

Professional Test Instruments Catalog



Precision, Specialty and Innovation . . . Since 1922

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Greetings from the President

Looking forward...to serving you

Over the past decade, we've made a lot of changes at General to grow our business. Those initiatives continue to bear fruit. Last year, they contributed—once again—to the best year we've ever had, both in terms of new product launches and revenue generated.

At General, the quality of our tools and instruments is something we work hard to improve every day. As an example of initiatives bearing fruit, take a closer look at the housing of our newest instruments. On them you'll find many new compliance markings that represent the end result of many new QA and QC policies and procedures. You can feel more confident than ever that your new precision instrument from General meets or exceeds all industry-standard testing requirements.

Our QA/QC initiative has also yielded better instrument precision. This, in turn, has allowed us to add many more instruments to our NIST certification program. Our full-line catalog now reflects this important performance option by using the NIST logo to identify qualifying products. If your application requires testing that is traceable to a national standard, we can provide a turnkey solution with NIST compliance.

At General, we haven't forgotten that we're in business to satisfy your demand for new productivity tools and instruments. So it is with great pride that I announce our first full line of electrical instruments for the industry professional. On pages 124 to 143 of this catalog you'll find the features and specifications of many new clamp meters, multimeters, electrical testers and multi-component kits targeted to contractors and

MRO professionals. We've even provided comparison charts for the clamp meters and multimeters to help you choose. With rugged mechanical designs, state-of-the-art electronics, improved CAT ratings and unique features, these can be considered "best of breed" electrical instruments that offer the best value in the market.

"Best of breed" is a term that applies equally well to our high-performance and Seeker families of video inspection borescopes. In 2013, General added VGA resolution probes with anti-glare and light boost to our high-performance line. Last year also saw the introduction of what has become the fastest-growing product in company history: the iBorescope. We think video inspection—using the iBorescope—may prove to be a "killer app" for those millions of iOS and Android smart-phones and tablets now taking the world by storm. But our first-generation iBorescope only scratches the surface of tasks that compact, WiFi-enabled scopes can perform more quickly and conveniently. Keep an eye out for even more exciting video inspection products soon.

At General, we value your data as much as we value having your business. Whether your data is a series of home inspection images, a video clip of a commercial drain system, on-site thermal images of a power plant, a week's worth of logged temperature/humidity points, or voice annotation of a water-damage restoration project, General Tools & Instruments gives you the wherewithal to make precision measurement and inspection your business as well.

Joe Ennis, President and CEO





Electrical Test Instruments



CM660 Rugged Auto Ranging TRMS AC/DC Clamp Meter -0 to 600A Range, 0.01A Max Resolution (see page I-127)



Rugged Auto Ranging TRMS AC/DC Clamp Meter -0 to 1000A Range, 0.1A Max Resolution (see page I-127)



CM770 Rugged Auto Ranging TRMS AC/DC Clamp Meter - 0 to 1000A Range, 0.1A Max Resolution with Integrated IRT (see page I-127)



GT520 Wireless Data Logging Multimeter with Detachable Display and NCV/NCC Detection (see page I-135)



BF20 Circuit Breaker Finder with NCV Detector and GFCI Outlet Checker (see page I-140)



with NCV Detection (see page I-132)



DMM570 Rugged TRMS Multimeter





BF20



CM660



CM700



CM770



DMM570



GT520



VR40



VS3000A

IRT, dB, Temp/RH, Moisture & Leak Detection









KT100

Contractor's Kit
Combines an IRTC50 Scanning
IR Thermometer with an MMD7NP Pinless LCD Moisture Meter with Tricolor Bar Graph and an MSV100 3-in-1 Stud/Voltage/Metal Detector (see page I-53)



Professional Inspection Kit

Combines a DCS280 Rugged Video Inspection System with an MMD7NP Pinless LCD Moisture Meter with Tricolor Bar Graph and an IRT105 6:1 Pocket IR Thermometer (see page I-53)



CK700FX 3000 Amp Clamp Meter Kit Combines a CM700 Rugged Auto Ranging TRMS AC/DC clamp meter with 0 to 1000A range (see page 1-127) with a 3000 Amp Flex Clamp Adaptor and several specially chosen accessories in a custom padded carrying case (see page I-129)





KHVP57068 **HVAC DMM Kit**

HVAC DMM KIT
Combines a DMM570 Rugged True RMS
Multimeter with NCV Detection (see page I-132)
with a DAMP68 Auto Ranging AC/DC True RMS
400 Amp Clamp Meter (see page I-126) and a pipe
wrap thermocouple and several other specially
chosen accessories in a custom padded carrying
case (see page I-124)





KEL57060

Electrician's Kit
Combines a DMM570 Rugged True RMS Multimeter with NCV
Detection (see page I-132) with a DAMP60 Auto Ranging 600A
AC Clamp Meter (see page I-126) and several specially chosen accessories in a custom padded carrying case (see page I-124)





KHY57030
HVAC Meter Kit
Combines a DMM570 Rugged True RMS
Multimeter with NCV Detection (see page I-132)
with an IRT730K 30:1 Ultra Wide-Range IR
Thermometer with "K" port (see page 39) and
a pipe wrap thermocouple and several other
specially chosen accessories in a custom specially chosen accessories in a custom padded carrying case (see page I-124)



"Predator" Thermal Imaging Cameras

GTi10: Thermal Imaging

GTi20: Thermal/Visual Imaging

with Picture-in-picture

GTi30: Thermal/Visual Imaging with & GTi50 **Picture-in-picture, Streaming**

Video and Voice Annotation

Ideal for revealing invisible heat-driven processes and problems.

Applications include: equipment maintenance and repair (MRO); building energy audits; process/manufacturing plant maintenance; water damage restoration; automotive repair; firefighting; navigation; surveillance.

By converting objects' infrared (IR) radiation to visible color images, thermal imaging cameras can detect very small temperature differences from a distance. Heat signatures can help diagnose the cause of equipment failures and poor performance due to wear and tear, misalignments and fault conditions.

KEY FEATURES:

- 160 x 120 pixel IR detector (GTi10/20/30) 384 x 288 pixel IR detector (GTi50)
- Temperature sensitivity of ±0.14°F (0.08°C) Temperature sensitivity of ±0.072°F (0.04°C) (GTi50)
- Manual focus w/4 in. (100mm) minimum focal length
- Included 2GB MiniSD card stores images for uploading to PC
- USB 2.0 and Video Out jacks and cables
- Bright 3.5 in. (89mm) diagonal flip-up color LCD
- Manually or automatically adjustable image level and span (brightness and contrast)
- · Adjustable emissivity
- Tripod mount (via optional adaptor)
- · Water, dust and oil-resistant to IP54 standard
- · Shock and vibration-resistant
- Powered by rechargeable Li-ion battery
- Squeezing trigger stores images
- CE and FCC compliant
- 3-year limited warranty (5-year term available)
- Up to 5 hours of operation using 2 batteries

Camera; 2 Rechargeable Li-ion Batteries; Compact Battery Charger; 2GB MiniSD Memory Card; SD Card Reader; Video Cable with BNC Plug; USB 2.0 Cable; Lens Cap; Standard Analysis & Reporting Software on CD; Calibration Certificate; Sun Shield; Hand & Neck Straps: Custom Hard Case: User's Manual: Bluetooth Headset with Charger (GTi30 & GTi50); 3-Year Limited Warranty

UPC	NO.	TEMPERATURE RANGE
01550 6	GTi10	-4° to 572°F (-20° to 300°C)
01624 4	GTi10-600	-4° to 1112°F (-20° to 600°C)
01649 7	GTi10-1000	-4° to 1832°F (-20° to 1000°C)
01627 5	GTi10-1500	-4° to 2732°F (-20° to 1500°C)
01586 5	GTi20	-4° to 572°F (-20° to 300°C)
016503	GTi20-600	-4° to 1112°F (-20° to 600°C)
01651 0	GTi20-1000	-4° to 1832°F (-20° to 1000°C)
01652 7	GTi20-1500	-4° to 2732°F (-20° to 1500°C)
01551 3	GTi30	-4° to 572°F (-20° to 300°C)
01592 6	GTi50	-4° to 572°F (-20° to 300°C)
01641 1	GTi50-600	-4° to 1112°F (-20° to 600°C)
01653 4	GTi50-1000	-4° to 1832°F (-20° to 1000°C)
01619 0	GTi50-1500	-4° to 2732°F (-20° to 1500°C)
T 0		



GTi₁₀



UPC	NO.	DESCRIPTION
01607 7	L38	38° Wide-angle Lens for
		GTi10/20/30
01609 1	L12	12° Telephoto Lens for GTi10/20/30
016107	L09	9° Telephoto Lens for GTi10/20/30
016114	L6P4	6.4° Telephoto Lens for GTi10/20/30
016138	L548	48° Wide-angle Lens for GTi50
016152	L512	12° Telephoto Lens for GTi50
016237	SWGT3N5	Professional Analysis & Reporting
		Software for GTi30/50 (includes
		streaming video software driver)
016169	ADPTRGTi	AC Adaptor for GTi10/20/30/50
016176	BTTGTi	Extra battery for GTi10/20/30/50
01637 4	CRCHGTi	Car Charger for GTi10/20/30/50
016183	TRPDGTi	Tripod Adaptor for GTi10/20/30/50



GTi₂₀

GTi₃₀

GTi₅₀

All four GTi thermal imaging cameras feature a large, bright color LCD and point-and-shoot simplicity



*Predator" Thermal Imaging Cameras

	GTi10	GTi20	GTi30	GTi50	
"PREDATOR" SERIES					
FEATURES & SPECIFICATIONS					
Picture-in-Picture Mode (Visual + Thermal Image Fusion)	No		es		
Analysis Tools	2 Movable Spots, Isothermal Analysis	4 Movable Spots, Isothermal Analysis	9 Movabl Isotherma Profile Analysis,	l Analysis	
LED Flashlight	No		es		
Temperature Alarms	No	1	es		
Visual File Format	Prop SAT/JPG	Prop SAT	/CCD/JPG		
Visual Image Resolution	N/A	320 x 2	40 pixels	640 x 480 pixels	
Thermal Video Streaming	N	0	Yes (Via	a USB)	
Voice Annotation	N	0	Yes (Via B	luetooth)	
IR Resolution		160 x 120 pixels	•	384 x 288 pixels	
Spatial Resolution		2.2 mrad		1.3 mrad	
Thermal Sensitivity at 86°F (30°C)	±0.14°F (0.08°C) ±0.072°F (0				
Field of View		20° x 15°		24° x 18°	
Refresh Rate		30 frames per second (fps)		•	
IR Detector Spectral Range		8 to 14um			
Laser Pointer		Yes			
Temperature Measurement Range	-4° to 572°F (-20° to 300°C), upgradeable to 1112°F (600°C), 1832°F (1000°C) or 2732°F (1500°C)				
Detector Type	Uncooled focal plane array, manual focusing				
Accuracy	±3°F (2°	°C) or 2% of reading, whichever	is greater		
Focusing		Manual			
Measurement Compensation Factors	Emissivity	y, Ambient Temperature, Humidit	y, Distance		
Minimum Focal Distance		4 in. (100mm)			
Optional Telephoto and Wide-Angle Lenses	6.4°, 9°, 12° and 38° f	ield of view for GTi10/20/30; 12	$^{\circ}$ and 48 $^{\circ}$ FOV for	GTi50	
Display		Flip-up 3.5 in. diagonal color LC	D		
Auto Hot/Cold Spot Indicator		Yes			
Video Output Formats		NTSC, PAL			
Color Palettes		Inverted, Rainbow, Feather, Grey			
Image Storage Medium, Capacity		GB MiniSD memory card (include	,		
Thermal File Format		Proprietary SAT, Radiometric, JP	G		
Battery		Rechargeable Lithium-Ion			
Total Charge Capacity	Up t	o 5 hours continuous with 2 bat	teries		
Power Saver Mode		Yes			
Operating Temperature	-4° to 122°F (-20° to 50°C) @ 10 to 90% RH				
Water/Dust/Oil Resistance	IP54				
Shock Resistance	Operational 25G				
Vibration Resistance	Operational 2G				
Tripod Mount	Non-standard. Optional Adaptor needed (No. TRPDGTi)				
Weight	1.3 lb. (580g)				
Dimensions		3 x 3.1 x 6.4 in. (172 x 80 x 162r			
External Power Source	Compact Battery Charger provided. Optional Accessories: AC Adaptor (No. ADPTRGTi), Car Charger (No. CRCHGTi)				
Limited Warranty Duration	3-Years (5-year term available)				

High-Performance Video Systems

TOLL FREE (800) 697-8665 FAX (212) 431-6499 www.generaltools.com

We Call Our Video Borescopes "High-Performance Systems" for Several Good Reasons:

 They use our thinnest probes, with diameters as small as 3.9mm (0.15 in.). Even our thickest general-purpose high-performance probe, at 6mm across, is no thicker than a No. 2 pencil lead.

• The probes have superior optical specs, including close-focus and far-focus depths of field.

 Probe choices abound. Just pick the probe type (flexible-obedient or soft metal), probe diameter (3.9mm, 4.9mm, 5.5mm or 6m), probe length (1m to 30m) and viewing angle (front view, articulating or switchable front/side view) you need; one of our probes is sure to fill the bill.

 The borescopes themselves also come in several styles—for example, wired or wireless, and recording or non-recording. Whichever model you choose, your high-performance borescope will have passed a 60,000-cycle performance test, sport a color monitor, and come in a custom protective hard case.



Probe Diameters (actual size)



3.9mm (0.15 in.)



4.9mm (0.19 in.)



5.5mm (0.22 in.)



6mm (0.24 in.)

	PRIMARY SYSTEM FEATURE(S)	Wireless	recording	VGA recording, with VGA probe	
	Model No.	DCS1800 DCS1800ART		DCS1700	
	System/Component Name	High-Performance Wireless Recording Video Borescope System	High-Performance Wireless Recording Video Borescope System with Articulating Probe	The VIPER 1700 Super High-Performance VGA Recording Video Borescope System	
	Display Size (diagonal)	3.5 in. (89mm)	3.5 in. (89mm)	3.5 in. (89mm)	
	Wireless Range	Up to 33 ft. (10m)	Up to 33 ft. (10m)	-	
	Records	Audio, video, still images	Audio, video, still images	Video, still images	
SYSTEM	Resolution (pixels)	Video: 320 x 240 Still images: 640 x 480	Video: 320 x 240 Still images: 640 x 480	Display: 320 x 240 Probe & Recording: 640 x 480	
	Zoom Level (s)	1.5X	1.5X	1.5X, 2X	
	Operating Temperature	Console: 32° to 140°F (0° to 60°C); Probe: -4° to 140°F (-20° to 60°C)	Console: 32° to 140°F (0° to 60°C); Probe: -4° to 140°F (-20° to 60°C)	Console: 32° to 140°F (0° to 60°C) Probe: -4° to 140°F (-20° to 60°C)	
	Memory (capacity of included SD card)	4GB	4GB	4GB	
	Power Source	Rechargeable Li-ion batteries	Rechargeable Li-ion batteries	(4) "AA" batteries	
	Certifications	CE, FCC, RoHS	CE, FCC, RoHS	CE, FCC, RoHS	
	Limited Warranty Term	1 year	1 year	1 year	
	Diameter	5.5mm (0.22 in.)	6mm (0.23 in.)	5.5mm (0.22 in.)	
	Style	Flexible-Obedient	Articulating	Soft metal	
	Length	1m (3.3 ft.)	1m (3.3 ft.)	1m (3.3 ft.)	
SUPPLIED	Field of View	60°	60°	60°	
PROBE	Depth of Field	0.25 to 12 in. (6.4 to 300mm)	0.25 to 12 in. (6.4 to 300mm)	0.25 to 12 in. (6.4 to 300mm)	
	Resistance to Water/Dust/Oil/Gas	IP67	IP67	IP67	
	Light Source 4 adjustable white LEDs		4 adjustable white LEDs	6 adjustable white LEDs: 4 front-facing, 2 side-facing	
	*Enables existing D0	CS1800ART owners to add	a Non Articulating Probe or	the P16HPART VGA resolution	



	Utility recording	4.9mm switchable front/side view probe	Rugged VGA recording	
DCS1600	DCS16HPART	DPS16	DCS1100	DCS800
High-Performance High-Performance Recording Video Borescope Recording Video Borescope System System Resolution Articulating Probe		Pipe & Duct Recording Video Borescope Inspection System	High-Performance Video Borescope System	Rugged High-Performance VGA Recording Video Borescope System
3.5 in. (89mm)	3.5 in. (89mm)	3.5 in. (89mm)	2.4 in. (61mm)	3.5 in. (89mm)
-	ı	_	-	_
Video, still images	Video, still images	Video, still images	N/A	Video, still images
Video: 320 x 240 Still images: 640 x 480	Video: 320 x 240 Still images: 640 x 480	Video: 320 x 240 Still images: 640 x 480	Video: 320 x 240 Still images: 640 x 480	Probe & Display: 320 x 240 Recording: 640 x 480
2X	2X	2X	1.5X	3X, 5X
Console: 32° to 140°F (0° to 60°C); Probe: -4° to 140°F (-20° to 60°C)	Console: 32° to 140°F (0° to 60°C); Probe: -4° to 140°F (-20° to 60°C)	Console: 32° to 140°F (0° to 60°C); Probe: 14° to 140°F (-10° to 60°C)	Console: 32° to 140°F (0° to 60°C); Probe: 32° to 131°F (0° to 55°C)	Console: 32° to 140°F (0° to 60°C); Probe: -4° to 140°F (-20° to 60°C)
4GB	4GB	4GB	-	4GB
Rechargeable Li-ion battery	Rechargeable Li-ion battery	Rechargeable Li-ion battery	4 "AA" batteries	4 "AA" batteries
CE, FCC, RoHS	CE, FCC, RoHS	CE, FCC, RoHS	CE, FCC, RoHS	CE, FCC, RoHS
1 year	1 year	1 year	1 year	1 year
5.5mm (0.22 in.)	6mm (0.23 in.)	28mm (1.1 in.)	4.9mm (0.19 in.)	5.5mm (0.22 in.)
Flexible-Obedient	Articulating	Soft metal	Flexible-Obedient, Switchable Front/Side View	Flexible-Obedient
1m (3.3 ft.)	1m (3.3 ft.)	22m (72 ft.)	1m (3.3 ft.)	1m (3.3 ft.)
60°	60°	151°	67°	60°
0.25 to 12 in. (6.4 to 300mm)	0.25 to 12 in. (6.4 to 300mm)	0.4 in. (10mm) to infinity	0.25 to 6 in. (6.4 to 150mm)	0.25 to 12 in. (6.4 to 300mm)
IP67	IP67	IP68	IP57	IP67
4 adjustable white LEDs	4 adjustable white LEDs	8 adjustable white LEDs	5 adjustable white LEDs: 3 front-facing, 2 side-facing	4 adjustable white LEDs

Probe Diameters (actual size)



3.9mm (0.15 in.)



4.9mm (0.19 in.)



5.5mm (0.22 in.)



6mm (0.24 in.)

1800 Performance Wirel ding Video Boresco n (see page I-14)		vith		High-Perf Recording Borescop (see pp. I	e System			mance Wireless ideo Borescope
	SYSTEM CONFIC	GURATIO	ON/PRO	ве сомр	ATIBILITY	CHART		
	PROBE D	ESCRIPTIO	N		CONS	OLES/PRO	BE CONTRO	DLLER
Probe Model No. (SKU)	Probe Description	Camera Head Diameter	Probe Length	Depth of Field	DCS1800-TR Wireless Probe Handle/ Controller	H16 Handheld Recording Console	H8 Rugged Compact VGA Recording Console	H17 Handheld VG Recording Console
SUPI	ER HIGH-PERFORMANCE PROBE OPT	IONS						
P16181HP			1m (3.3 ft.)					
P16182HP	VGA Resolution Probes	5.5mm (0.22 in.)	2m (6.6 ft.)					
P16183HP		, ,	3m (9.8 ft.)	0.25 to 12 in.		•	/	
P16HPART		6.0mm	1m (3.3 ft.)	(6.4 to 300mm)				
P16HP2ART	VGA Resolution Articulating Probes	(0.23 in.)	2m (6.6 ft.)					
P16HP3ART	HCH DEDECORMANCE PROPE OPTION	c	3m (9.8 ft.)					
	HIGH-PERFORMANCE PROBE OPTION							
P16181SR-M	FLEXIBLE-OBEDIENT PROBE OPTIONS I) 	1 m /2 2 ft)	T	I			
P16182SR-M	Flexible-Obedient Probes	5.5mm	1m (3.3 ft.) 2m (6.6 ft.)	0.25 to 12 in.			/	
P16183SR-M	riexible-Obedient Flobes	(0.22 in.)	3m (9.8 ft.)	(6.4 to 300mm)		,	•	
1 10103311 111	SOFT METAL PROBE OPTIONS		311 (3.6 11.)					
P16ART-1SM			1m (3.3 ft.)					
P16ART-2SM			2m (6.6 ft.)			✓		
P16ART-3SM	Soft Metal	6.0mm	3m (9.8 ft.)					
P18ART-1SM	Articulating Probes	(0.23 in.)	1m (3.3 ft.)					
P18ART-2SM			2m (6.6 ft.)	0.25 to 12 in.		N	/A	
P18ART-3SM			3m (9.8 ft.)	(6.4 to 300mm)				
P16181SM-M			1m (3.3 ft.)	,				
P16183SM-M		5.5mm	3m (9.8 ft.)					
P16185SM-M	Soft Metal Probes	(0.22 in.)	5m (16 ft.)			1	/	
P161810SM-M			10m (32 ft.)					
P161830SM-M	Deal Stand for Free 40 marsh 20 m 2 ft		30m (98 ft.)					
RP1618	Reel Stand for 5m, 10m and 30m Soft Metal Probes		N/A			•		
	SPECIALTY PROBE OPTIONS							
P1839-M	Ultra-Slim	3.9mm	0.75m (2.5 ft.)					<u> </u>
P16182-39	Flexible-Obedient Probes	(0.15 in.)	2m (6.6 ft.)					
P16183-39		, ,	3m (9.8 ft.)	0.25 to 6 in.				
P1618FS-49	Switchable Front/Side View	4.9mm	1m (3.3 ft.)	(6.4 to 150mm)		•	/	
P16182-49	Flexible-Obedient Probes	(0.19 in.)	2m (6.6 ft.)					
P16183-49		20	3m (9.8 ft.)	0.4.1.1.1.1	1			
P16PIP	Pipe & Duct Inspection Probe & Reel Set	28mm (1.1 in.)	22m (72 ft.)	0.4 in. (10mm) to infinity				
	ACCESSORIES							
HT1618	Telescoping Rigid Holding Tube for Articulating Probes						,	
PM003	Set of 3 Mirrored Viewing Tips (70°, 90°, 110°) for all 5.5mm probes except the P16181HP, P16182HP and P16183HP		N/A ✓		/			

^{*}DCS1800-TR (see p. I-23) enables DCS1800ART owners to add a non-articulating probe or the P16HPART, P16HP2ART or P16HP3ART VGA Resolution Articulating Probe; DCS1800-TR does not include the DCS1800 Receiving Console

N/A: Probe is not compatible

HIGH-PERFORMANCE VIDEO SYSTEMS

Configuration Guide



GENERAL®

DCS16HPART
High-Performance Recording Video Borescope
System with VGA Resolution Articulating Probe
(see page I-19)



DCS1100 High-Performance Borescope System with 4.9mm Switchable Front/Side View Probe (see page I-21)



DC\$800 Rugged Compact High-Performance VGA Recording Video Borescope System (see page I-22)



	SYSTEM CONFIGURATION/PROBE COMPATIBILITY CHART							
			HIGH-PER	FORMANCE V	IDEO BORESCO	PE SYSTEMS		
	DCS1800	DCS1800ART	DCS1700	DCS1600	DCS16HPART	DPS16	DCS1100	DCS800
Probe	Wireless	Wireless	The VIPER	Recording Video	High-Performance	Pipe & Duct	Video Borescope	Rugged Compact
Model No.	Recording Video	Recording	Super VGA	Borescope	Recording Video	Recording Video	System w/4.9mm	VGA Recording
(SKU)	Borescope	Borescope	Recording Video	System	Borescope System	Borescope	Switchable Front/	Video Borescope
	System	System w/	Borescope		with VGA Resolution	System	Side View Probe	System
		Articulating	System		Articulating Probe			
	CHRED HIGH BE	Probe	DODE ORTIONS					
D4C404UD	SUPER HIGH-PE	RFORMANCE P						
P16181HP P16182HP			INCLUDED		√			
P16182HP					,			
P16183HP P16HPART	-	*	√	✓	INCLUDED	✓	N/A	✓
P16HP2ART			•					
P16HP2ART P16HP3ART	1				✓			
PIOHPSAKI	LUCII DEDE	DRAANCE DROI	DE ODTIONS					
		DRMANCE PRO						
P16181SR-M	INCLUDED	BEDIENT PROB	E OPTIONS	INCLUDED	l			INCLUDED
P161815R-IVI		*	√	INCLUDED			_/	INCLUDED
	√	-	•	✓	•		•	✓
P16183SR-M SOFT METAL PROBE OPTIONS								
P16ART-1SM	JUFIN	IETAL PROBE O	I IIIIIS	1			1	
P16ART-2SM	31/0	N/A	✓		./		√	✓
P16ART-3SM	N/A	N/A	•		•		•	•
P18ART-1SM		INCLUDED						
P18ART-2SM	1 ✓		N/A		N/A		N/A	N/A
P18ART-3SM	· '	✓	11/7		11/14		11/7	N/A
P16181SM-M								
P16183SM-M	1							
P16185SM-M	· /	*	√		✓		√	✓
P161810SM-M	1		•		•		•	•
P161830SM-M	1							
11010303111111		Ala.						
RP1618	 	*	✓		✓		✓	✓
	SPECIA	ALTY PROBE OP	TIONS				ı	
P1839-M	1							
P16182-39	1						✓	
P16183-39	1 ,	*			,			
P1618FS-49	1 ′	-1º	~		✓		INCLUDED	✓
P16182-49	1							
P16183-49	1						✓	
D4 CD1D	·		✓		✓	INCLUSES	n. / -	✓
P16PIP	*		•	▼ INCLUDED			N/A	Y
		ACCESSORIES						
HT1618		✓						
PM003	'	*	√		✓		✓	✓

Wireless Recording Borescope

High-Performance Wireless Recording Video Borescope System

Features slim 5.5mm diameter probe, 3.5 in. color monitor and powerful ability to record video, still images and sound. Thinner, longer, multi-view and articulating probes available.

APPLICATIONS:

- · Government, Military, Security
- Infrastructure Inspection and Maintenance
- Aircraft Maintenance and Inspection
- Automotive Maintenance
- MRO / Industrial Inspection
- Inspection of Complex Machinery
- Oil, Power and Petro Industry Inspection Applications
- Inspection of Tooling Dies

FEATURES:

- 3.5 in. (89mm) extra-wide, color TFT monitor with super sharp clarity
- Records audio, video and still images with instant playback review
- Wireless image and video transfer
- Comes with a 1m (3.28 ft.) long x 5.5mm (0.22 in.) diameter QVGA resolution probe that retains its configured shape. Depth of field is 0.25 to 12 in. (6.4 to 300mm)
- Optional probes include: 3.9mm diameter, 4.9mm switchable front/side view, and 6mm VGA articulating and non-articulating probes of 1m, 2m and 3m length
- All probes feature at least 4 adjustable-brightness white LEDs for superior camera lighting
- All probes are water, oil, dust and scratch resistant to IP67 standard
- 3 interchangeable mirrored viewing tips provide extra-wide viewing angles of 70°, 90°, 110°
- · Multiple language menu
- AV out allows for TV monitor and computer interfaces
- Rechargeable Lithium-ion batteries



BENEFITS:

 Wireless imaging allows inspection results to be sent to a larger screen up to 33 ft. (10m) away for team-based analysis

RoHS

- Wireless camera probe enables access to otherwise inaccessible places
- Ultra slim probes with powerful video camera and LED lights in the tip enable user to inspect the tiniest spaces
- Optional 3.9mm (0.15 in.) diameter camera tipped probe is the slimmest on the market and can fit into the spark plug hole of any engine, as well as into diesel injector ports
- View findings in real time or record video and still images for viewing and sharing later
- Rechargeable batteries can record for 4 hours and will help you stay "Green"



DCS1800

INCLUDES:

Custom Hard Case, 5.5mm Diameter x 1m Long Flexible-Obedient Probe, 2GB SD Card, RCA Cable, 3 Interchangeable Mirrored Viewing Tips (70°, 90°, 110°), LCD Cleaning Cloth, AC Adaptor/Charger, 2 Rechargeable Batteries, User's Manual, 1-Year Limited Warranty

UPC	NO.
01297 N	DCS180

DCS1800, DCS1800ART Specifications:

DCS1800 comes with: 5.5mm (0.22 in.) Diameter x 1m (3.28 ft.) long QVGA resolution probe

DCS1800ART comes with: 6mm (0.24 in.) Diameter x 1m (3.28 ft.) long articulating QVGA resolution probe **Depth of Field (D0F):** 0.25 to 12 in. (6.4 to 300mm)

Probe Feature: Water, Oil & Dust resistant to IP67 standards

Field of View: Horizontal field angle 46° Vertical field angle 34° Diagonal field angle 56° Optional 5.5mm Probe Lengths: 2m, 3m, 5m, 10m, 30m

Other Optional Probes:

- 3.9mm diameter ultra-slim probe of 0.75m, 2m or 3m length
- 4.9mm diameter switchable front/side view probe of 1m, 2m or 3m length
- 6.0mm diameter VGA resolution articulating or nonarticulating probe of 1m, 2m or 3m length

Display: 3.5 in. (88.9mm) Color TFT

Recording Resolution: 320 x 240 pixels (video);

640 x 480 pixels (still images)

Audio: Integrated microphone (DCS1800 only)

Wireless Transceiver Frequencies: 2414MHz, 2432MHz, 2450MHz, 2468MHz

System Power: Battery: Rechargeable Li-Polymer Battery (3.7V) Adaptor/Charger Supply: 120VAC @ 60 Hz or 240VAC @50 Hz

Power Consumption: 1.8A @5.5VDC Recording Medium: 4GB SD Card



GENERAL Wireless Articulating Recording Borescope

High-Performance Wireless Recording Video Borescope System with Articulating Probe



Ideal for aircraft maintenance, machinery and production line inspection, petro-chemical and power plant inspection, general MRO and facility management

FEATURES:

- · One-handed articulation function allows user to turn the probe tip to inspect targets located at sides or at an angle while it is inside a tight space
- . Turning knob and lock button are ergonomically engineered
- Durable materials and construction: all components pass 60,000 cycle test

SPECIFICATIONS:

Articulation Angle: 2 way Articulation Sweep: 0 to ±155°

Supplied Probe: 6mm (0.23 in.) diameter x 1m (3.28 ft.) long, articulating soft metal probe

UPC	NO.
01417 2	DCS1800ART



The articulating probe's ±155° viewing angle enhances inspection flexibility

DCS1800, DCS1800ART Specifications (continued):

Video Out Format: NTSC and PAL

Interface: AV Out

Compression Format: Compliant with MPEG4

Image Resolution: 640 x 480 Pixels Video Resolution: 320 x 240 Pixels

Frame Rate: ~30 fps

Exposure: Automatic White Balance: Fixed S/N Ratio: 42dB or more

Languages: English, German, French, Spanish, Japanese, Italian, Traditional Chinese, Simplified Chinese

Operating Temperature: 32° to 140°F (0° to 60°C) for console; -4° to 140°F (-20° to 60°C) for probe

Interchangeable Options:

(0° to 60°C)

Set of 3 Mirrored Viewing Tips For All 5.5mm Probes except P16181/2/3HP

Storage Temperature: 32° to 140°F

No. PM003 (70°, 90°, 110°)

5.5mm

Diameter

VGA Recording Video Borescope System

Super High-Performance VGA Recording Video Borescope System

EVIPER 1700 is a rugged, lightweight, high-performance, VGA resolution recording borescope system that is ideal for making high-quality video and photo inspections of inaccessible or hard-to-see areas of vehicles, environments and industrial equipment

FEATURES & BENEFITS:

- Records VGA resolution (640 x 480 pixel) video clips and still images
- Probe features light boost, anti-reflection and screen rotation buttons
- · Camera lighting provided by 4 front-facing LEDs
- To minimize glare from shiny targets, lighting can be shifted to 2 angled LEDs
- Console features brightness controls, horizontal mirroring, 2X zoom, and slow-motion and fast-forward video playback
- · Object measurement mode
- Console accepts dozens of different length and diameter probes
- Probe and stainless steel camera head are IP67 water, oil and dust-proof
- Dual output jacks enable before/after image comparisons
- Auto Power Off is time adjustable
- Includes 4GB SD memory card, video and USB cables and hard case



Use for routine, onsite pipe and duct inspections



Rugged and outdoor-ready for the most challenging environments

0 0 0

Comfortable, lightweight,

rugged and

ergonomic

console



GENERAL VGA Recording Video Borescope System

#VPER17/0

Ideal for inspecting inaccessible or hard-to-see areas.

SPECIFICATIONS:

Display Size/Type: 3.5 in. (diagonal), color TFT LCD Display Resolution: 320 x 240 pixels (QVGA)

Video/Photo Recording Resolution: 640 x 480 pixels (VGA)

Video/Photo File Format: .avi/.jpg Video Zoom Options: 1.5X, 2X

Video Playback Speeds: 12%, 25%, 50%, 1X, 1.5X, 2X, 4X

Video Out Formats: NTSC and PAL

Video Frame Rate: 30 frames per second (fps)

Camera Lighting: 4 forward-facing LEDs + 2 angled LEDs

5.5mm (0.22 in.) diameter, 1m (39 in.) long, soft metal

Probe Depth of Field: 0.25 to 12 in. (6.4 to 300mm)

Probe Field of View: 60°

Interfaces: Video Out & USB 2.0 jacks

Recording Medium:

Standard-size SD card of up to 32GB capacity

Menu Languages: English, French, German, Italian, Spanish, and Portuguese, as well as 21 other

European and Asian languages

Operating/Storage Temperatures: Probe: -4° to 140°F (-20° to 60°C)

Console: 32° to 122°F (0° to 50°C)

Dimensions of Grip:

10.8 x 4.8 x 2.2 in. (275 x 123 x 55mm)

Weight of Grip (without Batteries): 13 oz. (370g) Power Source: 4 "AA" Alkaline batteries (included)

Battery Life (typical): 4 hours operation

Optional Power Source:

Rechargeable Ni-MH or Li-ion "AA" batteries

INCLUDES:

Console, VGA Resolution Probe, 4GB SD Memory Card, Object Measuring Tip, 110° Mirrored Viewing Tip, Video Cable, USB Cable, 4 "AA" Alkaline Batteries, LCD Cleaning Fluid and Cloth, Custom Hard Case, User's Manual and 1-Year Limited Warranty

UPC NO. 01601 5 DCS1700





Recording Video Borescope

High-Performance Recording Video Borescope System

Features slim 5.5mm diameter probe, 3.5 in. color monitor and powerful recording capability. Thinner, longer, multi-view and articulating probes available.

APPLICATIONS:

- Aircraft Maintenance and Inspection
- . Military, Security, Law Enforcement
- Automotive / Diesel Maintenance
- Other High Level Inspection

FEATURES:

- 3.5 in. (89mm) extra-wide, color TFT monitor with super sharp clarity
- Records video and still images with instant playback review
- Comes with a 1m (3.28 ft.) long, 5.5mm (0.22 in.) diameter, QVGA resolution probe that retains its configured shape. Depth of field is 0.25 to 12 in. (6.4 to 300mm)
- Optional probes include: 3.9mm diameter, 4.9mm switchable front/side view, and 6mm diameter VGA and QVGA articulating and non-articulating probes of 1m, 2m and 3m length
- All probes feature at least 4 adjustable-brightness white LEDs for superior camera lighting
- All probes are water, oil, dust and scratch resistant to IP67standard
- 3 interchangeable mirrored viewing tips provide extra wide viewing angles of 70°, 90°, 110°
- · Multiple language menu
- TV monitor and USB computer interfaces
- · Rechargeable Lithium-ion battery

BENEFITS:

- Ultra-slim probes with powerful video camera and LED lights in the tip enable access to otherwise inaccessible places
- Optional 3.9mm (0.15 in.) diameter camera-tipped probe is the slimmest on the market and can fit into the spark plug hole of any engine, as well as into diesel injector ports
- View findings in real time or record video and still images for viewing and sharing later
- Rechargeable batteries can record for 4 hours and will help you stay "Green"









INCLUDES:

Custom Hard Case, 5.5mm Diameter x 1m Long Flexible-Obedient Probe, 4GB SD Card, RCA Cable, USB Cable, 3 Interchangeable Mirrored Viewing Tips (70°, 90°, 110°), LCD Cleaning Cloth, AC Adaptor/Charger, Rechargeable Battery, User's Manual, 1-Year Limited Warranty

UPC	NO.
01305.2	DCS1600

DCS1600, DCS16HPART Specifications:

DCS1600 comes with: 5.5mm (0.22 in.) diameter x 1m (3.28 ft.) long QVGA resolution probe (P16181SR-M)

DCS16HPART comes with 6mm (0.24 in.) diameter x 1m (3.28 ft.) long VGA resolution articulating probe (P16HPART)

Depth of Field (DOF): 0.25 to 12 in. (6.4 to 300mm)

Probe Feature: Water, Oil & Dust resistant to IP67 standard

Field of View: 60°

Optional 5.5mm Probe Lengths: 2m, 3m, 5m, 10m, 30m

Other Optional Probes:

- 3.9mm diameter ultra-slim probe of 0.75, 2m or 3m length
- 4.9mm diameter switchable front/side view probe of 1m, 2m or 3m length

Display: 3.5 in. (89mm) Color TFT

Recording Resolution: 320 x 240 pixels (video); 640 x 480 pixels (still images)

System Power: Battery: Rechargeable Li-Polymer Battery (3.7V) Adaptor/Charger Supply: 120VAC @ 60 Hz or 240VAC @50 Hz

Power Consumption: 1.8A @5.5VDC Recording Medium: 4GB SD Card

C€ ☒ RoHS



GENERAL Articulating Recording Video Borescope

High-Performance Recording Video Borescope System with VGA Resolution Articulating Probe

APPLICATIONS:

Ideal for aircraft maintenance, machinery and production line inspection, petro-chemical and power plant inspection, general MRO and facility management

FEATURES:

· One-handed articulation function allows user to turn the probe tip to inspect targets located at sides or at an angle while it is inside a tight space

. Turning knob and lock button are ergonomically engineered

· Durable materials and construction: all components pass 60,000 cycle test

SPECIFICATIONS:

Articulation Angle: 2 way Articulation Sweep: 0 to ±155°

Supplied Probe: 6mm (0.23 in.) diameter x 1m (3.28 ft.) long VGA resolution articulating soft metal probe with light boost and anti-reflection (P16HPART)

UPC 016268

DCS16HPART—Combines the DCS1600 handheld recording console (H16, see p. I-23) and the 1m long P16HPART VGA resolution articulating probe (see p. I-24).





The articulating probe's ±155° viewing angle enhances inspection flexibility

DCS1600, DCS16HPART Specifications (continued):

Video Out Format: NTSC and PAL

Interface: AV Out and USB removable SD card

Compression Format: Compliant with MPEG4

Image Resolution: 640 x 480 Pixels Video Resolution: 320 x 240 Pixels

Frame Rate: ~30 fps **Exposure:** Automatic White Balance: Fixed S/N Ratio: 42dB or more

Languages: English, German, French, Spanish, Japanese, Italian, Traditional Chinese, Simplified Chinese

Operating Temperature: 32° to 140°F (0° to 60°C) for console; -4° to 140°F (-20° to 60°C) for probe Storage Temperature: 32° to 140°F (0° to 60°C)

Interchangeable Options:

Set of 3 Mirrored Viewing Tips For All 5.5mm Probes except P16181/2/3HP

No. PM003 (70°, 90°, 110°)

Pipe & Duct Recording Borescope

PIPE & DUCT VIDEO INSPECTION SYSTEM - DPS16

Ideal for examining the interior of 2, 4 and 6 inch I.D. water and sewer pipes with the included probe centering accessories.

FEATURES & BENEFITS:

- 72 ft. (22m) long probe with 28mm (1.1 in.) diameter camera head
- Eight super-bright white LEDs give probe 640 x 480 pixel (VGA) resolution; superior optics yield excellent depth of field of 0.4 in. (10mm) to infinity
- Includes H16 Handheld Recording Video Borescope Console
- Probe is water-tight to IP68 standard (depth of 50 ft./10m) and is flexible enough to make two 90° bends
- Stainless steel camera head is immune to bathroom toilet cleaner, unleaded gasoline, brake/transmission fluid and machine oil
- Steel probe reel is sturdy and dust-tight to IP65 standard. Reel works vertically or horizontally and includes IP55-rated probe length counter and bracket for H16 (DCS1600) console

INCLUDES:

- P16PIP Pipe & Duct Inspection Probe & Reel Set (includes probe length counter and brushes for centering probe in 2 in., 4 in. and 6 in. inner diameter pipes)
- Handheld Recording Video Borescope Console (General Part No. H16)
- · 4GB SD memory card
- RCA cable for viewing video and images on an NTSC monitor
- AC adaptor/battery charger and cleaning cloth and liquid for the console
- · Custom hard carrying case
- User's manual
- 1-Year Limited Warranty



Eight super-bright white LEDs give the DPS16/ P16PIP probe 640 x 480 pixel (VGA) resolution



SPECIFICATIONS:

- **♦ Camera-Tipped Probe:**
 - Camera Head Diameter: 1.1 in. (28mm)
 - Light Source: 8 white LEDs
 - Depth of Field: 0.4 in. (10mm) to infinity
 - Field of View: 150.8° (diagonal)
 - Diameter: 6mm (0.23 in.)
 - Length: 72 ft. (22m)
 - · Material: Fiberglass
 - Minimum Bending Radius: 6 in. (150mm)
 - Waterproof Depth (IP68): 50 ft. (10m)
 - Operating Temperature: 14° to 140°F (-10° to 60°C)

Reel

- Frame Diameter: 11.8 in. (300mm)
- Dust and Water Resistance: To IP65 standard
- Weight: 6.6 lb. (3kg)

INCLUDED ACCESSORIES:

Probe Centering Ring:

Inner Diameter: 1.1 in. (28mm) Outer Diameter: 2 in. (50mm)

Small Probe Centering Brush: Inner Diameter: 1.1 in. (28mm) Outer Diameter: 4 in. (100mm)

Large Probe Centering Brush: Inner Diameter: 1.1 in. (28mm)

Outer Diameter: 6 in. (150mm) UPC NO.

NO.
DPS16
P16PIF



The DPS16/P16PIP probe is flexible enough to make two 90° bends in a 1.6 in. (40mm) diameter pipe

P16PIP

Probe, reel, ring and brushes are available separately as P16PIP.



A packaged DPS16 system



TOLL FREE (800) 697-8665 FAX (212) 431-6499

www.generaltools.com



A probe's-eye view of a filthy air-conditioning duct



GENERAL® Video Borescope System w/4.9mm Probe

HIGH-PERFORMANCE VIDEO BORESCOPE SYSTEM WITH 4.9mm DIAMETER **SWITCHABLE FRONT/SIDE VIEW PROBE - DCS1100**

FEATURES & BENEFITS:

- Super-slim 4.9mm (0.19 in.) diameter switchable probe enables user to toggle between front and side views with the push of a button in a narrow space
- Overmolded console with ergonomic construction provides extra ruggedness and comfortable grip
- Rotate the probe when it's in side view mode to get a 360° view
- Minimum focal distance of 0.25 in. (6.4mm) enables extreme close-up viewing
- · Console also accepts any of General's QVGA (320 x 240 pixel) resolution borescope probes, including the ultra-slim 3.9mm (0.15 in.) diameter probe

SPECIFICATIONS:

CONSOLE:

♦ Display:

Type: Thin-film transistor (TFT) liquid crystal; Size: 2.4 in. (61mm) diagonal Resolution: 320 x 240 pixels

- ♦ Estimated Battery Life: 8 hours
- ♦ Operating Temperature: 32° to 140°F (0° to 60°C)
- ♦ Dimensions: 3.68 x 8.25 x 2.26 in. (93.5 x 209.5 x 57.5mm)
- ♦ Weight (w/battery): 12.6 oz. (357g)
- ♦ Power Source: 4 "AA" batteries (included)
- ♦ Approvals: CE, RoHS

PROBE:

- ◆ Diameter: 0.19 in. (4.9mm)
- ♦ Length: 39 in. (1m)
- ♦ Operating Temperature: 32° to 131°F (0° to 55°C)
- ♦ Dust/Water Resistance: To IP57 standard
- ♦ Head Material: Stainless steel
- ◆ Depth of Field: 0.25 to 6 in. (6.4 to 150mm)
- ♦ Field of View: 60°
- ♦ Light Source: 3 front-facing and 2 side-facing adjustable-intensity white LEDs, each w/ luminous intensity of 140 to 224 mcd (millicandelas)
- ♦ Weight: 15 oz. (425g)

APPLICATIONS:

· Inspecting cylinders, valves, diesel injectors and glow port plugs

· Looking behind body panels and under the dashboard to optimize cable routing

- Checking for corrosion and wear in hard-tosee areas
- · Inspecting fluid lines for leaks

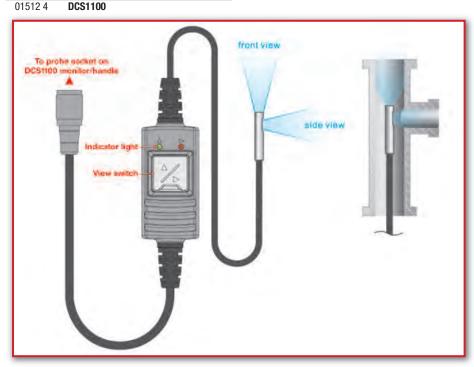
INCLUDES:

Warranty



DCS1100

UPC NΩ



Rotating the probe gives the side view camera full 360° coverage of the inside of a pipe - like a submarine periscope scanning the horizon

4.9mm DIAMETER SWITCHABLE FRONT/SIDE VIEW PROBES -P1618FS-49, P16182-49, P16183-49

- · Super-slim probe features 2 separate cameras, each with its own built-in light source
- Switchable dual views allow for straight-on and 90° viewing with full 360° rotational viewing
- Minimum focal distance of 1/4 in. (6.4mm) allows for extremely close-up viewing
- 4.9mm (0.193 in.) diameter x 1m (3.28 ft.) long probe is water, oil, dust and scratch resistant to IP57 standard

UPG	NO.
01481 3	P1618FS-49 (1m long)
015537	P16182-49 (2m long)
01554 4	P16183-49 (3m long)



Rugged VGA Recording Borescope

HEWI



DCS800



Inspection of hard-to-reach and hard-to-see areas

RUGGED COMPACT HIGH-PERFORMANCE VGA RECORDING VIDEO BORESCOPE SYSTEM – DCS800

Ideal for inspecting hard-to-reach and hard-to-see areas.

FEATURES & BENEFITS:

- 3.5 in. (89mm) diagonal color LCD
- 1m, (39 in.) long, 5.5mm, (0.22 in.) diameter flexible-obedient probe with 320 x 240 pixel (QVGA) resolution camera lit by four LEDs
- Probe and stainless steel camera head are IP67 water, oil and dust-proof. Console is rated IP55 and 1m (39 in.) drop-proof
- Console accepts dozens of other QVGA and VGA (640 x 480 pixel) resolution probes of various lengths and diameters
- Records VGA or QVGA resolution video clips and still images using familiar menu-driven user interface. Saved video and photo files incorporate real-time brightness, zoom and mirroring adjustments made prior to recording or "on the fly"
- Three options for mirroring live video: horizontal, vertical, or both
- 4GB SD memory card
- Analog video out jack and cable with RCA plug
- USB cable for uploading/viewing media on SD card to PC without ejecting card
- 90° mirrored probe viewing tip
- · Adjustable Auto Power Off interval
- · Choice of 27 menu languages
- · Custom hard plastic carrying case
- Powered by four "AA" Alkaline or rechargeable batteries

Few borescopes can handle the harsh military maintenance environment like the 1m drop-proof IP55 DCS800

SPECIFICATIONS:

- ♦ Display Resolution: 320 x 240 pixels (QVGA)
- Diameter of Camera Head with Thread Protector: 6mm (0.23 in.)
- ◆ Probe Depth of Field: 0.25 to 12 in. (6.4 to 300mm)
- ♦ Probe Field of View: 60°
- ♦ Video File Format: .avi
- ♦ Photo File Format: .jpg
- ♦ Video Zoom Options: 3.0X, 5.0X
- ♦ Video Out Formats: NTSC and PAL
- ♦ Video Frame Rate: 30 frames per second (fps)
- ♦ Compression Format: Compatible with MPEG4
- ◆ Probe Operating/Storage Temperature: -4° to 140°F (-20° to 60°C)
- ◆ Console Operating Temperature: 32° to 140°F (0° to 60°C)
- ◆ Dimensions of Console: 5.5 x 4.6 x 1.7 in. (140 x 116 x 42mm)
- ◆ Weight of Console (without Batteries): 10.6 oz. (300a)
- ◆ Power Source: (4) "AA" Alkaline or rechargeable Ni-MH batteries
- ♦ Battery Life (typical): 4 hours operation

UPC	NO.
01628.2	DCS800

INCLUDES:

Console, 5.5mm Diameter x 1m Long QVGA Resolution Flexible-obedient Probe, 90° Mirrored Viewing Tip and Thread Protector Ring, 4GB SD Memory Card, AV and USB Cables, (4) "AA" Alkaline Batteries, Adjustable Hand Strap, Custom Hard Plastic Carrying Case, User's Manual, 1-Year Limited Warrany









Inspecting a densely packed aircraft engine requires a thin probe and high-quality optics.
The DCS800 has both.



The DCS800 will give any professional garage – including this one for Formula 1 cars — the racer's edge when it comes to inspection



Borescope Consoles & Probe Controller

DCS1600 HANDHELD RECORDING CONSOLE - H16

Add any QVGA (320 x 240 pixel) or VGA (640 x 480 pixel) resolution probe from General to create a high-performance video borescope inspection system.

FEATURES & BENEFITS:

- 3.5 in. (89mm) extra-wide, color TFT monitor with super sharp clarity
- · Records video and still images with instant playback
- Optional probes include: 3.9mm diameter, 4.9mm switchable front/side view, and 6mm diameter VGA and QVGA articulating and nonarticulating probes of 1m, 2m and 3m length
- · All probes feature at least 4 adjustablebrightness white LEDs for superior camera
- · All probes are water, oil, dust and scratch resistant to IP67 standard

- 3 interchangeable mirrored viewing tips provide extra wide viewing angles of 70°, 90°, 110°
- Multiple language menu
- TV monitor and USB computer interfaces
- · Rechargeable internal battery

INCLUDES:

4GB SD Card, Video and USB Cables, Rechargeable Li-ion Battery, AC Adaptor/Charger, Custom Protective Hard Case, User's Manual. 1-Year Limited Warranty

	UPC	NO.
Π	01580 3	H16



WIRELESS PROBE HANDLE/CONTROLLER – DCS1800-TR

Makes a DCS1800ART system compatible with a non-articulating probe or the P16HPART, P16HP2ART or P16HP3ART VGA Resolution Articulating Probe. (Does not include the DCS1800 Receiving Console.)

INCLUDES:

1-Year Limited Warranty

UPC	NO.
01475 2	DCS1800-TR

HANDHELD VGA RECORDING CONSOLE – H17

Add any QVGA (320 x 240 pixel) or VGA (640 x 480 pixel) resolution probe from General to create a high-performance video borescope inspection system.

FEATURES & BENEFITS:

- 3.5 in. (89mm) diagonal color LCD
- Records VGA resolution (640 x 480 pixel) video clips and still images
- · Controls for camera lighting, horizontal mirroring, 2X zoom, and slow-motion and fastforward video playback
- · Object measurement mode
- Accepts dozens of different length and diameter probes. Optional probes include: 3.9mm diameter, 4.9mm switchable front/side view, and 6mm diameter VGA and QVGA articulating and non-articulating probes of 1m, 2m and 3m length
- Dual output iacks enable before/after image comparisons
- · Adjustable Auto Power Off trigger

INCLUDES:

4GB SD Memory Card, Object Measuring Tip, 110° Mirrored Viewing Tip, AV and USB Cables, 4 "AA" Alkaline Batteries, LCD Cleaning Fluid and Cloth, Custom Hard Case, User's Manual, 1-Year Limited Warranty

UPC	NO.
01648 0	H17

H17

RUGGED COMPACT VGA RECORDING CONSOLE - H8

Add any QVGA (320 x 240 pixel) or VGA (640 x 480 pixel) resolution probe from General to create a high-performance video borescope inspection system.

FEATURES & BENEFITS:

- 3.5 in. (89mm) diagonal color LCD
- Records VGA or QVGA resolution video clips and still images using familiar menu-driven user interface. Saved video and photo files incorporate real-time brightness, zoom and mirroring adjustments made prior to recording or "on the fly"
- · Water, oil and dust-proof to IP55 standard and 1m (39 in.) drop-proof
- · Accepts dozens of different length and diameter probes. Optional probes include: 3.9mm diameter, 4.9mm switchable front/side view, and 6mm diameter VGA and QVGA articulating and non-articulating probes of 1m, 2m and 3m length
- . Three options for mirroring live video: horizontal, vertical, or both
- Analog video out jack and cable with RCA plug
- Adjustable Auto Power Off interval
- · Choice of 27 menu languages

INCLUDES:

Console, 90° Mirrored Viewing Tip, 4GB SD Memory Card, AV and USB Cables, (4) "AA" Alkaline Batteries, Adjustable Hand Strap, Custom Hard Plastic Carrying Case, User's Manual, 1-Year **Limited Warranty**

UPC	NO.
01647 3	Н8



H8

P16HPART

P16HP2ART P16HP3ART

VGA Resolution Articulating Probes

VGA RESOLUTION ARTICULATING PROBES W/ LIGHT **BOOST AND ANTI-REFLECTION – P16HPART,** P16HP2ART, P16HP3ART

Ideal for capturing high-quality (640 x 480 pixel) video and images of hard-to-reach or hard-to-see areas and equipment. Light boost, anti-reflection and image flip functions extract clear images from even the darkest spaces.

FEATURES & BENEFITS:

• Five super-bright white LEDs support 640 x 480 pixel (VGA) resolution video and still images

• 6mm (0.23 in.) diameter probe goes deep into tight spaces

• Probe articulates 155° up and 155° down with radius of 50 ± 5 mm

• Light boost, anti-reflection and 90° image rotation buttons on handle

• Superior optics tailored for close-focus viewing from 0.25 in. to 12 in. (6.4 to 300mm) over 87° (diagonal) field of view

• 0.9 in. (23mm) long stainless steel camera head is immune to bathroom toilet cleaner, unleaded gasoline, diesel fuel, brake/ transmission fluid and machine oil

Probe is dust/waterproof to IP67 standard

• Dimensions of Handle: 5.47 x 1.38 x 1.26 in. (139 x 35 x 32mm)

• Weight: 7.76 oz. (220g)

UPC	NO.
01579 9	P16HPART (1m long)
01621 3	P16HP2ART (2m long)
01622 0	P16HP3ART (3m long)





An articulating probe is a must for inspecting densely packed aircraft engines



Before pressing light button (with mirror)



The 310° sweep of the articulating head makes it possible to view areas "behind" the probe tip

After pressing light button (with mirror)

The anti-reflection function of General's VGA resolution probes

Compatible with all

high-performance

video borescope consoles,

probe controllers and systems (except the DCS1100)

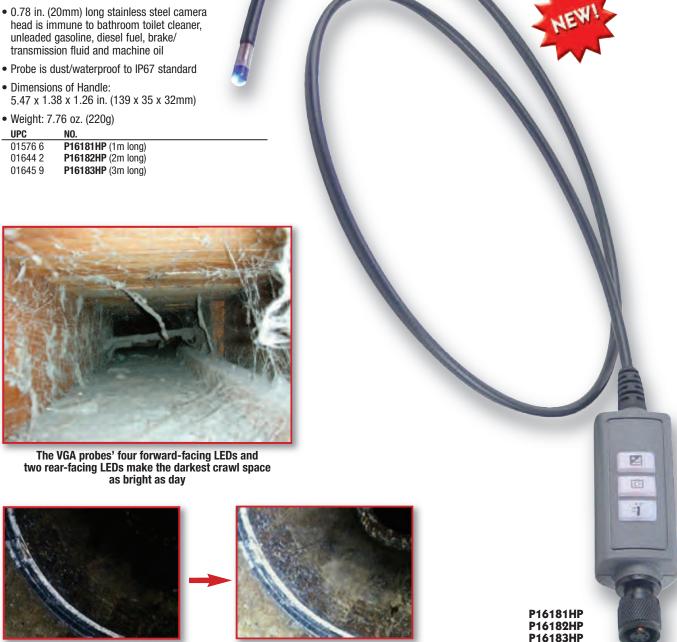


VGA RESOLUTION PROBES W/ LIGHT BOOST AND ANTI-REFLECTION -P16181HP, P16182HP, P16183HP

Ideal for capturing high-quality (640 x 480 pixel) video and images of hard-to-reach or hard-to-see areas and equipment. Light boost, anti-reflection and image flip functions extract clear images from even the darkest spaces.

FEATURES & SPECIFICATIONS:

- Six super-bright white LEDs support 640 x 480 pixel (VGA) resolution video and still images
- 5.5mm (0.22 in.) diameter probe goes deep into tight spaces
- Light boost, anti-reflection and 90° image rotation buttons on handle
- · Superior optics tailored for close-focus viewing from 0.25 in. to 12 in. (6.4 to 300mm) over 60° (diagonal) field of view



The light boost function of General's VGA resolution probes

Before Boosting

The SEEKER™ Video Inspection Systems

From our affordable DCS050 to our feature-packed SEEKER™ 400 Series, this line of camera scopes is designed to appeal to everyone from experienced automotive mechanics and HVAC/R technicians to DIY weekend warriors.







	PRIMARY SYSTEM FEATURES	Rugged Recording	Rugged Non-recording	
	Model No.	DCS350	DCS280	
SYSTEM	System Name	The SEEKER™ 350 Rugged Recording Video Inspection System	The SEEKER™ 280 Rugged Video Inspection System	
	Display	3.5 in. color LCD	2.4 in. color LCD	
	Records	Video and Still Images	_	
	Resolution (pixels)	Camera probe: 640 x 480 Monitor: 320 x 240	Camera probe: 640 x 480 Monitor: 320 x 240	
	Video Controls	4X Zoom, 180° rotation	2X Zoom, 180° rotation	
	Memory (capacity of included SD card)	2GB + 64MB Internal Flash Memory	-	
	Power Source	4 "AA" Batteries	4 "AA" Batteries	
	Limited Warranty Term	3 years	3 years	
	Diameter	12mm	9mm	
	Туре	Flexible-Obedient	Flexible-Obedient	
	Length	1m (3.28 ft.)	1m (3.28 ft.)	
	Field of View	60°	60°	
Supplied Probe	Depth of Field	1 to 12 in.	1 in. to 10 ft.	
	Resistance to Water and Dust	IP67 (Probe only) Unit is 1m drop-proof	IP67 (Probe only) Unit is 1m drop-proof	
	Light Source, Lens Material, Camera Head Material	2 LEDs, Plastic	4 LEDs, Glass, Anodized Aluminum	



The SEEKER™ Video Inspection Systems







Model No.	UPC	Diameter	Length	Description
P230-1	01386 1	12mm (0.47 in.)	1m (3.28 ft.)	Flexible-Obedient Probe - Close Focus*1
P230-1F	01474 5	12mm (0.47 in.)	1m (3.28 ft.)	Flexible-Obedient Probe - Far Focus*2
P230-1X	01387 8	12mm (0.47 in.)	1m (3.28 ft.)	Flexible-Obedient Probe Extension
P230-2X	01390 8	12mm (0.47 in.)	2m (6.6 ft.)	Flexible-Obedient Probe Extension
P230-3X	01391 5	12mm (0.47 in.)	3m (9.8 ft.)	Flexible-Obedient Probe Extension
P495-1N	01423 3	9mm (0.35 in.)	1m (3.28 ft.)	Flexible-Obedient Probe
P495-2N	01467 7	9mm (0.35 in.)	2m (6.6 ft.)	Flexible-Obedient Probe
P495-3N	01468 4	9mm (0.35 in.)	3m (9.8 ft.)	Flexible-Obedient Probe
P455-1N	01466 0	5.5mm (0.22 in.)	1m (3.28 ft.)	Flexible-Obedient Probe
P455-2N	01469 1	5.5mm (0.22 in.)	2m (6.6 ft.)	Flexible-Obedient Probe
P455-3N	01470 7	5.5mm (0.22 in.)	3m (9.8 ft.)	Flexible-Obedient Probe

^{*1-}General's 12mm close-focus probe has a defined depth of field of 0.25 to 4 in. (6.4 to 101.6mm)

^{*2-}General's 12mm far-focus probe has a minimum focal distance of 4 in. (101.6mm) and is in focus from there to 8 ft. (2.4m)

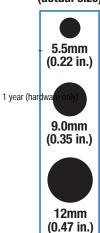




Model No.	UPC	Diameter	Description
RCV100	01446 2	-	Wireless USB Video Receiver for The SEEKER™ 100 & 400 Systems
AC2	01568 1	_	Replacement AC Adaptor/Charger for DCS400 Series
ADP05V	01497 4	_	Car Charger for DCS400 and DCS100 Series
PT12	01559 9	12mm (0.47 in.)	Mirror, magnet and hook accessories for DCS200, DCS300 and DCS400
PT9	01560 5	9mm (0.35 in.)	Mirror, magnet, hook and thread protector accessories for DCS200-09 and DCS400-09
PT5	01561 2	5.5mm (0.22 in.)	Mirror, guide ball and thread protector accessories for DCS200-05, DCS355 and DCS400-05

Wireless Recording Video Over Internet	Utility Non-Recording	Utility Non-Recording	Wireless USB Video Over Internet	Utility USB
DCS400 DCS400-09 DCS400-05	DCS300 DCS355	DCS200 DCS200-09 DCS200-05	DCS100	DCS050 DCS050-09
The SEEKER™ 400 Series Wireless Recording Video Inspection Systems	The SEEKER™ 300 Series Video Inspection Systems	The SEEKER™ 200 Series Video Inspection Systems	The SEEKER™ 100 Wireless USB Video Inspection System	The SEEKER™ 050 Series USB Video Inspection Systems
3.5 in. color LCD	3.5 in. color LCD	2.4 in. color LCD	User's computer	User's computer
Video and still images			Video and still images	Video and still images
Camera probe: 640 x 480 (DCS400, DCS400-09): 320 x 240 (DCS400-05) Monitor: 320 x 240 (DCS400, DCS400-09): 160 x 120 (DCS400-05)	Camera probe: 640 x 480 (DCS300); 320 x 240 (DCS355) Monitor: 320 x 240 (DCS300); 160 x 120 (DCS355)	Camera probe: 640 x 480 (DCS200, DCS200-09); 320 x 240 (DCS200-05) Monitor: 320 x 240 (DCS200, DCS200-09); 160 x 120 (DCS200-05)	Live video & still images: 640 x 480	Live video & still images: 640 x 480
4X Zoom, 180° rotation	2X Zoom, 180° rotation	2X Zoom, 180° rotation	Via user's computer	Via user's computer
2 GB	-	-	-	-
Rechargeable Li-ion Battery A/C Adapter/Charger	1 "9V" Battery	1 "9V" Battery	Rechargeable Li-ion Battery A/C Adapter/Charger	No battery needed
3 years	3 years	3 years	1 year (hardware only)	1 year (hardware only)
DCS400 - 12mm DCS400-09 - 9mm DCS400-05 - 5.5mm	DCS300 - 12mm DCS355 - 5.5mm	DCS200 - 12mm DCS200-09 - 9mm DCS200-05 - 5.5mm	12mm	DCS050 - 12mm DCS050-09 - 9mm
Flexible-Obedient	Flexible-Obedient	Flexible-Obedient	Flexible-Obedient	Flexible-Obedient
1m (3.28 ft.)	1m (3.28 ft.)	1m (3.28 ft.)	1m (3.28 ft.)	1m (3.28 ft.)
60°	60°	60°	60°	60°
DCS400 - 1 to 12 in. DCS400-09 - 1 in. to 10 ft. DCS400-05 - 0.25 to 4 in.	DCS300 - 4 in. to 8 ft. DCS355 - 0.25 to 4 in.	DCS200 - 4 in. to 8 ft. DCS200-09 - 1 in. to 10 ft. DCS300-05 - 0.25 to 4 in.	4 in. to 8 ft.	DCS050 - 4 in. to 8 ft. DCS050-09 - 1 in. to 10 ft.
IP67 (Probe only)	IP67 (Probe only)	IP67 (Probe only)	IP67 (Probe only)	IP67 (Probe only)
2 LEDs, Plastic (DCS400); 4 LEDs, Glass, Anodized Aluminum (DCS400-09, DCS400-05)	2 LEDs, Plastic (DCS300); 4 LEDs, Glass, Anodized Aluminum (DCS355)	2 LEDs, Plastic (DCS200); 4 LEDs, Glass, Anodized Aluminum (DCS200-09, DCS200-05)	2 LEDs, Plastic	2 LEDs, Plastic (DCS050); 4 LEDs, Glass, Anodized Aluminum (DCS050-09)

SEEKER™ 2.7 in. color LCD Probe **Diameters** (actual size)



Rugged Recording Camera Scope

GENERAL GENERAL 2012/18/18/38-1.JPG 2012/02/13 11-05-35

RUGGED RECORDING VIDEO INSPECTION SYSTEM - DCS350

Ideal for applications in harsh environments requiring a durable and ruggardized system. Features voice annotation, internal memory and removable SD card.

FEATURES & BENEFITS:

- Includes long (1m/39 in.), thin (12mm/0.47 in.) diameter, flexible-obedient camera-tipped probe for looking deep into tight spaces. Also available are longer and thinner (9mm and 5.5mm) probes, and probe extensions that extend inspection range to 16 ft. (5m).
- All probes and extensions are oil, water and dust-proof to IP67 standard.
- Grip and monitor are double-molded, making them drop-resistant to 1m (39 in.) height and IP54 splash-proof.
- 64MB internal memory for added versitility and convenience
- Built-in microphone to enable voice annotation of video recordings
- 2GB MicroSD card (upgradeable to 16GB), and USB jack to facilitate photo and video transfer
- 3.5 in. (89mm) diagonal color LCD shows crystal-clear videos and images
- One-button video start/stop and photo capture
- Image flip and 1 − 4X zoom buttons
- Two adjustable-brightness LEDs illuminate dark areas
- TV Out jack and included cable send video and images to larger monitor
- Includes three probe tip accessories (magnetic pickup, pickup hook and 45° mirror)
- Adjustable Auto Power Off interval
- Custom molded hard carrying case
- Powered by Alkaline or rechargeable "AA" batteries
- · Choice of five menu languages

SPECIFICATIONS:

- ◆ Display Size/Type:3.5 in. (89mm) diagonal TFT color LCD
- ♦ Display Resolution: 320 x 240 pixels
- Monitor Controls:
 180° flip, 1 to 4X zoom in 0.5 steps, brightness
 + and -, start/stop video recording, take picture
- ◆ Probe Diameter/Type: 12mm (0.47 in.) flexible-obedient
- ♦ Probe Length: 1m (39 in.)

- ♦ Probe Field of View: 60°
- ◆ Probe Depth of Field: 1 to 12 in. (25 to 300mm)
- ◆ Camera Light Source:2 adjustable-brightness white LEDs
- ♦ Impact Resistance: To height of 1m (39 in.)
- Water, Dust, Splash Resistance Levels: Camera-tipped probe designed to meet IP67; Grip and monitor designed to meet IP54
- ♦ Operating Temperature/Humidity: 32° to 113°F (0° to 45°C) @ 5 to 95% RH
- ♦ Internal Flash Memory Capacity: 64MB
- ♦ Maximum SD Card Capacity: 16GB
- ♦ Video Compatibilities: NTSC and PAL
- ♦ Video Resolution/File Type: 320 x 240 pixels/.avi
- ◆ Still Image Resolution/File Type: 640 x 480 pixels/.jpg
- ♦ PC Interface: USB2.0
- Menu Languages: English, French, Spanish, Portuguese, Mandarin Chinese
- ◆ Dimensions of Grip: 10.6 x 3.0 x 4.0 in. (270 x 75 x 100mm)
- ♦ Weight of Grip: 1 lb. (454g)
- Power Source:4 "AA" batteries (included)

INCLUDES:

- 1m (39 in.) Long x 12mm (0.47 in.) Diameter Camera-tipped Probe, Wand-type Grip and 3.5 in. (89mm) Color LCD
- 2GB MicroSD Card
- Three Probe Tip Accessories (Magnetic Pickup, Pickup Hook, 45° Mirror)
- ScopeView Video/Image Display Software
 + Driver on Mini-CD
- USB and video cables
- 4 "AA" Batteries
- Custom Hard Case
- User's Manual
- 3-Year Limited
 Warranty

015827

Warranty **UPC NO**.





Inspecting a crawl space the quick and easy way







Find blockages or broken registers in A/C ductwork

DCS350



Rugged Non-Recording Camera Scope

RUGGED NON-RECORDING VIDEO INSPECTION SYSTEM – DCS280

Ideal for real-time applications.

FEATURES & BENEFITS:

- Big, bright color LCD for crystal-clear real-time video imaging
- 9mm (0.35 in.) diameter x 1m (39 in.) long camera-tipped probe is thin enough to fit into very narrow spaces
- 2m and 3m long x 9mm diameter probes are available
- Super thin 5.5mm dia. probes in 1m, 2m and 3m lengths are also available
- All probes are oil, water and dust-proof to IP67 standard. The DCS280's wand-type grip and monitor are IP54 splash-proof.
- Four adjustable LEDs in camera head illuminate dark areas
- Unit is drop-resistant to 1m height and comes in a protective hard case
- Invert what you see 180° to read labels rightside up and Z00M video up to 200% to show
- Pays for itself quickly: Avoid the cost and trouble of tearing down engines
- One-handed operation frees your other hand to use tools
- · AV Out jack enables video connection to any NTSC television
- Includes four useful probe tip accessories

APPLICATIONS:

- · Inspecting cylinders, valves, diesel injectors and glow plugs
- · Viewing behind body panels and under the dashboard for electrical wiring and connections problems
- · Examining for corrosion and wear in hard-to-see areas
- · Inspecting fluid lines and leaks

INCLUDES:

- Video Inspection System with Wand-type Grip and 2.4 in. (61mm) Color LCD
- 1m (39 in.) Long x 9mm (0.35 in.) Diameter Flexible-obedient Probe
- Four Probe Tip Accessories (Thread Protector. Magnetic Pickup, Pickup Hook, 45° Mirror)
- Video cable
- 4 "AA" Batteries
- Custom Hard Case



The rugged DCS280 shrugs off the accidental bumps typical of industrial work

SPECIFICATIONS:

- ◆ Display Size/Type: 2.4 in. (61mm) diagonal TFT color LCD
- ♦ Display Resolution: 320 x 240 pixels
- ♦ Monitor Controls: 180° flip, 1 to 2X zoom in 0.2 steps, brightness + and -
- ◆ Probe Diameter/Type: 9mm (0.35 in.) flexibleobedient
- ♦ Probe Length: 1m (39 in.)
- ♦ Probe Field of View: 60°
- ♦ Probe Depth of Field: 1 in. to 10 ft. (25mm to 3m)
- ♦ Camera Light Source: 4 adjustable-brightness white LEDs
- ♦ Impact Resistance: To height of 1m (39 in.)
- ♦ Water, Dust, Splash Resistance Levels: Camera-tipped probe designed to meet IP67; Grip and LCD designed to meet IP54
- ◆ Operating Temperature/Humidity: 32° to 113°F (0° to 45°C) @ 5 to 95% RH
- ♦ Dimensions of Console: 10 x 3.6 x 2.3 in. (254 x 91 x 58mm)
- ♦ Weight of Console: 1 lb. (454g)
- ♦ Dimensions of Case:15 x 11 x 3.5 in. (381 x 279 x 89mm)
- ♦ Weight of Case and Contents: 4 lb. (1.8 kg)
- ♦ Power Source: 4 "AA" batteries (included)

DCS280 015728









Perfect for driveway mechanics

The SEEKER™ Series Camera Scopes



†Windows® 7, Windows® Vista and Windows® XP are registered trademarks of Microsoft Corporation



- *1 General's 12mm close focus probe has a defined depth of field of 0.25 to 4 in. (6.4 to 101.6mm)
- *2 General's 12mm far focus probe has a minimum focal distance of 4 in. (101.6mm) and is in focus from there to 8 ft. (2.4m)



THE SEEKER™050 USB VIDEO INSPECTION SYSTEMS - DCS050

Features a 12mm (0.47 in.) or 9mm (0.35 in.) diameter, 1m long waterproof camera probe with a USB connection to view images and video on your computer.

FEATURES:

- USB computer interface
- Works with Windows® 7, Windows® Vista and Windows® XP†
- Very affordable
- Adjustable light intensity from two (DCS050) or four (DCS050-09) built-in LEDs
- 1m (3.28 ft.) flexible-obedient probe retains configured shape to suit various applications
- · Probe is IP67 water, oil and dust proof

SPECIFICATIONS:

- ♦ Camera Resolution: 640 x 480 pixels
- ◆ Fixed Probe (DCS050): 12mm (0.47 in.) diameter x 1m (3.28 ft.) long with a depth of field of 4 in. to 8 ft.
- ◆ Fixed Probe (DCS050-09): 9mm (0.35 in.) diameter x 1m long with a depth of field of 1 in. to 10 ft. (25mm to 3m)

- ♦ Field of View: 60°
- ◆ Operating Temperature: 32° to 113°F (0° to 45°C)
- ♦ Operating Humidity: RH 5% to 95% non-condensing
- Storage Temperature: -4° to 122°F (-20° to 50°C), ≤85% RH
- ◆ Dimensions: 10.5 x 2.9 x 3.1 in. (266 x 73 x 80mm)
- ♦ Weight: 4.8 oz. (135g) w/o probe
- ♦ Power Source: Computer's USB port

INCLUDES:

Scope Handle with Fixed 1m Long Flexible-Obedient Probe, User's Manual, 1-Year Limited Warranty (Hardware Only)

UPC	NO.	PROBE DIAMETER
01445 5	DCS050	12mm (0.47 in.)
01484 4	DCS050-09	9mm (0.35 in.)

THE SEEKER™100 WIRELESS VIDEO INSPECTION SYSTEM - DCS100

Wirelessly transmits video and images to your computer up to 33 feet away; included software enables streaming video for remote viewing over the Internet.

FEATURES:

- Built-in radio transmitter wirelessly transmits live video signal to the RCV100 USB video receiver up to 10m away, enabling the video to be viewed on a Windows PC and streamed live over the Internet
- Works with Windows® 7, Windows® Vista and Windows® XP†
- 12mm (0.47 in.) diameter x 1m (3.28 ft.) long flexible-obedient far focus*2 camera-tipped probe is water, oil and dust proof to IP67 standard
- Optional probe extensions of 1m, 2m, and 3m (3.28 ft., 6.56 ft., 9.84 ft.) are available for the 12mm probe
- In addition to the standard 12mm (0.47 in.) diameter far-focus*2 probe, the DCS100 handle can also accept optional 9.0mm (0.35 in.) and 5.5mm (0.22 in.) diameter close-focus*1 camera-tipped probes
- Adjustable light intensity from two cameralighting LEDs
- Flexible-obedient probes retain configured shape

SPECIFICATIONS:

- ♦ Wireless Frequencies: 2414MHz, 2432MHz, 2450MHz, 2468MHz
- ♦ Wireless Range: Up to 10m (33 ft.)
- ♦ Operating Temperature: 32° to 103°F (0° to 45°C)
- ◆ Operating Humidity: 5% to 95% RH noncondensing
- Storage Temperature: -4° to 140°F (-20° to 50°C),≤85% RH
- ♦ Dimensions: 3.26 x 1.65 x 0.74 in. (83 x 42 x 19mm)
- ♦ Weight: 1.23 oz. (35g)

INCLUDES:

Custom Hard Case, Transmitter Handle with 12mm Diameter x 1m Long Flexible-Obedient Probe, 3 Accessory Tools: (45° Mirror, Magnetic Pick-Up, Pick-Up Hook), RCV100 Wireless USB Video Receiver, USB Extension and Video Cables, Software on Mini-CD, User's Manual, 1-Year Limited Warranty (Hardware Only)

UPC	NO.	PROBE DIAMETER
01443 1	DCS100	12mm (0.47 in.)

WIRELESS USB VIDEO RECEIVER - RCV100

Unique device wirelessly interfaces The Seeker[™]100 or The Seeker[™]400 Video Inspection System to any Windows computer via its USB2.0 port from up to 33 ft. away. Once the connection is made, real-time inspection video and still images captured by the Seeker can be viewed and stored on the PC. Skype-enabled ScopeView[™] media management software included with the RCV100 allows inspection video to be streamed over the Internet to support videoconferencing and remote diagnostics.

FEATURES:

- Skype-enabled streaming video receiver sends live video over the Internet
- Includes easy-to-use, powerful software
- USB 2.0 interface
- Works with DCS100 and DCS400 series to enable remote video presentations and live video troubleshooting and training
- 4 channel selection, enabling the user to select uncluttered radio bands

INCLUDES:

Receiver, USB Extension Cable, Video Cable, Software on Mini-CD, User's Manual, 1-Year Limited Warranty

UPC	NO.	
01446 2	RCV100	



The SEEKER™ Series Camera Scopes

THE SEEKER™200 SERIES VIDEO INSPECTION SYSTEMS - DCS200

Compact video camerascopes for the visual inspection of inaccessible areas.

FEATURES:

- View inspection video instantly on the 2.4 in. (61mm) color LCD
- · Separate monitor buttons for 2x zoom and 180° image flip
- System includes a 1m (3.28 ft.) long, flexibleobedient, camera-tipped probe
- · Probes are flexible, strong and slim enough to perform automotive engine check-up
- Flexible-obedient probes retain configured shape to suit different inspection needs
- Probes are water, oil and dust proof to IP67 standard
- Optional 12mm probe extensions of 1m, 2m, and 3m (3.28 ft., 6.6 ft., 9.9 ft.) are available for maximum extension of up to 5m (16 ft.)

SPECIFICATIONS:

DCS200 SYSTEM CONSOLE

- ♦ Display: 2.4 in. (61mm) Color LCD
- ♦ Resolution: 320 × 240 pixels
- ♦ Operating Temperature: 32° to 113°F (0° to
- ♦ Power Source: 1 "9V" battery (included)
- ♦ Weight: 15.6 oz. (442g)

- ♦ Supplied Probe: 12mm diameter, 1m long
- ◆ Light Source: 2 adjustable-brightness LEDs
- ♦ Field of View: 60°

♦ Optional 12mm Dia. Probe Extensions: 1m, 2m, 3m (3.28 ft., 6.6 ft., 9.9 ft.) for maximum extension of 5m (16 ft.)

- ◆ Supplied Probe: 5.5mm diameter, 1m long
- ♦ Light Source: 4 adjustable-brightness LEDs
- ♦ Field of View: 95°
- ◆ Tip Accessories: Thread protector, ball guide and mirror

- ♦ Supplied Probe: 9mm diameter, 1m long
- ♦ Light Source: 4 adjustable-brightness LEDs
- ♦ Field of View: 95°
- ◆ Tip Accessories: Thread protector, pick-up hook, magnetic pick-up, 45° mirror

INCLUDES:

Custom Hard Case, Pistol Grip Camera Handle with 1m Long, Flexible-Obedient Probe, 3 Accessory Tools, 1 "9V" Battery, Mini-Screwdriver, User's Manual, 3-Year Limited Warranty

UPC	NO.	PROBE DIAMETER
01372 4	DCS200	12mm (0.47 in.)
01494 3	DCS200-05	5.5mm (0.22 in.)
01482 0	DCS200-09	9mm (0.35 in.)







THE SEEKER™300 VIDEO INSPECTION SYSTEMS - DCS300

Compact video camerascopes for the visual inspection of inaccessible areas.

FEATURES:

- View inspection video instantly on the 3.5 in. (89mm) color LCD screen
- · Separate monitor buttons for 2x zoom and 180° image flip
- System includes a 1m (3.28 ft.) long, flexibleobedient, camera-tipped probe
- · Camera-tipped probes have built-in adjustable LED lighting
- · Probes are flexible, strong and slim enough to perform automotive engine check-up
- · Interchangeable probes are water, oil and dust proof to IP67 standards

SPECIFICATIONS:

DCS300 CONSOLE

- ♦ Display: 3.5 in. (89mm) Color LCD
- ♦ Resolution: 320 × 240 pixels
- ♦ Operating Temperature: 32° to 113°F (0° to 45°C)
- ♦ Power Source: 1 "9V" battery (included)
- ♦ Weight: 16 oz. (454g)

SYSTEM PROBES:

All probes are:

- Camera-tipped with built-in adjustable LED lighting
- · Flexible, strong and slim enough to perform automotive engine check-up
- · Water, oil and dust proof to IP67 standard
- · Flexible-obedient, meaning they retain their configured shape to suit various inspection needs

DCS300

- ♦ Supplied Probe: 12mm diameter, 1m long
- ♦ Light Source: 2 adjustable-brightness LEDs
- ♦ Field of View: 60°
- ◆ Tip Accessories: 45° Mirror, Magnetic Pick-Up, Pick-Up Hook
- ♦ Optional 12mm Dia. Probe Extensions: . 1m, 2m, 3m (3.28 ft., 6.6 ft., 9.9 ft.) for maximum extension of 5m (16 ft.)

- ♦ Supplied Probe: 5.5mm diameter, 1m long
- ♦ Light Source: 4 adjustable-brightness LEDs
- ♦ Field of View: 60°
- Tip Accessories: Thread protector, ball guide and mirror

INCLUDES:

Custom Hard Case, Pistol Grip Camera Handle with 1m Long Flexible-Obedient Probe, 3 Accessory Tools, 1 "9V" Battery, Mini Screwdriver, User's Manual, 3-Year Limited Warranty

UPC	NO.	PROBE DIAMETER
01373 1	DCS300	12mm (0.47 in.)
01472 1	DCS355	5.5mm (0.22 in.)







CE

DCS400

The SEEKER™ 400 & Specialty Borescope

THE SEEKER™400 WIRELESS RECORDING VIDEO INSPECTION SYSTEMS - DCS400

Wireless interface with optional RCV100 module enables streaming of live inspection video over the Internet.

FEATURES:

- Color monitor can be detached from pistol grip to show inspection video up to 33 ft. from probe
- 4x zoom and 180° video flip buttons on monitor
- · All systems include one long, thin flexibleobedient camera-tipped probe with IP67 water/oil/dustproof rating
- Included Li-ion batteries for monitor and grip can be charged at same time through included "Y" cable
- Included 2GB MicroSD card can store up to 3 hours of AVI video as well as snapshot JPEGs
- NTSC and PAL analog video out
- · Choice of 5 menu languages: English, French, Spanish, Chinese and Portuguese
- . Optional IP67 probes of various lengths and diameters are available (see p. I-27)

SPECIFICATIONS:

DETACHABLE WIRELESS MONITOR:

- ♦ Display: 3.5 in. (89mm) diagonal color LCD with 320 x 240 pixel resolution
- ♦ Dimensions: 3.9 x 3.3 x 1.0 in. (100 x 85 x 25mm)
- ♦ Weight: 6.1 oz. (172g)

PISTOL-GRIP PROBE HANDLE:

- ◆ Transmission Range: Up to 10m (33 ft.)
- ♦ Dimensions: 8.5 x 6.5 x 1.9 in. (215 x 165 x 50mm)
- ♦ Weight: 15 oz. (425g)

DCS400

- ♦ Supplied Probe: 12mm diameter, 1m long
- ♦ Light Source: 2 adjustable-brightness **LEDs**
- ♦ Field of View: 60°; Depth of Field: 1 to 12 in. (25 to 300mm)
- ♦ Tip Accessories: Magnetic Pickup, Pickup Hook, 45° Mirror
- ♦ Optional 12mm Probe Extensions: 1m. 2m, 3m (3.28 ft., 6.6 ft., 9.9 ft.) for maximum extension of 5m (16 ft.)

DCS400-05

- ◆ Supplied Probe: 5.5mm diameter, 1m long
- ♦ Light Source: 4 adjustable-brightness LEDs
- ♦ Field of View: 60°; Depth of Field: 0.25 to 4 in. (6.4 to 100mm)
- ◆ Tip Accessories: Thread protector, ball guide and mirror

DCS400-09

- ♦ Supplied Probe: 9mm diameter, 1m long
- ♦ Light Source: 4 adjustable-brightness LEDs
- ♦ Field of View: 60°; Depth of Field: 1 in. to 10 ft. (25mm to 3m)
- ◆ Tip Accessories: Thread protector, pick-up hook, magnetic pick-up, 45° mirror

INCLUDES:

Pistol Grip Handle, Flexible-Obedient Probe, Detachable Wireless Monitor, 2GB MicroSD Memory Card, 3 Accessory Tools, USB and Video Interconnect Cables, 2 Lithium-Ion Rechargeable Batteries with AC Adaptor/Charger, Custom Hard Case, User's Manual, 3-Year Limited Warranty

UPC	NO.	PROBE DIAMETER
013717	DCS400	12mm (0.47 in.)
01447 9	DCS400-05	5.5mm (0.22 in.)
01426 4	DCS400-09	9mm (0.35 in.)

THE PALMSCOPE™ - DCS950

A rugged, full-featured video inspection system no bigger than a smartphone. Ideal for busy craftsmen, professionals and DIYers.

FEATURES:

- Fits in your pocket or clips on your belt
- Affordable
- 1 meter drop-proof
- Long, thin camera-tipped probe penetrates tight. hard-to-reach spaces
- · Probe is waterproof, holds its shape and coils inside clamshell case for storage
- · Four camera-lighting LEDs produce bright, crisp video on large color LCD
- · Four screen controls
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Probe Length: 24 in. (0.6m)
- ♦ Camera Head Diameter: 0.35 in. (9mm)
- ◆ Probe/Camera Head Water/Dust/Oil Resistance: to IP67 standard
- ♦ LCD Size: 2.7 in. (686mm) diagonal
- ♦ LCD/Camera Resolution: 320 x 240 pixels (QVGA)
- ◆ Camera Depth of Field: 1 in. to 10 ft. (25mm to 3m)
- ◆ Camera Field of View: 60°

- ♦ Screen Controls: Brightness up and down, 1 to 4X zoom in 6 steps, 180° flip
- ♦ Case Impact Resistance: From height of 39 in. (1m) onto 2 in. (50mm) thick hardwood
- ♦ Dimensions: 5.4 x 2.9 x 1.5 in. (136 x 73 x 39mm)
- ♦ Weight: 9 oz. (250g)
- ♦ Power Source: (4) "AAA" batteries (not included)

INCLUDES:

Nylon Pouch with Belt Clip, Four Probe Tip Accessories (Pickup Hook, Magnetic Pickup, 45° Mirror, Thread Protector), User's Manual, 1-Year Limited Warranty

UPC	NO.
01660 2	DCS950







VIDEO INSPECTION SYSTEMS

GENERAL®

Specialty Borescopes

iBORESCOPE - DCiS1

Ideal for wireless inspection applications. With the help of a free app, iBorescope can wirelessly stream video to your iPhone®, iPad® or Android™ device via a self-generated WiFi hotspot without Internet access. Video clips and still images extracted from the stream can be displayed, stored, played back and shared.

FEATURES:

- 6 ft. (1.83m) long, thin (0.39 in./9.8mm diameter) flexible-obedient probe captures VGA (640 x 480 pixel) resolution video
- App's VIDEO and SNAP SHOT soft buttons capture .mp4 (Apple) or .m4v (Android) video clips and still .jpg images of video stream and save files to Photos folder of iPad/iPad or Android device. Video clips and photos can be viewed immediately, shared immediately by text, or shared later via e-mail or Skype™.
- Non-replaceable Li-ion battery charges through included USB cable
- · Includes three useful probe tip accessories

SPECIFICATIONS:

- ◆ Compatible with: All iPad, iPhone and Android devices
- ♦ Security: WiFi (WEP) password
- ♦ Video Resolution: 640 x 480 pixels (VGA)
- ♦ WiFi Range: 60 ft. (18m), max (unobstructed)
- ♦ Camera Lighting: 2 adjustable-brightness LEDs
- ◆ Camera Head Diameter: 0.39 in. (9.8mm)
- ♦ Camera Depth of Field: 1/2 in. to 12 in. (12.7 to 305mm)
- ◆ Camera Field of View: 54°

- ♦ Probe Length: 6 ft. (1.83m)
- ♦ Probe Minimum Bending Radius: 1.77 in. (45mm)
- ◆ Dust & Water Resistance Rating: IP67 (Probe & Camera Head only)
- ♦ Operating Voltage: 3.7V internal from 5V input
- ♦ Current Consumption: 600 mA, max @ 5VDC
- ◆ Operating Temperature: 32° to 104°F (0° to 40°C)
- ♦ Grip Dimensions: 8.50 x 2.50 x 4.88 in. (216 x 64 x 124mm)
- ♦ Weight: 5.80 oz. (164.43g)
- ◆ Power Source: Rechargeable Li-ion battery with 5V/1A output
- ♦ Battery Life: 3 hours (typical)

INCLUDES:

WiFi Grip, 0.39 in. Diameter x 6 ft. Long Probe, Charging Cable with USB Plug (compatible with iPad/iPhone/Android Power Adaptor and all computers), Video Cable, Three Probe Tip Accessories (45° Mirror, Magnetic Pickup, Pickup Hook), Custom Hard Case, User's Manual, 1-Year Limited Warranty

UPC	NO.
01591 9	DCiS1



iBorescope makes it easy to identify the jacks on the back of rack or wall-mounted equipment

CE

SEASCOPE™600 NON-RECORDING SEASCOPE™660 RECORDING WATERPROOF VIDEO INSPECTION SYSTEMS – DCS600, DCS660

Ideal for plumbing-related applications and inspections of submerged structures and parts of boats, ships, bridges or offshore oil platforms.

FEATURES:

- Makes it possible to inspect sewer and water lines carrying running water
- Enables a diver or snorkeler to view probe video under water in real time. Other "waterproof" inspection systems lack watertight grips and monitors. Entire unit can be submerged.
- Ideal for marine search & rescue operations
- Eliminates concerns about accidentally dropping or dunking grip or monitor into water
- Grip, probe and monitor are guaranteed leakproof to depth of 1m; all three components will also resist leaks at depths up to 2m for short periods (1 hour, max)
- 3.4 in. (86mm) color LCD makes videos large and crystal-clear
- Video can be inverted (rotated 180°) to make it easier to read labels and serial numbers
- Analog Video Out jack

Additional Features for SeaScope™660

- Record time/date-stamped still images and videos on included 2GB MicroSD memory card
- Videos can be panned by joystick and zoomed up to 4X
- USB jack and cable for PC connection

SPECIFICATIONS:

◆ Camera-Tipped Flexible Obedient Probe Diameter, Length: 9.8mm (0.39 in.), 1m (3.3 ft.)

- ♦ Field of View: 54°
- ♦ Depth of Field: 0.6 to 6 in. (15 to 150mm)
- ♦ Camera Illumination: 2 adjustable LEDs
- ♦ LCD Type, Size: TFT, 3.4 in. (86mm) diagonal
- ♦ Display Resolution: 320 x 240 pixels
- ◆ Operating Temperature: 32° to 113°F (0° to 45°C)
- ♦ Grip Dimensions: 13.0 x 10.5 x 4.5 in. (330 x 267 x 114mm)
- ♦ Grip Weight: 56 oz. (1587.57g)
- ♦ Power Source: 4 "AA" batteries (not included)

INCLUDES:

UPC

Watertight Grip, Monitor and 1m Camera-tipped Probe; Video Cable; Set of Three Probe Tip Accessories (45° Mirror, Pickup Hook and Magnetic Pickup); Hard Plastic Protective Case User's Manual, 1-Year Limited Warranty. DCS660 also includes 2GB MicroSD Memory Card, USB Cable

015148	DCS600
01515 5	DCS660
01596 4	P600-2 70 in. (1.8m) long x 9.8mm diameter optional probe
01597 1	P600-3 105 in. (2.7m) long x 9.8mm diameter optional probe





Infrared Thermometers

Cold or hot \dots it matters not \dots to General's extended family of point-and-shoot infrared thermometers. From our affordable VR40 and IRT105 to our Ultra-High Temperature IRT5000, there's an IRT with your name – and application – on it. Just pick a Distance-to-Spot (D:S) ratio and a temperature range and begin firing away.



VR4	10	
(see	page	I-36)

IRT206 & IRT207 (see page I-36)

IRTC50 (see page I-37)

IRT650 (see page I-37)

IRT657 (see page I-38)

	SPECIFICATIONS							
	D:S Ratio Model No.	4:1 VR40	6:1 IRT105	8:1 IRT206 & IRT207	8:1 IRTC50	12:1 IRT650	12:1 IRT657	
	Name	4:1 IR Thermometer with NCV and Flashlight	6:1 Pocket Infrared Thermometer	8:1 Mid-Range Infrared Thermometer	8:1 Scanning IR Thermometer with Star Burst Laser Targeting	12:1 Wide-Range Infrared Thermometer	12:1 Wide-Range Infrared Thermometer with Star Burst Laser Targeting	
	Temperature Measurement Range	-4° to 626°F (-20° to 330°C)	-22° to 482°F (-30° to 250°C)	-4° to 608°F (-20° to 320°C)	-40° to 428°F (-40° to 220°C)	-25° to 999°F (-32° to 535°C)	-40° to 1076°F (-40° to 580°C)	
П	Resolution	0.1°	0.1°	0.1°	0.1°	0.1°	0.1° below 1000°	
	Accuracy	±3.8°F (2°C) or ±1% of reading (whichever is greater) above 32°F; ±4.5°F (2.5°C) below 32°F	±2% of reading or ±5°F/±3°C (max), whichever is greater	±2% of reading or ±3.6°F/±2°C (whichever is greater)	±2% of reading or ±3°F (2°C) above 32°F ±3% of reading or ±5°F (3°C) below 32°F	±5°F (±3°C) from -25° to -4°F (-32° to -20°C); ±3°F (±2°C) from -4° to 212°F (-20° to 100°C); ±2% from 212° to 999°F (100° to 535°C)	±3.6°F (2°C) or ±2% of reading (whichever is greater) above 32°F (0°C); ±5.4°F (3°C) or ±2% of reading below 32°F	
	Emissivity	Fixed at 0.95	Adjustable from 0.1 to 1.0 in 0.01 steps	Fixed at 0.95	Fixed at 0.95	Fixed at 0.95	Fixed at 0.95	
Ш	Display	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD	
Ш	Laser Power	<1mW (Class 2)*	<1mW (Class 2)*	<1mW (Class 2)*	<3mW (Class 3R)**	<1mW (Class 2)*	Class 3R (<3mW)**	
Ш	Auto Power Off	Yes	Yes	Yes	Yes	Yes	Yes	
	Other Key Features	Non-contact voltage detector with 4 sensitivity levels, LED flashlight	Min/Max Measurement Mode Measurement Lock Mode	Data Hold	Green/red/blue indication of normal/hot/cold 1°,5° or 10°F setpoint bandwidth Data Hold	F/C and laser on/off buttons	Low battery indication Over-range indication	
	Accessories Included	(2) "AAA" batteries, User's manual, 3-year limited warranty	Wrist strap "9V" battery User's manual, 1-year limited warranty	"9V" battery User's manual, 1-year limited warranty	"9V" battery User's manual, 1-year limited warranty	"9V" battery User's manual, Soft pouch, 1-year limited warranty	"9V" battery User's manual Soft carrying pouch, 1-year limited warranty	

^{*} Laser radiation! Do not stare into beam!

^{**} Laser radiation! Avoid direct eye exposure!



Infrared Thermometers



SPECIFICATIONS

12:1 IRT659K	30:1 IRT670	30:1 IRT730K	50:1 IRT500DL	50:1 IRT675	100:1 IRT5000
12:1 Infrared Thermometer with "K" Type Thermocouple and Adjustable Emissivity	30:1 High-Performance Ultra Wide-Range Infrared Thermometer	30:1 Ultra Wide-Range IR Thermometer with "K" port	50:1 Data Logging Ultra Wide-Range IR Thermometer with "K" port	50:1 High-Performance Ultra Wide-Range Infrared Thermometer	100:1 Ultra-High Temperature Infrared Thermometer with Dual Laser Target Tracking System
IRT: 58° to 1202°F (-50° to 650°C) "K" Port: -146° to 2498°F (99° to 1370°C)	-25.6° to 1400°F (-32° to 760°C)	-58° to 1472°F (-50° to 800°C) for IRT; -40° to 2372°F (-40° to 1300°C) for "K" port	-58° to 1832°F (-50° to 1000°C)	-26° to 2372°F (-32° to 1300°C)	392° to 4352°F (200° to 2400°C)
0.1° below 1000°	0.1° below 1000°	0.1° below 1000°	0.1° below 1000°	0.1° below 1000°	0.1° below 1000°
IRT: ±3°F (2°C) or ± 2% of reading above 32°F (0°C) ±4°F (3°C) or ±3% of reading below 32°F; "K" type thermocouple: ±(1% of reading + 1°C) above 0°C; ±(2% of reading + 2°C) below 0°C	±5°F (±3°C) from -25.6° to -4°F (-32° to -20°C); ±3°F (±2°C) from -4° to 212°F (-20° to 100°C); ±2% from 212° to 1400°F (100° to 760°C)	\pm 7.2°F (4°C) from -58° to 32°F (-50° to 0°C); \pm 1.5% of reading or \pm 3.6°F (2°C), whichever is greater, from 32° to 752°F (0° to 400°C); \pm 2% of reading or \pm 3.6°F (2°C), whichever is greater, from 752° to 1472°F (400° to 800°C)	±5.4°F (3°C) from -58° to -4°F (-50° to -20°C); ±3.8°F (2°C) from -4° to 212°F (-20° to 100°C); ±2% of reading from 212° to 1832°F (100° to 1000°C)	±5°F (±3°C) from -25.6° to -4°F (-32° to -20°C); ±3°F (±2°C) from -4° to 212°F (-20° to 100°C) ±2% from 212° to 2372°F (100° to 1300°C)	±2% of reading
Adjustable from 0.1 to 1.0 in 0.01 steps	Adjustable from 0.1 to 1.0 in 0.01 steps	Adjustable from 0.1 to 1.0 in 0.01 steps	Adjustable from 0.1 to 1.0 in 0.01 steps	Adjustable from 0.1 to 1.0 in 0.01 steps	Adjustable from 0.1 to 1.0 in 0.01 steps
Backlit LCD	Backlit LCD	Backlit LCD	LCD	Backlit LCD	Backlit LCD
<3mW (Class 3R)**	<1mW (Class 2)*	<1mW (Class 2)*	<1mW (Class 2)*	<1mW (Class 2)*	<1mW (Class 2)*
Yes	Yes	Yes	Yes	Yes	Yes
Automatically stores last 10 readings, Displays Min/Max/Avg/Dif session values, Settable high & low temperature alarms, Star Burst Laser Targeting	High/Low Audible Alarm Min/Max/Avg + 10 Reading Memory	"K" type thermocouple port; 100 reading memory; Min/Max/Avg/Dif displays; Adjustable Hi and Lo temp alarm setpoints; F/C and laser on/off buttons	Data logging via USB cable, Min/Max/Avg/Dif displays, Settable Hi and Lo temperature audible alarms, "K" type thermocouple port, 10-reading memory, measurement lock mode	High/Low Audible Alarm Min/Max/Avg/∆T + 10 Reading Memory	Measurement Lock Low Battery indication Over-range indication "K" type probe Stores 24 Measurement- Emissivity Pairs
"K" type thermocouple with 0° to 500°F (-18° to 260°C) range, "9V" battery, nylon pouch, User's manual, 1-year limited warranty	Carrying case, User's manual, "9V" battery, 1-year limited warranty	"K" type probe with -4° to 500°F (-20° to 260°C) range, "9V" battery, User's manual, Soft pouch, 3-year limited warranty	Data logging software, USB cable, "K" type thermocouple, Hard case, "9V" battery, User's manual, 1-year limited warranty	Carrying case, User's manual, "9V" battery, 1-year limited warranty	Magnetic stand "K" type bead thermocouple probe, (2) "AA" batteries, User's manual, Metal case, 1-year limited warranty

CE

IRT105

N

N



Laser radiation!

Do not stare into beam!

3-IN-1 POCKET INFRARED THERMOMETER WITH NCV AND FLASHLIGHT – VR40

Also can check in a safe (non-contact) way whether a line, cable or AC outlet is "hot" (energized).

FEATURES:

- Wide temperature measurement range
- Non-contact voltage detection (NCV) circuit sounds beeper and flashes LED when activated
- . Safe for CAT III 600V, CAT II 1000V use
- Also checks 110VAC outlets for wiring faults
- Patent-pending design places the IR and NCV sensors and flashlight on same end

SPECIFICATIONS:

- ◆ IRT D:S Ratio, Range: 4:1, -4° to 626°F (-20° to 330°C)
- ♦ IRT Measurement Accuracy: ±3.8°F (2°C) or ±1% of reading (whichever is greater) above 32°F; ±4.5°F (2.5°C) below 32°F
- ♦ Laser Power: <1mW (Class 2)
- ♦ IRT Emissivity: Fixed at 0.95

- ♦ Display Digits/Counts/Resolution: 4/2000/0.1°
- ◆ Detection Ranges/Sensitivities: 12 to 25VAC, 70 to 125VAC, 150 to 240VAC, 250 to 1000VAC
- ◆ Operating Temperature: 32° to 113°F (0° to 45°C) @ <95% RH
- ♦ Dimensions: 6.0 x 1.2 x 1.2 in. (152 x 31 x 31mm)
- ♦ Weight (with batteries): 7.8 oz. (220g)
- ◆ Power Source: (2) "AAA" (LR03) batteries (included)

INCLUDES:

- Batteries User's Manual
- 3-Year Limited Warranty

UPC	NO.
016343	VR40

6:1 POCKET INFRARED THERMOMETER - IRT105

Ideal for spot-checking the temperature of substances and surfaces from a distance. Perfect for electrical troubleshooting and HVAC equipment maintenance. **FEATURES:**

- · Optimized measurement range
- Accuracy of ±3°F or 2% above 32°F
- Adjustable emissivity
- · Fast response time
- Max/Min measurement and measurement lock modes
- Selectable °F or °C unit
- Large LCD
- Separate batteries for thermometer and laser
- · Small and light and easy to use
- CE approved

SPECIFICATIONS:

- ◆ Distance-To-Spot (D:S) Ratio: 6:1
- ◆ Temperature Measurement Range: -22° to 482°F (-30° to 250°C)
- ♦ Measurement Accuracy: ±3°F (2°C) or 2% of reading (whichever is greater) above 32°F (0°C); ±5°F (3°C) or 2% of reading (whichever is greater) below 32°F

- ♦ Emissivity: Adjustable from 0.1 to 1
- ♦ Response Time: 500 msec for 95% response
- ◆ Laser Power: <1mW (Class 2)
- ♦ Thermometer Battery Life: 50 hours, typical
- ◆ Operating Temperature: 32° to 104°F (0° to 40°C) @<75% relative humidity</p>
- ◆ Dimensions: 4.25 x 2.05 x 0.98 in. (108 x 52 x 25mm)
- ♦ Weight: 1.41 oz. (40g)
- ♦ Power Source: 2 "CR2032" Li-ion batteries

INCLUDES:

- Wrist strap
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
20196 1	IRT105



Laser radiation!

To not stare into beam!

THE HEAT SEEKER™ 8:1 MID-RANGE INFRARED THERMOMETER – IRT206 THE HEAT SEEKER™ 8:1 MID-RANGE INFRARED THERMOMETER – IRT207

FEATURES:

- · Rugged and ergonomic design
- Backlit LCD display
- · Sighting laser can be turned off
- °F/°C switch
- · CE, RoHS, WEEE approved

SPECIFICATIONS:

- ♦ Distance to Spot (D:S) Ratio: 8:1
- ◆ Measurement Range: -4° to 608°F (-20° to 320°C)
- ♦ Measurement Accuracy: 3.6°F (2°C) or 2% of reading, whichever is greater
- ♦ Emissivity: Fixed at 0.95
- ♦ Resolution: 0.1°F (F or C)

- ◆ Operating Temperature:
 32° to 104°F (0° to 40°C)@ 10 to 90% RH
- ♦ Laser Power: <1mW (Class 2)
- ♦ Dimensions:

5.98 x 4.65 x 1.26 in. (152 x 118 x 32mm)

- ♦ Weight: 4.41 oz. (170g) without battery
- ♦ Power Source:
 - 1 "9V" battery (included)

INCLUDES:

- Battery
 User's Manual
- 1-Year Limited Warranty

- I Tour Ellintou Waltanty		
	UPC	NO.
	02060 9	IRT206
	01403 5	IRT207

Do not stare into beam!



Infrared Thermometers

50:1 DATA LOGGING ULTRA WIDE-RANGE INFRARED THERMOMETER WITH "K" PORT - IRT500DL

Range and D:S ratio make this IRT suitable for use in superheated and subcooled applications.

FEATURES:

- Very wide temperature measurement range and very high D:S ratio
- · Data logging capability via included PC software and USB jack and cable
- 10-reading memory
- Min/Max/Avg/Dif displays
- Settable Hi and Lo temperature audible alarms
- °C/°F and laser on/off switches
- Tripod mountable

SPECIFICATIONS:

- ♦ Temperature Measurement Range: -58° to 1832°F (-50° to 1000°C)
- ♦ Measurement Accuracy: ±5.4°F (3°C) from -58° to -4°F (-50° to -20°C); ±3.8°F (2°C) from

- -4° to 212°F (-20° to 100°C); ±2% of reading from 212° to 1832°F (100° to 1000°C)
- ♦ Measurement Resolution: 0.1°F (0.1°C)
- ♦ Emissivity: Adjustable from 0.1 to 1.0
- ♦ Laser Power: <1mW (Class 2)
- ♦ Dimensions: 5.0 x 1.9 x 7.9 in. (127 x 47 x 200mm)
- ◆ Power Source: (1) "9V" battery (included)

INCLUDES:

- Data Logging Software USB cable
- "K" Type Thermocouple Hard Case Battery
- User's Manual
 1-Year Limited Warranty

NO. IRT500DL 52046 0

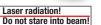
Optional "K" type probes: See pp. I-44 - 45





CE

IRT500DL N



12:1 WIDE-RANGE INFRARED THERMOMETER - IRT650

Suitable for most HVAC/R and automotive applications.

FEATURES:

- · Sighting laser can be turned off
- Large 4-digit backlit LCD
- Selectable temperature unit
- Fast response time
- Auto power off
- CE, RoHS, WEEE approved

SPECIFICATIONS:

- ♦ Distance to Spot (D:S) Ratio: 12:1
- ♦ Measurement Range: -25° to 999°F (-32° to 535°C)
- ♦ Measurement Accuracy: ±5°F (±3°C) from -25° to -4°F (-32° to -20°C); ±3°F (±2°C) from -4° to 212°F (-20° to 100°C); ±2% from 212° to 999°F (100° to 535°C)
- ♦ Resolution: 0.1°F (0.1°C)

- ♦ Emissivity: Fixed at 0.95
- ♦ Response Time: 0.5 seconds
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @10 to 90%RH
- ◆ Laser Power: <1mW (Class 2)</p>
- ♦ Battery Life: 16 hours
- ♦ Dimensions: 6.69 x 5.23 x 1.77 in. (170 x 133 x 45mm)
- ♦ Weight: 5.8 oz. (163g)
- ◆ Power Source: 1 "9V" battery (included)

- Soft Carrying Case
 Battery
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
40650 2	IRT650





8:1 ENERGY AUDIT INFRARED THERMOMETER/SCANNER WITH STAR BURST LASER TARGETING - IRTC50

Ideal for energy auditors, building inspectors, HVAC technicians, electricians, manufacturing technicians, food processing inspectors and homeowners.

FEATURES:

- Setpoint band options of 1°, 5° and 10°F (0.5°, 3°, 5.5°C)
- Red or blue light and fast or slow buzzer signal when the target temperature is above or below the reference temperature \pm the setpoint
- Unique Star Burst laser targeting system helps approximate the target spot size
- Large backlit LCD
- · Releasing trigger holds reading
- · Display and backlight turn off after 15 seconds of inactivity
- · Auto-power off after 60 seconds of inactivity
- · CE and ROHS approved

SPECIFICATIONS:

- ♦ Distance to Spot Ratio: 8:1
- ♦ Measurement Range: -40° to 428°F (-40° to 220°C)

- ♦ Measurement Accuracy: ±4°F/C or ±2% of reading above 32°F (0°C); ±3°F/C or ±3% of reading below 32°F (0°C)
- ♦ Display Resolution: 0.1° (F or C)
- ♦ Emissivity: Fixed at 0.95
- ♦ Response Time: 0.5 seconds
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ <90%RH)
- ♦ Laser Power: <3mW (Class 3R)</p>
- ♦ Dimensions:
- 5.31 x 1.65 x 6.81 in. (135 x 42 x 173mm)
- ♦ Weight: 6.24 oz. (117g) without battery
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

UPC NO. IRTC50 01442 4



Laser radiation!

Avoid direct eye exposure



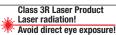






Infrared Thermometers







IRT657

N



Class 3R Laser Product Laser radiation! Avoid direct eye exposure!

12:1 WIDE-RANGE INFRARED THERMOMETER WITH STAR BURST LASER TARGETING - IRT657

Ideal for isolating overheated electrical components and hot spots, troubleshooting HVAC/R and automotive systems, or performance-testing motors and boilers.

- · Wide measurement range of -40° to 1076°F (-40° to 580°C)
- Accuracy of ±3.6°F (2°C) or ±5.4°F (3°C), depending on temperature
- Large (1.6 in. diagonal) backlit LCD

SPECIFICATIONS:

- ◆ Distance-To-Spot (D:S) Ratio: 12:1
- ◆ Temperature Measurement Range: -40° to 1076°F (-40° to 580°C)
- ♦ Emissivity: Fixed at 0.95
- ♦ Measurement Accuracy:±3.6°F (2°C) or ±2% of reading above 32°F (0°C); ± 5.4 °F (3°C) or ±2% of reading below 32°F (0°C)
- ♦ Response Time: 500 msec for 95% response

- ♦ Display Size and Type: 1.6 in. (40.6mm) diagonal LCD
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @<75% relative humidity (RH)
- ♦ Laser Power: <3mW (Class 3R)</p>
- ♦ Dimensions: 6.9 x 3.6 x 1.5 in. (175 x 91.5 x 38mm)
- ♦ Weight: 5.93 oz. (168g)
- ♦ Power Source: 1 "9V" battery (included)

- Carrying Case Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
01480 6	IRT657

12:1 DUAL SENSOR INFRARED THERMOMETER WITH "K" TYPE THERMOCOUPLE & ADJUSTABLE EMISSIVITY - IRT659K

Ideal for isolating overheated electrical components and hot spots, troubleshooting HVAC/R and automotive systems, and performance-testing motors and boilers.

FEATURES:

- · Automatically holds measurements
- · Automatically stores last 10 readings for recall
- Displays Min/Max/Avg/Dif temperatures captured during each scanning session
- Settable high and low temperature alarms
- °C/°F and laser pointer on/off switches

SPECIFICATIONS:

- ♦ Distance-to-Spot (D:S) Ratio: 12:1
- ♦ IR Temperature Measurement Range: -58° to 1202°F (-50° to 650°C)
- ♦ IR Temperature Measurement Accuracy: ±3.6°F (2°C) or ±2% of reading (whichever is greater) above 32°F (0°C); ±4.8°F (3°C) or ±3% of reading (whichever is greater) below 32°F
- ◆ "K" Port Measurement Range: -146° to 2498°F (-99° to 1370°C)
- ♦ Included "K" Type Thermocouple Range/Accuracy: -50° to 500°F $(-45^{\circ} \text{ to } 260^{\circ}\text{C})/ \pm (1\% \text{ of reading} + 1^{\circ}\text{C})$ above 0°C; ±(2% of reading + 2°C) below 0°C
- ♦ Display Resolution: 0.1° (F or C)
- ♦ Emissivity: Adjustable from 0.1 to 1.0 in 0.01 steps, with default of 0.95
- ◆ Display Size & Type: 1.5 in. (38mm) diagonal backlit LCD



- ♦ Response Time: 500 ms
- ♦ Laser Power: Class 3R (<3mW)</p>
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ 10 to 75% RH, non-condensing
- ◆ Auto Power Off Trigger: 30 seconds of inactivity
- ♦ Dimensions: 5.31 x 1.65 x 6.81 in. (135 x 42 x 173mm)
- ♦ Weight: 6.93 oz. (168g) (without battery)
- ♦ Power Source: (1) "9V" battery (included)

INCLUDES:

- "K" Type Thermocouple Probe
- Soft Carrying Case
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC NO. IRT659K 015988

Optional "K" type probes: See pp. I-44 - 45



CE



Infrared Thermometers

30:1 HIGH-PERFORMANCE ULTRA WIDE-RANGE **INFRARED THERMOMETER – IRT670**

Suitable for the most demanding industrial applications, including furnaces and heat exchangers.

FEATURES:

- °F/°C and laser on/off switches
- · High, low audible alarms
- · Large backlit LCD display
- Min/Max/Avg + 10 reading memory
- Measurement lock mode
- Low battery indication
- Auto power off
- CE. RoHS. WEEE approved



SPECIFICATIONS:

- ♦ Distance to Spot (D:S) Ratio: 30:1
- ♦ Emissivity: Adjustable from 0.1 to 1.0
- ♦ Measurement Range: -25.6° to 1400°F (-32° to 760°C)
- ♦ Measurement Accuracy: ±5°F (±3°C) from -25.6° to -4°F (-32° to -20°C); ±3°F (±2°C) from -4° to 212°F (-20° to 100°C); ±2% from 212° to 1400°F (100° to 760°C)
- ♦ Resolution: 0.1°F (0.1°C)
- ♦ Response Time: 0.5 seconds
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @10 to 90%RH
- ◆ Laser Power: <1mW (Class 2)</p>
- ♦ Battery Life: 16 hours
- ♦ Dimensions:

7.8 x 6.5 x 2 in. (200 x 166 x 51mm)

- ♦ Weight: 10.6 oz. (300g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES:

- Carrying Case
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC NO. IRT670 406700

Laser radiation! Do not stare into beam **IRT670** N

30:1 ULTRA WIDE-RANGE IR THERMOMETER W/ "K" PORT – IRT730K

Ideal for measuring high temperatures safely—from a distance. Industrial applications include operation and maintenance of furnaces and heat exchangers.

FEATURES:

- Extremely wide measurement range
- · Adjustable emissivity
- Laser targeting ring outlines analysis area
- Port for included "K" type bead thermocouple probe
- · Releasing trigger holds measurement
- Automatically stores last 100 readings for recall
- Min/Max/Avg/Dif displays
- Adjustable Hi and Lo temperature alarm setpoints
- · Large backlit LCD w/dual 4-digit readouts
- Auto power off
- · °F/°C and laser on/off buttons
- Low battery indicator

SPECIFICATIONS:

- ♦ IRT Distance to Spot (D:S) Ratio: 30:1
- ♦ IRT Emissivity: Adjustable from 0.1 to 1.0 in 0.01 steps with default of 0.95
- ♦ IRT Measurement Range: -58° to 1472°F (-50° to 800°C)
- ♦ ÎRT Measurement Accuracy: ±7.2°F (4°C) from -58° to 32°F (-50° to 0°C); $\pm 1.5\%$ of reading or $\pm 3.6^{\circ}$ F (2°C), whichever is greater, from 32° to 752°F (0° to 400°C); $\pm 2\%$ of reading or ±3.6°F (2°C), whichever is greater, from 752° to 1472°F (400° to 800°C)

- ♦ IRT Measurement Resolution: 0.1° (F or C) below 1000°; 1° above 1000°
- ♦ Range/Accuracy of Included "K" Type Bead Thermocouple Probe: -4° to 500°F $(-20^{\circ} \text{ to } 260^{\circ}\text{C})/ \pm (2\% + 2 \text{ digits})$
- ♦ Response Time: <500ms
- ♦ Laser Power: <1mW (Class 2) @ wavelength of 630 to 670nm
- ♦ Spectral Response: 8 to 14µm
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @10 to 90%RH
- ♦ Auto Power Off Trigger: 30 seconds of frontpanel inactivity
- ♦ Dimensions: 7.6 x 3.8 x 3.3 in. (192 x 95 x 83mm)
- ♦ Weight: 9.7 oz. (275g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- "K" Type Bead Thermocouple Probe
- Soft Pouch
- Battery
- User's Manual
- 3-Year Limited Warranty

IRT730K 016435

Optional "K" type probes: See pp. I-44 - 45



Infrared Thermometers



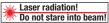
IRT675

N









50:1 HIGH-PERFORMANCE ULTRA WIDE-RANGE INFRARED THERMOMETER – IRT675

Ideal for use in hazardous, superheated, subcooled, and other challenging industrial applications.

FEATURES:

- °F/°C and laser on/off switches
- · High, low audible alarms
- Large backlit LCD display
- Min/Max/Avg/\DeltaT + 10 reading memory
- · Measurement lock mode
- Low battery indication
- Auto power off
- · CE, RoHS, WEEE approved





SPECIFICATIONS:

- ♦ Distance to Spot (D:S) Ratio: 50:1
- ♦ Emissivity: Adjustable from 0.1 to 1.0
- ♦ Measurement Range:

-25.6° to 2372°F (-32° to 1300°C)

- ♦ Measurement Accuracy: ±5°F (±3°C) from -25.6° to -4°F (-32° to -20°C); ±3°F (±2°C) from -4° to 212°F (-20° to 100°C); ±2% from 212° to 2372°F (100° to 1300°C)
- ♦ Resolution: 0.1°F (0.1°C)
- ♦ Response Time: 0.5 seconds
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C), 10 to 90%RH
- ♦ Laser Power: <1mW (Class 2)
- ♦ Battery Life: 16 hours
- ♦ Dimensions:
- 7.8 x 6.5 x 2 in. (200 x 166 x 51mm)
- ♦ Weight: 9.9 oz. (280g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Carrying Case
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC NO. 40677 9 IRT675

100:1 ULTRA-HIGH TEMPERATURE INFRARED THERMOMETER WITH DUAL LASER TARGET TRACKING SYSTEM - IRT5000

Ideal for applications in power generation and transmission, maintenance, foundry operations, industrial site inspection, manufacturing MRO, and fire fighting operations.

FEATURES:

- 100:1 distance to spot (D:S) ratio
- · Stores up to 24 data points
- Ultra-high temperature operation up to 4352°F (2400°C)
- · High/Low alarm levels
- Fast response time of 0.5 seconds
- Min/Max/Dif memory
- Dual lasers for tracking target/spot size

SPECIFICATIONS:

- ♦ Distance to Spot (D:S) Ratio: 100:1
- ♦ Measurement Range: 392° to 4352°F (200° to 2400°C)
- ♦ Measurement Accuracy: ±2% of reading

- ♦ Measurement Range with "K" Type Thermocouple: -83.2° to 2552°F (-64° to 1400°C)
- ♦ Accuracy with "K" Type Thermocouple: ±1% of reading
- ♦ Emissivity: Adjustable from 0.10 to 1.0
- ♦ Laser Power: <1mW (Class 2) ♦ Dimensions:
- 2.4 x 8.2 x 9.2 in. (61 x 208 x 234mm)
- ♦ Weight: 16.8 oz. (475g)
- ♦ Power Source: 2 "AA" batteries (included)

INCLUDES:

- 1 "K" Type Bead Thermocouple
- Batteries
- · Metal case
- User's Manual
- 1-Year Limited Warranty

IRT5000 01479 0

Optional "K" type probes: See pp. I-44 – 45





Do not stare into beam!



Multi-Channel Thermometers

4-CHANNEL THERMOMETER WITH EXCEL-FORMATTED **DATA LOGGING SD CARD - DT4947SD**

Accurately measures four channels of temperature from -148° to 3092°F (-100° to 1700°C).

FEATURES:

- Four independent temperature measurement
- · Also measures T1-T2 difference between any two channels
- · Works with and automatically temperaturecompensates for six popular thermocouple types: K, J, T, E, S and R
- Combining thermocouple types extends potential measurement range to -148° to 3092°F (-100° to 1700°C)
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Measurement Range:
- With Pt 100 ohm RTD: -327° to 1562°F
- With thermocouples: depends on type

- ♦ Measurement Accuracy:
 - With Pt 100 ohm probes: ± (0.4% of reading + 1.8°F) from -327° to 999.9°F, \pm (0.44% of reading + 2.0°F) from 1000° to 1562°F)
 - · With thermocouples: \pm (0.4% of reading + 2.0°F max)
- ◆ Data Logging Sampling Time: 1 second to 1 hour
- ♦ Settable Parameters: Date, time, decimal point or comma decimal division, auto power off, beep sound, temperature unit, sampling time
- ♦ Storable/Recallable Readings: Maximum, minimum
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Operating Relative Humidity: 0 to 85%
- ♦ Dimensions: 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

♦ Weight: 1.13 lb. (515g) ◆ Power Source: Six "AA" batteries (not included) or optional 9-VDC AC adaptor

UPC NO.

014620 2 DT4947SD

Optional Accessories:

01506 3 AC1 9VDC adaptor for 110V power supply 01502 5 SDRD1 SD Card Reader

Optional "K" type probes: See pp. I-44 - 45









INCLUDES:

- Hard Carrying Case
- Two TPK500 "K" Type Beaded Thermocouple **Probes**
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

12-CHANNEL TEMPERATURE RECORDER WITH **EXCEL-FORMATTED DATA LOGGING SD CARD – DT4208SD**

Accurately measures 12 channels of temperature from -148° to 3092°F (-100° to 1700°C).

FEATURES:

- Twelve independent temperature measurement channels
- Displays up to eight channels at a time; one push of a button switches to Channels 9 through 12
- · Works with and automatically temperaturecompensates for six popular thermocouple types: K, J, T, E, S and R
- Combining thermocouple types extends overall measurement range to -148° to 3092°F (-100° to 1700°C)
- Can automatically log 12 channels of data every day during same period (loop data recording)
- · Big (3.9 in. diagonal) front-panel green backlit LCD is easy to read
- · Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- · Auto power off function; can be disabled to enable long-term data logging

SPECIFICATIONS:

- ♦ Display: 3.23 x 2.40 in. (82 x 61mm) LCD
- ♦ Measurement Range:
- With included "K" type thermocouples: -50° to 500°F (-45° to 260°F)
- · With other thermocouples: depends on type
- ♦ Measurement Accuracy:
 - With included "K" type thermocouples: \pm (0.4 % of reading + 2.0°F max)
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Operating Relative Humidity: 0 to 85%
- ♦ Dimensions:
- 8.86 x 4.92x 2.52 in. (225 x 125 x 64mm)
- ♦ Weight: 1.84 lb. (827g)
- ♦ Power Source: Eight "AA" batteries or optional 9-VDC AC adaptor

UPC NO. DT4208SD 01463 9

Optional Accessories:

01506 3 AC1 9VDC adaptor for 110V power supply 01502 5 SDRD1 SD Card Reader

Optional "K" type probes: See pp. I-44 - 45









DT4208SD N

- · Hard Carrying Case
- Two TPK500 "K" Type Beaded Thermocouple **Probes**
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

TEMPERATUR

DT304

DT309DL N

Thermocouple Thermometers



4-CHANNEL THERMOCOUPLE THERMOMETERS – DT304 & DT309DL

Ideal for monitoring up to four very high or low temperatures in a commercial or industrial setting such as food or chemical processing, HVAC, power generation or paper production.

FEATURES:

- Measures and displays up to four temperatures simultaneously
- Wide measurement range
- ±0.3% accuracy
- Large backlit LCD
- Min/Max memory + data hold
- RS-232 output

SPECIFICATIONS:

- ♦ Measurement Range: -328° to 2498°F (-200° to 1370°C) with included "K" type thermocouple
- ♦ Accuracy: ±0.3% of reading + 2°F (1°C)
- ♦ Resolution: 0.1°F (0.1°C)
- ♦ Input Protection: 60VDC/24VAC_{rms} (max)
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<80% RH
- Storage Temperature:
- -4° to 140°F (-20° to 60°C)@<70% RH

- ♦ Dimensions:
- 7.24 x 2.52 x 1.18 in. (184 x 64 x 30mm)
- ♦ Weight: 7.8 oz. (220g)
- ♦ Power Source: 1 "9V" battery (included)

- 2 "K" Type Thermocouple (TPK500)
- · Carrying Case
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01434 9	DT304
40309 9	DT309DL Data Logging
01437 0	ACA115 9V AC/DC Adaptor (optional)
01441 7	DT300RSCB RS-232 cable for DT309DL
	(optional)
01438 7	DT300SF PC data logging software for
	DT309DL (optional)

Optional "K" type probes: See pp. I-44 - 45



DIGITAL THERMOMETER WITH ONE "K" TYPE PROBE AND CASE - DT8801

For use in labs, industrial control and audits.

- Single probe input
- Accepts "K" type thermocouple probes
- Data hold
- Max hold
- °F/°C switch
- Auto power off
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: -58° to 2000°F (-50° to 1093°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); ±4°F (2°C) elsewhere
- ♦ Probe Length: 5 in. with 3 ft. cord

- ♦ Dimensions:
- 7.1 x 2.8 x 1.2 in. (181 x 71 x 30mm)
- ♦ Weight: 5.6 oz. (160g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES:

- Molded Hard Case
- "K" Type Beaded Thermocouple (TPK500)
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC		NO.
21005	5	DT8801

Optional "K" type probes: See pp. I-44 - 45



DT8811WP

WATERPROOF DIGITAL THERMOMETER - DT8811WP

For use in labs, industrial control and audits.

FEATURES:

- Waterproof to IP66 standard
- Single input
- Autoranging
- Min/Max memory
- · Selectable °F or °C unit
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: -328° to 2372°F (-200° to 300°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C)
- ♦ Sampling Rate: 2x per second
- ♦ Dimensions:
- 7.1 x 2.8 x 1.2 in. (181 x 71 x 30mm)
- ♦ Weight: 6.4 oz. (180g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- · Molded hard case
- Waterproof "K" type thermocouple with boot (TPK500)
- Battery
- · User's Manual
- 1-Year Limited Warranty

UPC	NO.
21090 1	DT8811WP

Optional "K" type probes: See pp. I-44 - 45



Thermocouple Thermometers

SINGLE THERMOCOUPLE DIGITAL THERMOMETER – DT80-1

Ideal for commercial and industrial applications requiring measurement of very high or low temperatures.

FEATURES:

- Dual 5-digit LCD
- · Wide measurement range
- Measurement accuracy of ±0.05% of reading
- Compatible with "K" and "J" type thermocouples
- Includes one "K" type thermocouple

SPECIFICATIONS:

- ♦ Measurement Range: -328° to 1922°F (-200° to 1050°C) with J-type thermocouple; -328° to 2498°F (-200° to 1370°C) with K-type thermocouple
- ♦ Measurement Accuracy: ±0.05% of reading
- ◆ Display Size/Type: 1.5 x 1.5 in. (38 x 38mm)/ black & white LCD
- Operating Temperature: 40° to 104°F (5° to 40°C) @<80% RH

♦ Storage Temperature: 14° to 140°F (-10° to 60°C)@<70% RH

- ♦ Input Protection: 24V DC or AC, max
- ♦ Power Source: 9V battery
- ◆ Battery Life: 200 hours, typical
- ♦ Dimensions: 5.12(L) x 2.2(W) x 1.50(H) in. (130 x 56 x38mm)
- ♦ Weight: 6 oz. (170g)
- ◆ Auto Power Off Trigger: 15 minutes of inactivity
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- 1 "K" Type Thermocouple (TPK500)
- Battery
 User's Manual
- 1-Year Limited Warranty

UPC	NO.
01432 5	DT80-1
Optional "K"	type probes: See pgs. 44 - 45



DT80-1 N

DUAL THERMOCOUPLE DIGITAL THERMOMETER – DT80-2

Ideal for measuring the differential between two very high or low temperatures in an industrial or commercial environment.

FEATURES:

- Dual 5-digit LCD
- Wide measurement range
- Measurement accuracy of ±0.05% of reading
- Compatible with "K" and "J" type thermocouples
- Includes two "K" type thermocouples

SPECIFICATIONS:

- ♦ Measurement Range: -328° to 1922°F (-200° to 1050°C) with J-type thermocouple; -328° to 2498°F (-200° to 1370°C) with K-type thermocouple
- ♦ Measurement Accuracy: ±0.05% of reading
- ♦ Display Size/Type: 1.5 x 1.5 in. (38 x 38mm)/ black & white LCD
- ◆ Operating Temperature: 40° to 104°F (5° to 40°C)@<80% RH

- ♦ Storage Temperature: 14° to 140°F (-10° to 60°C)@<70% RH
- ♦ Input Protection: 24V DC or AC, max
- ♦ Power Source: 9V battery
- ♦ Battery Life: 200 hours, typical
- ♦ Dimensions: 5.12(L) x 2.2(W) x 1.50(H) in. (130 x 56 x38 mm)
- ♦ Weight: 6 oz. (170g)
- ♦ Auto Power Off Trigger: 15 minutes of inactivity
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- 2 "K" Type Thermocouples (TPK500) Battery • User's Manual • 1-Year Limited Warranty

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01433	2	DT	80-2
Ontional	"K"	tyne	nrol

Optional "K" type probes: See pp. I-44 - 45

DT80-2 N

DIGITAL THERMOCOUPLE THERMOMETERS – DT8852, DT8855, DT8856

Ideal for precision temperature measurement and measuring temperature differentials T1-T2.

FEATURES:

- Dual input (DT8852 and DT8856); Single input
- DT8852 is compatible with types "K", "J" and "T" thermocouples; DT8855 and DT8856 are also compatible with types "R", "S" and "E"
- RS-232 output jack: optional PC data logging kit includes RS-232 to USB adaptor
- . Min/max memory with relative time stamp
- Large backlit LCD with dual temperature readouts and relative clock readout
- T1-T2 channel (DT8852 and DT8856 only)
- · 20-minute Auto Power Off (can be disabled for data logging)
- °C/°F switch

SPECIFICATIONS:

♦ Measurement Range of "K" thermocouple port: -328° to 2498°F (-200° to 1370°C)

- ♦ Measurement Accuracy: 0.1% (±1°F)
- ♦ Measurement Range of Included Thermocouple(s): -58° to 392°F (-50° to 200°C)
- Dimensions: 7.16 x 2.83 x 1.18 in. (182 x 72 x 30mm)
- ♦ Weight: 7.8 oz. (220g)
- ♦ Power Source: 1 "9V" battery (included)

- (2) "K" Type Probes (DT8885, DT8856); (1) "K" Type Probe (DT8855)
- Custom Hard Case
 Battery
 User's Manual
- 1-Year Limited Warranty

UPC	NO.
21012 3	DT8852
01656 5	DT8855
01657 2	DT8856
12710 0	ASFTKIT PC Interface Kit (optional)
210147	Z110VADPT 9V AC/DC adaptor (optional
Optional "K"	' type probes: See pp. I-44 – 45



DT8852 DT8855 **DT8856**



RTD Probe and "K" Type Probes

All "K" type probes fit and work with: DT8801, DT80-1, DT80-2, DT304, DT4947SD, DT4208SD, DLAF930SD, DT2000RTD, DT8852, DT8855, DT8856, DT721, DT306DL, DT309DL, DT8811WP, IRT659K, IRT730K, IRT5000, CM660, CM700, CM770, DMM570



PRECISION PT 100 OHM TEMPERATURE PROBE FOR GENERAL'S THERMOMETERS WITH RTD JACKS – RTDTP100

- Measurement Range: -58° to 752°F (-50° to 400°C)
- Impedance: 100Ω

UPC	NO.
014363	RTDTP10

GENERAL PURPOSE "K" TYPE PROBE WITH EXTENDABLE CORD – TPK02

- Measurement Range: -58° to 482°F (-50° to 250°C)
- Probe length: 3.75 in.
- Cord length: 4 ft.

UPC	NO.
25001.3	TPK02



AIR TYPE PROBE WITH CORD - TPK04

- Measurement Range: -40° to 950°F (-40° to 510°C)
- Probe length: 8 in.
- Cord length: 4 ft.

UPC	NO.
25004 4	TPK04



GENERAL PURPOSE BEADED TIP PROBES – TPK500, TPK900

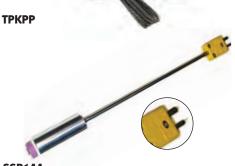
- Measurement Range for TPK500: -50° to 500°F (-45° to 260°C); for TPK900: -50° to 900°F (-45° to 482°C)
- Wire length: 3.125 ft.

NO.
TPK500
TPK900



- Measurement Range: -58° to 1202°F (-50° to 650°C)
- Wire length: 6 ft.

UPC	NO.
25060.0	TPKPP



PLUG-IN "K" TYPE SURFACE PROBE - SSP144

- Measurement Range: -40° to 950°F (-40° to 510°C)
- Probe length: 8 in.
- Best if used with probe extender Model TPKH (see page I-45)

UPC	NO.
25045 7	SSP144



General Tools & Instruments

PLUG-IN "K" TYPE AIR PROBE - SSP146

- Measurement Range: -40° to 500°F (-40° to 260°C)
- Probe length: 8 in.
- Best if used with probe extender Model TPKH (see page I-45)

_	UPU	NU.
	25055 6	SSP146



e Probes

All "K" type probes fit and work with: DT8801, DT80-1, DT80-2, DT304, DT4947SD, DT4208SD, DLAF930SD, DT2000RTD, DT8852, DT8855, DT8856, DT721, DT306DL, DT309DL, DT8811WP, IRT659K, IRT730K, IRT5000, CM660, CM700, CM770, DMM570

HIGH TEMPERATURE PROBE WITH CORD – TPK2500

- Molten metal probe
- · For high temperatures
- Measurement Range: Up to 2500°F (1347°C)
- Wire length: 2 ft.

UPC	NO.
25080 8	TPK2500



TPK2500

SURFACE SENSOR "K" TYPE PROBE WITH CORD -

TPK03

- Measurement Range: -40° to 950°F (-40° to 510°C)
- Probe length: 8 in.
- Cord length: 4 ft.

	0
UPC	NO.
25003 7	TPK03



TPK03

PIERCING "K" TYPE PROBE WITH CORD - TPK05

- Measurement Range: -40° to 1562°F (-40° to 850°C)
- Probe length: 8 in.
- Cord length: 4 ft.

UPC	NO.
25005 1	TPKU



TPK05

BEADED TIP "K" TYPE PROBE WITH OVEN CLIP -OC119

- Measurement Range: -40° to 950°F (-40° to 510°C)
- · Heavy duty clip
- Wire length: 4 ft.

UPC	NO.
52504 0	OC119



OC119

PLUG-IN "K" TYPE PIERCING PROBE - SSP145

- Measurement Range: -40° to 1562°F (-40° to 850°C)
- Probe length: 8 in.
- Best if used with probe extender Model TPKH (below)

UPC	NO.
25050 1	SSP145



"K" TYPE THERMOCOUPLE PROBE EXTENDER – TPKH

- Extender with handle for use with interchangeable probe tips
- Cord length: 4 ft.

UPC	NO.
25070 9	TPKH



Patented

DLAF930SD

INI

ENVIRONMENTAL METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – DLAF930SD

Accurately measures air (wind) speed + temperature, air temperature + humidity, light & sound levels, surface temperature.

FEATURES:

- Multi-function probe measures air speed and temperature, air temperature and humidity, and light level. Optional accessories measure surface temperature and sound level
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Displays maximum and minimum readings and holds any reading
- · Automatically logs measurements at sampling time settable from 1 second to 1 hour
- · Also supports manual data logging and changing of SD card storage location
- Auto power off function

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Parameters Measured: Air temperature, relative humidity (R.H.), air speed, light level
- ♦ Measurement Range:
- For air speed: 0.4 to 25 m/sec, 1.4 to 90 km/hr, 0.9 to 55.9 mph, 0.8 to 48.6 knots, 80 to 4930 ft/min
- For temperature: 32° to 122°F (0 to 50°C); for R.H., 10 to 95%
- For light level: 0 to 20,000 lux, 0 to 1860 ft-cd
- ♦ Measurement Accuracy:
 - For air speed: \pm (2% + 0.2 m/sec), \pm (2% + 0.8 km/hr), \pm (2% + 0.4 mph), \pm (2% + 0.4 knots), \pm (2% + 40 ft/min)
 - For temperature: 1.5°F (± 0.8°C)
 - For humidity: ± (3% of reading + 1%) for R.H. values ≥70%; ± 3% of reading for R.H values < 70%
 - For light level: ± (5% of reading ± 8 digits)

- ◆ Data Logging Sampling Time: 1 second to 1 hr.
- ♦ Settable Parameters: Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, air speed unit, light level unit, optional thermocouple type (K or J)
- ♦ Storable/Recallable Readings: Max/Min
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Operating Relative Humidity: 0 to 85%
- ♦ Dimensions of Meter: 5.31 x 2.36 x 1.30 in. (135 x 60 x 33mm)
- ♦ Weight of Meter: 1.13 lb. (515g)
- ♦ Dimensions of Probe: 4.13 x 1.81 x 1.14 in. (105 x 46 x 29mm)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

INCLUDES:

- Hard Carrying Case
- · Combination Temperature/Humidity/Air Speed/Light Level Probe
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

	UPC		NO.
Ī	01460	8	DLAF930SD
(Optional	Ad	ccessories:

01506 3 AC1 9VDC adaptor for 110V power supply 01570 4 SC941 Sound level probe/plug adaptor

01502 5 SDRD1 SD Card Reader 01543 8 **P930SD** Replacement Sensor

Optional "K" type probes: See pp. I-44 - 45

DT2000RTD

3-IN-1 THERMOCOUPLE/RTD/IR THERMOMETER - DT2000RTD

Ideal for making high- or low-temperature industrial or laboratory measurements and verifying their accuracy using another mode. Also suitable for general-purpose professional use.

FEATURES:

- Displays readings from
- a) Type "K", "J", "T", "E" or "R" thermocouple b) 100 Pt Resistance-Temperature Detector (RTD) or
- c) Integral laser-sighted 7:1 IR thermometer with adjustable emissivity
- Min/Max memory + data hold + relative measurement
- Sensor and temperature unit switches
- RS-232 output
 Auto power off
- Tripod mount

SPECIFICATIONS:

- ♦ Measurement Range/Accuracy: With "K" type thermocouple, -148°F to 2372°F $(-100^{\circ} \text{ to } 1300^{\circ}\text{C})/\pm0.2\% \text{ of reading} + 1.8^{\circ}\text{F}$ (1.0°C); With 100 Pt RTD, -328° to 1562°F $(-200^{\circ} \text{ to } 850^{\circ}\text{C})/\pm0.2\% \text{ of reading} + 1^{\circ}\text{F } (1^{\circ}\text{C});$ IR thermometer: -4° to 752°F (-20° to 400°C)/±3% of reading or 5°F (3°C), whichever is greater
- ♦ Display Size: 2.0 x 1.25 in. (51 x 32mm), with 0.6 in. (15mm) high digits

- ♦ IR Thermometer Emissivity Range: Adjustable from 0.2 to 1.0 (factory set to 0.95)
- ♦ Sampling Time: 1 second
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<80% RH
- ♦ Dimensions: 7.87 x 2.68 x 1.18 in. (200 x 68 x 30mm)
- ♦ Weight: 7.76 oz. (220g) ♦ Power Source: 1 "9V" battery (included)

- Soft Pouch Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
01460 8	DT2000RTD
01478 3	RS232-USB RS232 to USB Converter (optional)
01439 4	DT2000U801 PC data logging software (optional)
01440 0	DT2000RSCB RS232 cable (optional)
Optional RTD	and "K" type probes: See pp. I-44 – 45



Digital Stem Thermometers

DIGITAL STEM THERMOMETER – DPT301FC

Ideal for food preparation, laboratory, agricultural/horticultural and HVAC/R applications.

FATIIDES

- Wide range, with 0.1° display resolution
- °F/°C switch
- Food safe
- 4.5 in. stainless steel stem
- · Flat edge, non-roll case



SPECIFICATIONS:

- ◆ Measurement Range: -40° to 302°F (-40° to 150°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C)
- ♦ Probe Length: 4.5 in. (114mm)
- ◆ Dimensions: 11.00 x 5.25 x 1.25 in. (279 x 133 x 32mm)
- ♦ Weight: 2.55 oz. (72.29g)
- ◆ Power Source: 1 "LR44" battery (included)

UPC	NO.
20035 3	DPT301F0



WATER RESISTANT DIGITAL STEM THERMOMETER - DPT392FC

FEATURES:

- On/off switch
- °F/°C switch
- · Min/Max memory
- · Pocket clip

SPECIFICATIONS:

- ◆ Measurement Range: 14° to 392°F (-10° to 200°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C)
- ◆ Measurement Resolution: 0.1° (F or C)
- ♦ Probe Length: 5 in. (127mm)
- ♦ Sampling Rate: 1 second
- Power Source: 1 "LR44" battery (included)

UPC	NO.
20050 6	DPT392F



DPT392FC

SURFACE CONTACT DIGITAL STEM THERMOMETER – DST570

FEATURES:

- On/off switch
- °F/°C switch
- Pocket clip
- Auto power off

SPECIFICATIONS:

- ◆ Measurement Range: -58° to 572°F (-50° to 300°C)
- Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); ±3.6°F (2°C) elsewhere
- ♦ Measurement Resolution: 0.1° (F or C)

- ◆ Probe Length: 5 in. (127mm)
- ♦ Response Time: 1 second
- ◆ Auto Power Off: After 1 hour of inactivity
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ♦ Power Source: 1 "LR44" battery (included)

UPC	NO.
20075 9	DST570



DST570

LAB DIGITAL STEM THERMOMETERS - DT310LAB & DT510LAB

FEATURES:

- Stainless steel probe
- Hi and Lo alarms
- Min/Max memory
- On/off switch
- Auto power off
- °F/°C switch
- Pocket clip

SPECIFICATIONS:

- Measurement Ranges:

 -58° to 302°F (-50° to 150°C) for DT310LAB;
 -58° to 536°F (-50° to 280°C) for DT510LAB
- Measurement Accuracy: ±1.8°F (±1°C) between -4° and 248°F (-20° and 120°C); ±3.6°F (±2°C) elsewhere in range

- Measurement Resolution: 0.1° (F or C)
 ◆ Probe Length: 8.38 in. (213mm)
- ◆ Response Time: 1 second
- ♦ Auto Power Off: After 1 hour of inactivity
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ♦ Power Source: 1 "LR44" battery (included)

NO.
DT310LAB
DT510LAB





Digital Stem Thermometers



DT340RH DT540RH





T-HANDLE DIGITAL STEM THERMOMETERS - DT320TH & DT520TH

FEATURES:

- °F/°C and data hold switches
- · Auto power off
- Pocket clip

SPECIFICATIONS:

- Measurement Ranges: -58° to 302°F (-50° to 150°C) for DT320DTH; -58° to 536°F (-50° to 280°C) for DT520DTH
- Measurement Accuracy: ±2°F (±1°C) from -4° to 248°F (-20° to 120°C); ±3.6°F (2°C) elsewhere
- ◆ Probe Length: 8 in. (203mm)
- ♦ Response Time: 1 second
- ♦ Auto Power Off: After 10 minutes of inactivity
- Operating Temperature: 14° to 122°F (-10° to 50°C)
- ♦ Power Source: 1 "LR44" battery (included)

UPC	NO.
20150 3	DT320TH
20160 2	DT520TH

ROTARY HEAD DIGITAL STEM THERMOMETERS – DT340RH & DT540RH

FEATURES:

- °F/°C switch
- · Auto power off
- Pocket clip

SPECIFICATIONS:

- Measurement Ranges: -58° to 302°F (-50° to 150°C) for DT340RH; -58° to 536°F (-50° to 280°C) for DT540RH
- Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); ±3.6°F (2°C) elsewhere
- ◆ Probe Length: 5 in. (127mm)
- ♦ Response Time: 1 second
- ◆ Auto Power Off: After 1 hour of inactivity
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)
- Power Source:1 "CR2023" battery (included)

UPC	NO.
20115 2	DT340RH includes 1 extra battery
20120 6	DT540RH

WATERPROOF KEY PAD DIGITAL STEM THERMOMETERS – DT605MFC & DT655HFC

DT605MFC

FEATURES:

- Water resistant to IP65 standard
- °F/°C switch
- Min/Max memory
- · Stainless steel probe
- Auto power off

SPECIFICATIONS:

- ◆ Measurement Range: -58° to 392°F (-50° to 200°C)
- ◆ Measurement Accuracy: ±1.8°F (±1°C) from -4° to 184°F (-20° to 120°C); ±3.6°F (±2°C) from -58° to -4°F (-50° to -20°C) and from 248° to 392°F (120° to 200°C); ±5.4°F (±3°C) from 392° to 572°F (200° to 300°C)
- ♦ Response Time: 0.7 seconds
- ◆ Probe length: 5 in. (127mm)
- ◆ Auto Power Off: After 10 minutes of inactivity
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Power Source: 1 "LR44" battery (included)

UPC	NO.
20165.7	DT605MFC

DT655HFC

FEATURES:

- Water resistant to IP65 standard
 °F/°C switch
- Data hold
 Stainless steel probe
- Polycarbonate case + probe cover
- · Auto power off

SPECIFICATIONS:

- ♦ Measurement Range: -58° to 536°F (-50° to 280°C)
- Measurement Accuracy: ±1.8°F (±1°C) from -4° to 248°F (-20° to 120°C); ±3.6°F (±2°C) from -58° to -4°F (-50° to -20°C) and from 248° to 302°F (120° to 150°C); ±8°F (±6°C) from 302° to 392°F (150° to 200°C); ±11°F (±8°C) from 392° to 536°F (200° to 280°C)
- ♦ Response Time: 0.5 seconds
- ◆ Probe length: 5 in. (127mm)
- ◆ Auto Power Off: After 10 minutes of inactivity
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ◆ Power Source: 1 "LR44" battery (included)

UPC	NO.
001701	DICECUEO

WATERPROOF T-HANDLE KEY PAD DIGITAL STEM THERMOMETER – DT618HF

FEATURES:

- Water resistant to IP65 standard
- °F readout Data hold
- Stainless steel probe Auto power off

SPECIFICATIONS:

- ♦ Measurement Range: -58° to 536°F (-50° to 280°C)
- Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); ±3.6°F (±2°C) elsewhere
- ♦ Response Time: 0.5 seconds
- ♦ Probe length: 8 in. (203mm)
- ◆ Auto Power Off: After 1 hour of inactivity
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ◆ Power Source: 1 "LR44" battery (included)

		()
UPC	NO.	
20185 5	DT618HF	

DT655HFC



Digital Stem Thermometers

DELUXE DIGITAL STEM THERMOMETER – HDT304K

Ideal for automotive, heating and refrigeration.

FEATURES:

- °F/°C switch Data hold
- · Stainless steel piercing probe
- Pocket clip
 Drop resistant

SPECIFICATIONS:

- ♦ Measurement Range: -58° to 302°F (-50° to 150°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); ±3.6°F (±2°C) elsewhere
- ♦ Response Time: 0.5 seconds

- ♦ Probe length: 3.8 in. (97mm)
- ♦ Auto Power Off: After 1 hour of inactivity
- ♦ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ♦ Dimensions: 11.00 x 5.25 x 1.00 in. (279 x 133 x 26mm)
- ♦ Weight: 1.60 oz. (45.36g)
- ◆ Power Source: 1 "LR44" battery (included)

UPG		NU.
20005	6	HDT304K



DELUXE FAST RESPONSE WATERPROOF DIGITAL STEM THERMOMETER - DWS350SSQ

10 times faster than regular probes. Dishwasher safe. Can be calibrated in the field.

FEATURES:

- Rugged stainless steel construction
- Push button calibrating
- Waterproof
- °F/°C switch
- Min/Max memory
- Data hold
- Fast response

SPECIFICATIONS:

- ♦ Measurement Range: -40° to 450°F (-40° to 232°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C) from 14° to 158°F (-10° to 70°C); ±3.6°F (±2°C) elsewhere in range
- ◆ Stem Length: 4.7 in. (119mm)
- ♦ Power Source: 1 "LR44" battery (included)

UPG	NU.
20010 0	DWS350SS



N

CE

DIGITAL STEM TYPE SERVICE THERMOMETER WITH JUMBO DISPLAY -PT300M

Ideal for use in labs, industrial control and HVAC/R applications.

- Probe can be angled at 45°, 90°, 135° or 180° from handle
- Wide measurement range
- Displays ambient temperature and temperature from remote probe
- °F or °C display
- Min/Max memory + data hold
- Wrist Strap
- · Stainless steel probe

SPECIFICATIONS:

- ♦ Measurement Range: -58° to 572°F (-50° to 300°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C)
- ♦ Response Time: 1 second
- ♦ Probe Length: 5.125 in.
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ♦ Dimensions: 6 x 1.8 x 0.7 in. (152 x 46 x 18mm)
- ♦ Weight: 4 oz. (114g)
- ◆ Power Source: 1 "AAA" battery (included)

UPC	NO.
21060 /	DT3UUM

CE PT300M

WATERPROOF KEY PAD THERMOMETER WITH ALARM – DKP300MA

Ideal for reading surface temperature where water is present. Suitable for maintenance of pools, whirlpools and aguariums.

FEATURES:

- Wide measurement range
- °F or °C display
- · Settable Hi and Lo alarms
- Min/Max memory + data hold
- Stainless steel sensor probe
- Auto power off
- · Protective plastic cap for probe
- Pocket clip and stand on back
- Sensor wire compartment
- CE approved

SPECIFICATIONS:

♦ Measurement Range: -58° to 302°F (-50° to 150°C)

- ♦ Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); 3.6°F (2°C) elsewhere
- ◆ Probe Length: 5 in. with 3 ft. cord
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)
- ♦ Dimensions: 4.7 x 3.2 x 1 in. (120 x 80 x 24mm)
- ♦ Weight: 3.4 oz. (95g)
- ♦ Power Source: 1 "LR44" battery (included)

UPC	NO.
21070.3	DKB300MA



Analog Thermometers



ANALOG POCKET STEM THERMOMETERS WITH MAGNIFYING LENS -320, 321

Ideal for quick temperature readings.

FEATURES & SPECIFICATIONS:

- Rugged 5 in. (127mm) long, 0.14 in. (3.5mm) diameter stainless steel probe
- 1 in. (25.4mm) diameter dial with magnifying lens
- Measurement Range: -40° to 160°F (-40° to 71°C) for **320**; 0° to 220°F (-18° to 104°C) for **321**
- Measurement Accuracy: ±5%

INCLUDES:

Protective Sheath with Pocket Clip

UPC	NO.
00320 1	320
22391 3	321



TEMPERATURE



PT2008G220







PT2020G-220

LONG-STEM ANALOG THERMOMETERS – PT2008G-160, PT2008G220, PT2008G-550 AND PT2020G-220

FEATURES:

- Four combinations of measurement range and probe length
- 2 in. (51mm) diameter dial w/glass lens
- Durable stainless steel probe
- Rugged construction



SPECIFICATIONS:

UPC	NO.	Measurement Range	Probe Length
01658 9	PT2008G-160	-40° to 160°F (-40° to 71°C)	8 in. (203mm)
23101 2	PT2008G220	0° to 220°F (-18° to 104°C)	8 in. (203mm)
23100 5	PT2008G-550	50° to 550°F (10° to 285°C)	8 in. (203mm)
23105 0	PT2020G-220	0° to 220°F (-18° to 104°C)	20 in. (508mm)



FT80H



HORIZONTAL REFRIGERATOR/FREEZER ANALOG THERMOMETER -FT80H

Ideal for hanging.

FEATURES:

- Stainless steel
- Horizontal reading
- Hanging or free standing
- Easy to read display
- °F/°C scales

SPECIFICATIONS:

- ♦ Measurement Range: -40° to 80°F (-40° to 27°C)
- ♦ Dimensions:

1.25 x 4.75 x 0.75 in. (32 x 121 x 19mm)

UPC	NO.
24015 1	FT80H





ROUND REFRIGERATOR/FREEZER THERMOMETER - FT80R

Ideal for hanging.

FEATURES:

- Stainless steel
- Hanging or free standing
- Easy-to-read round dial
- °F/°C scales
- Color-coded temperature arcs

SPECIFICATIONS:

- ♦ Measurement Range: -20° to 80°F (-29° to 27°C)
- ♦ Dial Diameter: 2 in. (51mm)

UPC	NO.	
24005 2	FT80R	



In, Out Thermometers & Panel Meters

3 CHANNEL CAPABLE WIRELESS THERMOMETER WITH REMOTE – EMR813

Ideal for measuring and monitoring indoor and outdoor temperature. **FEATURES:**

- Min/Max memory
- Programmable temperature alert
- °F/°C switch
- · CE approved

SPECIFICATIONS:

- ◆ Measurement Range: Indoor: 32° to 122°F (0° to 50°C) Outdoor: -4° to 140°F (-20° to 60°C)
- ◆ Dimensions of Base Unit: 3.8 x 2.4 x 0.2 in. (97 x 60 x 30mm)
- ♦ Weight of Base Unit: 3 oz. (85g)

- ♦ Dimensions of Sensor: 3.6 x 2.6 x 0.9 in. (90 x 65 x 23mm)
- ♦ Weight of RemoteSensor: 3 oz. (85g)
- ♦ Power Source: 2 "AAA" batteries (not included)
- ♦ Warranty: 1 year (limited)

UPC NO. 600177 **EMR813**



STANDARD DIGITAL PANEL METER WITH EXTERNAL SENSOR - DPM300PP

Wide range of applications.

FEATURES:

- °F/°C switch
- High/low alarm
- · Jumbo digital display
- 3.28 ft. (1m) cord with stainless steel sensor

SPECIFICATIONS:

- ♦ Measurement Range: -58° to 302°F (-50° to 150°C)
- ♦ Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); ±3.6°F (±2°C) elsewhere
- ◆ Digit Height: 0.75 in.
- ♦ Display Size: 1.85 x 0.85 in.
- ♦ Dimensions:
 - 2.4 x 1.4 x 0.5 in. (61 x 36 x 13mm)
- Power Source: 1 "LR44" battery (included)

UPC NO. 22140.2 DPM300PP



DPM300PP

MINI PANEL METER WITH EXTERNAL SENSOR - MDP300PP

Suitable for various applications.

FEATURES:

- °F/°C button
- On/Off button Digital display
- · Stainless steel sensor with 3 ft. cord
- Suction cup on back

SPECIFICATIONS:

♦ Measurement Range: -58° to 302°F (-50° to 150°C)

- ♦ Measurement Accuracy: ±1.8°F (±1°C) from -22° to 302°F (-30° to 150°C); ±3.6°F (±2°C) elsewhere
- ♦ Digit Height: 0.5 in.
- ♦ Display Size: 1.6 x 0.6 in.
- ♦ Dimensions:
- 2.05 x 1.06 x 0.5 in. (52 x 27 x 13mm)
- ♦ Power Source: 1 "LR44" battery (included)

UPC NO. MDP300PP 221006

MDP300PP

INSIDE/OUTSIDE THERMOMETER WITH WATERPROOF PROBE – AQ150

Ideal for digitally monitoring indoor/outdoor temperatures and in aquarium and aqua-culture applications.

FEATURES:

- . Displays ambient or remote (IN or OUT) temperature
- Tracks MAX and MIN temperatures
- · High and low remote temperature alarms
- °C/°F button
- Backlit LCD
- Foldaway stand
- Includes battery and mounting hardware
- · Magnets on back
- Detachable sensor-tipped cable

SPECIFICATIONS:

- ◆ Ambient Temperature Range: 14° to 122°F (-10° to 50°C)
- ◆ Remote Temperature Range: -58° to 158°F (-50° to 70°C)
- ♦ Measurement Accuracy: ±1°F (0.5°C) from -4° to 122°F (-20° to 50°C); ±1.8°F (±1°C) elsewhere in range

- ♦ Display Resolution: 0.1° (C or F)
- ♦ Sampling Period: 10 seconds
- ◆ Probe Cord Length: 10 ft. (3m)
- ◆ Display Size: 1.88 x 0.82 in. (48 x 21mm)
- ◆ Digit Height: 5/8 in. (16mm)
- ♦ Dimensions:
- 2.9 x 2.1 x 0.7 in. (73 x 52 x 18mm)
- ♦ Weight of unit, probe, battery and accessories: 3.76 oz. (106g)
- ♦ Power source: 1 "CR2032" battery (included)

INCLUDES:

- Suction Cup
- Velcro Mounting Tape
- Battery
- Mounting Hardware
- 1-Year Limited Warranty

UPC NO. 22150 1 AQ150



In, Out Thermometers & Hygrometer



DT898P

TEMPERATURE

JUMBO DISPLAY INSIDE/OUTSIDE THERMOMETER - DT898P

Ideal for measuring and monitoring both indoor and outdoor temperature.

- Jumbo triple LCD display
- Min/Max memory
- Outdoor probe is water-resistant
- 12 ft. cable with probe
- Wall mount or stand for desktop display
- 12/24 hour clock

SPECIFICATIONS:

- ♦ Measurement Range (Outdoor): -58° to 158°F (-50° to 70°C)
- ♦ Measurement Range (Indoor): 32° to 122°F (0° to 50°C)
- ♦ Accuracy/Resolution: ±1.5°F (±0.8°C)/0.1° (F or C)

- ◆ LCD Size: 2.4 x 1.6 in. (60 x 40mm)
- ♦ Dimensions:

4.2 x 2.6 x 0.9 in. (106 x 75 x 22mm)

- ♦ Weight: 4.8 oz. (135g)
- ◆ Power Source: 1 "AAA" battery (included)

- · Mounting accessories
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC 100127 DT898P

INSIDE/OUTSIDE THERMOMETER WITH MIN/MAX MEMORY – DTR900

Ideal for walk-in refrigerators, reach-in boxes, greenhouses and household and lab applications.

- · Simultaneously displays the time and indoor and remote probe temperatures, or the time and date and the remote probe temperature
- Stores and recalls minimum and maximum indoor and remote probe temperatures with time and date stamps
- · Fast response
- Waterproof exterior sensor cable is thin enough to fit under a window
- One switch selects °F or °C temperature unit and time and date format
- . Mounts on a wall or a flat surface

SPECIFICATIONS:

- ♦ Indoor Range: 14° to 122°F (-10° to 50°C)
- ◆ Outdoor Range: -40° to 176°F (-40° to 80°C)
- ♦ Accuracy: ±1.8°F (±1°C)
- ♦ Resolution: 0.1° (F or C)
- ◆ Probe Length: 6.5 ft. (2m)
- ◆ Display Size:
- 2.53(W) x 0.91(H) in. (64.3 x 23.1mm) ◆ Dimensions:
- 3.5 x 3.5 x 1 in. (89 x 89 x 25mm)
- ♦ Weight: 3.8 oz. (107g)
- ♦ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

NO. DTR900

C€ RoHS

DTR900

EMR963HG **Sensor THGR268**







WIRELESS THERMO-HYGROMETER WITH REMOTE SENSOR – EMR963HG

Ideal for general-purpose environmental monitoring of facilities.

- . Monitors temperature and humidity from up to 90 feet away
- °F/°C switch
- Up to three wireless sensors may be used with hase station
- Includes one remote wireless sensor; additional sensors available
- Jumbo display
- Min/Max memory
- Trend information
- Comfort indicator
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Indoor and Outdoor Temperature Range: -58° to 158°F (-50° to 70°C)
- ♦ Indoor and Outdoor Humidity Range: 25% to 90%
- ◆ Temperature Resolution: 0.2°F (0.1°C)
- ♦ Humidity Resolution: 1%
- ♦ Humidity Accuracy: ±5%

- ◆ Transmitting Range: up to 90 ft.
- ◆ Transmission Interval: approximately every 30 seconds
- ♦ Transmission Frequency: 433 MHz
- ♦ Dimensions: Base: 4.5 x 4 x 0.75 in. (114 x 102 x 19mm) Sensor: 4 x 2.75 x 0.75 in. (102 x 70 x 19mm)
- ♦ Weight: (w/o batteries): Base Station: 5.5 oz. (156g);

Sensor: 2.2 oz. (62g)

♦ Power Source: Base Station: 2 "AA" batteries (included) Sensor: 2 "AA" batteries (included)

INCLUDES:

- 1 Wireless Temperature-Humidity Sensor Model
- 4 Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
60070 2	EMR963HG
60073 3	THGR268 (optional)

Wireless temperature-humidity sensor



Restoration & Remediation

CONTRACTOR'S KIT - KT100

Ideal for restoration and renovation specialists. Buy all three units and save!

MSV100 - 3-In-1 Stud/Voltage/ **Metal Detector**

FEATURES:

- Detects wood joists/studs, live wires and pipes/cables behind
- Automatically compensates for wall thickness
- In voltage mode, automatically compensates for distance to wire
- Center arrow and beeper pinpoint edges
- Marking slot on top of unit
- 1-Year Limited Warranty

SPECIFICATIONS:

- Wall Thickness for Wood Detection: 3/4 in. (max)
- Voltage Detection Range Behind Wall: 2 in.
- Metal Detection Range Behind Wall: 1.5 in.
- Operating Temperature: 40° to 104°F
- Dimensions: 7.1 x 3.0 x 1.2 in.
- Power Source: 1 "9V" battery (included)
- Battery Life: 1-year normal use



KT100

IRTC50 - Scanning IR Thermometer **FEATURES:**

- One squeeze of trigger captures reference temp and begins scanning
- · Color of light panel and speed of beeper indicate whether target is above, within or below reference temperature ± setpoint bandwidth
- · Choice of three setpoint bandwidths: 1°F (default), 5°F and 10°F
- Ideal for making relative readings—as in energy auditing
- · Star Burst laser targeting helps determine optimum target distance
- 1-Year limited warranty

SPECIFICATIONS:

- Distance-To-Spot (D:S) Ratio: 8:1
- Measurement Range: -40° to 428°F
- Measurement Accuracy/Resolution: ±4°F above 32°F; ±3°F below 32°F/0.1°
- . Emissivity: Fixed at 0.95
- Power Source: 1 "9V" battery (included)

KIT INCLUDES:

- Soft Carrying Case
- · 3 Batteries
- 3 User's Manuals



MMD7NP - Pinless Moisture Meter FEATURES:

Separate settings for drywall, masonry, softwood and hardwood

- 2 in. backlit LCD + 3-color LED bar graph
- Non-invasive technology with 34 in. maximum sensing depth
- ±4% accuracy on wood
- Auto calibrating
- Reading HOLD button
- Separate out-of-range alarms for wood and building materials
- 1-Year limited warranty

SPECIFICATIONS:

- Measurement Ranges: 0 to 53% for softwood; 0 to 35% for hardwood
- Measurement Accuracy/Resolution: ±4%/1%
- Maximum Sensing Depth: 3/4 in.
- Operating Temperature: 32° to 104°F
- Dimensions: 6.7 x 2.9 x 1.2 in.
- Weight: 5.4 oz. (152g) without battery
- Power Source: 1 "9V" battery (included)

UPC NO. 01603 9 KT100



PROFESSIONAL INSPECTION KIT - KT280

Ideal for restoration & renovation specialists, HVAC/R installers & technicians, & building inspectors. Buy all three units and save!

DCS280 - Rugged Video Inspection System **FEATURES:**

- Grip and color LCD are IP54 splashproof and 1m drop-proof.
- Thin (0.35 in.) probe is IP67 oil, water and dust-proof. • One-handed operation frees
- vour other hand to use tools Video flip and 2X zoom
- buttons • Includes four probe tip
- accessories (thread protector, magnetic pickup, pickup hook, 45° mirror)
- · 3-Year limited warranty

SPECIFICATIONS:

- Camera/LCD Resolution: 320 x 240 pixels
- Depth of Field: 1 in. to 10 ft. (25mm to 3m)
- Video Controls: 180° flip, 2X zoom in 7 steps
- Dimensions of Grip and Monitor: 8.5 x 4.6 x 3.2 in.
- Power Source: 4 "AA" batteries (included)

KIT INCLUDES:

- Soft Carrying Case
- 7 Batteries (4 "AA", 2 CR2032, 1 "9V")
- 3 User's Manuals





IRT105 - 6:1 Pocket Infrared Thermometer **FEATURES:**

- · Adjustable emissivity
- Min and Max measurement modes + Measurement Lock
- Selectable °F or °C unit
- . Small and light and easy to use

SPECIFICATIONS:

- Distance-To-Spot (D:S) Ratio:
- Measurement Range: -22° to 482°F
- Measurement Accuracy/Resolution: ±3°F above 32°F; ±5°F below 32°F/0.1°
- Dimensions: 4.25 x 2.05 x 0.98 in.
- Weight: 1.41 oz. (40g)
- Power Source: 2 CR2032 Li-ion batteries (included)
- · 1-Year limited warranty

3450

MMD7NP - Pinless Moisture Meter **FEATURES:**

- Separate settings for drywall, masonry, softwood and hardwood
- 2 in. backlit LCD + 3-color LED bar graph
- Non-invasive technology with 34 in. maximum sensing depth
- ±4% accuracy on wood
- Auto calibrating
- Reading HOLD button
- · Separate out-of-range alarms for wood and building materials
- 1-Year limited warranty

SPECIFICATIONS:

- Measurement Ranges: 0 to 53% for softwood; 0 to 35% for hardwood
- Measurement Accuracy/Resolution: ±4%/1%
- Maximum Sensing Depth: 3/4 in.
- Operating Temperature: 32° to 104°F
- Dimensions: 6.7 x 2.9 x 1.2 in.
- Weight: 5.4 oz. (152g) without battery • Power Source: 1 "9V" battery (included)

UPC	NO.
016046	KT280





Affordable. Versatile. And high-tech.

We're especially excited about our new MMD950, with its "magic" sphere that can sense moisture 4 inches below a hard surface. This instrument and its siblings demonstrate that when it comes to construction materials like wood, concrete and wallboard, General has the right moisture measurement tool for you.



SPECIFICATIONS

Model No.	MM1E	MMD4E	MMD5NP	MM70D
Name	Pin-Type LED Bar Graph Moisture Meter	Pin-Type LCD Moisture Meter	Pinless LCD Moisture Meter	Pin-Type LCD Moisture Meter with Remote Pin-Type Probe
Measurement Depth	Mostly surface	Mostly surface	3/4 in. (20mm)	Mostly surface
Pin Length	3/8 in. (10mm)	3/8 in. (10mm)	N/A	1/2 in. (13mm) and 7/8 in. (23mm)
Measurement Accuracy	±1% of reading	±3% of reading	±(3% of reading + 3 digits)	±1% of reading
Measurement Resolution	1%	0.1%	0.1%	0.1%
Material Selection Switch	No	Yes	Yes	Yes
Calibration Check	Manual	No	No	Manual
Other Features		Data hold, Lo/Med/Hi moisture tones & icons	peak reading alert	99 reading memory, 8 wood species selection, Auto Temperature Compensation, Data hold, Min/Max/Avg memory, Manual calibration
Includes (in addition to user's manual and 1 year limited warranty)		"9V" battery	"9V" battery	Soft pouch, "9V" battery



SPECIFICATIONS

	of Edit Idaliana				
MMD7003	MMD7NP	RHMG650	MMH800	MMD900	MMD950
Pin-Type LCD	Pinless LCD	9-In-1 Thermo-	Pin/Pinless	Pin/Pinless Deep	Pin/Pinless Deep
Moisture Meter	Moisture	Hygrometer with	Moisture Meter	Sensing	Sensing Moisture
with Bar Graph	Meter with	Pin/Pinless	with Temperature	Moisture Meter	Meter
	Tricolor Bar	Moisture Meter	& Humidity	w/Remote Probe	w/Spherical
	Graph				Sensor
Mostly surface	3/4 in. (20mm)	Mostly surface	Mostly surface for	Mostly surface for	Mostly surface for
			pin-type probe;	remote pin-type	integral pins and
			3/4 in. (20mm) for	probe;	remote pin-type
			pinless sensor	2 in. (51mm) for	probe;
				pinless sensor	4 in. (102mm) for
					pinless sensor
0.44 in. (11mm)	N/A	3/8 in. (10mm)	3/16 in. (5mm)	3/8 in. (10mm) and	3/16 in. (5mm)
				3/16 in. (5mm)	
±(5% of reading	±4% of reading for	±3% of reading	±3% of reading	±(3% of reading	±(3% of reading
+ 5 digits)	wood			+5 digits)	+5 digits)
0.1%	1%	0.1%	0.1%	0.1%	0.1%
Yes	Yes	No	Yes	No	No
No	Automatic	No	Manual	Manual and Auto	Manual and Auto
Data hold, Min/Max	Hi/Lo audible	Data hold, Settable	Data hold,	Data hold,	Data hold,
memory	alarms, Hi/Med/Lo	audible Hi/Lo	Audible/visual	Audible/visual	Audible/visual
	color bands	moisture alarms,	Hi/Med/Lo alarms,	moisture level	moisture level
		Thermo-	Also measures	alarm	alarm
		Hygrometer for	temperature and		
		measuring 7	RH for display on		
		environmental	separate LCD		
		parameters			
10	llov (ll. L	6 6 1			
10 pairs of extra pins	"9V" battery	Soft pouch, external	Hard case, "9V"	Hard case,	Hard case,
		probe, "9V" battery	battery, two pairs	external probe,	external probe,
			of extra pins	"9V" battery, two	"9V" battery, two
				pairs of extra pins	pairs of extra pins



PIN-TYPE LED BAR GRAPH MOISTURE METER - MM1E

Ideal for use in woodworking, building construction and home inspection. Examples include:

- Checking for moisture in carpets and sub-flooring
- . Checking wood, drywall and concrete before painting/wallpapering, sealing or treating
- Locating water leaks in roofs, floors and walls
- Selecting dry lumber

FEATURES:

- 10-LED display
- Two measurement ranges: 7 to 15% and 16 to 35%
- · Protective cap doubles as calibration checker
- Full and low battery indications
- CE and RoHS approved

SPECIFICATIONS:

- ◆ Low Measurement Range: 7 to 15% WME (Wood Moisture Equivalent)
- ♦ High Measurement Range: 16 to 35% WME
- ♦ Measurement Accuracy: ±1 LED (~1%)
- ♦ Calibration Check Point: 21% ±2%
- ♦ Low Battery Level: <7.5V
- ♦ Current Consumption: <15mA

- ◆ Operating Temperature: 32° to 140°F (0° to 60°C)
- ♦ Dimensions:
- 6.5 x 2.7 x 1 in. (164 x 69 x 26mm)
- ♦ Weight: 3.2 oz. (91g) w/out battery
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Protective Cap
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC		NO.
1018	8 Q	MM1F



PIN-TYPE LCD MOISTURE METER - MMD4E

Ideal for use in woodworking, building construction, home inspection, lumber selection, water-damage restoration.

FEATURES:

- 99.9 count LCD w/0.4 in. high digits
- Wood/building materials selection switch
- Low, Medium and High moisture tones and on-screen icons
- Data hold + auto power off + low battery indicator
- Replaceable stainless steel pins (#PIND4E)

SPECIFICATIONS:

- ♦ Overall Moisture Measurement Range: 5 to 50% for wood, 1.5 to 33% for building materials
- ♦ Wood Moisture Scales: 5 to 11.9% (low); 12 to 15.9% (medium); 16 to 50% (high)
- ♦ Building Materials Scales: 1.5 to 16.9% (low); 17 to 19.9% (medium); 20 to 33% (high)

- ♦ Measurement Accuracy: ±3% of reading
- ♦ Measurement Resolution: 0.1%
- ♦ Low Battery Level: <7.5V
- ♦ Auto Power Off Trigger: 3 minutes of inactivity
- ♦ Current Consumption: <15mA
- ◆ Dimensions: 6.0 x 2.6 x 0.8 in. (152 x 66 x 20 mm)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Protective Cap Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
41447 7	MMD4E
01499 8	PIND4E Replacement pins
	·

PINLESS LCD MOISTURE METER - MMD5NP

Ideal for measuring moisture content of wood and other construction materials.

FEATURES:

- Non-invasive measurement technique
- Jumbo display
- Wide measurement range
- Intuitive on-screen icons: Low/Medium/High moisture content; wood/concrete mode
- Data hold
- Audible peak reading alert
- Auto Power Off
- · Low and very low battery warnings

SPECIFICATIONS:

- ♦ Measurement Ranges: 0 to 99.9% WME (Wood Moisture Equivalent) for wood; 0 to 56.5% for building materials
- ♦ Measurement Accuracy/Resolution: ±3%/0.1%
- ♦ Measuring Depth: 3/4 in. (20mm)

- Display Type/Size: 99.9 count LCD with 0.4 in. (10mm) high digits
- ♦ Auto Power Off Trigger: 3 to 4 minutes with 0% reading
- ♦ Low/Very Low Battery Warning Triggers: <7.5V/<6.5V
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @ <80%RH
- ♦ Dimensions: 5.75 x 2.6 x 0.75 in. (146 x 66 x 19 mm)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Battery
 User's manual
- 1-Year Limited Warranty

UPC	NO.
40142 2	MMD5NP

MMD5NP

CE



PINLESS LCD MOISTURE METER W/TRICOLOR BAR GRAPH - MMD7NP

Ideal for measuring moisture content of wood and other construction materials. **FEATURES:**

- · Separate settings for drywall, masonry, softwood and hardwood
- 2 in, backlit LCD + 3-color LED bar graph
- Non-invasive technology with 3/4 in. maximum sensing depth
- ±4% accuracy on wood
- · Auto calibrating
- Data hold
- · Separate out-of-range alarms for wood and building materials

SPECIFICATIONS:

- ♦ Measurement Ranges: 0 to 53% for softwood; 0 to 35% for hardwood
- ♦ Measurement Accuracy/Resolution: ±4%/1%
- ♦ Maximum Sensing Depth: 3/4 in.
- ♦ Auto Power Off (APO) Trigger: 2 minutes of inactivity
- ♦ Operating Temperature: 32° to 104°F
- ♦ Dimensions: 6.7 x 2.9 x 1.2 in.
- ♦ Weight: 5.4 oz. (152g) without battery
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
01583 4	MMD7NF



PIN/PINLESS MOISTURE METER W/ TEMPERATURE & HUMIDITY - MMH800

Ideal for locating water leaks and measuring moisture content of drywall, plastered walls, floors and subfloors. Also measures ambient temperature and humidity.

- Pin-type and non-marring inductive sensors
- Two dedicated displays: Moisture percentage, and ambient temperature plus relative humidity
- · High/medium/low audible indication of moisture level
- Holds moisture level readings
- Auto diagnostic check
- Auto power off

SPECIFICATIONS:

- ♦ Measurement Ranges: 5 to 50% moisture (wood); 1.5 to 33% moisture (building materials)
- ♦ Moisture Measurement Accuracy: ±3%
- ♦ Moisture Measurement Resolution: 0.1%

- ♦ Temperature Measurement Range/Accuracy: 32° to 140°F (0° to 60°C)/±5.4°F (±3°C)
- ♦ Humidity Measurement Range/Accuracy: 25 to 95%/±5% below 75%RH; ±10% above 75%
- ♦ Auto Power Off: After 3 minutes of inactivity
- ♦ Dimensions: 7.13 x 2.17 x 1.57 in. (181 x 55 x 40mm)
- ♦ Weight: 4.06 oz. (115g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Battery Two Pairs of Extra Pins
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01486 8	MMH800





PIN-TYPE LCD MOISTURE METER W/BAR GRAPH - MMD7003

Ideal for measuring moisture content of wood, timber and concrete.

- Two displays: Red LED bar graph and LCD display with 0.62 in. (51mm) high digits
- Optional remote probe available
- Replaceable 0.44 in. (11mm) long pins
- Min/Max memory + data hold
- · Heavy-duty housing
- · Low battery indicator

SPECIFICATIONS:

- ♦ Two measurement ranges: 0 to 100% for concrete and non-wood materials, 6 to 40% moisture for wood
- ♦ Measurement Accuracy/Resolution: \pm (5% of reading + digits)/0.1%

- ♦ Dimensions:
 - 8.4 x 2.7 1.2 in. (216.5 x 68.5 x 29.7mm)
- ♦ Weight: 8.8 oz. (251g)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- 10 Pairs of Extra Pins
- Protective Cover
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
07003 1	MMD7003
01255 0	MP7003 External Pin-Type Probe (optional)



MMD7003



MMD900

MMD950

PIN/PINLESS DEEP SENSING MOISTURE METER WITH REMOTE PROBE -**MMD900**

Ideal for contractors, woodworkers and homeowners to find leaks and to measure the moisture content of wood and other construction materials.

- Two measurement modes: Pin (%WME) and pinless (REL)
- · Pinless measuring up to 2 in. deep via sensor on back of meter
- . Dual displays: Jumbo LCD and 40-dot LED bar graph
- Jack for included remote pin-type probe
- · Protective cover doubles as calibration checker
- Spare pins compartment
- · Replaceable stainless steel pins
- Auto zero calibration
- · Data hold function
- User can turn beep sound, backlight and auto power off function on or off



- ♦ Measurement Range: 6.0 to 87.6% WME (Wood Moisture Equivalent) and 0.1 to 99 REL
- ♦ Measurement Accuracy (Pin Mode): ±3% of reading +5 digits
- ♦ Pin Length/Type: 3/16 in. (5mm) stainless steel
- ◆ External Probe Cable Length: 46 in. (1.168m)
- ♦ Pinless Measuring Depth: 2 in. (50.8mm)
- ◆ LCD Digit Height: 0.9 in. (22.9mm)
- ♦ LCD Resolution: 0.1%
- ♦ LED Bar graph Composition/Colors: 40 dots/green, red, yellow
- ♦ Operating Current: 70 mADC max
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<80%RH
- 9 x 2.75 x 1.625 in. (229 x 70 x 41mm)
- ♦ Weight: 8 oz. (249g)
- ♦ Power Source: 1 "9V" battery (included)



♦ Dimensions:

- Remote Probe Hard Carrying Case
- Two Pairs of Extra Pins
- Battery User's Manual
- 1-Year Limited Warranty

	UPC	NO.
Ī	01485 1	MMD900
	01655 8	MP905 Deep Wall Moisture Probe
		(optional, see middle photo at left)





PIN/PINLESS DEEP SENSING MOISTURE METER WITH SPHERICAL **SENSOR AND REMOTE PROBE - MMD950**

Ideal for contractors, woodworkers and homeowners to measure the moisture content of wood and other construction materials.

- Two measurement modes: Pin and pinless
- Pin mode uses replaceable pins at end of 46 in. cable; pinless mode uses integral ball sensor with 4 in. measurement depth
- . Displays % WME or relative readings simultaneously on two displays: 0 to 99.9 count jumbo LCD, and 40-dot tri-color LED bar graph
- Auto-calibrating
- Data hold function
- · User can turn beep sound, backlight and auto power off function on or off
- Low battery warning
- Spare pins storage compartment

- ♦ Pinless Ball Sensor Measurement Depth: 4 in. (10.16cm)
- ♦ Ball Sensor Diameter: 1 in. (22.9mm)
- ♦ LCD Digit Height: 0.9 in. (22.9mm)
- ♦ LCD Resolution: 0.1%
- ♦ LED Bar Graph Composition/Colors: 40 dots/green, red, yellow
- ♦ Operating Current: 70 mADC max
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<80%RH
- ♦ Dimensions:
- 9 x 2.75 x 1.625 in. (229 x 70 x 41mm)
- ♦ Weight (w/battery): 8 oz. (249g)
- ♦ Power Source: 1 "9V" battery

SPECIFICATIONS:

- ♦ Measurement Range: 6.0 to 87.6% WME (Wood Moisture Equivalent) and 0.1 to 99 REL
- ♦ Measurement Accuracy (Pin Mode): ±3% of reading +5 digits
- ♦ Pin Length/Type: 3/16 in. (5mm) Stainless Steel
- ◆ External Probe Cable Length: 46 in. (1.168m)

- Remote Probe Two Pairs of Extra Pins
- Hard Carrying Case Battery
- User's Manual 1-Year Limited Warranty

UPC	NO.
01505 6	MMD950
01655 8	MP905 Deep Wall Moisture Probe (optional, see middle photo above)





Precision Moisture Meters/Probes

PIN-TYPE LCD MOISTURE METER W/REMOTE PIN-TYPE PROBE - MM70D

Precision digital instrument for making accurate moisture measurements in wood and timber.

FEATURES:

- 1% accuracy
- . Backlit dual readout LCD
- Protective cap for safe carrying and operation
- · Hardened gloss treatment on display-window for an abrasion-proof long-term clean lens
- 5.5% to 99.9% measurement range with 0 to 1 VDC output
- Stores/recalls up to 99 readings + Min/Max
- Auto temperature compensation and manual calibration
- Auto power off
- Ergonomic design, comfortable and durable
- Audible and visual low battery warning
- Additional set of long pins 0.9 in. (23mm) included
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 5.5 to 99.9% Wood Moisture Equivalent (WME)
- ♦ Resolution: 0.1%
- ♦ Accuracy (at 25°C): ±1% Wood scale

- ♦ Sampling Rate: 0.3 seconds
- ♦ Wood Group Scales: Select from 8 wood species groups
- ◆ Data Memory: 99 readings
- ♦ Signal Output: 0 to 1 VDC (10mV/%WME)
- ♦ Operating Temperature: -4° to 131°F (-20° to 55°C) @<80% RH
- ◆ Dimensions:
- 6.0 x 2.2 x 1.26 in. (153 x 56 x 32mm)
- ♦ Weight: 5.5 oz. (155g) including battery
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- MM70D Meter with Two 0.5 in. (12.7mm) Pins
- MP7021 External Pin-Type Probe: 39 in. (1m) Long with 0.5 in. (12.7mm) Pins
- Extra Pair of 0.9 in. (23mm) Long Pins
- Soft Pouch Battery User's manual
- * 1-Year Limited Warranty

UPC	NO.
07010 9	MM70D



PIN/PINLESS LCD MOISTURE METER KIT W/ REMOTE PIN TYPE PROBE AND ROLLER TYPE SENSOR - MM70D-7022KIT

Precision digital moisture meter for highly accurate readings in wood, timber and many other materials.

FEATURES:

- 1% accuracy
- · Backlit dual readout LCD
- Protective cap for safe carrying and operation
- · Hardened gloss treatment on display-window for an abrasion-proof long-term clean lens
- 5.5% to 99.9% measurement range with 0 to 1 VDC output
- Stores/recalls up to 99 readings + Min/Max
- Auto temperature compensation and manual calibration
- · Auto power off
- Ergonomic design, comfortable and durable
- · Audible and visual low battery warning
- Interchangeable extension probes
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 5.5 to 99.9% Wood Moisture Equivalent (WME)
- ♦ Resolution: 0.1%
- ♦ Measurement Accuracy: ±1% WME
- ♦ Sampling Rate: 0.3 seconds
- ♦ Wood Group Scales: Select from 8 wood species groups
- ◆ Data Memory: 99 readings

- ♦ Signal Output: 0 to 1 VDC (10mV/%WME)
- ♦ Operating Temperature: -4° to 131°F (-20° to 55°C) @<90% RH
- ♦ Dimensions: 6.0 x 2.2 x 1.26 in. (153 x 56 x 32mm)
- ♦ Weight: 5.5 oz. (155g) including battery
- ◆ Power Source: 1 "9V" battery (included)

KIT INCLUDES:

- MM70D Meter with Two 0.5 in. (12.7mm) Long Pin-Type Probes
- MP7021 External Pin-Type Probe: 39 in. (1m) Long with 0.5 in. (12.7mm) Pins
- MP7022 External Roller-Type Probe
- Extra Pair of 0.9 in. (23mm) Long Pins
- Soft Pouch
- Battery
- User's Manual
- 1-Year Limited Warranty







UPC	NO.
01292 5	MM70D-7022KIT
70604 6	MP7021 External Pin-Type Probe 39 in. (1 meter) long
07070 3	MP7022 External Roller-Type Probe 39 in. (1 meter) long (optional)



PRECISION DIGITAL SOIL MOISTURE METER WITH PROBE - DSMM500

Ideal for commercial, agricultural and professional use.

FEATURES:

- · Designed to measure moisture content of soil
- · Heavy-duty probe
- Min/Max memory + data hold
- IP65 water resistance
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 50%
- ♦ Measurement Accuracy/Resolution: ±(5% of reading + 5 digits)/0.1%

- ♦ Sampling Time: 0.8 seconds
- ♦ Probe Length: 8 in. (203mm)
- ♦ Display Size: 1.1 x 0.75 in. (28 x 19mm)
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<80% RH
- Dimensions of Meter Body:6.8 x 1.6 x 1.6 in. (172 x 40 x 40mm)
- ♦ Weight of Unit (including batteries): 9.4 oz. (267g)
- ◆ Power Source: 4 "AAA" batteries (not included)

UPC	NO.
01240 6	DSMM500

GENERAL-PURPOSE MOISTURE METER – MM6012

Ideal for measuring moisture content of a wide variety of materials, including wood fiber, wood products, tobacco, cotton and paper.

FEATURES:

- Large 4-digit LCD display
- Data hold function
- · Compact, lightweight and easy to use
- Also measures ambient temperature



SPECIFICATIONS:

- ♦ Moisture Measurement Range: 0 to 50%
- Moisture Measurement Accuracy: ±0.5% of reading
- ◆ Temperature Measurement Range: 14° to 150°F (-10° to 65°C)
- ◆ Temperature Measurement Accuracy: ±1°F (0.8°C)
- ♦ Display Digit Height: 0.4 in. (10mm)
- ♦ Cord Length: 3.5 ft. (1.07m)
- ♦ Probe Length: 6 in. (152mm)
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)@<85% RH</p>
- ♦ Dimensions:
- 7 x 2.7 x 1.5 in. (178 x 68 x 39mm)
- ♦ Weight (without batteries or probe): 6.7 oz. (190g)
- ♦ Power Source: 4 "AA" batteries (not included)

INCLUDES:

- Hard case User's manual
- 1-Year Limited Warranty

UPC	NO.
10195 7	MM6012



MMG608

GRAIN MOISTURE METER - MMG608

Ideal for use in grain storage and other industrial settings.

FEATURES:

- Also measures temperature
- Large 4-digit LCD
- Red LED bar graph augments LCD
- Min/Max memory + data hold
- Rugged construction
- Lightweight

SPECIFICATIONS:

- ♦ Moisture Measurement Range: 8 to 20%
- ♦ Moisture Measurement Accuracy: ±1% of reading
- ◆ Temperature Measurement Range: 14° to 131°F (-10° to 55°C)
- ◆ Temperature Measurement Accuracy: ±1°F (0.8°C)
- ♦ Display Digit Height: 0.4 in. (10mm)

- ♦ Cord Length: 4 ft. (1.22m)
- ♦ Probe Length: 9.8 in. (290mm)
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<85% RH
- ♦ Dimensions:
- 7 x 2.7 x 1.5 in. (178 x 68 x 39mm)
- ♦ Weight (without batteries or probe): 9 oz. (280g)
- ♦ Power Source: 4 "AA" batteries (not included)

- Protective Hard Case
- Steel Probe with Dual 9.8 in. Needles and 4 ft. Cord
- Operating Instructions
- 1-Year Limited Warranty

UPC	NO.
10197 1	MMG608



Multi-Function Data Loggers

9-IN-1 THERMO-HYGROMETER WITH PIN/PINLESS MOISTURE METER -RHMG650

Ideal for water damage restoration contractors, facility maintenance professionals and HVAC system installers/technicians.

FEATURES:

- Measures 1) ambient temperature, 2) relative humidity (RH), 3) absolute humidity (in mg/L or g/m^3), 4) GPP (mixing ratio—in grains per pound or g/kg), 5) relative moisture level using pinless sensor, 6) absolute moisture level using included pin-type probe, 7) dew point, 8) atmospheric pressure and 9) vapor pressure
- · Stores/recalls 20 pairs of readings
- Settable high and low alarms for RH, relative moisture level and absolute moisture level
- · Backlit LCD with 3-digit primary readout + 4-digit secondary readout
- Field calibratable humidity measurement
- Min/Max, Data Hold, and 30-minute Auto Power Off functions

SPECIFICATIONS:

- ♦ Ambient Temperature Measurement Range/Accuracy: -20° to 167°F (-29° to 75°C)/±3.6°F (2°C)
- ♦ RH Measurement Range: 0 to 100%
- ♦ RH Measurement Accuracy: ±2.5% from 11 to 90%RH; ±3%RH elsewhere
- ♦ Absolute Humidity Range: 0.5 to 240mg/m³
- ♦ GPP Range: 0 to 999 GPP (0 to 160g/kg)
- ♦ Relative/Absolute Moisture Level Range: 0 to 99.9%

- ♦ Pinless Moisture Measurement Depth: 0.75 in. (19mm)
- ♦ External Moisture Probe Measurement Accuracy/Resolution: ±3%/0.1%
- ◆ External Probe Pin Length: 3/8 in. (10mm)
- ♦ Dew Point Range: -76° to 140°F (-60° to 60°C)
- ♦ Atmospheric Pressure Range: 30 to 120 kPA
- ♦ Vapor Pressure Range: 0 to 20.0 kPA
- ♦ Sampling Rate: 2X/sec
- ♦ Memory Capacity: 20 pairs of readings
- ♦ Auto Power Off Trigger: 30 minutes of inactivity
- ♦ Battery Life 6 to 8 weeks (4 hrs/day use)
- ♦ Operating Temperature 32° to 110°F (0° to 43°C)
- ♦ Dimensions 7.3 x 2.8 x 1.4 in. $(185 \times 72 \times 36 \text{mm})$
- ♦ Weight 6.2 oz. (175g), without battery
- ♦ Power Source (1) "9V" battery (included)

INCLUDES:

- RHMG650 Meter External Moisture Probe
- Soft Carrying Case User's Manual
- 1-Year Limitied Warranty

UPC	NO.
01608 4	RHMG650
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)







CALIBRATABLE MULTI-FUNCTION PSYCHROMETERS -EP8703, EP8709, EP8710

Ideal for accurately measuring any environment's temperature, relative humidity (RH), dew point and other condensation parameters.

FEATURES:

- Jumbo backlit display with double (EP8703, EP8709) or triple (EP8710) readout
- · Field calibratable using optional 33% and 75% salts
- Data hold and Max/Min buttons (EP8709 and EP8710 only)
- Also calculates and displays wet bulb temperature (EP8709 and EP8710 only)
- Using included external probe (EP8710 only), can also measure: 1) the difference between an object's internal and surface temperatures or 2) an object's condensation temperature—the difference between its surface temperature and the dew point temperature
- °F/°C switch
- · 20-minute Auto Power Off (can be disabled for calibration)
- Low battery indicator

SPECIFICATIONS:

- ◆ Ambient Temperature Measurement Range: 14° to 122°F (-10° to 50°C)
- ♦ Ambient Temperature Measurement Accuracy/Resolution: ±1.8°F (±1.0°C)
- ◆ External Temperature Probe Measurement Range (EP8710 only): 14° to 158°F (-10° to 70°C)

- ♦ External Temperature Probe Measurement Accuracy (EP8710 only): ±1.8°F (±1°C)
- ◆ External Probe Cord Length: 48 in. (1.22m)
- ♦ Temperature Measurement Resolution: 0.1°
- ♦ RH Measurement Range: 0 to 99.9%
- ♦ RH Measurement Accuracy: ±3% from 5% to 95% RH
- ♦ RH Measurement Resolution: 0.1%
- ♦ RH Response Time: <80 seconds
- ♦ Current Consumption: <15mA ♦ Battery Life: 60 hours (typical)
- ♦ Dimensions: 7.56 x 2.40 x 1.57 in. (192 x 61 x 40mm)
- ♦ Weight (without battery): 3.77 oz. (107g)
- ♦ Power Source: (1) "9V" battery (included)

- Sensor Protection Cap
- "9V" Battery User's Manual
- External Temperature Probe (EP8710 only)
- 1-Year Limited Warranty

UPG	NU.
01632 9	EP8703
01630 5	EP8709
01631 2	EP8710
15060 3	HR33 Calibration Salt MgCl 33% (optional)
15070 2	HR75 Calibration Salt NaCl 75% (optional)



Data Logging Temp/Humidity Monitors

LRTH185DL1 Shown complete with LRTH185DLP

1m probe

LRTH185DLP

1m Probe

DATA LOGGING TEMPERATURE-HUMIDITY MONITOR WITH JUMBO DISPLAY – LRTH185DL

Ideal for temperature/humidity monitoring of labs, computer rooms, clean rooms, and other critical areas.

FEATURES:

- · Complete environmental monitor and alarm
- · Wall-mounted, LED type, easy reading
- · Settable Hi & Lo temperature & humidity alarms
- · Field calibratable humidity measurement
- Data logging capacity of 30,000 records
- USB interface
- Optional probe LRTH185DLP
- · CE and RoHS approved

UPC	NO.
01312 0	LRTH185DL
01365 6	LRTH185DL1 with 1 meter probe
01364 9	LRTH185DLP 1 Meter Probe (optional)
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -4° to 140°F (-20° to 60°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C) between 32° and 104°F; ±3.6°F (±2°C) elsewhere
- ♦ Relative Humidity Measurement Range: 5 to 95%
- ♦ RH Measurement Accuracy: ±2%
- ◆ Temperature, Humidity Resolutions: 0.1°F (0.1°C), 0.1% RH
- ♦ Relative Humidity Response Time: less than 4 seconds
- ◆ Display Dimensions:: 8.4 in. x 4.73 in. (214 x 120mm)
- ◆ Power Loss Data Backup: 1 "9V" battery (included)
- ♦ Dimensions: 10.2 x 7 x 1.9 in. (260 x 178 x 47mm)
- ♦ Weight: 35.3 oz. (1000g)
- Power Source: "9V" AC/DC adaptor for 110V power supply (included)

INCLUDES:

- Battery
- AC/DC Adaptor
- User's Manual
- 1-Year Limited Warranty



Predator Temperature Predator Predator

PRECISION DATA LOGGING THERMO-HYGROMETER – DTH184DL

Ideal for process control, labs and other critical areas.

FEATURES:

- . Dual readout backlit LCD
- Measures and displays temperature and humidity
- 1% accuracy over most of humidity range
- Also calculates and displays dew point and wet bulb temperature
- Min/Max memory + data hold
- Settable Hi & Lo temperature & RH audIble alarms
- °C/°F switch
- Field calibratable humidity measurement
- 20 minute Auto Power Off (can be disabled for data logging and calibration)

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -4° to 140°F (-20° to 60°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C) between 32° and 104°F; ±3.6°F (±2°C) elsewhere
- ◆ Relative Humidity Measurement Range: 5 to 95%

- ♦ RH Measurement Accuracy: ±1% of reading between 15 and 80% RH; 2.5% elsewhere
- ♦ Temperature, Humidity Resolutions: 0.1°F (0.1°C), 0.1% RH
- ♦ Operating Temperature: -4° to 140°F (-20° to 60°C)@<95% RH
- ♦ Current Consumption: 10mADC @9V
- ♦ Dimensions: 5.1 x 2.2 x 1.5 in. (130 x 56 x 38mm)
- ♦ Weight: 8.8 oz. (250g)
- ◆ Power Source: 1 "9V" battery (included)

- Battery
- · Data Logging/Interface Software
- USB Cable
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01315 1	DTH184DL
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)
	01315 1 15060 3



Temperature & Humidity Monitors

DIGITAL TEMPERATURE AND HUMIDITY PEN – PTH8708

Ideal for HVAC/R, laboratories, hospitals, computer rooms, greenhouses, printing, film processing, and more.

FEATURES:

- Simultaneously displays temperature and humidity
- Field calibratable humidity measurement
- °F/°C switch
- Auto power off after 20 minutes
- Min/Max memory + data hold
- · Fits in your shirt pocket
- CE approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 14° to 122°F (-10° to 50°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)

- ◆ Relative Humidity Measurement Range: 5 to 95%
- ◆ RH Measurement Accuracy: ±5% of reading
- ◆ Temperature, RH Resolutions: 0.1° (F or C), 1% RH
- ◆ Dimensions:
 - 6.9 x 1.7 x 0.6 in. (175 x 42 x 16mm)
- ◆ Power Source: 1 "CR2032" battery (included)

INCLUDES:

• Battery • Pocket Clip • User's Manual

UPC	NO.
10005 9	PTH8708
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)







DTH700

DIGITAL TEMPERATURE AND HUMIDITY METER - DTH700

Ideal for measuring, monitoring and displaying temperature and humidity. **FEATURES:**

- Measures and displays temperature and humidity
- °F/°C switch
- · Wall or desk mountable
- Min/Max memory with auto daily reset feature

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 14° to 140°F (-10° to 60°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)
- ◆ Relative Humidity Measurement Range: 10 to 95%

- ♦ RH Measurement Accuracy: ±5% of reading
- ◆ Temperature, RH Resolutions: 0.1° (F or C), 1% RH
- ♦ Dimensions:
- 4 x 2.5 x 0.5 in. (102 x 64 x 13mm)
- ◆ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
11015 7	DTH700

DIGITAL TEMPERATURE AND HUMIDITY METER WITH CLOCK – DTH800

Ideal for measuring, monitoring and displaying temperature and humidity. FEATURES: ◆ Relative Humidity Measurement

- Simultaneously displays time, temperature and humidity
- Clock with alarm and snooze button
- Min/Max memory
- Wall or desk mountable

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 14° to 140°F (-10° to 60°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)

- ◆ Relative Humidity Measurement Range: 10 to 95%
- ♦ RH Measurement Accuracy: ±5% of reading
- ◆ Temperature, RH Resolutions: 0.1° (F or C), 1% RH
- ♦ Dimensions:
 - 4.25 x 2.5 x 0.5 in. (108 x 64 x 13mm)
- ♦ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
11020 1	DTH800





MINI HYGRO-THERMOMETER - LCR318

Ideal for use in humidors, wine cellars, computer rooms and music rooms. **FEATURES**:

- Simultaneously displays indoor temperature in °F and relative humidity (RH) as a percentage
- Large LCD display
- Min/Max temperature and humidity memory
- Low battery warning
- Wall or desk mountable

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 14° to 140°F (-10° to 60°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)

- ◆ Relative Humidity Measurement Range: 10 to 99%
- ♦ RH Measurement Accuracy: ±5% of reading
- ◆ Temperature, RH Resolutions: 0.1° (F or C), 1% RH
- ♦ Display Size: 1.4 x 0.7 in.
- ♦ Dimensions:
- 1.5 x 2.05 x 0.6 in. (38 x 52 x 15mm)
- ◆ Power Source: 1 "LR44" battery (included)

- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.	
11075 1	LCR318	



LCR318

Thermo-Hygrometers



DIGITAL HANDHELD THERMO-HYGROMETER - CMM880

Ideal for accurate measuring and monitoring of temperature and humidity in a wide range of professional and industrial applications such as: film processing, printing, hospitals, and laboratories.

FEATURES:

- Measures and displays humidity and temperature
- Large LCD
- Min/Max memory
- °F/°C switch
- Data hold
- Field calibratable humidity measurement
- Auto power off (can be disabled for calibration)
- Low battery indication
- · Protective cap with pocket clip
- CE approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -4° to 122°F (-20° to 50°C)
- ♦ Humidity Measurement Range: 5 to 95%RH

- ◆ Temperature Accuracy: ±1.8°F (±1°C)
- ♦ Humidity Accuracy: ±3% of reading
- ♦ Response Time: 80 seconds (approx.)
- ♦ Dimensions:

6.7 x 1.85 x 0.5 in. (170 x 47 x 13mm)

◆ Power Source: 2 "AAA" batteries (included)

INCLUDES:

- Batteries Protective Cap
- Pocket Clip User's Manual
- 1-Year Limited Warranty

UPC	NO.
10015 8	CMM880
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)



DEW POINT THERMO-HYGROMETER – LAM880D

Ideal for accurately measuring and monitoring temperature and humidity in a wide range of professional and industrial applications such as: film processing, printing, hospitals and laboratories.

FEATURES:

- Measures and displays dew point, humidity and temperature
- Large LCD
- Min/Max memory
- °F/°C switch
- Data hold
- Field calibratable humidity measurement
- Auto power off (can be disabled for calibration)
- Low battery indication
- CE approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -4° to 122°F (-20° to 50°C)
- ♦ Humidity Measurement Range: 5 to 95%RH
- ◆ Temperature Accuracy: ±1.8°F (±1°C)

- ♦ Humidity Accuracy: ±3% of reading
- ◆ Response Time: 60 seconds (approx.)
- ♦ Dimensions:

6.7 x 1.85 x 0.5 in. (170 x 47 x 13mm)

♦ Power Source: 2 "AAA" batteries (included)

NCLUDES:

- Batteries
 Protective Cap
- Pocket Clip User's Manual
- 1-Year Limited Warranty

UPC	NO.
10020 2	LAM880D
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)

HUMIDITY SEEKER TEMPERATURE & HUMIDITY PEN – PTH8707

Ideal for contractors and homeowners to measure temperature and humidity.

FEATURES:

- °F/°C switch
- Field calibratable humidity measurement
- Sensor protection cap
- Clips into your shirt pocket

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)
- ◆ Relative Humidity Measurement Range: 20 to 95%
- ♦ RH Measurement Accuracy: ±3% of reading

- ◆ Temperature, RH Resolutions: 0.1° (F or C), 0.1% RH
- ◆ Dimensions: 6.5 x 1.25 x 0.5 in. (165 x 32 x 13mm)
- ♦ Weight: 1.9 oz. (54g)
- ◆ Power Source: 1 "CR2032" battery (included)
- ♦ Warranty: 1 year (limited)

INCLUDES:

- Battery Pocket Clip User's Manual
- 1-Year Limited Warranty

UPC	NO.
014028	PTH8707
16120 3	HR33LJ 33% Calibration Salt (optional)
16130 2	HR75LJ 75% Calibration Salt (optional)



PTH8707



Thermo-Hygrometers

JUMBO DISPLAY IN/OUT TEMPERATURE AND HUMIDITY METER WITH CLOCK - DTH04

Ideal for measuring, monitoring and displaying temperature and humidity.

- Triple readout shows time, inside or outside temperature, and inside or outside relative humidity (RH)
- Min/Max memory
- · Warm, Comfortable and Cool indications
- °C/°F switch
- 12/24 hour alarm clock with 10 minute snooze
- Includes flip-out stand, 9.8 ft. (3m) probe and batteries

SPECIFICATIONS:

◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)

- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)
- ♦ Relative Humidity Measurement Range: 20 to 100%
- ♦ RH Measurement Accuracy: ±6% of reading
- ◆ Temperature, RH Resolutions: 0.1° (F or C), 0.1%RH
- ◆ Digit Height: 0.67 in. (17mm)
- ♦ Display Window Size: 2.8 x 2.4 in. (71 x 61mm)
- ♦ Dimensions: 3.9 x 4.1 x 0.9 in. (99 x 104 x 23mm)
- ♦ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
11032 4	DTH04





JUMBO DISPLAY HUMIDITY AND TEMPERATURE MONITOR - DTH03A

Ideal for measuring, monitoring and displaying temperature and humidity.

FEATURES:

- · Displays humidity and temperature
- · Min/Max memory
- °F/°C slide switch

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ♦ Relative Humidity Measurement Range: 20 to 95%
- ◆ Temperature, RH Resolutions: 0.1° (F or C), 1% RH

- ♦ Display Size: 3.2 x 2.3 in. (80 x 58mm) with 0.9 in. (23mm) high digits
- ♦ Dimensions:
- 4.3 x 3.9 x 0.8 in. (110 x 98 x 20mm) ♦ Weight: 6.3 oz. (175g)
- ◆ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

	UPC	NO.
_	11040 9	DTH03A





DTH03A

HIGH TEMPERATURE THERMO-HYGROMETERS – A600FC & B600FC

Ideal for measuring and monitoring temperature and humidity.

FEATURES:

- Stainless steel case (A600FC); Brass case (B600FC)
- Flange mounting
- Attractive design

SPECIFICATIONS:

- ♦ Temperature Measurement Range: 30° to 250°F (-1° to 121°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)
- ♦ Relative Humidity Measurement Range: 0 to 100%
- ♦ RH Measurement Accuracy: ±6% of reading
- ♦ Temperature, RH Resolutions: 2°, 2%
- ♦ Dimensions: 5.125 in. dial diameter, 6 in. overall
- ♦ Weight: 11 oz. (312g)

UPC	NO
61006 0	A600FC (Stainless steel case)
01636 7	B600FC (Brass case)



Interfaz

USB Temperature-Humidity Pata Loggers

HT10: RH/Temp/GPP Data Logger

HT20: RH/Temp/GPP Data Logger w/ LCD

HT50: RH/Temp/GPP Data Logger w/ LCD & IRT

These data loggers can be deployed on a job site or in key areas of a facility and left unattended for days, weeks or months. The temperature and humidity readings they make and collect can be uploaded to a PC and viewed in Excel, making it easy to spot trends and unexpected excursions.

APPLICATIONS:

- Water damage restoration Units can be deployed and left in place over duration of the job to monitor the drying process
- Process control Simpler, more cost-effective monitoring of office buildings, greenhouses, food and equipment storage facilities, wineries, freezers, shipping containers, HVAC/R installations, computer rooms, labs, libraries and museums
- Electronics manufacturing Monitor and/or data log RH/temp to control high-voltage static discharge

FEATURES & BENEFITS:

- One button starts/stops data logging without a PC
- Plug-and-play USB 2.0 interface; no need for cables, cradles or docks
- Large storage capacity: Up to 16,000 pairs of RH and temperature readings
- 3-1/2-digit LCD displays real-time temperature and RH readings, device working status and "memory full" (HT20 and HT50 only)
- . Built-in IR thermometer for checking temperature of vents and surfaces (HT50 only)
- . Included software is used to set sampling time & Hi/Lo temp and RH alarm setpoints
- · Software also calculates dew point and wet bulb temperatures, and mixing ratio as GPP (Grains per Pound) or GPK (Grams per Kilogram)
- . One-click exporting of logs to Excel or Word
- · Long battery life (up to one year)

- Windows®-Compatible CurveViewer Software
- USB Extension Cable Battery User's Manual
- 1-Year Limited Warranty

UPC NO	
01501 8 HT	10
01503 2 HT	20
01504 9 HT	50
72015 8 BA	10 Extra "1/2 AA" Battery (optional)





Magnetic back for easy storage and deployment



Monitor water damage restoration









USB Temperature-Humidity Data Loggers



Monitor greenhouse temperature and humidity





•			
SPECIFICATION	NS		
Model No.	HT10	HT20	НТ50
Name	USB RH/Temp/GPP	USB RH/Temp/GPP	USB RH/Temp/GPP
Name	Data Logger w/LEDs	Data Logger w/LCD	Data Logger w/LCD & IRT
Temperature Measurement	-4° to 158°F (-2	0° to 70°C)/±1.8°F (1°C) fro	om 14° to 104°F
Range/Accuracy	(-10° to 4	0°C); ±3.6°F (2°C) elsewher	e in range
Temperature Measurement		±0.2°F (0.1°C)	
Resolution			
RH Measurement	0 to 100%/±	3% from 20 to 80%RH, ±3.5	% elsewhere
Range/Accuracy	,		
RH Measurement Resolution		0.1%	
GPP Measurement Range	() to 1500 GPP (0 to 285g/kខ្	<u>''</u>
			16,000 pairs of RH &
Internal Storage Capacity	16,000 pairs of RH & temp readings		temp readings/10,000 RH
			& temp sets + IR readings
IRT Measurement Range	N,	/A	-4° to 482°F
			(-20° to 250°C)
IRT Measurement			±5°F (3°C) below 32°F
Accuracy/Resolution	N,	/A	(0°C); ±4°F (2°C) above
IDT Distance to Cust Datis	. N	/^	32°F/±0.2°F (0.1°C) 2:1
IRT Distance-to-Spot Ratio		/A	
IRT Emissivity	<i>'</i>	/A	0.95 (fixed)
IRT Response Time	N,		0.5 seconds
Laser Power	N,	/A	<1mW (Class 2)
Dimensions	4.96 x 1.10 x 2.01 in	. (126 x 28 x 51mm)	4.92 x 1.69 x 0.91 in.
		<u> </u>	(125 x 43 x 23mm)
Weight		<7 oz. (<200g)	
Power Source		rgeable Lithium-Ion Battery	. ,,
What's Included	Battery, Softw	vare, USB Extension Cable,	User's Manual
Battery Life (typical)		1 year	
Limited Warranty Term		1 year	



Monitor the drying part of water damage restoration



Monitor a climate-controlled food warehouse







RH/Temp Data Loggers



N **INCLUDES:**

DTH3007SD

• Soft Carrying Case • Temperature-Humidity Probe

Patented

- 2 GB SD Memory Card User's Manual
- 1-Year Limited Warranty

Optional Accessories:

UPC	NO. DESCRIPTION	
01544 5	P3007SD Replacement Temperature-Humidity Probe	
015063	AC1 9VDC adaptor for 110V power supply	
015025	SDRD1 SD Card Reader	
15060 3	HR33 33% Calibration Salt (optional)	
15070 2	HR75 75% Calibration Salt (optional)	
Optional "K" type probes: See pp. I-44 – 45		



NCLUDEDS:

• Battery • 1-Year Limited Warranty

General Tools & Instruments

DATA LOGGING TEMPERATURE-HUMIDITY MONITOR – LTH8809DL

Ideal for monitoring and recording temperature and humidity readings in HVAC/R applications.

FEATURES:

- · Bright red jumbo LED display
- Wall or desk mountable
- · Settable high and low temperature and humidity alarms
- · Also calculates and displays dew point
- Selectable temperature unit
- Data logging capacity of 16,000 records
- Field calibratable humidity measurement

SPECIFICATIONS:

- ♦ Temperature Range: -4° to 158°F (-20° to 70°C)
- ♦ Temperature Accuracy: ±1.2°F (±0.6°C)
- ♦ Relative Humidity Measurement Range: 5 to 95%
- ♦ RH Measurement Accuracy: ±3% of reading between 10 and 90% RH; ±5% elsewhere
- ♦ Temperature, Humidity Resolutions: 0.1°F (0.1°C), 0.1% RH
- ♦ Display Size: 2 x 2.6 in. (50.9 x 65.5mm)

- ♦ Dimensions: 4.8 x 5.2 x 1.6 in. (120 x 130 x 42mm)
- ♦ Weight: 7.4 oz. (210g)
- ♦ Power Loss Data Backup: 4 "AA" batteries (included)
- ♦ Warranty: 1 year (limited)

INCLUDES:

- 9V AC/DC Adaptor
- Backup Batteries
- Data Logging/Interface Software
- USB Cable
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01309 0	LTH8809DL
210147	Z110VADPT 9VDC adaptor for 110V
	power supply
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)

HUMIDITY-TEMPERATURE INSTRUMENT WITH EXCEL-FORMATTED DATA LOGGING SD CARD - DTH3007SD

Ideal for high accuracy measurements of temperature and relative humidity of a fluid, including dew point/wet-bulb temperature of ambient air.

FEATURES:

- · Four-function instrument measures temperature/humidity, dew point, wet bulb temperature and surface temperature
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Min/Max memory + data hold
- Sampling time settable from 1 second to 1 hour
- Also supports manual data logging and changing of SD card storage location
- Field calibratable humidity measurement
- · Auto power off (can be disabled for data logging and calibration)

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Measurement Range:
- Temperature: 32° to 122°F (0° to 50°C)
- R.H.: 5 to 95%

- Dew Point: -13.5° to 120.1°F (-25.3° to 48.9°C)
- Wet-bulb: -6.9° to 122°F (-21.6° to 50°C)
- ♦ Measurement Accuracy:
- ±1.5°F (±0.8°C) for temperature
- Sum of temperature and humidity accuracies for dew point and wet-bulb temperature
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH
- ♦ Dimensions: 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)
- ♦ Weight: 1.08 lb. (489g)
- ♦ Power Source: 6 "AA" batteries (not included) or optional 9-VDC AC adaptor

UPC	NO.
01461 5	DTH3007SD

TEMPERATURE-HUMIDITY DATA LOGGER – DL8835

Ideal for measuring, monitoring and recording temperature and humidity of sensitive facilities. Also useful on water-damage restoration projects.

- · Records relative humidity and temperature with date/time stamp
- · Logs data for days, weeks or months
- · Multiple data loggers can be programmed and data downloaded from a single docking station
- Sampling rate programmable from 1 second to 2 hours
- · View either temperature or humidity on LCD
- · Data logging functions require optional USB Interface Kit INT8819 (see below)
- Programmable high and low Itemperature and RH alarms

SPECIFICATIONS:

◆ Temperature Measurement Range: -40° to 185°F (-40° to 85°C)

- ♦ Temperature Measurement Accuracy: ±1°F between -4° and 122°F; ±2°F elsewhere
- ♦ Relative Humidity Measurement Range: 5 to 95%
- ♦ RH Measurement Accuracy: ±5% of reading
- ♦ Temperature, RH Resolutions: 0.1°, 0.1% RH
- ♦ Data Logging Capacity: Up to 8,000 data points each for temperature, humidity
- ♦ Dimensions: 3.14 x 2.16 x 0.86 in. (80 x 55 x 22mm)
- ♦ Weight: 2.6 oz. (76g)
- ◆ Power Source: Lithium battery (included)

UPC	NO.
46125 9	DL8835
461358	INT8819 USB Interface Kit (optional)

Indicates optional NIST calibration is available



DIGITAL POCKET HEAT INDEX MONITOR - SPORTS MODEL - SAM800HI

Ideal for sports medicine professionals, coaches and athletes to monitor outdoor conditions to ensure safety.

FEATURES:

- · Measures and displays heat index, temperature, humidity and dew point
- Danger icon with audible beep
- Min/Max memory + data hold
- °F/°C switch
 2-line x 4-digit LCD
- Auto power off with low battery indicator
- CE approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)
- ◆ Relative Humidity Measurement Range: 0 to 100%

- ♦ RH Measurement Accuracy: ±3% of reading
- ◆ Dew Point Measurement Range/Accuracy: 32° to 140°F (0° to 60°C)/±3%
- ♦ Heat Index Range/Accuracy: 70° to 115°F (21° to 45°C)/±3%
- ♦ Display Resolutions: 0.1° (temperature), 0.1% (RH)
- ♦ Battery Life: 100 hours (average)
- Dimensions:
 - 6.7 x 1.85 x 0.5 in. (168 x 47 x 15mm)
- ◆ Power Source: 1 "CR2032" battery (included)

UPC	NO.
10100 1	SAM800HI



DIGITAL POCKET HEAT INDEX MONITOR - INDUSTRIAL MODEL - SAM800IND

Ideal for professional monitoring of outdoor conditions for sports and worker safety. **FEATURES:**

- Measures and displays heat index, temperature, humidity and dew point
- Danger icon with audible beep
- Min/Max memory + data hold
- °F/°C switch 2-line x 4-digit LCD
- Auto power off with low battery indicator
- CE approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)

- ◆ RH Measurement Range: 0 to 100%
- ♦ RH Measurement Accuracy: ±3% of reading
- ◆ Dew Point Measurement Range/Accuracy: 32° to 140°F (0° to 60°C)/±3%
- ♦ Heat Index Range/Accuracy: 70° to 115°F (21° to 45°C)/±3%
- ♦ Display Resolutions: 0.1° (temperature), 0.1% (RH)
- ♦ Battery Life: 100 hours (average)
- Dimensions:
- 6.7 x 1.85 x 0.5 in. (168 x 47 x 15mm)
- ◆ Power Source: 1 "CR2032" battery (included)

UPC	NO.	
10105 6	SAM800IN	

CE **INCLUDES:** Battery SAM800IND Pocket Clip User's Manual

• 1-Year Limited Warranty

HEAT INDEX MONITOR WITH WET BULB GLOBE TEMPERATURE – WBGT8758

Ideal for industrial uses including HVAC/R, and outdoor sports medicine applications.

- Measures and displays four parameters:
- Air temperature
 Relative humidity

SPECIFICATIONS:

- Wet bulb temperature
- Dew point CE approved

- ◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ◆ Temperature Measurement Accuracy: ±0.8°F (±0.6°C)
- ◆ Relative Humidity Measurement Range: 5 to 95%
- ♦ RH Measurement Accuracy: ±3% of reading

- ♦ Wet Bulb Temperature Measurement Range: 70° to 115°F (21° to 45°C)
- ♦ Wet Bulb Temp. Measurement Accuracy: ±2°F
- ◆ Dew Point Measurement Accuracy: ±3% of reading
- ♦ Black Ball Dimensions: 1.38 (H) x 1.57 (Diam) in. (35 x 40 mm)
- ♦ Dimensions of Instrument: 10 x 1.6 x 1.9 in. (254 x 40 x 49mm)
- ♦ Power Source: 2 "AAA" batteries (included)

_	UPC	NO.
	08758 9	WBGT8758
	161203	HR33LJ 33% Calibration Salt (optional)
	16130 2	HR75LJ 75% Calibration Salt (optional)

DELUXE WBGT HEAT INDEX MONITOR WITH 75MM BLACK BALL – WBGT8778

Ideal for industrial uses including HVAC/R, and outdoor sports medicine applications.

FEATURES:

- Measures four parameters: Air temperature, relative humidity, dew point, wet bulb temperature
- CE approved

SPECIFICATIONS:

- ♦ Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ◆ Temperature Measurement Accuracy: ±0.8°F (±0.6°C)
- ♦ Relative Humidity Measurement Range: 5 to 95%
- ♦ RH Measurement Accuracy: ±3% of reading
- ♦ Wet Bulb Temperature Measurement Range: 70° to 115°F (21° to 45°C)

- ♦ Wet Bulb Temperature Measurement Accuracy: ±2°F
- ♦ Dew Point Measurement Accuracy: ±3% of reading
- ♦ Black Ball Dimensions: 2.95 (H) x 2.95 (Diam) in. (75 x 75mm)
- ♦ Dimensions of Instrument:
- 11 x 3 x 3 in. (278 x 75 x 75mm)
- ♦ Weight: 5.3 oz. (150g)
- ♦ Power Source: 2 "AAA" batteries (included)

UPC	NO.
01308 3	WBGT8778
161203	HR33LJ 33% Calibration Salt (optional)
16130 2	HR75LJ 75% Calibration Salt (optional)





CE



INCLUDES:

- Battery
- User's Manual
- 1-Year Limited Warranty

WBGT8778

General Tools & Instruments -69

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DIGITAL PSYCHROMETER WITH DEW POINT AND WET BULB - SAM990DW

Ideal for monitoring environmental conditions.

FEATURES:

- Measures and displays RH and ambient, wet bulb and dew point temepratures
- · No twirling or charts necessary
- Min/Max memory + data hold
- °C/°F switch
- 20-minute auto power off (can be disabled for calibration)
- · Low battery indication

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -4° to 122°F (-20° to 50°C)
- ◆ Temperature Measurement Accuracy: ±1.8°F (±1°C)
- ◆ Relative Humidity Measurement Range: 10 to 90%

- ♦ RH Measurement Accuracy: ±3% of reading
- ◆ Dew Point Measurement Accuracy: ±1.2°F (±0.6°C)
- ◆ Response Time: 60 seconds (approx.)
- ◆ Dimensions: 6.7 x 1.85 x 0.5 in. (170 x 22 x 13mm)
- ♦ Weight: 4 oz. (113g)
- ♦ Power Source: 2 "AAA" batteries (included)

INCLUDES.

- Protective Cap With Pocket Clip
 Batteries
- User's Manual 1-Year Limited Warranty

UPC	NO.
10025 7	SAM990DW
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)



CALIBRATABLE DIGITAL PSYCHROMETER - EP8706

Ideal for accurate handheld measurements of temperature and humidity.

FE ATUDE C

- · Jumbo display, triple read-out
- · Rotating head to protect sensor
- Field calibratable humidity measurement
- Auto power off
- Min/Max memory + data hold
- · CE approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -4° to 122°F (-20° to 50°C)
- ◆ Temperature Measurement Accuracy: ±1.2°F (±0.6°C)

- ◆ RH Measurement Range: 10 to 90%
- ◆ RH Measurement Accuracy: ±3% of reading
- ♦ Response Time: 60 seconds
- ◆ Power Source: 2 "AAA" batteries (included)

INCLUDES:

- Batteries User's Manual
- 1-Year Limited Warranty

UPG	NU.
10041 7	EP8706
10043 1	P8706 External Temperature Probe
	(optional)
15060 3	HR33 33% Calibration Salt (optional)
15070 2	HR75 75% Calibration Salt (optional)



laulata valativa kumiditu ku maaausinu assa.

Calculate relative humidity by measuring evaporation.

SLING PSYCHROMETERS – SP100CR & SP100FR

FEATURES:

- High impact plastic construction
- Fast, accurate and easy to use
- No assembly required
- · Classic twirling design
- Separate models for °F or °C
 Model Range Type

SP100CR -5° to 50°C Red Spirit SP100FR 20° to 120°F Red Spirit

SPECIFICATIONS:

♦ Dimensions: 8.25 x 1.25 x 0.625 in. (210 x 32 x 16mm)

INCLUDES:

• Two Thermometers • One Wick

UPC	NO.
10215 2	SP100CR
10205 3	SP100FR
10260 2	SPR108
10265 7	SPR109
10270 1	SPR120

Replacement parts:

SPR108 - Two °F Replacement Thermometers for SP100FR SPR109 - Two °C Replacement Thermometers for SP100CR

SPR120 - Six Replacement Wicks for Either Unit

SP100CR

SP100FR



TEMPERATURE & HUMIDITY Psychrometers/Analog Humidity Calculator

TWIRLING PSYCHROMETER - TSP200RC

For measuring temperature and humidity.

FEATURES:

- °C temperature readout
- Extra large handle
- High impact plastic construction
- Fast, accurate and easy to use
- Classic twirling design
- · Red Spirit filled

SPECIFICATIONS:

- ◆ Temperature Measurement Range: 0° to 50°C
- ◆ Temperature Measurement Accuracy: ±0.3°C
- ♦ Humidity Measurement Range: 10 to 100%
- ♦ Humidity Measurement Accuracy: ±3%
- ◆ Dimensions:
- 8.5 x 1.75 x 1 in. (216 x 45 x 25mm)
- ♦ Weight: 7.05 oz. (200g)

INCLUDES:

• Two Thermometers • One Wick

UPU	NU.
10225 1	TSP200RC
10202 2	RTSP Replacement °C Thermometers (2)
10270 1	SPR120 Set of 6 Replacement Wicks



TSP200RC

MASON'S HYGROMETER - MH120

Measures relative humidity.

FEATURES:

- · Measures relative humidity by comparing wet and dry bulb thermometers
- Includes two red spirit thermometers in a sturdy white plastic case and plastic reservoir bottle
- Dual scale readings

SPECIFICATIONS:

- ◆ Operating Temperature: 0° to 120°F (-15° to 50°C)
- ◆ Dimensions: 12.25 x 2.75 x 0.85 in. (311 x 70 x 22mm)

INCLUDES:

· Conversion chart

UPC	NO.
23005.3	MH120



ANALOG TEMPERATURE/HUMIDITY CALCULATOR – HC880

Ideal for calculating dry/wet bulb temperatures and relative humidity percentages for industrial processes.

FEATURES:

- · Easy-to-read
- Pocket sized

SPECIFICATIONS:

- ♦ Dry Bulb Temperature Range: 30° to 120°F (-1° to 49°C)
- ♦ Wet Bulb Temperature Range: 20° to 120°F (-7° to 49°C)
- ♦ Relative Humidity Range: 10 to 95%

UPC	NO.
16110 4	HCSSO



Combustible Gas Leak Detectors



INTRINSICALLY SAFE COMBUSTIBLE GAS LEAK DETECTOR - CGD900

Ideal for detecting more combustible gases (including hydrocarbons) than competitive units.

FEATURES:

- Detects Methane, Propane, Ethane, Butane, Hydrogen, Ethylene, Ethanol, ISO-Butane, NOL, Gasoline, Acetylene, Methyl Ether, Ammonia, Hydrogen Sulfide, Industrial solvents, Benzene, Alcohols, Acetone, Toluene, Xylene
- MSHA approved
- Intrinsically safe (in methane-air only)
- Numeric LED display of sensitivity
- Heated sensor technology
- Ultra sensitive to methane gas
- · Long life sensor
- · Unique digital leak size display
- Automatic calibration
- · Alarm mute mode
- 3 LED sensitivity levels

SPECIFICATIONS:

- ♦ Sensitivity: As low as 5ppm (methane)
- ♦ Sensor Life: 300+ hours
- ♦ Response Time: Instantaneous
- ♦ Warm-up Time: <10 seconds
- ♦ Calibration: Automatic
- ♦ Probe Length: 17 in. (432mm)
- ♦ Display: Bright LED-visible in sunlight
- ♦ Dimensions: 13.75 x 10.00 x 3.25 in. (349 x 254 x 83mm)
- ♦ Weight: 2.0 lbs. (907g)
- ♦ Power Source: 4 "AA" batteries (included)
- ♦ Battery Life: 20 hours continuous use

INCLUDES:

- Test Vial Batteries User's Manual
- 2-Year Limited Warranty

UPC	NO.
01449 3	CGD900

COMBUSTIBLE GAS LEAK DETECTOR - NGD8800

Ideal for industrial uses, HVAC/R, plumbing and plant maintenance.

FEATURES:

- Detects Methane, Hydrogen, Iso-Butane, Ethanol, Ethylene, Tetracholoroethylene, Dimethyl Sufide, Toluene, Formaldehyde, Diethyl-Ether, Ethyl-Acetate, Dichloromethane, Ammonia, R-22
- Uses DSP (Digital Signal Processing)
- · Multi-color circular bar graph
- Semiconductor gas sensor
- Leak size indication (audible/visible)
- Fast warm-up
- · Adjustable Hi/Lo sensitivity
- Low battery indication
- Sensing tip protector
- 15.5 in. (395mm) flexible gooseneck probe

SPECIFICATIONS:

- ♦ Sensitivity: Variable; as low as 5ppm (gasoline)
- ♦ Warm-Up Time:
- <110 seconds (at 25°C, 60%RH)
- ◆ Operating Temperature: 32° to 104°F (0° to 40°C)
- ♦ Dimensions: 6.8 x 2.6 x 2.2 in. (173 x 66 x 56mm)
- ♦ Weight: 14.5 oz. (410g)
- ♦ Power Source: 4 "AA" batteries (included)
- ♦ Battery Life: up to 20 hours (approx.)

INCLUDES:

- Leak Check BottleHard Carrying CaseBatteries
- 1-Year Limited Warranty

NO.
NGD8800
NGD8800SEN Replacement sensor

NGD268

COMBUSTIBLE GAS LEAK DETECTOR FOR EXTREME ENVIRONMENTS -**NGD268**

Works from -40° to 158°F. Ideal for mining and tunnel construction.

- Detects Methane, Natural Gases, Coal Gases, Hexane, Propane, Ethane, Butane, Pentane, Isopropyl Alcohol, Halogenated Hydrocarbons (Methanol, Ethanol, Butanol), Ether, Ketones (Butone, Protone), Hydrogen, Toluene, Gasoline, Industrial Solvents, Lacquers, Refrigerants, Sulfur Dioxide, Ammonia, Sulfured Hydrogen, Acetic Acid
- · Quick response
- · Long and flexible gooseneck probe
- Adjustable sensitivity
- 30 level light/Tricolor LED indication
- · Low battery indicator
- · Sensor self-fault detection
- · High concentration protection

SPECIFICATIONS:

- ♦ Sensitivity: < 50ppm
- ◆ Operating Temperature: -40° to 158°F (-40° to 70°C) @< 98% RH

- ♦ Warmup Time: 20 sec.
- ♦ Response Time: <10 seconds
- ♦ Alarm Levels: Low level Green 20% LEL (Lower Explosive Limit)

Med level - Yellow High level - Red - 50% LEL

- ◆ Charge time: 4 to 6 hours
- ♦ Dimensions:
- 6.7 x 2.4 x 1 in. (170 x 62 x 26mm)
- ♦ Weight: 12.4 oz. (350g)
- ♦ Power Source: 1 "4.8V" rechargeable battery (included)
- ♦ Battery life: up to 8 hours (approx.)

INCLUDES:

- AC Power Adaptor Operating Instructions
- Battery
 1-Year Limited Warranty

UPC	NO.
41537 5	NGD268

NGD8800

PNGD170



Combustible Gas Leak Detectors

MINI DIGITAL COMBUSTIBLE GAS LEAK DETECTOR FOR EXTREME **ENVIRONMENTS - PNGD170**

Works from -40° to 158,F. Ideal for mining and underground construction. **FEATURES:**

- Detects methane (CH₄), propane (C₃H₈), hydrogen (H₂), hydrogen sulfide (H₂S), carbon monoxide ($\overline{C0}$), oxygen ($\overline{O_2}$)
- LED display of gas level and system status
- Malfunction and low voltage alarms (sound and vibration)
- · Wide operating temperature range

SPECIFICATIONS:

- ♦ Measurement Ranges: 0 to 100% LEL (Lower explosive limit) for methane, propane. hydrogen; 0 to 100ppm for hydrogen sulfide, carbon monoxide; 0 to 30% by volume for
- ♦ Measurement Accuracy: ±5% of full scale
- ♦ Response Time: < 30 seconds</p>
- Operating Temperature:
- -40° to 158°F (-40° to 70°C) @< 90%RH

♦ Sensor Life: 2 years

♦ Dimensions: 3.9 x 2.4 x 1.6 in. (100 x 61 x 40mm)

♦ Weight: 7.1 oz. (200g) including battery

♦ Power Source: Rechargeable 3.6V Lithium-ion battery (included)

INCLUDES:

- Molded Hard Case
- AC Adaptor
- Belt Clip
- Batterv
- Screwdriver
- Operating Instructions
- 1-Year Limited Warranty

UPC	NO.
41540 5	PNGD170

PRECISION GAS LEAK DETECTOR "GAS DOG" - NGD7201

Ideal for industrial uses such as gas furnace and plant maintenance.

- Detects very low levels of methane and propane
- Two dedicated 5-level LED bar graphs
- Auto-calibrating
- Headphone jack
- · Reliable solid state sensor
- · Redundant visual and audible alarms
- Audible alarm mute
- Auto power off
- · Low battery warning
- Unique compact ergonomic design
- · Variable alarm set point
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Detection Ranges: 120 to 1920ppm (methane): 40 to 640ppm (propane)
- ♦ Operating Temperature: 23° to 113°F (-5° to 45°C)
- ♦ Warm-Up Time: <60 seconds
- ♦ Response Time: <10 seconds
- ♦ Flexible Probe Length: 18 in. (465mm)
- ♦ Auto Power Off: After 10 minutes of inactivity
- ♦ Dimensions:
- 6.9 x 2.8 x 1.5 in. (175 x 70 x 38mm)
- ♦ Weight: 8 oz. (227g)
- ♦ Power Source: 4 "AA" batteries (included)

- · Stainless Steel Flexible Probe
- Molded Hard Case
- Batteries
- · Operating Instructions
- 1-Year Limited Warranty

UPC	NO.
40720 2	NGD7201

CE RoHS **NGD7201**

COMBUSTIBLE GAS LEAK DETECTOR PEN – PNG2000A

Ideal for detecting leaks of natural gas, propane or butane from plumbing and appliances.

FEATURES:

- · Sensitive, reliable and easy to operate
- Fast response time
- · Redundant visual and audible alarms
- · Auto-calibrating
- · Malfunction and low battery alerts

SPECIFICATIONS:

- ♦ Range: 0 to 100%LEL
- ♦ Response Time: < 5 seconds
- ♦ Sampling: Natural diffusion
- ◆ Operating Temperature: -4° to 131°F (-20° to 55°C)
- ♦ Operating Humidity: <95%RH

- ♦ Operating Voltage: DC3V
- ♦ Operating Current: <150mA
- ♦ Low Alarm: (20±5)% LEL
- ♦ High Alarm: (50±10)% LEL
- ♦ Dimensions: 7.6 (L) x 1.2 (Dia) in. (193 x 30mm)
- ♦ Weight: 4 oz. (113g)
- ♦ Power Source: 2 "AA" batteries (included)

INCLUDES:

- Wrist Strap Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
41501 6	PNG2000A



CO, Microwave & Refrigerant Leak Detectors



DIGITAL CO DETECTOR WITH AUTO ZERO - DCO1001

Ideal for home, office, tunnels, mines, etc.

FEATURES:

- Adjustable CO warning level
- 2-line backlit LCD
- Auto max level display with reset
- Auto-calibrates at 0, 100 and 500 ppm
- 15-second self-test at startup
- · Also measures and displays temperature
- °F/°C switch
- 15-minute Auto Power Off

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 999ppm
- ♦ Resolution: 1ppm
- ♦ Accuracy: ±20% from 0 to 100ppm; ±15% from 100 to 500 ppm

♦ Dimensions:

7 x 1.7 x 1.1 in. (178 x 43 x 28mm)

- ♦ Weight: 4 oz. (113g)
- ♦ Power Source: 3 "AAA" batteries (included)
- ♦ Battery Life: 250 hours with the backlight off; and 35 hours with the backlight on

INCLUDES:

- Wrist Strap
- Carrying Pouch
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC NO. 41655 6 **DC01001**





THE LEAK SEEKER™ MICROWAVE LEAKAGE DETECTOR - MLD290

Ideal for checking for small leaks from microwave ovens.

FEATURES:

- Wand allows leak detection in small areas
- Numeric and colored scales
- · No battery needed

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 2 mW/cm²
- ♦ Measurement Frequency: 2450 MHz
- ◆ Dimensions:

4.8 x 2.2 x 1.7 in. (122 x 56 x 44mm)

♦ Weight: 1.08 lb. (489g)

UPC NO. 40290 0 MLD290

MLD290

CE

RoHS

DIGITAL REFRIGERANT LEAK DETECTOR WITH PUMP - RLD400

Ideal for electronic sensing—the most widely used, sensitive and accurate method of refrigerant leak detection. New proprietary semiconductor sensor detects many new ozone layer-friendly refrigerants approved under the U.S. EPA's Significant New Alternatives Policy (SNAP).

FEATURES:

- Proprietary sensor with lifetime of more than 300 hours of operation (ten years of normal use)
- Detects all commercially available HFC, HFO, HC, HCFC and CFC refrigerants as well as blends and newly approved replacements such as R-22 and R-1234yf
- Triple-redundant leak indication (loud fast beep, bright flashing LED, digital leak size reading)
- True mechanical pump draws in samples, increasing sensitivity
- Three sensitivity levels
- Fast warmup
- · Comfortable neoprene grip
- Automatic calibration and reset to ambient levels
- Mutable beeper
- Garage-durable construction
- Made in U.S.A.
- SAE J2791 and J2913 certified
- Complies with European standard EN 14624
- CE, RoHS, WEEE approved

SPECIFICATIONS:

- ◆ Sensitivities: 0.05 oz./yr (1.4 g/yr) for R-134a; 0.025 oz./yr (0.7g/yr) for R-22
- ♦ Refrigerants Detected: R-134a, R-410a, R-404a, R-407c, R-507, CFC-12 (R-12 or Freon), R-22, R-1234yf
- ◆ Detection Modalities: Sound, light, leak size measure
- ♦ Sensor Type: Proprietary solid electrolyte semiconductor
- ♦ Sensor Life: >300 hours (ten years' normal use)
- ♦ Warmup Time: 17–20 seconds
- ♦ Response Time: Instantaneous
- ◆ Display Type, Size: 7-segment red LED, 0.6 in. (15mm) high
- ◆ Dimensions of Instrument: 6.8 x 2.6 x 2.2 in. (173 x 66 x 56mm) w/17 in. (432mm) probe
- ♦ Weight of Instrument: 1.5 lb. (680g)
- ♦ Power Source: 4 "AA" batteries (included)
- ◆ Battery Life: 5 hours continuous operation (typical)

INCLUDES:

- Padded Hard Case
 Leak Test Vial
- Batteries User's Manual
- · 2-Year Limited Warranty (including sensor)

UPC NO. 01587 2 RLD400

I-74

RLD400



Refrigerant Leak Detectors

HIGH-PERFORMANCE REFRIGERANT LEAK DETECTOR - RLD380L

Ideal for HVAC/R, industrial and automotive applications.

- Detects R-134a, R-404A, R-407C, R-410A, R-22 (Freon)
- Uses semiconductor sensor and digital signal processing
- · Color-coded display of Hi and Lo leak levels
- · Hi/Lo sensitivity switch
- Includes flexible stainless steel gooseneck probe, reference source
- Fast warmup
- · Redundant audible and visual alarms
- · Ambient refrigerant concentration reset
- · Auto power off
- Low battery alert
- · CE, RoHS, WEEE approved



SPECIFICATIONS:

- ♦ Sensitivities: 6g/yr (Hi) and 30g/yr (Lo) for R-134a, R-22; 8g/yr (Hi) and 40g/yr (Lo) for R-404A, R-407C, R-410A
- ♦ Warmup Time: 90 seconds
- ◆ Auto Power Off: 10 minutes of inactivity
- ♦ Probe Length: 15.5 in. (394mm)
- ♦ Operating Altitude: <6500 ft. (1980m)
- ♦ Operating Temperature and Humidity: 32° to 104°F (0° to 40°C), < 80%RH
- ♦ Storage Temperature and Humidity: 14° to 140°F (-10° to 60°C), < 70%RH
- ♦ Dimensions: 6.8"H x 2.6"W x 2.2"D (173 x 66 x 56mm)
- ♦ Weight: 14.1 oz. (400g)
- ◆ Power Source: 4 "AA" batteries (included)
- ♦ Battery Life: 40 hours of normal use

INCLUDES:

- · Leak Check Bottle
- Molded Hard Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
40141 5	RLD380L
01378 6	RS380 Replacement Sensor



RLD380L



HIGH-PERFORMANCE REFRIGERANT LEAK DETECTOR WITH PUMP -RLD382P

Ideal for HVAC/R, industrial and automotive applications requiring greater sensitivity.

FEATURES:

- Detects R-134a, R-404A, R-407C, R-410A, R-22 (Freon)
- · Uses pump to draw in gas, increasing sensitivity
- · Also uses semiconductor sensor and digital signal processing
- Three-color display of Hi, Medium, Lo leak levels
- · Hi/Lo sensitivity switch
- Includes flexible stainless steel gooseneck probe, reference source
- Fast warmup
- · Redundant audible and visual alarms
- · Ambient refrigerant concentration reset
- Auto power off
- Low battery alert
- CE, RoHS, WEEE approved





SPECIFICATIONS:

- ♦ Sensitivities: 3g/yr (Hi), 15g/yr (Med) and 30g/yr (Lo) for R-134a, R-22; 4g/yr (Hi), 20g/yr (Med) and 40g/yr (Lo) for R-404A, R-407C, R-410A
- ♦ Warmup Time: 45 seconds
- ♦ Auto Power Off: 10 minutes of inactivity
- ♦ Probe Length: 15.5 in. (394mm)
- ♦ Operating Altitude: <6500 ft. (1980m)
- ♦ Operating Temperature and Humidity: 32° to 104°F (0° to 40°C), < 80%RH
- ♦ Storage Temperature and Humidity: 14° to 140°F (-10° to 60°C), < 70%RH
- ♦ Dimensions: 6.8 x 2.6 x 2.2 in. (173 x 66 x 56mm)
- ♦ Weight: 14.1 oz. (400g)
- ♦ Power Source: 4 "AA" batteries (included)
- ♦ Battery Life: 7 hours of normal use
- ♦ Warranty: 1-year (limited)

INCLUDES:

- · Leak Check Bottle
- Molded Hard Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
00382 4	RLD382P
01378 6	RS380 Replacement Sensor



RLD382P



CE

CDM77535

Indoor Air Quality (IAQ) Meters

HANDHELD DIGITAL ENVIRONMENTAL METER WITH CO₀ /RH / TEMPERATURE - CDM77535

Ideal for monitoring indoor air quality of houses, offices, classrooms, factories, hospitals and hotels.

FEATURES:

- Measures CO2 level, air temperature, dew point, wet bulb temperature and humidity
- Triple displays of CO₂ level, temperature and humidity
- Uses stable non-dispersive infrared (NDIR) sensor to measure CO₂
- Calculates, periodically updates and displays 8-hour time-weighted average (TWA) of CO₂ exposure and 15-minute short-term exposure limit (STEL)
- Backlit LCD
- Audible CO₂ warning alarm
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- · Calibratable RH measurement
- · 20-minute Auto Power Off (can be disabled for calibration)
- Min/Max memory + data hold
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ CO₂ Measurement Range: 0 to 5000ppm
- ♦ CO₂ Measurement Accuracy: ±50ppm ±5%
- ♦ Pressure Dependence of CO₂ Measurement: +1.6% of reading per kPa deviation from sea-level atmospheric pressure (100kPa)
- ♦ CO₂ Calibration Level: 400ppm

- ♦ Temperature Measurement Range: 14° to 140°F (-10° to 60°C)
- ◆ Temperature Measurement Accuracy: ±0.9°F (0.6°C)
- ♦ Humidity Measurement Range: 10 to 95%
- ♦ Humidity Measurement Accuracy: ±3%
- ♦ Warmup Time: 30 seconds
- ♦ Response Times: 30 seconds for CO₂ and temperature, 30 minutes for humidity
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<80% RH
- ♦ Dimensions: 8.2 x 2.8 x 2.2 in. (208 x 71 x 56mm)
- ♦ Weight: 5.6 oz. (159g)
- ◆ Power Source: 4 "AA" batteries (included)

INCLUDES:

- Molded Hard Case
- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NU.
77535 4	CDM77535
12710 0	ASFTKIT PC Interface Kit (optional)
21014 7	Z110VADPT 9V AC/DC adaptor (optional)
15060 3	HR33 Calibration salt MgCl 33% (optional)
15070 2	HR75 Calibration salt NaCl 75% (optional)

HIGH ACCURACY TEMPERATURE/HUMIDITY AND IAQ MONITOR WITH OUTPUT RELAY – CDM77232

Ideal for monitoring indoor air quality of houses, offices, classrooms, factories, hospitals and hotels. Includes relay for activating a ventilation system.

- Measures CO2 level, air temperature, humidity, dew point and wet bulb temperature
- Triple backlit LCD displays of CO₂ level, temperature and humidity
- Uses stable non-dispersive infrared (NDIR) sensor to measure CO₂
- Calculates, periodically updates and displays 8-hr. time-weighted average (TWA) of CO2 exposure and 15-minute short-term exposure limit (STEL)
- Visual and audible CO₂ alarms
- Min/Max memory +data hold
- · RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- · Calibratable RH measurement
- 20-minute Auto Power Off (can be disabled for calibration)
- Wall or desktop mount
- CE and RoHS approved

SPECIFICATIONS:

- ♦ CO₂ Measurement Range: 0 to 5000ppm
- ♦ CO₂ Measurement Accuracy: ±50ppm ±5% of reading

- ♦ Pressure Dependence of CO₂ Measurement: +1.6% of reading per kPa deviation from sea-level atmospheric pressure (100kPa)
- ♦ CO₂ Calibration Level: 400ppm
- ◆ Temperature Range: 14° to 140°F (-10° to 60°C)
- ♦ Temperature Accuracy: ±0.9°F (0.6°C)
- ♦ Humidity Measurement Range: 10 to 95%
- ♦ Humidity Measurement Accuracy: ±3%
- ♦ Warmup Time: 30 seconds
- ♦ Response Times: 30 seconds for CO₂ and temperature, 30 minutes for humidity
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)@<80% RH ♦ Dimensions: 6.88 x 5.63 x 2.38 in.
- (174.75 x 143 x 60.45mm)
- ♦ Weight: 14.00 oz. (397g)
- ♦ Power Source: AC Adaptor (included)

INCLUDES:

- AC Adaptor
 User's Manual
- 1-Year Limited Warranty

UPC	NO.
01311 3	CDM77232
12710 0	ASFTKIT PC Interface Kit (optional)
15060 3	HR33 Calibration salt MgCl 33% (optional)
15070 2	HR75 Calibration salt NaCl 75% (optional)



CDM77232

Patented



Sound Level Meters

CLASS 2 SOUND LEVEL METER 31.5 HZ TO 8 KHZ WITH EXCEL-FORMATTED DATA LOGGING SD CARD - DSM402SD

Accurately measures sound levels of machinery or an environment with 0.1 dB resolution.

FEATURES:

- Measures sound levels of machinery or an environment
- · Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Makes measurements in auto ranging mode or within any of three manual ranges
- Displays maximum and minimum readings and holds any reading
- · Performs automatic data logging at sampling time settable from 1 second to 1 hour
- · Also supports manual logging and changing of card storage location
- Auto power off function that can be disabled to enable long-term data logging

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38 mm) LCD
- ♦ Frequency Range: 31.5 Hz to 8 kHz
- ♦ Measurement Range:
 - 30 to 130 dB in auto ranging mode
 - User can also select fixed range of 30 to 80 dB, 50 to 100 dB, or 80 to 130 dB
- ♦ Measurement Weighting:
 - By frequency: using "A" or "C" standard
 - By time: time weighting is fast or slow (200 ms or 500 ms response time)

- ♦ Measurement Accuracy:
- With "A" frequency weighting: ± 3.5 dB @ 31.5 Hz, 2.5 dB @ 63 Hz, 2 dB @ 125 Hz, 1.9 dB @ 250 Hz, 1.9 dB @ 500 Hz, 1.4 dB @ 1 kHz, 2.6 dB @ 2 kHz, 3.6 dB @ 4 kHz, 5.6 dB @ 8 kHz
- ♦ Data Logging Sampling Time: 1 second to 1 hour
- ♦ Settable Parameters: Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, "A" or "C" frequency weighting, fast or slow time weighting
- ♦ Storable Readings: Maximum, Minimum, Peak
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Operating Relative Humidity: 0 to 85%
- ♦ Dimensions:
- 9.65 x 2.68 x 1.77 in. (245 x 68 x 45mm)
- ♦ Weight: 1.08 lb. (489g)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

UPC	NO.
01464 6	DSM402SI

Optional Accessories:

015063 AC1 9VDC adaptor for 110V power supply 015025 SDRD1 SD Card Reader





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INCLUDED ACCESSORIES:

- Hard Carrying Case
- Sound Wind Shield Ball
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

CLASS 1 SOUND LEVEL METER 31.5 HZ TO 16 KHZ WITH EXCEL-FORMATTED DATA LOGGING SD CARD - DSM403SD

Accurately measures sound levels of machinery or an environment with 0.1 dB resolution.

FEATURES:

- . Measures sound levels of machinery or an environment
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Makes measurements in auto ranging mode or within any of three manual ranges
- · Displays maximum and minimum readings and holds any reading
- · Performs automatic data logging at sampling time settable from 1 second to 1 hour
- · Also supports manual logging and changing of card storage location
- Auto power off function that can be disabled to enable long-term data logging

SPECIFICATIONS:

- ♦ Display Size: 2.05 x 1.5 in. (52 x 38mm)
- ♦ Frequency Range: 31.5 Hz to 16 kHz
- ♦ Measurement Range:
 - 30 to 130 dB in auto ranging mode
 - User can also select fixed range of 30 to 80 dB, 50 to 100 dB, or 80 to 130 dB
- ♦ Measurement Weighting:
 - . By frequency: using Class I IEC 61672 and "A" or "C" standard
 - By time: using Class 1 IEC 61672 standard; weighting is fast or slow (200 ms or 500 ms response time)

- ♦ Measurement Accuracy:
 - With "A" frequency weighting: ± 2.0 dB @ 31.5 Hz, 1.5 dB @ 63 Hz, 1.5 dB @ 125 Hz, 1.4 dB @ 250 Hz, 1.4 dB @ 500 Hz, 1.1 dB @ 1 kHz, 1.6 dB @ 2 kHz, 1.6 dB @ 4 kHz, +2.1 dB and -3.1dB @ 8kHz; +3.0 dB and -6.0 dB @ 12.5 kHz, +3.5 dB and -17.0 dB @ 16 kHz
- ◆ Data Logging Sampling Time: 1 second to 1 hour
- ♦ Settable Parameters: Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, "A" or "C" frequency weighting, fast or slow time weighting
- ♦ Storable Readings: Maximum, Minimum, Peak
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Operating Relative Humidity: 0 to 85%
- Dimensions:
- 9.65 x 2.68 x 1.77 in. (245 x 68 x 45mm)
- ♦ Weight: 1.08 lb. (489g)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

UPC DSM403SD 01465 3

Optional Accessories:

AC1 9VDC adaptor for 110V power supply 015063 SDRD1 SD Card Reader





DSM403SD INI

INCLUDED ACCESSORIES:

- Hard Carrying Case
- Sound Wind Shield Ball
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

CE

DSM325

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CE

Sound Level Meters





Ideal for measuring the loudness of equipment and vehicles or levels of environmental or industrial noise.

FEATURES:

- Large backlit digital display plus analog bar graph
- Meets IEC651 TYPE 2 and ANSI S1.4 TYPE 2 standards
- "A" frequency weighting and fast time weighting
- Autoranging
- Min/Max memory + data hold
- Analog output
- Auto power off after 20 minutes

SPECIFICATIONS:

- Measurement Range: 40 to 130dB over four ranges (40 to 70dB, 60 to 90dB, 80 to 110dB, 100 to 130dB)
- ♦ Measurement Accuracy: ±2dB @ 94dB & 1 kHz
- ♦ Frequency Range: 100 Hz to 8.3 kHz
- ♦ Frequency Weighting: "A" type
- ♦ Time Weighting: Fast (125 ms) time constant
- ♦ Digital Display Type: 4-digit (4000 count) LCD
- ♦ Digital Display Resolution: 0.1dB

- ♦ Digital Display Update Period: 160 ms
- ♦ Analog Bar Graph Resolution: 1dB
- ♦ Analog Bar Graph Update Period: 40 ms
- ♦ Analog Output Type/Amplitude: 0 to 0.707AC
- ◆ Auto Power Off Trigger: 20 minutes of inactivity
- ♦ Sensor Type: ½ in. (12mm) Electret condenser microphone
- ♦ Battery Life: 30 hours (typical)
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @ 10 to 95% RH
- ♦ Dimensions: 8.1 x 2.4 x 1.6 in.
- ♦ Weight: 5.3 oz.
- ◆ Power Source: "9V" battery (included)

INCLUDES:

- Wind Shield Ball
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC NO. 01590 2 **DSM8930**

MINI DIGITAL SOUND LEVEL METER - DSM325

Ideal for making very accurate sound measurements.

FEATURES:

- Meets IEC651 Type2 and ANSI S1.4 Type 2 standards
- Includes wind shield ball
- Large 4-digit backlit LCD
- A or C frequency weighting
- Fast or slow time weighting
- Min/Max memory
- AC output
- 1/2 in. Electret condenser microphone
- Low battery and under/over range indications
- CE and RoHS approved

SPECIFICATIONS:

♦ Measurement Range: 32 to 130 dB over three ranges (32 to 80 dB, 50 to 100 dB, 80 to 130 dB)

- ♦ Measurement Accuracy: ±1.5 dB
- ♦ Resolution: 0.1 dB
- ♦ Response Time: 0.5 seconds
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C)@<90% RH
- ♦ Dimensions:
- 9.1 x 2.1 x 1.3 in. (231 x 53 x 33mm)
- ♦ Weight: 12 oz. (340g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Windscreen Calibration Screwdriver
- Battery User's Manual
- 1-Year Limited Warranty

UPC NO. 41012 7 **DSM325**

DIGITAL SOUND METER WITH JUMBO DISPLAY - DSM8925

FEATURES:

- Jumbo digital LCD + analog bar graph
- "A" or "C" frequency weighting
- Fast or slow time weighting
- Autoranging or manual ranging
- Min/Max memory + max hold
- Auto power off
- Analog output for data logging
- Calibrates to standard 94dB signal
- Tripod mount socket on back

SPECIFICATIONS:

- Measurement Range: 40 to 130 dB over four ranges
- ♦ Measurement Accuracy: ±2 dB
- ♦ Digital Display Resolution: 0.1 dB
- ♦ Digital Display Refresh Period: 160 ms
- ♦ Analog Bar Graph Resolution: 1 dB
- ♦ Analog Bar Graph Refresh Period: 40 ms

- ♦ Frequency Range: 31.5 Hz to 8 kHz
- ◆ Display Window Size:
- 1.18 (W) x 1.38 (H) in. (30 x 35mm)
- ♦ Digit Height: 0.6 in. (15.2mm)
- ♦ Microphone Diameter & Type: 0.5 in. (12.7mm) electret condenser
- ♦ Battery Life: 60 hours (typical)
- ♦ Analog Output: 0 to 0.707Vrms
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<80% RH
- ♦ Dimensions: 9 x 2.25 x 1.73 in. (229 x 57 x 44mm)

INCLUDES:

- Wind Shield Ball Batteries
- User's Manual
 1-Year Limited Warranty

♦ Power Source: 4 "AAA" batteries (included)

UPC NO. 41025 7 **DSM8925**

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DSM8925

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ALC: U



Sound Calibrator & Vibration Meters

SOUND LEVEL CALIBRATOR – SCAL1356

Calibration source for sound meters.

FEATURES:

- . Conforms to ANSI S1.40-1984 and IEC0942:2003 Class 2
- Fits 1 in., 1/2 in. and 1/4 in. diameter microphones
- Internal battery test
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Output Levels: 94dB and 114dB ±0.5dB at reference conditions
- ♦ Reference Conditions: 68°F (20°C), 65% RH, 1013mbar

- ♦ Output Frequency: 1kHz ±2%
- ♦ Temperature Coefficient: ±0.02db per °C
- ♦ Total Harmonic Distortion: <2%
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- 2 microphone adaptors
- Carrying case
- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
41018 9	SCAL13

SCAL1356 N

Patented

VIBRATION METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD - VM8205SD

Accurately measures a machine's acceleration and velocity to determine if it is within operational parameters.

FEATURES:

- · Vibration probe measures acceleration or
- · Included magnetic base facilitates attachment of probe to metal parts or machine housing
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Min/Max/Peak_{RMS} memory + data hold
- Automatically logs measurements at sampling time settable from one second to one hour
- Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Parameters Measured: Acceleration, velocity
- ♦ Units:
 - For acceleration: m/sec², g (gravitational force) or ft/sec²
- For velocity: mm/sec, cm/sec or inches/sec
- ♦ Displayed Value Options: Root mean square (RMS), peak, max hold
- ♦ Input Frequency Range: 10 Hz to 1 kHz
- ♦ Measurement Range:
 - For acceleration: 0.5 to 199.9 m/sec², $0.05 \text{ to } 20.39 \text{ g}, 2 \text{ to } 656 \text{ ft/sec}^2$
 - For velocity: 0.5 to 199.9 mm/sec, 0.05 to 19.99 cm/sec, 0.02 to 7.87 in./sec

- ♦ Measurement Accuracy:
- For acceleration: ± (5% of reading + 2 digits)
- For velocity: ± (5% of reading + 2 digits)
- ♦ Calibration Point:
 - For acceleration: 50 m/sec² @ 160 Hz
- For velocity: 50 mm/sec @ 160 Hz
- ♦ Data Logging Sampling Time: 1 second to 1 hour
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @ <85%RH
- ♦ Dimensions of Meter: 7.99 x 2.99 x 1.50 in. (203 x 76 x 38mm)
- ♦ Weight of Meter: 1.13 lb. (515g)
- ♦ Dimensions of Probe: 1.46 (length) x 0.63 (diameter) in. (37 x 16 mm)
- ♦ Length of Probe Cable: 47.24 in. (1.2m)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

UPC NO.

01454 7 VM8205SD

01547 6 P8205SD Replacement Sensor

Optional Accessories:

01506 3 AC1 9VDC adaptor for 110V power supply 01502 5 SDRD1 SD Card Reader





VM8205SD

INCLUDES:

- Hard Carrying Case
- Vibration Sensing Probe
- Magnetic Base
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

VIBRATION METER - VB8201HA

Wide frequency range for industrial usage.

- Selectable units of in./sec or mm/sec for velocity and ft./sec2 or m/sec2 for acceleration
- · Remote vibration sensor on 39 in. (1m) cable
- Wide frequency range of 10Hz to 1kHz
- Min/Max memory + data hold
- Auto power off
- RMS or peak value display
- CE and RoHS approved

SPECIFICATIONS:

♦ Velocity Range: 0.02 to 7.87 in./sec (0.5 to 200mm/sec)

- ♦ Acceleration Range: 1.64 to 656 ft./sec² $(0.5 \text{ to } 200 \text{m/sec}^2)$
- ♦ Measurement Accuracy: ±(5% of reading +2 digits)\
- ♦ Dimensions:
- 7.1 x 2.8 x 1.3 in. (180 x 72 x 32mm)
- ♦ Weight: 0.87 lbs. (395g)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- Remote Sensor with 3.9 ft. Cable
- Magnetic Mount Molded Hard Case
- User's Manual
 1-Year Limited Warranty

UPC NO. VB8201HA 43052 1



VB8201HA





later Alarm & Digital Light Meters





WATER ALARM – WA500

Ideal for detecting leaks from HVAC systems, plumbing, appliances, water heaters etc.

- Alarm sounds when water is detected
- Helps reduce water damage
- Finds mold-causing moisture
- Low battery indicator

SPECIFICATIONS:

- ♦ Dimensions: 4.3 x 4.3 x 1 in. (109 x 109 x 25mm)
- ♦ Weight: 4 oz. (113g)
- ♦ Power Source: 1 "9V" battery (included)
- ◆ 1-Year Limited Warranty

UPC	NO.
80140 8	WA500

Patented







DLM112SD N

LIGHT METER W/ EXCEL-FORMATTED DATA LOGGING SD CARD - DLM112SD

Accurately measures light intensity in lux or foot-candles using three automatically switched full-scale ranges.

FEATURES:

- Includes light probe
- . Measures light intensity within three automatically switched full-scale ranges: 2,000 lux, 20,000 lux and 100,000 lux (200 ft-cd, 2,000 ft-cd and 10,000 ft-cd)
- · Selectable lux or foot-candle units
- Min/Max memory + data hold
- Sampling time settable from 1 second to 1 hour
- Big (2.5 diagonal) front-panel green backlit LCD is easy to read
- · Auto power off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Full-Scale Ranges:
 - 0 to 1,999 lux (0 to 186 ft-cd)
 - 1,800 to 19,990 lux (167 to 1,860 ft-cd)
 - 18,000 to 99,900 lux (1,670 to 9,290.7 ft-cd)
- ♦ Measurement Accuracy:
 - ±4% of full-scale reading + 2 digits for all lux readings and ft-cd readings at 200 ft-cd fullscale (f.s.)

- ±4% of f.s. reading + 2 ft-cd at 2,000 ft-cd
- ±4% of f.s. reading + 20 ft-cd at 20,000 ft-cd f.s.
- ◆ Data Logging Sampling Time: 1 second to 1 hour
- Operating Temperature: 32° to 122°F (0° to 50°C) @85%RH
- ◆ Dimensions: 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)
- ♦ Weight: 1.08 lb. (489g)
- ♦ Power Source: Six "AA" batteries or optional 9-VDC AC adaptor

INCLUDES:

- Hard Carrying Case
- · Light Probe with Protective Cover
- 2 GB SD Memory Card User's Manual
- 1-Year Limited Warranty

UPG	NU.		
01459 2	DLM112SD		
01546 9	P112SD Replacement Sensor		
Optional Accessories:			
015063	AC1 9VDC adaptor for 110V power supply		
01502 5	SDRD1 SD Card Reader		
Optional "K" type probes: See pp. I-44 – 45			

CE



JUMBO DISPLAY WIDE RANGE DIGITAL LIGHT METER – DLM1337

Ideal for measuring indoor or outdoor light levels.

FEATURES:

- . Displays measurements in lux or foot-candles
- Jumbo 3-1/2 digit LCD
- Uses cosine angular correction, silicon diode and spectral response filter
- Min/Max memory + data hold
- Low battery and overload indications
- Auto power off
- · Small and light
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 20000 lux over four ranges or 0 to 2000 foot-candles over four ranges
- ♦ Measurement Accuracy: ±3% of reading + 0.5% of full-scale value
- ♦ Resolution: 1 ft-cd (10.76 lux)

- ◆ Probe Cord Length: 5 ft. (1.5m)
- ◆ Operating Temperature: 32° to 104°F (0° to 40°C)@<80% RH
- ♦ Dimensions of Meter: 5.9 x 2.83 x 1.37 in. (150 x 72 x 35mm)
- ♦ Weight of Meter: 11.3 oz. (320g)
- ♦ Power Source: 6 "AAA" batteries (included)

INCLUDES:

- Sensor
- Molded Hard Case
- Batteries
- Operating Instructions
- 1-Year Limited Warranty

	UPC	NO.	
Ī	42003 4	DLM1337	



Digital Light Meters

3 RANGE DIGITAL LIGHT METER - DLM2000

Ideal for measuring low light levels.

FEATURES:

- · Readings displayed in lux or foot-candles
- Large 3-1/2 digit LCD
- · Uses silicon photodiode
- Small and light
- Data hold
- · Low battery and overload indications
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 20000 lux over three ranges or 0 to 2000 foot-candles over three
- ♦ Measurement Accuracy: ±3% of reading from 200 to 2000 lux (20 to 200 ft-cd); ±5% of reading from 2000 to 20000 lux (200 to 2000 ft-cd)

- ◆ Probe Cord Length: 5 ft. (1.5m)
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C)@<80% RH
- ♦ Dimensions: 5.6 x 2.9 x 1.3 in. (142 x 74 x 33mm)
- ♦ Weight: 7.5 oz. (213g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Sensor Probe
- Molded Hard Case
- Battery
- · Operating Instructions
- 1-Year Limited Warranty

UPC	NO.
42005 8	DLM200



DLM2000 N

WIDE RANGE SINGLE PIECE DIGITAL LIGHT METER – DLM204

Ideal for measuring levels of indoor or outdoor lighting.

FEATURES:

- · Readings displayed in lux or foot-candles
- Choice of nine ranges
- Large 2000 count LCD
- Uses cosine angular correction, silicon photodiode and filter
- DC analog output
- Min/Max memory + data hold
- Low battery and overload indications
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 200000 lux over five ranges or 0 to 20000 foot-candles over four ranges
- ♦ Measurement Accuracy: ±3% of reading
- ◆ Operating Temperature: 14° to 122°F (-10° to 50°C)@<80%RH
- ◆ Dimensions: 6.7 x 2.2 x 1.5 in. (172 x 55 x 38mm)
- ♦ Weight: 8.8 oz. (250g)
- ♦ Power Source: 1 "9V" battery (included)

- Case Battery User's manual
- 1-Year Limited Warranty

UPC	NO.	
42001 0	DLM204	



CE

DLM204 N

CE

DIGITAL SOLAR POWER METER - DBTU1300

Ideal for checking thermal window efficiency.

FEATURES:

- · Measures and displays solar power in units of W/m^2 or Btu/(ft² x h) on 4-digit LCD
- Wide spectral range
- Uses silicon photodiode and cosine angular correction
- Min/Max/Avg memory + data hold
- · Stores 99 readings
- Auto power off
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 2000 W/m² or 0 to $634 \text{ Btu/(ft}^2 \text{ x h)}$
- ♦ Measurement Accuracy: ±10 W/m² $(\pm 3 \text{ Btu/(ft}^2 \text{ x h)}) \text{ or } \pm 5\% \text{ of reading,}$ whichever is greater

- ♦ Resolution: 0.1 W/m² or Btu/(ft² x h)
- ♦ Spectral Range: 400 to 1000nm
- ♦ Sampling Rate: 4x per second
- ♦ Operating Temperature and Humidity: 32° to 122°F (0° to 50°C) @<80%RH
- ♦ Dimensions:
- 4.3 x 2.5 x 1.3 in. (110 x 64 x 34mm)
- ♦ Weight: 5.6 oz. (158g)
- ♦ Power Source: 4 "AAA" batteries (included)

INCLUDES:

- Tripod Mounting Screw
- Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC		NO.	
_	20926.4	DBTU1300	



DBTU1300



Light Meters

Patented



UV254SD

UVA, UVC LIGHT METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – UV254SD

Accurately measures UVA and UVC light intensity within two automatically switched full-scale ranges: 2 mW/cm2 and 20 mW/cm2.

- Includes UVA and UVC probes
- . Measures light intensity within two automatically switched full-scale ranges
- Min/Max memory + data hold
- Performs real-time automatic data logging at sampling time settable from 1 second to 1 hour
- · Comes with 2 GB SD memory card, but works with cards up to 16 GB
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Auto power off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38 mm) LCD
- ♦ UV Light Types Measured: UVA, UVC
- ♦ Measurement Range: 240 nm to 390 nm
- ♦ Measurement Accuracy: ±4% of full-scale reading + 2 digits
- ♦ Full-Scale Auto Ranges: 2 mW/cm² and 20 mW/cm²
- ◆ Data Logging Sampling Time: 1 second to 1 hour
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH
- ♦ Dimensions of Meter: 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)

- ♦ Weight of Meter: 12.38 oz. (351 g)
- ♦ Dimensions of UVA Probe Head: 1.77 in. (diagonal) x 1.26 in. (L) (45 x 32 mm)
- ♦ Dimensions of UVA Probe Handle: 0.94 in. (diagonal) x 4.92 in. (L) (24 x 125 mm)
- ♦ Weight of UVA Probe: 3.53 oz. (100g)
- ♦ Dimensions of UVC Probe: 1.50 (diagonal) x 0.98 in (L) (38 x 25 mm)
- ♦ Weight of UVC Probe: 3.63 oz. (103g)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

INCLUDES:

- UVA Probe
- UVC Probe
- 2 GB SD Memory Card
- · Hard Carrying Case
- User's Manual
- 1-Year Limited Warranty

	UPC	NO.
	01453 0	UV254SD
(Optional A	ccessories:

AC1 9VDC adaptor for 110V power supply 015063

015025 SDRD1 SD Card Reader



DIGITAL UVC METERS – UV512C & UV513AB

Ideal for applications such as UV curing and sterilization, semiconductor fabrication, offset printing, environmental monitoring and industrial process control.

- Backlit LCD with 4 digit dual display
- · Socket for tripod mounting
- · Low battery indicator · Magnetic mount
- 20 point memory
- Over range indication
- CE, RoHS, WEEE approved

SPECIFICATIONS:

- ♦ Spectral Range: (UV513AB) 280 to 400nm UVAB
- ◆ Calibration Point: (UV513AB) 365nm
- ♦ Spectral Range: (UV512C) 220 to 275nm UVC
- ♦ Calibration Point: (UV512C) 254nm
- ♦ Illumination Range: Low: 1 μW/cm² to 9999 μW/cm² High: 0.01 mW/cm² to 40.00 mW/cm²
- ♦ Measurement Accuracy: ±(4% of reading +1 digit)

- ♦ Sampling Time: 0.3 seconds approximately
- ♦ Memory: 20 points plus 1 for interval time
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @10 to 90%RH
- ♦ Dimensions: 5.51 x 1.93 x 1.14 in. (140 x 49 x 29mm)
- ♦ Weight: 3.2 oz. (90g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES:

- UV Sensor Probe
- · Hard Carrying Case
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01290 1	UV512C
012796	UV513AB



DIGITAL TRIPLE AXIS EMF METER WITH DATA LOGGING MICRO SD CARD - EMF1394DL

Ideal for measuring the intensity of electromagnetic fields produced by power lines, industrial machinery and home appliances (computer and TV monitors).

- · Uses three orthogonal sensors to measure field intensity independent of angle
- Displays readings in microTeslas (µT) or milliGauss (mG)
- . Internal memory for manual storage of up to 99 readings
- Included 4GB MicroSD card for automatic logging of thousands of readings
- Triple readout 3-1/2 digit LCD
- · Autoranging or manual ranging
- Min/Max memory + data hold
- Auto power off (can be disabled for data logging)
- Flip-up stand
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Frequency Range: 30 to 2000 Hz
- ♦ Measurement Ranges: 0 to 20 mG (0 to 2µT): 0 to 200 mG (0 to 20µT); 0 to 2000 mG (0 to 200 µT)

- ♦ Measurement Accuracies: In 0 to 20 mG (0 to $2\mu T$) range: $\pm (3\% + 30 \text{ digits})$ from 40 to 200 Hz; \pm (3% + 30 digits) minus 3dB from 30 to 40 Hz and from 200 to 2000 Hz. In 0 to 200 mG (0 to 20 μ T) and 0 to 2000 mG (0 to 200 μ T) ranges: $\pm(3\% + 3 \text{ digits})$ at 50 and 60 Hz; $\pm (5\% + 3 \text{ digits})$ from 40 to 200 Hz (except at 50 and 60 Hz); \pm (5% + 3 digits) -3dB from 30 to 40 Hz and from 200 to 2000 Hz
- ♦ Sampling Time: 1 to 255 seconds
- ♦ Auto Power Off: After 15 minutes of inactivity
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<80%RH
- ◆ Dimensions: 5.91 x 2.83 x 1.38 in. (150 x 72 x 35mm)
- ♦ Weight: 7.94 oz. (225g)
- ♦ Power Source: 6 "AAA" batteries (included)

INCLUDES:

- Windows-compatible Data Logging Software on CD
- 4GB MicroSD Card USB Cable
- Batteries User's Manual
- 1-Year Limited Warranty



UPC	NO.
42052 2	EMF1394DL

DIGITAL EMF TESTER - EMF1390

Ideal for measuring electromagnetic radiation from power lines and appliancesand also for detecting paranormal activity.

FEATURES:

- · Compact and lightweight
- Displays readings in microTeslas (μT) or milliGauss (mG) on triple readout 3-1/2 digit LCD
- Data and peak hold
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 2000 mG (0 to 200µT)
- ♦ Bandwidth: 30 to 300 Hz
- ♦ Resolution: 0.1 mG (0.01µT)
- ♦ Accuracy: ±4% + 3 digits

- ♦ Sampling Time: 0.4 seconds
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C)
- ♦ Dimensions:
 - 4.37 x 2.52 x 1.34 in. (111 x 64 x 34mm)
- ♦ Weight: 5.82 oz. (165g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Soft case
 Battery
- User's Manual 1-Year Limited Warranty

UPC	NO.	
42050 8	EMF1390	



EMF1390

CE

DIGITAL EMF TESTER WITH DATA LOGGING - EMF1392DL

Suitable for electromagnetic surveys of buildings and power lines.

FEATURES:

- Compact and light
- Displays readings in microTeslas (uT) or milliGauss (mG) on triple readout 3-1/2 digit LCD
- Data and peak hold
- · Auto power off (can be disabled for data logging)
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 2000 mG (0 to 200µT)
- ♦ Measurement Accuracy: ±(3% of reading +3 digits) @50/60 Hz
- ♦ Resolution: 0.1 mG (0.01µT)
- ♦ Bandwidth: 30 to 300 Hz

- ♦ Sampling Time: 0.4 seconds
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @<80%RH
- ♦ Dimensions: 4.37 x 2.52 x 1.34 in. (111 x 64 x 34mm)
- ♦ Weight: 5.82 oz. (165g)
- ♦ Power Source: (4) "AAA" batteries (included)

- Interfacing/Data Logging Software on CD
- RS-232 Cable
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
42051 5	EMF1392DL



EMF1392DL





Pressure Meters



GAS PRESSURE TEST KITS – GPK005, GPK015, GPK035

Ruggedized for heavy-duty field use. **FEATURES:**

- Measures natural gas (methane) or LP gas pressure across appliance manifolds
- Tests gas stoves, furnaces, dryers and other gas appliances. Can also be used for other non-corrosive gases
- Large 2.5 in. diameter diaphragm gauge is calibrated in inches of water column, also shows ounces per square inch (GPK015/GPK035 only); GPK005 is calibrated in psi and meets requirements of the New York City Fuel Gas Code (2008)
- Magnified lens
- Easier to use than a manometer

SPECIFICATIONS:

- ♦ Measurement Range GPK005: 0 to 5 psi
- Measurement Range GPK015:
 0 to 15 inches of water column (in. H₂0)
 0 to 9 ounces per square inch (oz./in²)

- Measurement Range GPK035:
 0 to 35 inches of water column (in. H₂0)
 0 to 20 ounces per square inch (oz./in²)
- ♦ Measurement Accuracy (GPK005, GPK015, GPK035): ±1.5% of full-scale range

INCLUDES:

- 2.5 in. (64mm) Diameter Diaphragm Gauge
- 39 in. (991mm) of Rubber Tubing
- 3/8 in. (10mm) NPT Brass Fitting for Quick Connection to Appliance Manifold
- Hose Clamp
- Molded Hard Case
- 1-Year Limited Warranty

UPC	NO.
01585 8	GPK005
41240 4	GPK015
41230 5	GPK035



HYDROGAUGE MANOMETER – HG15

A reliable, inexpensive tool for making pressure measurements.

FATIIDES

- · Replaces ordinary U-tube manometers
- . Measures gas pressure easily and efficiently
- Direct reading, no plus or minus readings to add together as in old-fashioned U-tubes
- Fills like a glass of water, eliminates troublesome air bubbles
- Strong magnet for mounting
- Heavy-duty construction
- Made of industrial grade, flexible PVC plastic
- Lightweight
- · Easy to use

SPECIFICATIONS:

- ♦ Water Column Height: 15 in. (381mm)
- ♦ Hose Fitting: All brass
- ♦ Hose Length: 30 to 36 in. (762 to 914mm)
- ◆ Dimensions: 24.00 x 3.50 x 0.88 in. (610 x 89 x 22mm)
- ♦ Weight: 5.50 oz. (156g)

INCLUDES:

- Mounting Magnet
- 1-Year Limited Warranty

UPC	NO.
41225 1	HG15

HIGH RESOLUTION DIGITAL MANOMETERS - DM8252, DM8252RS

Ideal for low static, negative pressure testing.

FEATURES:

- · Digital display of gauge or differential pressure
- Display unit options: psi, inH₂0, mmH₂0, bar and mbar
- Bright backlight
- Min/Max memory + data hold
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)

UPC	NO.
41216 9	DM8252
41220 6	DM8252RS w/4 Rubber Stoppers for
	Duct Smoke Detectors
12710 0	ASFTKIT PC Interface Kit (optional)
210147	Z110VADPT—9V AC/DC adaptor
	(optional)

SPECIFICATIONS:

- Measurement Ranges: DM8252: 0 to 2 psi DM8215: 0 to 15 psi DM8200: 0 to 100 psi
- ♦ Accuracy: ±0.3%
- ♦ Resolution (bar): 0.01
- ♦ Response Time: 0.5 seconds
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Dimensions:

7.2 x 2.8 x 1.2 in. (182 x 72 x 30mm)

- ♦ Weight: 7.6 oz. (215g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Connection Hose Molded Hard Case
- BatteryUser's Manual
- 1-Year Limited Warranty



DM8252 DM8252RS

N

General Tools & Instruments

CE



PRESSURE METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – PM930SD

Ideal for high accuracy measurements of hydraulic or pneumatic pressure using ten different units. **FEATURES:**

- Measures hydraulic or pneumatic pressure using optional sensors with full-scale ranges from 2 to 400 bar
- · Choose a sensor with the right range for your application from the list at lower right
- · Sensors calibrated by single push of a button
- Ten different pressure units available
- Min/Max memory + data hold
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Auto power off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display Size: 2.05 x 1.5 in. (52 x 38mm)
- ♦ Displayed Pressure Unit: bar, psi, inches Hg, inches H₂O, hPA, kPA, kg/cm², mm Hg, meters H₂0, atmospheres
- ♦ Measurement Accuracy: ± 0.5% of full-scale reading + 1 digit
- ♦ Data Logging Sampling Time: 1 second to 9 hours
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH
- ♦ Dimensions:
- 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)
- ♦ Weight: 0.77 lb. (350g)
- ♦ Power Source: 6 "AA" batteries (not included) or optional 9-VDC AC adaptor

INCLUDES:

- Molded hard Case
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

UPG	NU.
01450 9	PM930SD
Optional A	ccessories:
01506 3	AC1 9VDC adaptor for 110V power supply
01491 2	PS2 2 bar full-scale pressure sensor
01528 5	PS5 5 bar full-scale Pressure sensor
01527 8	PS10 10 bar full-scale Pressure sensor
015698	PS20 20 bar full-scale Pressure sensor
01532 2	PS50 50 bar full-scale Pressure sensor
01533 9	PS100 100 bar full-scale Pressure sensor
01534 6	PS400 400 bar full-scale Pressure sensor
01502 5	SDRD1 SD Card Reader









DELUXE DIGITAL MANOMETERS – DM8200, DM8205, DM8215, DM8230

Ideal for industrial pressure testing.

FEATURES:

- Digital display of gauge or differential pressure
- Display unit options: psi, inH₂O, bar, mmHq, ozin2, kgcm2, kPa, ftH₂0, inHg, cmH₂0 & mbar
- Min/Max memory + data hold
- · RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)
- Typical industrial application for:
- **DM8200**–Measuring manifold pressure
- **DM8205**–Balancing valves
- DM8215-Measuring gas pressure in HVAC/R system

DM8230-Measuring low or static pressure

SPECIFICATIONS:

♦ Measurement Range/Resolution:

DM8200: 0 to 100 psi/0.1 psi DM8205: 0 to 5 psi/0.003 psi DM8215: 0 to 15 psi/0.01 psi DM8230: 0 to 30 psi/0.02 psi

- ♦ Measurement Accuracy: ±3% of full scale value
- ♦ Response Time: 0.5 seconds
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Dimensions:

7.2 x 2.8 x 1.2 in. (182 x 72 x 30mm)

- ♦ Weight: 7.6 oz. (215g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Connection Hose Molded Hard Case
- Battery User's Manual
- 1-Year Limited Warranty

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UPC	NO.
41200 8	DM8200
412107	DM8205
41215 2	DM8215
41217 6	DM8230
12710 0	ASFTKIT PC Interface Kit (optional
210147	Z110VADPT—9V AC/DC adaptor
	(optional))



DM8200 DM8205 DM8215 **DM8230** N



Charging Scale, Vacuum & Torque Meters



DS300RC





VC9200 N





TQ8800

DIGITAL CHARGING SCALE - DS300RC

Ideal for accurate charging of refrigerant containers.

FEATURES:

- Constructed from rigid die cast aluminum
- · Heavy duty load cell with built-in overload protection
- · Scale zero button
- Auto Power Off and low battery indicator
- · Reliable membrane key pad switches
- . Displays readings in lb/oz or kg
- . Extra large backlit LCD
- Display unit is desk or wall mountable

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 220 lb. (0 to 100kg)
- ♦ Measurement Accuracy: ±1%
- ♦ Resolution: 0.5 oz. (5g)

- ♦ Operating Temperature: 32° to 115°F (0° to 45°C)
- ♦ Platform Dimensions: 8-3/4 x 8-3/4 in. (220 x 220mm)
- ♦ Weight: 116 oz. (3288g)
- ♦ Power Source: 1 "9V" battery (included)
- ♦ Battery Life: 40 hours (typical))

INCLUDES:

- · Molded Hard Case
- Battery Operating Instructions
- 1-Year Limited Warranty

UPC	NO.
01245 1	DS300RC

DIGITAL VACUUM METER - VC9200

Designed to measure air, gas or oil pressure in automotive, industrial, lab, HVAC/R or medical environments.

FEATURES:

- · Heavy-duty sensor
- Jumbo display
- Eight measurement unit options: torr. bar. mmHg, µmHg, Pascal (Pa), kPa, in.Hg, psi
- Min/Max memory + data hold
- 1/4 in. pressure port connector
- · RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- 10-minute Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 1500 mbar/0 to 150 KPa/0 to 1125 torr/0 to 21.75 psi/0 to 44.3 in.Hg
- ♦ Measurement Accuracy: ±1% of full-scale value
- ♦ Sampling Time: 0.8 seconds

- ♦ LCD Size: 2.4 x 1.3 in. (61 x 34mm), with 0.6 in. (15mm) high digits
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Dimensions of Meter: 7.1 x 2.8 x 1.3 in. (180 x 72 x 32mm)
- ♦ Weight of Meter: 7.76 oz. (220g)
- ♦ Dimensions of Probe:
- 4.8(L) x 1.2(D) in. (74 x 30mm)
- ♦ Weight of Probe: 6.2 oz. (175g)
- ♦ Power Source: (1) "9V" battery (not included)

INCLUDES:

- Molded Hard Case
- Vacuum Sensor Probe
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
47025 1	VC9200
41420 0	LSFTKIT PC Interface Kit (optional)

TORQUE METER – TQ8800

Ideal for measuring tightness of bolts and making machinery adjustments.

FEATURES:

- Includes torque sensor with cramp. Cramp attaches to torqued part through included gear and pinion. Sensor is bolted to table or held in vise. Together, sensor and pinion connect meter to torqued part like an extension of a socket wrench
- · Selectable fast or slow resolution and fast or slow sampling time
- Peak hold, data hold and Min/Max memory
- Three available display units: Kg-cm, lb-in.
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- · Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 15 lb-ft. (0 to 15 Kg-cm/0 to 147.1 N-cm)
- ♦ Measurement Accuracy: ±1.5% + 5 digits
- ♦ Max Torque: 19.53 lb-ft. (19.53 Kg-cm/220.1 N-cm)

- ◆ Sampling Periods: 0.125 sec (fast), 0.334 sec (slow)
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)@ <80% RH
- ♦ Current Consumption: 12 mADC
- ♦ Dimensions of Meter: 7.1 x 2.8 x 1.3 in. (180 x 72 x 32 mm)
- ♦ Weight of Meter: 8 oz. (225g)
- ♦ Dimensions of Sensor: 6.3 (L) x 1.89 (Diam) in. (160 x 48mm)
- ♦ Weight of Sensor: 1.46 lb. (665g)
- ♦ Power Source: 1 "9V" battery

INCLUDES:

- Torque Sensor Pinion
- Carrying Case User's Manual
- 1-Year Limited Warranty

UPC	NO.
43060 6	TQ8800
41420 0	LSFTKIT PC Interface Kit (optional)

N

EMHT40



Hardness/Thickness Testers

HARDNESS TESTER ASTM RATED - PEN-STYLE - EMHT40

Checks hardness of most metals.

FEATURES:

- Conforms to ASTM A 956
- · Compact, easy to use and reliable
- Wide measuring range, with display of hardness values in any of the following units: Rockwell HRB and HRC, Vickers HV, Brinell HB and Shore HS
- Impact device provides testing at any angle, even upside down
- 1250 reading internal memory
- Displays minimum, maximum and average values
- · Includes PC data logging kit
- 2-minute Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Measurement Accuracy: ±0.5%
- ♦ Display Size, Type: 112×64 pixel LCD

◆ Power Source: 3.7V rechargeable Li-ion-battery

- ◆ Dimensions: 6.2 x 1.6 x 1 in. (158 x 41 x 26mm)
- ♦ Weight: 4.2 oz. (120g)

INCLUDES:

- Pen-style unit incorporating "D" type impact device.
- Standard hardness test block with nominal hardness value of 777HLD
- Cleaning brush and conventional support ring
- 110VAC adaptor with 3.7VDC output via full-size USB jack
- USB interface/charging cable
- · Mini-disc with PC drivers and interface program
- User's manual

UPC	NO.				
01304.5	FMHT4				

DIGITAL HARDNESS TESTER – UTEMHT20

Checks hardness of most metals.

FEATURES:

- Conforms to ASTM A 956
- · Compact, easy to use and reliable
- Wide measuring range, with display of hardness values in any of the following units: Leeb HL, Rockwell HRB and HRC, Vickers HV, Brinell HB and Shore HS
- Impact device can be fired from any of 5 directions
- 1250 reading internal memory
- Includes PC interface/data logging kit
- 3-minute Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Measurement Accuracy: ±0.5%
- ♦ Display Size, Type: 112×64 pixel LCD
- Power Source: (2) "AAA" batteries (not included)

- ◆ Dimensions: 4.25 x 2.44 x 0.98 in. (108 x 62 x 25mm)
- ♦ Weight: 6.35 oz. (180g)

INCLUDES:

- Console with "D" type impact device
- Standard hardness test block with nominal hardness value of 797HLD
- Cleaning brush and conventional support ring
- Cable with mini-stereo plug at one end and 9-pin serial plug at other end
- Adapter with 9-pin serial jack at one end and full-size USB plug at other end
- · Mini-disc with PC drivers and interface program
- User's manual

UPC	NO.
01263 5	UTEMHT20



ULTRASONIC THICKNESS GAUGE – UTEGEMTT2

Suitable for use with steel, aluminum, glass etc.

FEATURES:

- · Easy to operate
- Suitable for steel, stainless steel, aluminum, glass, polystyrene, polyethylene
- · 4000 data point internal memory
- Large backlit 4-digit LCD
- RS-232 output jack
- 2-minute Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ◆ Thickness Measurement Range: 0.026 to 9.843 in. (0.65 to 250mm)
- ♦ Measurement Accuracy: ±0.04mm from 0.65 to 9.99mm; ±(0.1% +0.04mm) from 10 to 99.99mm; ±0.3% from 100 to 250mm

- ♦ Working Frequency: 2 to 7.5MHz
- ◆ Operating Temperature: 32° to 104°F (0° to 40°C)
- ♦ Dimensions:
 - 2.4 x 4.3 x 1.1 in. (61 x 108 x 28mm)
- ♦ Weight: 8 oz. (227g) including batteries
- ♦ Power Source: 2 "AAA" batteries (included)

INCLUDES:

- Molded Hard Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
40720.2	UTEGEMET



UTEGEMTT2



.8 in. (Dia.) - 7 0Z. .3 in. (Dia.) - 22 0Z.



BRIX 0-90%

All of our handheld traditional refractometers have a metal body with a cushioned eyepiece, a rubber hand grip, and a calibration screen. Included with each is a calibration screwdriver, a plastic pipette and a carrying case.

A refractometer measures a substance's index of refraction, which is determined by its composition.

In practice, traditional and digital refractometers are used to measure:

- a. The concentration of sugar or other soluble solids in juices, syrups or similar solutions
- b. The salinity or specific gravity of watery solutions
- c. The viscosity of refrigerant oils, glycols, brake fluids, and polymers

Many refractometers use the unit Brix, which can be expressed as a percentage or in degrees. Others use relative units such as the SG (for specific gravity) or the RI (for refractive index)



eters piece, een. vdriver,	ATC	INDUSTRIAL FLUII	LOW CONCENTRA	FRUIT JUICE	HIGH CONCENTRA	LOW DENSITY SOI	SOFT DRINKS	CANNED GOODS	LOW SUGAR SOLU	HIGH SUGAR SOLI	CONDENSED MILK	SIZE 6.2 in. (L) x 1	SIZE 7.5 in. (L) x 1	RESOLUTION
MODEL REF101 (UPC 44420 9) BRIX 0-10%		Х	Х									Х		0.10%
MODEL REF102 (UPC 44102 2) BRIX 0-20%		Х				Х						Х		0.20%
MODEL REF103 (UPC 44103 9) HIGH RANGE BRIX 0-32%		Х		Х			Х					Х		0.20%
MODEL REF104 (UPC 44104 6) BRIX 28-62%		Х			Х			Х		Х		Х		0.20%
MODEL REF105 (UPC 44105 3) BRIX 45-82%		Х			Х					Х	Х	Χ		0.50%
MODEL REF106 (UPC 44106 0) BRIX 58-92%		Х	Х	Х	Х	Х	Х	Χ		Х	Х		Х	0.20%
MODEL REF111ATC (UPC 44101 5) LOW RANGE BRIX 0-10%	Χ	Х	Х									Х		0.10%
MODEL REF112ATC (UPC 44112 1) BRIX 0-20% W/ ATC	Х		Х						Х			Х		0.20%
MODEL REF113ATC (UPC 44113 8) HIGH RANGE BRIX 0-32%	Χ	Х		Х			Х					Х		0.20%
MODEL REF114ATC (UPC 44114 5) BRIX 28-62%	Χ	Х			Х			Х		Х		Х		0.20%
MODEL REF107 (UPC 04410 7)														

x | x | x | x | x | x | x | x

ATION JUICES

TION JUICES

	ATC	OILS, HUGH MV POLYMERS	SEAWATER, BRINE	SALINITY	SIZE 6.2 in. (L) x 1.8 in. (Dia.) - 7 0Z	SIZE 7.5 in. (L) x 1.3 in. (Dia.) - 22 07	RESOLUTION
MODEL REF201 (UPC 44116 9) SALINITY 0-100%		X		X	X		0.10%
MODEL REF202 (UPC 44115 2) SALINITY 0-28%		Х		Х	Х		0.20%
MODEL REF211ATC (UPC 44120 6) SALINITY 0-10%, & SPECIFIC GRAVITY 1.0 - 1.070	Х		Х	Х	Х		0.10%, 0.001SG





DIGITAL WIDE RANGE BRIX REFRACTOMETER – DREF45-121

FEATURES:

- · High accuracy
- Uses distilled water as calibration reference
- Also measures, displays and automatically compensates for temperature
- °F or °C temperature display unit
- · Auto power off
- Low voltage alert

SPECIFICATIONS:

- ♦ Measurement Ranges/Accuracies: 0 to 35% Brix/±0.2%; 0 to 28% salinity/±0.2%; 1.3330 to 1.3900 refractive index/±0.0003
- ◆ Temperature Measurement Range: 32° to 104°F (0° to 40°C)

- ◆ Temperature Measurement Accuracy: ±2°F (1°C)
- ◆ Auto Power Off: After 3 minutes of inactivity
- ◆ Operating Temperature Range: 32° to 90°F (0° to 35°C)
- ♦ Dimensions:
- 7.28 x 2.32 x 1.77 in. (185 x 59 x 45mm)
- ♦ Weight: 8.11 oz. (230g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES:

- Carrying Case
- Battery
 Operating Instructions
- 1-Year Limited Warranty

DREF45-121 44425 2



DREF45-121

DIGITAL WIDE RANGE PROTEIN/URINE REFRACTOMETER – DREF/UP320

FEATURES:

- High accuracy
- Uses distilled water as calibration reference
- · Also measures, displays and automatically compensates for temperatures
- °F or °C temperature display unit
- Auto power off
- · Low voltage alert

SPECIFICATIONS:

- ♦ Measurement Ranges/Accuracies: 1 to 1.050 Urine SG/±0.002%; 0 to 12 g/dl serum protein/±0.2%; 1.3330 to 1.3900 refractive $index/\pm0.0003$
- ◆ Temperature Measurement Range: 32° to 104°F (0° to 40°C)

- ◆ Temperature Measurement Accuracy: ±2°F (1°C)
- ◆ Auto Power Off: After 3 minutes of inactivity
- ♦ Operating Temperature Range: 32° to 90°F (0° to 35°C)

7.28 x 2.32 x 1.77 in. (185 x 59 x 45mm)

- ♦ Weight: 8.11 oz. (230g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES

- Carrying Case
- Battery Operating Instructions
- 1-Year Limited Warranty

UPC DREF/UP320 444027



DREF/UP320

Tachometers









SPECIFICATIONS

Model #	LT2234C	CT6235B	PCT2236B	PCT900
Name	Non-contact Laser Tachometer	Contact Tachometer	Contact/Non-contact Laser Tachometer	Combination Contact/Non-contact Laser Tachometer
Measurement Range	2.5 to 99,999 rpm	0.5 to 19,999 rpm	10 to 99,999 rpm	Non-contact: 6 to 99,999 rpm Contact: 6 to 25,000 rpm
Display	5-digit LCD	5-digit LCD	5-digit LCD	5-digit LCD
Accuracy	±0.05% of reading + 1 digit	±0.05% of reading + 1 digit	±0.04% of reading + 2 digits	±0.01% of reading +1 digit up to 6,000 rpm; ±0.05% of reading +1 digit above 6,000 rpm
Max Distance to Target (Non-contact mode)	20 in. (500mm)	n/a	20 in. (500mm)	39 in. (1m)
Memory	96 measurements + Min, Max, Last readings	96 measurements + Min, Max, Last readings	96 measurements + Min, Max, Last readings	40 points (10 each selectable Min, Max, Avg, Data measurements)
What's Included	Hard carrying case, reflective tape, batteries	Hard carrying case, rpm adaptors batteries	Hard carrying case reflective tape, rpm adaptors, batteries	Hard carrying case, reflective tape, rpm adaptors,



NON-CONTACT LASER TACHOMETER – LT2234C

Ideal for high-speed motors, engines, gearboxes, fans, compressors.

FEATURES:

- Jumbo 5-digit LCD display
- Auto ranging
- Wide measuring range
- Laser precision
- Memory: Min/Max/Last

SPECIFICATIONS:

- ♦ Measurement Range: 2.5 to 99,999 rpm
- ♦ Accuracy: ±0.05% + 1 digit

- ♦ Resolution: 0.1 rpm (2.5 to 999 rpm); 1 rpm (over 10,000 rpm)
- ♦ Sampling Time: 1 second
- ♦ Power Source: 3 "AAA" batteries (included)

INCLUDES:

- Adhesive Reflective Tape
- Hard Case
- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
42120 8	LT2234C
43021 4	RT800 Reflective tape

CONTACT TACHOMETER - CT6235B

Ideal for measuring rotational speeds.

FEATURES:

- Jumbo 5-digit LCD display
- Auto ranging
- Also measures linear speeds (of conveyors, e.g.)
- Memory: Min/Max/Last

SPECIFICATIONS:

- ◆ Measurement Range: 0.5 to 19,999 rpm (rotational); 50mm/min. to 2 km/min./(linear)
- ♦ Accuracy ±0.05% + 1 digit

- ◆ Rotational Resolution: 0.1 rpm (0.5 to 999 rpm); 1 rpm (over 1000 rpm)
- ◆ Power Source: 4 "AA" batteries (included)

INCLUDES:

- Rpm adaptors
- Hard case
- Batteries User's manual
- 1-Year Limited Warranty

UPC NO. 42115 4 CT6235B



LT2234C

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I-90





CONTACT/NON-CONTACT LASER TACHOMETER – PCT2236B

Ideal for making rotational or linear speed measurements.

FEATURES:

- Two measurement modes
- Auto power off (with disable)
- · Wide measuring range
- Jumbo 5-digit LCD display
- Memory: Min/Max/Last
- Non-contact mode uses laser targeting

CONTACT SPECIFICATIONS:

- ♦ Measurement Range: 0.5 to 99,999 rpm
- ♦ Accuracy: ±0.04% + 2 digits
- ♦ Resolution: 0.001: 0.01: 0.1: 1 rpm (depends on scale)
- ♦ Sampling Time: 1 second

NON-CONTACT SPECIFICATIONS:

- ♦ Measurement Range: 2.5 to 99,999 rpm
- ♦ Accuracy: ±0.05% + 1 digit

- ♦ Resolution: 0.1 rpm below 1,000 rpm; 1 rpm above 1,000 rpm
- ♦ Sampling Period: 1 second
- ◆ Dimensions: 5.9 x 2 x 1.3 in. (150 x 51 x 33mm)
- ♦ Weight: 6.50 oz. (184.27g)
- ◆ Power Source: 4 "AA" batteries (included)

INCLUDES:

- RPM Adaptors
- Adhesive Reflective Tape
- Hard Case
- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
42110 9	PCT2236B
43021 4	RT800 Reflective tape





PCT2236B N

COMBINATION CONTACT/NON-CONTACT LASER TACHOMETER - PCT900

Ideal for a wide variety of rpm and surface speed measurements.

FEATURES:

- · Counts total revolutions and measures rotational speeds as well as surface speeds and lengths
- Non-contact rpm measurements up to 1m from target
- Super-accurate (±0.01%) rpm measurements
- LCD
- · Auto power off
- 40 point memory: 10 selectable Max, Min, Avg and Data measurements
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Rotational Speed Measurement Ranges: 6 to 25,000 rpm (contact), 6 to 99,999 rpm (non-contact)
- ◆ Rpm Measurement Accuracy: ±0.01% + 1 digit from 6 to 6,000 rpm; $\pm 0.05\% + 1$ digit above 6,000 rpm
- ♦ Surface Speed Measurement Range: 2 to 8202 ft./min (0.6 to 25,000 m/min)

- ♦ Length Measurement Range: 0.3 to 32,808 ft. (0.1 to 9,999m)
- ♦ Length/Surface Speed Measurement Accuracy: $\pm 0.5\% + 1$ digit
- ♦ Response Time: 1 second
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Dimensions: 7.75 x 1.93 x 1.14 in. (146 x 49 x 29mm)
- ♦ Weight: 1 lb. (451g) without battery
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- · Cone Adaptor
- Funnel Adaptor
- Contact Adaptor
- Master Wheel (100mm)
- Reflective Tape
- Hard Case
- · User's Manual
- 1-Year Limited Warranty

UPC	NO.
40900 8	PCT900
43021 4	RT800 Reflective tape

♦ Display Size/Type: Four red LEDs,

♦ Power Consumption: <30 watts

32° to 122°F (0° to 50°C)@<80% RH

8.3 x 4.7 x 4.7 in. (210 x 120 x 120mm)

MEAS

DIGITAL STROBOSCOPE - DS2239

Ideal for use in timing/calibration applications (car tune-ups, e.g.) or for measuring motor/fan shaft speeds.

FEATURES:

- Super-accurate Xenon tube light source
- Jumbo 4-digit LED readout
- Two ranges
- Powered by 110VAC or 220VAC
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 100 to 9999 rpm
- ♦ Measurement Accuracy: ±0.05% + 1 digit
- ♦ Measurement Resolution: 0.1 rpm below 1000 rpm; 1 rpm above 1000 rpm
- ♦ Measurement Ranges: 100 to 1200 rpm (Lo); 1200 to 9999 rpm (Hi)
- **INCLUDES:** Power Cord
- User's Manual

♦ Dimensions:

1-Year Limited Warranty

UPC	NO.
40239 9	DS2239

♦ Weight: 2.2 lb. (1kg)

each 10mm high

♦ Operating Temperature:





PCT900

DS2239



Airflow Volume Anemometers

The ability to measure airflow volume is what sets these seven anemometers apart from the crowd. No one offers more of this type of precision instrument than General. When you need to know how much air is coming out of a register or vent-not just how fast it's movingthere's no substitute for a meter that measures CFM or CMM.







see page I-98

see page I-98

SPECIFICATIONS				
Model #	DCFM8906	DCFM8901	DCFM700	
NAME	Digital One Piece Airflow Meter with CFM Display	Digital Two Piece Airflow Meter with RS-232 Computer Interface	Digital Anemometer with CFM	
Airflow Volume Measurement Range	0 to 9,999 CFM or CMM	0 to 99,999 CFM or CMM	0 to 99,999 CFM or CMM	
Airflow Velocity Measurement Range	80 to 5900 ft/min (0.4 to 30 m/sec)	80 to 6900 ft/min (0.4 to 35 m/sec)	0 to 8800 ft/min (0 to 45 m/sec)	
Hot Wire Sensor	-	-	-	
Airflow Measurement Accuracy	±3%	±2%	±2%	
Air Temperature Measurement Range	14° to 122°F (-10° to 50°C)	14° to 122°F (-10° to 50°C)	-58° to 158°F (-50° to 70°C)	
Air Temperature Measurement Accuracy	±2°F (±1°C)	±1°F (±0.6°C)	$\pm 0.9^{\circ}$ F from 32° to 122°F ($\pm 0.5^{\circ}$ C from 0° to 50°C), otherwise $\pm 1.8^{\circ}$ F ($\pm 1^{\circ}$ C)	
Air Speed Units	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	
Data Processing	Min/max memory + data hold	Min/max/average memory + data hold	Min/max/average memory + data hold	
Memory	-	-	Internal memory: 10 readings	
Other Parameters Measured	-	-	-	
Includes	Hard case, "9V" battery, User's Manual	Hard case, "9V" battery, User's Manual	Hard case, 3 "AAA" batteries, User's Manual	







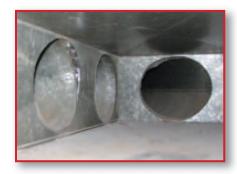


Airflow Volume Anemometers



SPECIFICATIONS

WDCFM8912	HWA2005DL	DAF2005MDL	CIH20DL
Digital Airflow Meter with CFM, BTU, Temp, Humidity, DP, FPM, MPH, KPH, MPS, Knots & Wet Bulb	Hot Wire Anemometer with Real-Time Data Logger	High Temperature Data Logging Airflow Meter	Data Logging Hot Wire Anemometer w/CFM/CMM and 8:1 IR Thermometer
0 to 99,999 CFM or CMM	0 to 1,271,200 CFM (0 to 36,000 CMM)	0 to 1,908,300 CFM (0 to 54,000 CMM)	0 to 2,542,700 CFM (0 to 72,000 CMM)
1 to 6840 ft/min (0.3 to 35 m/sec)	40 to 3940 ft/min (0.2 to 20 m/sec)	80 to 5910 ft/min (0.4 to 30 m/sec)	2 to 7874 ft/min (20 mm/sec to 40 m/sec)
-	Yes. Ideal for ultra-low air speed measurements	-	Yes. Ideal for ultra-low air speed measurements
±5%	±5%	±2%	±3%
-4° to 140°F (-20° to 60°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)	32° to 158°F (0° to 70°C)
±1°F (±0.6°C)	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)
ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots
Min/max/average memory + data hold	Min/max memory + data hold	Min/max memory + data hold	Min/max/average memory + data hold
-	Logs up to 16,000 data points	-	Internal memory: 9 readings logs up to 2000 data points via USB
Relative humidity, wet bulb temperature, dew point, BTUs	Surface temperatures from -50° to 2372°F with 0.2% accuracy using Type K or J thermocouple	Surface temperatures from -50° to 2372°F with 0.2% accuracy using Type K or J thermocouple	Surface temperatures from -25° to 999°F (-32° to 537°C) using integral 8:1 IR thermometer
Hard case, 4 "AAA" batteries, User's Manual	Hard case, "CR2032" battery, User's Manual	Hard case, 4 "AA" batteries, User's Manual	Data logging software, USB cable, hard case, AC adaptor, "9V" battery, User's Manual







Data Logging Anemometers

When you need to record wind speeds over time, a data logging anemometer is just what the doctor ordered. Our three best offerings in this category make data logging easy and foolproof, thanks to their use of our patented technology for Excel formatting of data stored on SD memory cards. When you plug a loaded



SPECIFICATION	SPECIFICATIONS			
Model #	CIH20DL	HWA4214SD	DAF4207SD	DLAF930SD
NAME	Data Logging Hot Wire Anemometer w/CFM/CMM and 8:1 IR Thermometer	Hot Wire Anemometer- Thermometer with Excel Formatted Data Logging SD Card	Anemometer- Thermometer with Excel Formatted Data Logging SD Card	Environment Meter with Excel Formatted Data Logging SD Card
Airflow Velocity Measurement Range	2 to 7874 ft/min (20 mm/sec to 40 m/sec)	40 to 3940 ft/min (0.2 to 20 m/sec)	79 to 6890 ft/min (0.4 to 30m/sec)	80 to 4930 ft/min (0.4 to 25 m/sec)
Airflow Measurement Accuracy	±3%	±5%	±2%	±2%
Air Temperature Measurement Range	32° to 158°F (0° to 70°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)
Air Temperature Measurement Accuracy	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)
Hot Wire Sensor	Yes: Ideal for ultra-low air speed measurments	Yes: Ideal for ultra-low air speed measurments	-	-
Surface Temperature Measurement Using Type K or J Thermocouple	Yes	Yes	Yes	Yes
Airflow Volume Measurement	Yes: from 0 to 2.5 million CFM (72,000 CMM)	-	-	-
Other Parameters Measured	Surface temperature from -25° to 999°F (-32° to 537°C) using integral 8:1 IR thermometer	-	-	Humidity and light level, sound level (via optional probe)
Data Processing	Min/max/average memory + data hold	Min/max memory + data hold	Min/max memory + data hold	Min/max memory + data hold
Memory	Internal memory: 9 readings logs up to 2000 data points via USB	Patented Excel formatting of unlimited number of data logs on SD memory cards	Patented Excel formatting of unlimited number of data logs on SD memory cards	Patented Excel formatting of unlimited number of data logs on SD memory cards
Other Features	Large backlit LCD	Jumbo 2.05 x 1.5 in. (52 x 38mm) backlit LCD	Jumbo 2.05 x 1.5 in. (52 x 38mm) backlit LCD	Jumbo 2.05 x 1.5 in. (52 x 38mm) backlit LCD
Includes	Interface software, USB cable, carrying case, AC adaptor, "9V" battery, User's Manual	Hard case, telescoping air speed-temperature probe, 2 GB SD card, User's Manual	Hard case, combination air speed-temperature vane-type probe, 2 GB SD card, User's Manual	Hard case, combination multifunction vane-type probe, 2 GB SD card, User's Manual



Hot Wire Anemometers

How low can you go?
If the question involves measuring the velocity of slow-moving air, a hot wire anemometer is the answer. Our top-of-the-line CIH20DL can sense a breeze as gentle as 2 ft/min because it uses a hot wire sensor with no mechanical inertia, unlike a vane anemometer.







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SPECIFICATION	ONS			
Model #	CIH20DL	HWA4204HA	HWA2005DL	HWA4214SD
NAME	Data Logging Hot Wire Anemometer w/CFM/CMM and 8:1 IR Thermometer	Hotwire Anemometer with RS-232 Computer Interface	Hot Wire Anemometer with Real-Time Data Logger	Hot Wire Anemometer- Thermometer with Excel Formatted Data Logging SD Card
Airflow Velocity Measurement Range	2 to 7874 ft/min (20 mm/sec to 40 m/sec)	40 to 3940 ft/min (0.2 to 20 m/sec)	40 to 3940 ft/min (0.2 to 20 m/sec)	40 to 3940 ft/min (0.2 to 20 m/sec)
Airflow Measurement Accuracy	±3%	±5%	±5%	±5%
Airflow Speed Units	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots
Air Temperature Measurement Range	32° to 158°F (0° to 70°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)
Air Temperature Measurement Accuracy	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)
Airflow Volume Measurement	Yes: from 0 to 2.5 million CFM (72,000 CMM)	-	Yes: from 0 to 1,271,200 CFM (0 to 36,000 CMM)	-
Surface Temperature Measurement	Yes: from -25° to 999°F (-32° to 537°C) using integral 8:1 IR thermometer	-	Yes: from -50° to 2372°F with 0.2% accuracy using Type K or J thermocouple	-
Data Processing	Min/max/average memory + data hold	Min/max memory + data hold	Min/max memory + data hold	Min/max memory + data hold
Memory	Internal memory: 9 readings logs up to 2000 data points via USB	-	-	Patented Excel formatting of unlimited number of data logs on SD memory card
Other Features	Jumbo backlit LCD display; 4 ft. probe	Jumbo 1.4 in. (36mm) dual LCD display; 4 ft. probe	-	Jumbo 2.05 x 1.5 in. (52 x 38mm) backlit LCD
Includes	Data logging software, USB cable, hard case, AC adaptor, "9V" battery, User's Manual	Hard case, User's Manual	Carrying case, "CR2032" battery, User's Manual	Hard case, telescoping air speed-temperature probe, 2 GB SD card, User's Manual







Airflow Velocity/Temp

Many of our old-school vane anemometers recently graduated from college, where they learned how to speak the new digital language of displays. Some measure wind speed alone; others also measure temperature and humidity and use those numbers to compute wind chill for you.



SPECIFICATION	NS			
Model #	DAF80MIN	DAF80PWM	DAF3300	
Name	Mini Vane Anemometer with Temperature	High Temperature Metal Vane Anemometer	Mini Airflow/Temperature Meter with Wind Chill and Compass	
Airflow Velocity Measurement Range	160 to 2358 ft/min (0.8 to 12 m/sec)	80 to 4930 ft/min (0.4 to 25 m/sec)	0 to 8160 ft/min (0 to 42 m/sec)	
Airflow Velocity Measurement Accuracy	±2%	±2%	±3%	
Air Temperature Measurement Range	32° to 176°F (0° to 80°C)	32° to 140°F (0° to 60°C)	-58° to 212°F (-50° to 100°C) -58° to 212°F (-50° to 100°C)	
Air Temperature Measurement Accuracy	±1.5°F (±0.8°C)	±1.5°F (±0.8°C)	±0.5°F (±0.3°C)	
Air Speed Units	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots		
Data Processing	Min/max memory + data hold	Min/max memory + data hold		
Other Parameters Measured/Displayed			Display options: Wind speed + max wind speed; Wind speed + temperature; Wind speed + wind chill; Wind speed + wind direction	
Other Features	13mm diameter metal probe with mini-vane and thermistor extends to 23.6 in. (600mm); Jumbo 2 x 1.5 in. (51 x 32mm) dual display	Heavy-duty metal vane measures air speeds at temperatures from 32° to 176°F; jumbo 2 x 1.5 in. (51 x 32mm) dual display	Sealed housing is weather- proof and water-resistant to depth of 3.3 ft (1m)	
Includes	Hard case, telescoping probe, User's Manual	Hard case, metal vane probe, User's Manual	Case, "CR2032"battery, lanyard, User's Manual	









see page I-103 see page I-104

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SPECIFICATIO	N2

		5F	'ECIFICATIONS
DAF3010	DAF3010B	DLAF8000	DAF800
Mini Airflow/Temperature Meter with Wind Chill	Airflow Seeker™ Digital Airflow Meter	4-In-1 Environmental Airflow Meter	Mini Digital Airflow Meter
0 to 8160 ft/min (0 to 42 m/sec)	0 to 5905 ft/min (0 to 30 m/sec)	80 to 5910 ft/min (0.4 to 30 m/sec)	80 to 5910 ft/min (0.4 to 30 m/sec)
±3%	±5%	±5% max	±3%
-58° to 212°F (-50° to 100°C)	32° to 113°F (0° to 45°C)	32° to 122°F (0° to 50°C)	N/A
±0.5°F (±0.3°C)	±3.6°F (±2°C)	±2.5°F (±1.5°C)	N/A
ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots	ft/min, mph, km/hr, m/sec, knots
	Data hold	Min/Max memory + data hold	Min/max memory + data hold
Wind speed + max wind speed; wind speed + temperature; wind speed + wind chill	Display options: Current/average/max wind speed + temperature + wind chill	Relative humidity from 10 to 90% with accuracy of 4%; Light levels from 0 to 20,000 lux (0 to 2000 ft-cd) with accuracy of ±5%; Surface temperatures from -148° to 2372°F (-100° to 1300°C) with ±1% accuracy using "K" type thermocouple	
Sealed housing is weather- proof and water-resistant to depth of 3.3 ft. (1m)		Low-friction ball vane wheels improve accuracy at high and low velocities	Low-friction ball vane wheels improve accuracy at high and low velocities
Case, "CR2032" battery, lanyard, User's Manual	"CR2032" battery, User's Manual	Lanyard, User's Manual	Lanyard, User's Manual





INDUSTRIAL

Anemometers



DCFM8906



DCFM8901 DCFM8901CERT





[-98 General Tools & Instruments

DIGITAL ONE PIECE AIRFLOW METER WITH CFM DISPLAY - DCFM8906

Ideal for measuring airflow speed and volume output of exhaust fans and blowers. **FEATURES**:

- Measures and displays CFM, CMM, FPM, temperature and knots
- · One-handed airflow measurement
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)
- Calculates and displays average, minimum, and maximum air speed and airflow volume readings at one point or up to eight points
- Data hold
- °F/°C switch
- CE and RoHS approved

SPECIFICATIONS:

- ◆ Airflow Volume Measurement Range: 0 to 9,999 CFM or CMM
- ♦ Airflow Velocity Measurement Range: 80 to 5900 ft./min (0.4 to 30m/sec)

- ◆ Airflow Measurement Accuracy/Resolution: ±3%/1 ft./min (10mm/sec)
- ◆ Temperature Measurement Range: 14° to 122°F (-10° to 50°C)
- ◆ Temperature Measurement Accuracy/Resolution: ±2°F (±1°C)/0.1°
- ♦ Dimensions: 7 x 2.5 x 1.75 in. (183 x 76 x 45mm); Vane diameter: 2.8 in. (70mm)
- ♦ Display Size: 1.25 x 1.625 in.
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Molded Hard Case
 Battery
- 1-Year Limited Warranty

UPC	NO.
40015 9	DCFM8906
12710 0	ASFTKIT PC Interface Kit (optional)
210147	Z110VADPT 9V AC/DC adaptor
	(optional)

DIGITAL TWO PIECE AIRFLOW METER WITH RS-232 COMPUTER INTERFACE – DCFM8901

Measures airflow volume, airflow velocity, air temperature.

- Measures and displays CFM, CMM, FPM, MPS and temperature
- Min/Max memory + data hold
- Single- and multi-point averages
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)
- °F/°C switch
- · CE and RoHS approved

SPECIFICATIONS:

- ◆ Airflow Volume Measurement Range: 0 to 99,999 CFM or CMM
- ◆ Airflow Velocity Measurement Range: 80 to 6900 ft./min (0.4 to 35 m/sec)
- ♦ Airflow Measurement Accuracy/Resolution: ±2%/1 ft./min (10 mm/sec)
- ◆ Temperature Measurement Range: 14° to 122°F (-10° to 50°C)

- ◆ Temperature Measurement Accuracy/Resolution: ±1°F (±1°C)/0.1°
- ♦ Cord Length: 20.5 in.; extends to 4.5 ft.
- ♦ Dimensions of Meter: 7.1 x 2.8 x 1.5 in. (181 x 71 x 38mm); Vane diameter: 2.9 in. (73mm)
- ♦ Weight of Meter: 10.4 oz. (295g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Remote Vane/Temperature Probe
- Molded Hard Case Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
40005 0	DCFM8901
40006 7	P8901 Replacement Vane/Temperature
	Probe (optional)
12710 0	ASFTKIT PC Interface Kit (optional)
210147	Z110VADPT 9V AC/DC adaptor (optional)

DIGITAL ANEMOMETER WITH CFM – DCFM700

Ideal for measuring airflow speed and volume output of exhaust fans and blowers. **FEATURES**:

- Measures and displays airflow velocity/volume + temperature
- Stores, recalls 10 values
- Min/Max memory
- Data hold function
- Low battery indication
- Auto power off
- · CE and RoHS approved

SPECIFICATIONS:

- ◆ Airflow Volume Measurement Range: 0 to 99,999 CFM or CMM
- ◆ Airflow Velocity Measurement Range: 0 to 8800 ft./min (0 to 45 m/sec)
- ♦ Airflow Measurement Accuracy: ±2%
- ◆ Temperature Measurement Range: -58° to 158°F (-50° to 70°C)

- ◆ Temperature Measurement Accuracy/Resolution: ±0.9°F (±0.5°C) from 32° to 122°F (0° to 50°C); ±1.8°F (±1°C) elsewhere
- ◆ Operating Temperature: -14° to 158°F (-10° to 70°C)
- ◆ Storage Temperature: -14° to 158°F (-10° to 70°C)
- ♦ Sampling Period: 1 second
- ♦ Dimensions:

Meter: 6.9 x 3.3 x 1.4 in. (175 x 85 x 35mm) Vane: 6.1 x 3 x 1.4 in. (170 x 75 x 35mm)

- ♦ Weight: 10 oz. (280g)
- ♦ Power Source: 3 "AAA" batteries (included)

INCLUDES:

- Molded Hard Case
 Batteries
- User's Manual 1-Year Limited Warranty

000. 0		•		 	
UPC	NO.				
40700 4	DCFM:	70	0		



DIGITAL ALL-IN-ONE AIR FLOW METER WITH CFM, BTU, TEMP, HUMIDITY, DP, FPM, MPH, KPH, MPS, KNOTS AND WET BULB – WDCFM8912

Ideal for measuring airflow speed and volume output of exhaust fans and blowers. **FEATURES**:

- · One-handed airflow measurement
- Min/Max memory + data hold
- · Single- and multi-point averages
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)
- °F/°C switch
- · CE and RoHS approved

SPECIFICATIONS:

- ◆ Airflow Volume Measurement Range: 0 to 99,999 CFM or CMM
- ◆ Airflow Velocity Measurement Range: 1 to 6840 ft./min (0.3 to 35 m/sec)
- ♦ Airflow Measurement Accuracy: ±5%
- ◆ Temperature Measurement Range: -4° to 140°F (-20° to 60°C)
- ◆ Temperature Measurement Accuracy: ±1°F (±0.6°C)

- ♦ RH Measurement Range: 10 to 90%
- ♦ RH Measurement Accuracy: ±3% of reading
- ◆ Dew Point/Wet Bulb Temperature Measurement Resolution: 0.1°F (0.1°C)
- ♦ Dimensions of Meter: Vane: 6.7 x 3 x 1.6 in. (170 x 77 x 40mm) Meter: 6.9 x 2.8 x 1.3 in. (175 x 70 x 33mm)
- ♦ Weight of Meter: 10.4 oz. (295 g)
- Power Source: 4 "AA" batteries (included) or optional 9V AC adaptor

INCLUDES:

- Hard Case Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
01249 9	WDCFM8912
12710 0	ASFTKIT PC Interface Kit (optional)
01291 8	P8912 Replacement Vane/Temperature Probe (optional)
210147	Z110VADPT 9V AC/DC adaptor (optional)



WDCFM8912







HOT WIRE ANEMOMETER WITH REAL-TIME DATA LOGGER - HWA2005DL

Ideal for measurement of multiple temperature and air flow parameters. **FEATURES**:

- Measures airflow volume and velocity, ambient and surface temperatures
- Hot wire sensor at end of telescoping probe can sense even the gentlest breeze
- Jumbo 4-digit LCD
- Min/Max memory + data hold
- Time-stamps up to 16,000 data points for logging/uploading via optional RS-232 to USB PC interface kit

SPECIFICATIONS:

- ◆ Airflow Volume Measurement Range: 0 to 1,271,200 CFM (0 to 36,000 CMM)
- ♦ Airflow Velocity Measurement Range: 40 to 3940 ft./min (0.2 to 20 m/sec)
- ♦ Airflow Measurement Accuracy: ±5%
- ♦ Ambient Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ◆ Ambient Temperature Measurement Accuracy: ±1.5°F (±0.8°C)

- ◆ Surface Temperature Measurement Range (using "K" or "J" type thermocouple): 50° to 2372°F (10° to 1300°C)
- ♦ Surface Temperature Accuracy: ±0.2%
- ♦ Dimensions:
- 8 x 3 x 1.5 in. (203 x 76 x 38mm)
- ♦ Weight: 1.13 lb. (513g)
- ♦ Power Source:
 - 1 "CR2032" battery (included)
 - 4 "AA" batteries (not included)

INCLUDES:

- Molded Hard Case
 Battery
- User's Manual 1-Year Limited Warranty

UPC	NO.
40119 4	HWA2005DL
012598	PHWA2005 Replacement Hot Wire Air
	Speed/Temperature (optional)

41420 0 LSFTKIT PC Interface Kit (optional)
Optional "K" type probes: See pp. I-44 – 45



HWA2005DL

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HIGH TEMPERATURE DATA LOGGING AIRFLOW METER - DAF2005MDL

Ideal for measuring airflow speed and volume output of exhaust fans and blowers. **FEATURES**:

- Measures airflow volume and velocity, ambient and surface temperatures
- Uses heavy-duty vane probe
- Jumbo 4-digit LCD
- Min/Max memory + data hold
- Time-stamps up to 16,000 data points for logging/uploading via optional RS-232 to USB PC interface kit

SPECIFICATIONS:

- ♦ Airflow Volume Measurement Range: 0 to 1,908,300 CFM (0 to 54,000 CMM)
- ♦ Airflow Velocity Measurement Range: 80 to 5910 ft./min (0.4 to 30 m/sec)
- ♦ Airflow Measurement Accuracy: ±2%
- ↑ Ambient Temperature Measurement Range: 32° to 122°F (0° to 50°C)
 N Indicates optional NIST calibration is available

- ♦ Ambient Temperature Measurement Accuracy: ±1.5°F (±0.8°C)
- ◆ Surface Temperature Measurement Range (using "K" or "J" type thermocouple): 50° to 2372°F (10° to 1300°C)
- ♦ Surface Temperature Accuracy: ±0.2%
- ◆ Dimensions:
- 7.9 x 2.9 x 1.4 in. (203 x 76 x 38mm)
- ♦ Power Source: 4 "AA" batteries (included)

INCLUDES:

- Molded Hard Case And Probe
 Batteries
- User's Manual
 1-Year Limited Warrant

 User's IVIa 	nual • 1-year Limited Warranty
UPC	NO.
40133 0	DAF2005MDL
01260 4	P2005DAF Replacement Vane/
	Temperature Probe (optional)
41420 0	LSFTKIT PC Interface Kit (optional
Optional "K"	type probes: See pp. I-44 - 45



DAF2005MDL



General Tools & Instruments I-9

C€ RoHS

DATA LOGGING HOT WIRE ANEMOMETER WITH CFM/CMM AND 8:1 IR THERMOMETER – CIH20DL

Ideal for low FPM applications.

FEATURES:

- Measures and displays air speed or airflow volume in several Imperial or metric units
- · Simultaneously measures and displays ambient temperature from 32° to 158°F (0° to 70°C) in °F or °C with ±2% accuracy
- Measures air speeds from 2 ft/min to 7874 ft/min (20 mm/sec to 40 m/sec) with ±3% accuracy
- Measures airflow volumes from 0 to 2.5 million CFM (0 to 72,000 CMM) with ±3% accuracy
- Displays maximum, minimum or maximum air speed plus temperature
- Also has 8:1 infrared thermometer for remote, non-contact measurement of surface temperatures from -25° to 999°F (-32° to 538°C) with ±3% accuracy
- · Telescoping probe and cable extend reach of hot wire sensor and thermistor to up to 6 ft. (1.8m)
- Jumbo backlit LCD with three readouts
- Stores/recalls up to nine sets of three readings in nonvolatile memory
- Time-stamps and saves up to 20,000 data points at user-selected sampling rate from 5 seconds to 1 hour
- Included USB cable and interface/data logging software enable transfer of stored data logs from the meter's internal memory to a PC for tabular or graphic display and analysis
- · Data hold and auto power off functions
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Air Flow Volume Measurement Range/Resolution: 0 to 2,542,700 CFM (0 to 72,000 CMM)/0.01 CFM (0.001 CMM)
- ♦ Air Speed Measurement Range/Accuracy: 2 to 7874 ft./min (20 mm/sec to 40 m/sec)/±3%
- ♦ IR Thermometer Distance-to-spot (D:S) ratio: 8:1
- ♦ IR Thermometer Emissivity: 0.95 (fixed)
- ♦ IR Thermometer Measurement Range: -25° to 999°F (-32° to 537°C)
- ♦ IR Thermometer Measurement Accuracy: ±3.6°F (2°C) from -4° to 212°F (-20° to 100°C)
- ♦ IR Thermometer Measurement Resolution: 0.1°max/ (F or C)
- ♦ IRT Laser Power: <1mW (Class 2)
- ♦ Memory: Nine readings + Max/Min/Avg + Data Hold
- Extended length of telescoping hot wire probe: 70.8 in. (1.8m)
- ◆ Dimensions: 7.24 x 2.75 x 1.57 in. (184 x 70 x 40mm)
- ♦ Weight: 11.3 oz. (320g) ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- USB cable PC Data Logging Software
- AC Adaptor
 Hard Carrying Case
- Battery
 User's Manual
- 1-Year Limited Warranty

UPC	NO.
01498 1	CIH20DL

HOT WIRE ANEMOMETER-THERMOMETER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – HWA4214SD

Accurately measures air (wind) speeds as low as 0.5 mph and air temperatures within ±1.5°F (± 0.8°C).

FEATURES:

- Includes telescoping air speed-temperature probe
- Displays air (wind) speed in meters/second, feet per minute, kilometers/hr, knots (nautical miles per hour), or miles per hour
- Measures air speeds down to 0.2 m/sec with 0.01 m/sec resolution (down to 40 ft/min with 1 ft/min resolution)
- Displays temperature in °F or °C
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- . Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- Also supports manual data logging and changing of SD card storage location
- Auto power off function

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Parameters Measured: Air speed, temperature
- ♦ Measurement Range:
- For air speed: 0.2 to 25 m/sec, 0.7 to 172 km/hr, 0.5 to 44.7 mph, 0.4 to 38.8 knots, 40 to 3940 ft/min
- For temperature: 32° to 122°F (0° to 50°C)

- ♦ Measurement Accuracy:
 - For air speed: \pm (5% + 0.1 m/sec), \pm (5% + 0.3 km/hr), \pm (5% + 0.2 mph), \pm (5% + 0.2 knots), \pm (5% + 20 ft/min)
 - For temperature: ± 1.5°F (± 0.8°C)
- ◆ Data Logging Sampling Time: 1 second to 1 hour
- ♦ Settable Parameters: Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, air speed unit, optional thermocouple type (K or J)
- ♦ Storable/Recallable Readings: Max, Min
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Operating Relative Humidity: 0 to 85%
- ♦ Dimensions of Instrument: 7.99 x 2.99 x 1.50 in. (203 x 76 x 38mm)
- ♦ Weight of Instrument: 1.13 lb. (515g)
- ♦ Dimensions of Probe: 0.4724 in. (diameter) x 11.02 in.(collapsed)/37 in.(extended) (12mm x 280mm/940mm)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

INCLUDES:

- · Hard Carrying Case
- Telescoping Air Speed/Temperature Probe
- 2 GB SD Memory Card User's Manual
- 1-Year Limited Warranty



UPC	NO.			
01456 1	HWA4214SD			
Optional Accessories:				
01548 3	P4214SD Replacement Hot Wire Air			
	Speed/Temperature Probe			
015063	AC1 9VDC adaptor for 110V power supply			

HWA4214SD

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01502 5 SDRD1 SD Card Reader Optional "K" type probes: See pp. I-44 - 45



ANEMOMETER-THERMOMETER WITH EXCEL-FORMATTED DATA LOGGING SD CARD - DAF4207SD

Accurately measures air (wind) speed and temperature.

FEATURES:

- Includes combination air speed-temperature probe
- · Displays air (wind) speed in meters/second, feet per minute, kilometers/hr, knots, (nautical miles per hour), or miles per hour
- Displays temperature in °F or °C
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- . Displays maximum and minimum readings and holds any reading
- Automatically logs measurements at sampling time settable from one second to one hour
- · Also supports manual data logging and changing of SD card storage location

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Parameters Measured: Air speed, temperature
- ♦ Measurement Range:
 - For air speed: 0.4 to 30m/sec, 1.4 to 126 km/hr, 0.9 to 78.3 mph, 0.8 to 68 knots, 79 to 6890 ft/min
 - For temperature: 32° to 122°F (0° to 50°C)
- ♦ Measurement Accuracy:
 - For air speed: ± (2% + 0.2 m/sec), \pm (2% + 0.8 km/hr), \pm (2% + 0.4 mph), \pm (2% + 0.4 knots), \pm (2% + 40 ft/min)
 - For temperature: ± 1.5°F (± 0.8°C)

- ◆ Data Logging Sampling Time: 1 second to 1 hour
- ♦ Settable Parameters: Date, time, auto power off. beep sound, sampling time, decimal point or comma decimal division, temperature unit, air speed unit, optional thermocouple type (K or J)
- ♦ Storable/Recallable Readings: Min/Max
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Operating Relative Humidity: 0 to 85%
- ♦ Dimensions of Instrument:
- 7.99 x 2.99 x 1.50 in. (203 x 76 x 38mm)
- ♦ Weight of Instrument: 1.13 lb. (515g)
- ◆ Diameter of Probe Head: 2.83 in. (72mm)
- ♦ Power Source: 6 "AA" batteries or optional

9-VDC AC adaptor			
	UPC	NO.	
	01455 4	DAF4207SD	
	Optional A	ccessories:	
	015063	AC1 9VDC adaptor	for 110V power suppl

SDRD1 SD Card Reader 015025 401316 **P80P** Replacement Vane/Temperature Probe

Optional "K" type probes: See pp. I-44 - 45







INCLUDES:

- · Hard Carrying Case
- Combination Vane/Temperature Probe
- 2 GB SD Memory
- 1-Year Limited Warranty

ENVIRONMENTAL METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – DLAF930SD

Accurately measures air (wind) speed + temperature, air temperature + humidity, light & sound levels, surface temperature.

FEATURES:

- · Multi-function probe measures air speed and temperature, air temperature and humidity, and light level. Optional accessories measure surface temperature and sound level
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Displays maximum and minimum readings and holds any reading
- · Automatically logs measurements at sampling time settable from 1 second to 1 hour
- · Also supports manual data logging and changing of SD card storage location
- · Auto power off function

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ◆ Parameters Measured: Air temperature, relative humidity (R.H.), air speed, light level
- ♦ Measurement Range:
 - For air speed: 0.4 to 25 m/sec, 1.4 to 90 km/hr, 0.9 to 55.9 mph, 0.8 to 48.6 knots, 80 to 4930 ft/min
- For temperature: 32° to 122°F (0 to 50°C); for R.H., 10 to 95%
- For light level: 0 to 20,000 lux, 0 to 1860 ft-cd

- ♦ Measurement Accuracy:
 - For air speed: ± (2% + 0.2 m/sec), \pm (2% + 0.8 km/hr), \pm (2% + 0.4 mph), \pm (2% + 0.4 knots), \pm (2% + 40 ft/min)
 - For temperature: 1.5°F (± 0.8°C)
 - For humidity: ± (3% of reading + 1%) for R.H. values ≥70%; ± 3% of reading for R.H values
 - For light level: ± (5% of reading ± 8 digits)
- ◆ Data Logging Sampling Time: 1 second to 1 hr.
- ♦ Settable Parameters: Date, time, auto power off, beep sound, sampling time, decimal point or comma decimal division, temperature unit, air speed unit, light level unit, optional thermocouple type (K or J)
- ♦ Storable/Recallable Readings: Max/Min
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH
- Dimensions of Meter:

5.31 x 2.36 x 1.30 in. (135 x 60 x 33mm)

- ♦ Weight of Meter: 1.13 lb. (515g)
- ♦ Dimensions of Probe:
- 4.13 x 1.81 x 1.14 in. (105 x 46 x 29mm)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor





DLAF930SD N

INCLUDES:

- Hard Carrying Case
- Combination Temperature/Humidity/Air Speed/Light Level Probe
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

UPC NO. 01460 8 **DLAF930SD**

Optional Accessories:

01543 8 **P930SD** Replacement Combination Probe 015063 AC1 9VDC adaptor for 110V power supply SC941 Sound level probe/plug adaptor 015704

015025 SDRD1 SD Card Reader

Optional "K" type probes: See pp. I-44 - 45

Anemometers CE



HWA4204HA N



DAF80MIN N





DAF80PWM N

DIGITAL HOTWIRE ANEMOMETER – HWA4204HA

Ideal for measuring velocity and temperature of air produced by fans and blowers. **FEATURES:**

- Hot wire sensor at end of thin telescoping probe accurately measures speed and temperature of low-speed airflows in ducts, vents and other tight spaces
- Jumbo LCD
- Min/Max memory + data hold
- Five available air speed units
- Auto power off
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Airflow Velocity Measurement Range: 40 to 3940 ft./min (0.2 to 20 m/sec)
- ♦ Airflow Measurement Accuracy: ±5%
- ◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)

- ♦ Ambient Temperature Measurement Accuracy: ±1.5°F (±0.8°C)
- ♦ Dimensions of Instrument:
- 7.1 x 3.1 x 1.5 in. (185 x 78 x 38mm)
- ♦ Weight of Instrument: 12.5 oz. (354g)
- ♦ Power Source:
- 1 "CR2032" battery (included)
- 4 "AA" batteries (not included)

INCLUDES:

- Molded Hard Case and Probe
- CR2032 Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
40120 0	HWA4204HA
40121 7	P4204 Replacement Hot Wire Air Speed/Temperature (optional)

MINI VANE ANEMOMETER WITH TEMPERATURE - DAFSOMIN

Ideal for checking for obstructions in ducts.

FEATURES:

- Measures and displays airflow speed and temperature
- Five available air speed units
- Lightweight
- · Telescoping metal probe has mini-vane and thermistor at tip
- · Jumbo dual readout 4-digit LCD
- Min/Max memory + data hold
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- · Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Airflow Velocity Measurement Range: 160 to 2358 ft./min (0.8 to 12 m/sec)
- ♦ Airflow Measurement Accuracy: ±2%
- ◆ Temperature Measurement Range: 32° to 176°F (0° to 80°C)

- ♦ Ambient Temperature Measurement Accuracy: ±1.5°F (±0.8°C)
- ♦ Display Size: 2 x 1.5 in. (51 x 32mm)
- ♦ Probe Diameter: 0.5 in. (13mm)
- ◆ Extended Probe Length: 23.6 in. (600mm)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- Molded hard case and probe
- User's manual
- 1-Year Limited Warranty

UPC	NO.
40125 5	DAF80MIN
41420 0	LSFTKIT PC Interface Kit (optional)
401378	P80MIN Replacement Hot Wire Air
	Speed/Temperature Probe (optional)

HIGH TEMPERATURE METAL VANE ANEMOMETER – DAF80PWM

Ideal for measuring velocity and temperature of hot air produced by fans and blowers. **FEATURES: SPECIFICATIONS:**

- Measures and displays air speed and temperature
- Three air speed display options: Current value, 2/3 of current value, average of up to 20 readings
- · Five available air speed units
- °F or °C display
- · Probe has thermistor and low-friction ball vane wheels
- Jumbo dual readout 4-digit LCD
- Min/Max memory + data hold
- · RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- · Auto Power Off (can be disabled for data logging)

- ◆ Airflow Velocity Measurement Range: 80 to 4930 ft./min (0.4 to 25 m/sec)
- ♦ Airflow Measurement Accuracy: ±2%
- ◆ Temperature Measurement Range: 32° to 140°F (0° to 60°C)
- ◆ Temperature Measurement Accuracy: ±1.5°F (±0.8vC)
- ♦ Display Size: 2 x 1.5 in. (51 x 32mm)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- · Molded hard case and probe
- User's manual
- 1-Year Limited Warranty

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UPC	NO.
40135 4	DAF80PWM
40136 1	P80M Replacement Vane/Temperature
	Probe (optional)
41420 0	LSFTKIT PC Interface Kit (optional)
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C€ RoHS



Outdoor & Mini Anemometers

MINI AIRFLOW/TEMPERATURE METER WITH WIND CHILL **AND COMPASS - DAF3300**

Perfect for monitoring outdoor comfort/safety levels.

FEATURES:

- · Measures windspeed, temperature and windchill factor
- Digital compass
- · Backlit display
- One button operation
- Weatherproof and waterproof to 6 ft.
- · Completely sealed: internal sensors
- Stainless steel back
- 1-minute Auto Power Off (can be disabled)
- · Samples twice/second
- · CE and RoHS approved

SPECIFICATIONS:

♦ Temperature Measurement Range: -58° to 212°F (-50° to 100°C) Resolution: 0.2°F (-0.1°C) Accuracy: ±0.5°F (±0.3°C)

♦ Windspeed:

Units: km/h, mph, m/s, fps, knots Range:

0.7 to over 94 mph, 1.1 to over 150km/hr Resolution: 0.1 unit

Accuracy:

±3% from 2.0 to 94 mph (3.1 to 150km/h)

♦ Compass Range: 0° to 359° off North Resolution: 1°

Accuracy: ±4° when calibrated

♦ Dimensions:

3.5 x 1.5 x 0.75 in. (41 x 93 x 17mm)

- ♦ Weight: 2 oz. (50g)
- ♦ Power Source: 1 "CR2032" battery (included)
- 1-Year Limited Warranty

INCLUDES:

LanyardBattery User's manual UPC NO. DAF3300 50330 0



DAF3300

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MINI AIRFLOW/TEMPERATURE METER WITH WIND CHILL - DAF3010

Measures wind speed as well as temperature.

FEATURES:

- Measures windspeed, temperature, windchill factor
- Backlit display
- One button operation
- Weatherproof and waterproof to 6 ft.
- Completely sealed; internal sensors
- · Stainless steel back
- 1-minute Auto Power Off (can be disabled)
- Samples twice/second

SPECIFICATIONS:

◆ Temperature Measurement Range: -58° to 212°F (-50° to 100°C) Resolution: 0.2°F (-0.1°C) Accuracy: ±0.5°F (±0.3°C)

- ♦ Windspeed Units: km/h, mph, m/s, fps, knots
- ♦ Windspeed Measurement Range: 0.7 to over 94 mph (1.1 to over 150km/hr)
- ♦ Windspeed Measurement Accuracy: ±3% from 2.0 to 94 mph (3.1 to 150km/h)
- ♦ Resolution: 0.1 unit
- ♦ Dimensions:

3.5 x 1.5 x 0.75 in. (41 x 93 x 17mm)

- ♦ Weight: 2 oz. (50g)
- ♦ Power Source: 1 "CR2032" battery (included)

INCLUDES:

- Lanyard Battery User's Manual
- 1-Year Limited Warranty

UPC NO. DAF3010 401156



DAF3010

AIRFLOW SEEKER™ DIGITAL AIRFLOW METER - DAF3010B

Ideal for contractors, auto technicians and homeowners to measure and monitor the efficiency of AC and ventilation systems. Also suitable for outdoor use.

- · Displays current, average, or maximum wind speed
- Wind chill indication
- · LCD display with backlight for easy reading
- Selectable air speed units of ft/min, m/s, km/hr, mph and knots
- °F/°C switch
- · Battery status indication

SPECIFICATIONS:

- ♦ Airflow Velocity Measurement Range: 0 to 8160 ft./min (0 to 42 m/sec)
- ♦ Airflow Measurement Accuracy: ±3%

- ◆ Temperature Measurement Range: -58° to 212°F (-50° to 100°C)
- ◆ Temperature Measurement Accuracy: ±0.5°F (±0.3°C)
- ♦ Dimensions: 5 x 3 x 1 in. (120 x 70 x 26.5mm)
- ♦ Weight: 2.5 oz. (70g) (including battery)
- ♦ Power Source: 1 "CR2032" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

UPC NO. 40105 7 **DAF3010B**





DAF3010B



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4-IN-1 ENVIRONMENTAL AIRFLOW METER - DLAF8000

Measures airflow, humidity, temperature and light. **FEATURES:**

- Displays FPM, MPH, KPH, MPS, knots + temperature
- · One-handed airflow measurement
- Single and multi-point averages
- · Low-friction ball vane wheels improve accuracy at high and low velocities
- . "K" type thermocouple port for measuring surface temperatures
- Min/Max memory + data hold
- °F/°C switch
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Airflow Velocity Measurement Range: 80 to 5910 ft./min (0.4 to 30 m/sec)
- ♦ Airflow Measurement Accuracy: ±5% max
- ♦ Ambient Temperature Measurement Range: 32° to 122°F (0° to 50°C)

- ♦ Ambient Temperature Measurement Accuracy: ±2.5°F (±1.5°C)
- ♦ Relative Humidity Measurement Range: 10 to 90%
- ♦ RH Measurement Accuracy: ±4% of reading
- ♦ Surface Temperature Measurement Range (with "K" type thermocouple): -148° to 2372°F (-100° to 1300°C)
- ♦ Surface Temperature Measurement Accuracy: ±1%
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- Safety Strap
- C4 Case, "K" Type Thermocouples (see page I-44-45)
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
40110 1	DLAF8000
401118	DLAF8000C with "C4" case
01264 2	C16 "C4" case for DLAF8000/
	replacement case for DLAF8000C

Optional "K" type probes: See pp. I-44 - 45



MINI DIGITAL AIRFLOW METER - DAF800

Measures airflow in ducts and at grille returns. Helps balance systems.

FEATURES:

- Five available air velocity units: ft./min (fpm), m/sec, kmph, mph, knots
- · Small and light enough for one-handed operation
- · Low-friction ball vane wheels provide high accuracy at all air speeds
- Min/max memory + data hold
- 10-minute Auto Power Off (disabled during Min/Max recording)
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Ranges: 1.4 to 108 kmph, 0.4 to 30m/sec, 80 to 5810 fpm, 0.9 to 67 mph, 0.8 to 58.3 knots
- ♦ Measurement Accuracy: ±3% of full-scale value below 20 m/s; ±4% of full-scale value above 20m/sec
- ♦ Measurement Resolutions: 0.1 km/hr, 0.1 m/sec, 1 fpm, 0.1 mph, 0.1 knots
- ♦ Display Size 1.3 in. (33mm) diagonal
- ♦ Digit Height 3/8 in. (10mm)
- ◆ Dimensions:
- 6.15 x 2.36 x 1.29 in. (156 x 60 x 33mm)
- ♦ Weight (including battery): 5.6 oz. (159g)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- Wrist Strap
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
40105 7	DAF800



Environment/Water/Airflow Meter

ENVIRONMENTAL METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD - DLAF930SD

Accurately measures air (wind) speed + temperature, air temperature + humidity, light & sound levels, surface temperature.

FEATURES:

- Multi-function probe measures air speed and temperature, air temperature and humidity, and light level. Optional accessories measure surface temperature and sound level
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Min/Max memory + data hold
- Automatically logs measurements at sampling time settable from 1 second to 1 hour
- · Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ♦ Parameters Measured: Air temperature, relative humidity (R.H.), air speed, light level
- ♦ Measurement Range:
 - For air speed: 0.4 to 25 m/sec. 1.4 to 90 km/hr, 0.9 to 55.9 mph, 0.8 to 48.6 knots, 80 to 4930 ft/min
 - For temperature: 32° to 122°F (0 to 50°C); for R.H., 10 to 95%
 - For light level: 0 to 20,000 lux, 0 to 1860 ft-cd
- Measurement Accuracy:
 - For air speed: \pm (2% + 0.2 m/sec), \pm (2% + 0.8 km/hr), \pm (2% + 0.4 mph), \pm (2% + 0.4 knots), \pm (2% + 40 ft/min)
 - For temperature: 1.5°F (± 0.8°C)

- For humidity: ± (3% of reading + 1%) for R.H. values ≥70%; ± 3% of reading for R.H values < 70%
- For light level: ± (5% of reading ± 8 digits)
- ◆ Data Logging Sampling Time: 1 second to 1 hr.
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH
- ♦ Dimensions of Meter: 5.31 x 2.36 x 1.30 in. (135 x 60 x 33mm)
- ♦ Weight of Meter: 1.13 lb. (515g)
- ♦ Dimensions of Probe:
 - 4.13 x 1.81 x 1.14 in. (105 x 46 x 29mm)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

INCLUDED ACCESSORIES:

- Hard Carrying Case
- Combination Temperature/Humidity/Air Speed/Light Level Probe
- 2 GB SD Memory Card
- User's Manual

015025

1-Year Limited Warranty

	,
UPC	NO.
01460 8	DLAF930SD
015438	P930SD Replacement Probe
Optional	Accessories:
015063	AC1 9VDC adaptor for 110V power supply
01570 /	CC0/11 Cound level probe/plug adapter

SDRD1 SD Card Reader

Optional "K" type probes: See pp. I-44 - 45







FLOW WATCH - FW450

Ideal for making precise water/air speed and temperature measurements. **FEATURES:**

- Displays instantaneous, maximum or average speed + instantaneous, maximum, or minimum temperature or wind chill
- · Speed units: kmph, m/s, knots, mph, fps and cm/s
- Backlit display
- Aluminum bottom plate for tripod attachment
- Waterproof
- CE and RoHS approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range/Accuracy: -4° to 158°F (-20° to 70°C)/±0.38°F (±0.2°C)
- ♦ Air/Water Speed Measurement Accuracy: ±2%
- ♦ Dimensions: 6.1 x 2.6 in. (155 x 65mm)
- ◆ Power Source: 2 "AA" batteries (included)

INCLUDES:

- Display Unit
- 20mm (0.79 in.) Air Impeller
- 60mm (2.36 in.) Water Impeller
- 1.2m (3.9 ft.) Aluminum Telescoping Rod with 2m (6.6 ft.) Cable



User's Manual

• 1-Year Limited Warranty

Optional Accessories:

• FW450-12: 12mm (0.47 in.) windspeed impeller

• FW450-50: 15m (49.2 ft.) sounding cable with water speed impeller

Transcription of the control of the	
UPC	NO.
01374 8	FW450
01471 4	FW450-12
01473 8	FW450-50





General Tools & Instruments -105



FHT801

FHT803

Fruit Hardness, Soil & Grain Moisture

FRUIT HARDNESS TESTER - SMALL, SOFT FRUITS - FHT801

Know when to pick and ship your fruits.

FEATURES:

- Penetrating tip tests for ripeness
- Tip sized for strawberries, cherries, grapes, peaches, bananas, apricot, plums, melons, citrus fruits and persimmons
- Display unit options: kilogram-force (kgf/cm²), pound-force(lbf/cm²), Newtons, Pascals
- Max memory
- · Zero adjust button
- Auto power off with adjustable trigger

SPECIFICATIONS:

- ♦ Tip Diameter: 3.5mm (0.14 in.)
- ♦ Hardness Measurement Range: 0.2 to 5 kgf/cm² (2.84 to 71.12 lbf/in.²)

- ♦ Measurement Accuracy: ±1% of reading
- ◆ Auto Power Off: Adjustable from 0 to 9 minutes of inactivity
- ◆ Operating Temperature: 32° to 113°F (0° to 45°C) @<90% RH
- ♦ Dimensions: 8.0 x 2.4 x 1.3 in. (204 x 62 x 33mm)
- ♦ Weight: 8.1 oz. (229g)
- ◆ Power Source: 4 "AAA" batteries (not included)

INCLUDES:

- Hard Carrying Case User's Manual
- 1-Year Limited Warranty

UPC	NO.
01366 3	FHT801

FRUIT HARDNESS TESTER - LARGE, HARD FRUITS - FHT803

Know when to pick and ship your fruits. **FEATURES**:

- Two penetrating tips included to test for ripeness
- Smaller tip sized for pears, nectarines, kiwis, avocados; larger tip sized for apples
- Display unit options: kilogram-force (kgf/cm²), pound-force(lbf/cm²), Newtons, Pascals
- Max memory
- Zero adjust button
- · Auto power off with adjustable trigger

SPECIFICATIONS:

- ◆ Tip Diameters: 7.9mm (0.31 in.) and 11.1mm (0.44 in.)
- ◆ Hardness Measurement Range: 0.2 to 11 kgf/cm² (2.84 to 156.5 lbf/in.²) for 7.9mm tip; 0.4 to 22 kgf/cm² (5.69 to 313 lbf/in.²) for 11.1mm tip

- ♦ Measurement Accuracy: ±1% of reading
- ♦ Auto Power Off: Adjustable from 0 to 9 minutes of inactivity
- ♦ Operating Temperature: 32° to 113°F (0° to 45°C) @<90% RH
- ◆ Dimensions: 8.0 x 2.4 x 1.3 in. (204 x 62 x 33mm)
- ♦ Weight: 8.1 oz. (229g)
- Power Source: 4 "AAA" batteries (not included)

INCLUDES:

- Hard carrying case User's Manual
- 1-Year Limited Warranty

UPC	NO.
01367 0	FHT803

PRECISION DIGITAL SOIL MOISTURE METER WITH PROBE - DSMM500

Ideal for professional agricultural use. **FEATURES:**

- · Heavy-duty probe
- Min/Max memory + data hold
- LCD readout
- IP-65 water resistance CE, RoHS approved
- 1-Year limited warranty

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 50% moisture content
- ♦ Measurement Accuracy: ±5% of full-scale value + 5 digits
- ♦ Resolution: 0.1%

- ♦ Response Time: 0.8 seconds
- ♦ LCD Size: 1.1 x 0.75 in. (28 x 19mm)
- ◆ Dimensions of Meter:
- 6.8 x 1.6 x 1.6 in. (172 x 40 x 40mm)
- ♦ Weight of Meter: 9.3 oz. (267g) w/batteries
- ◆ Dimensions of Probe: 8 (L) x 0.4 (Dia.) in. (202 x 10mm)
- ♦ Operating Temperature: 32°F to 122°F (0° to 50°C)@<80% RH
- ◆ Power Source: 4 "AAA" batteries (not included)

UPC	NO.	
01240.6	DCMMEOU	

GRAIN MOISTURE METER - MMG608

Ideal for use in grain storage facilities. **FEATURES:**

- Also measures temperature
- Red LED bar graph augments LCD
- 9.8 in. (250mm) stainless steel probe with 4 ft. cord
- Material selection switch
- Min/Max memory + data hold

SPECIFICATIONS:

- ♦ Moisture Measurement Range: 8 to 20%
- ♦ Moisture Measurement Accuracy: ±1%
- ◆ Temperature Measurement Range/Accuracy: 14° to 131°F (-10° to 55°C)/ ±0.8° (F or C)

- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH</p>
- ♦ Dimensions of Meter: 7.0 x 2.7 x 1.5 in. (178 x 68 x 39mm)
- ♦ Weight of Meter: 9.9 oz. (280g) without batteries
- ◆ Power Source: 4 "AA" batteries (included)

INCLUDES:

- Hard Carrying Case Probe Batteries
- Operating Instructions 1-Year Limited Warranty

UPC NO. 10197 1 MMG608



I-106 General Tools & Instruments



Stem Thermometers & Soil Meters

LONG-STEM ANALOG THERMOMETERS - PT2008G-160, PT2008G220, PT2008G-550 AND PT2020G-220

FEATURES:

- · Four combinations of measurement range and probe length
- 2 in. (51mm) diameter dial w/glass lens
- Durable stainless steel probe
- Rugged construction



SPECIFICATIONS:

UPC	NO.	Measurement Range	Probe Length
01658 9	PT2008G-160	-40° to 160°F (-40° to 71°C)	8 in. (203mm)
23101 2	PT2008G220	0° to 220°F (-18° to 104°C)	8 in. (203mm)
23100 5	PT2008G-550	50° to 550°F (10° to 285°C)	8 in. (203mm)
23105 0	PT2020G-220	0° to 220°F (-18° to 104°C)	20 in. (508mm)





PT2008G-160

PT2008G220





PT2008G-550

PT2020G-220

LONG-STEM AGRICULTURAL THERMOMETER – T300-36

Ideal for agricultural applications and gardening.

FEATURES:

- · Glass lens
- · Rugged design
- · Ideal for measuring compost temperature
- 1-Year limited warranty

SPECIFICATIONS:

- ♦ Range: 0° to 220°F (-18° to 104°C)
- ♦ 3 in. (76mm) dial
- ♦ 36 in. (914.4mm) long stem
- ♦ 1/2 in. (12.7mm) NPT fitting

UPC	NO.	
23103 4	T300-36	



T300-36



SOIL MOISTURE & LIGHT METER - GLMM100

Checks for adequate lighting and moisture.

FEATURES:

- Moisture/Light level switch
- Dual analog display
- Easy-to-interpret readings
- · Heavy duty probe
- Includes plant water and light requirements chart
- · No batteries needed

SPECIFICATIONS:

- ♦ Moisture Scale Range: 1 (dry) to 10 (wet)
- ♦ Light Level Scale Range: A (low) to H (high)
- ♦ Dimensions:

3.9 x 2.6 x 1.1 in. (100 x 65 x 28mm)

♦ Weight: 3.2 oz. (90g)

INCLUDES:

- · Plant Watering and Light Chart
- 1-Year Limited Warranty

UPC	NO.
10017 2	GLMM100

GLMM100

SOIL MOISTURE METER - GLMM200

Checks for adequate moisture.

FEATURES:

- Simplified moisture level readout
- To use, match readout to included list of over 100 plants grouped by watering needs

SPECIFICATIONS:

- ◆ Dimensions:
 - 10 x 2.2 x 1.1 in. (255 x 55 x 28mm)
- ♦ Weight: 1.8 oz. (50g)

UPC	NO.
10018 9	GLMM200

SOIL PH TESTER - GLMM300

FEATURES:

- · Instantly reads soil or compost acidity
- Plant pH chart included
- · No batteries needed
- 1-Year limited warranty

SPECIFICATIONS:

- ♦ Dimensions:
- 10 x 2.2 x 1.1 in. (255 x 55 x 28mm)
- ♦ Weight: 1.6 oz. (45g)

UPC	NO.
100196	GI MM300





DO/Conductivity/TDS Meters

Patented



DOM551SD

Patented



DCT430SD

DISSOLVED OXYGEN METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – DOM551SD

Accurately measures dissolved oxygen concentration of liquid or air.

FEATURES:

- Uses heavy-duty Polarographic oxygen probe
- Precisely measures D0 from 0 to 20 mg/L, as well as liquid temperature
- Easy to calibrate
- · Supports automatic and manual data logging
- Time-stamps and stores measurements on SD memory cards
- Min/Max memory + data hold
- Automatically compensates for temperature, altitude and salt content of liquids
- Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display Size: 2.0 x 1.5 in. (52 x 38mm)
- ◆ D0 Measurement Range: 0 to 20 mg/L
- ♦ D0 Measurement Accuracy: ±0.4 mg/L
- ♦ Oxygen in Air Measurement Range: 0 to 100%
- ◆ Oxygen in Air Measurement Accuracy: ±0.7% 02
- ◆ Temperature Measurement Range: 32° to 122°F (0° to 50°C)
- ◆ Temperature Measurement Accuracy: ±1.5°F (±0.8°C)
- ◆ Compensation For Altitude: 0 to 29,200 ft. (0 to 8,900m)

- ◆ Compensation For Liquid Salt Content: 0 to 50%
- ◆ Data Logging Sampling Time: 1 second to 9 hours
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH</p>
- ◆ Dimensions of Meter: 7.0 x 2.7 x 1.9 in. (177 x 68 x 45mm)
- ♦ Weight of Meter: 1.08 lb. (489g)
- ◆ Dimensions of Probe: 7.5 (long) x 1.1 (across) inches (190 x 28mm)
- ♦ Weight of Probe: 0.74 lb. (335g)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC adaptor

INCLUDES:

- Hard Carrying Case Oxygen Probe
- Probe-Filling Electrolyte
- Two Spare Probe Heads and Diaphragm Set
- 2 GB SD Memory Card User's Manual
- 1-Year Limited Warranty

UPC	NO.	
01457 8	DOM551SD	
Optional Ac	cessories:	

O1506 3 AC1 9VDC adaptor for 110V power supply O1502 5 SDRD1 SD Card Reader

CONDUCTIVITY, TDS METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – DCT430SD

Accurately measures any solution's conductivity, total dissolved solids (TDS), salt content and temperature.

FEATURES:

- Includes 3-parameter probe
- Conductivity measurement automatically compensated for temperature
- Min/Max memory + data hold
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- Auto power off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- ◆ Probe Type: Carbon rod electrode
- Parameters measured: Conductivity, TDS, salt content, temperature
- ♦ Measurement Ranges:
 - For conductivity: 0 to 200 mS over four ranges
 - For TDS: 0 to 132,000 ppm over four ranges
- For salt: 0 to 12%
- For temperature: 32° to 140°F (0° to 60°C)
- ♦ Measurement Accuracy:
 - For conductivity, TDS: ±2% of full-scale reading +1 digit
 - For temperature: ±0.8°C/±1.5°F
 - For salt: ±0.5% of value
- ◆ Temperature Compensation:
 - Automatic from 32° to 140°F (0° to 60°C)
 - Temperature compensation factor is manually variable from 0 to 5% per degree Celsius

- ◆ Data Logging Sampling Time: 1 second to 9 hours
- ◆ Operating Temperature:
- 32° to 122°F (0° to 50°C) for meter
- 32° to 140°F (0° to 60°C) for probe
- ♦ Operating Relative Humidity: 0 to 85%
- ♦ Dimensions of Meter: 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)
- ♦ Weight of Meter: 1.08 lb. (489g)
- ◆ Dimensions of Probe: 0.86 in. (diameter) x 4.72 in. (L) (22mm x 120mm)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

INCLUDES:

- · Hard Carrying Case
- Combination Conductivity/TDS/Salt Probe
- 2 GB SD Memory Card
- User's Manual 1-Year Limited Warranty

01457 8	DCT430SD
Optional Ac	cessories:
01506 3	AC1 9VDC adaptor for 110V power suppl
01502 5	SDRD1 SD Card Reader
01574 2	CDPB03 Conductivity/TDS/Salt Probe
01545 2	PCT430SD Replacement Probe

CE

TDS503



TDS/Conductivity Meters

POCKET TDS METER - TDS503

Ideal for use in water treatment plants and industrial pollution control.

FEATURES:

- · Digital display
- Pocket-sized
- Automatic temperature compensation
- Lightweight
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Electrode extends to 3.15 in.
- ♦ Range: 10 to 9990 ppm
- ♦ Dimensions:

6.2 x 1.5 x 1.3 in. (157 x 38 x 33mm)

- ♦ Weight: 4 oz. (113g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES:

- Hard Carrying Case
- Calibration Solution
- Calibration Screwdriver
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
41410 1	TDS503

DIGITAL CONDUCTIVITY METER - DCM7021

Ideal for field measurements.

FEATURES:

- Measures conductivity, TDS, salinity, temperature
- Automatic temperature compensation
- IP-57 waterproof (unit floats)
- One-button calibration
- Pocket-sized
- Lightweight
- Min/Max memory + data hold
- CE and RoHS approved

SPECIFICATIONS:

◆ Measurement Ranges: 0 to 2000 uS (MicroSiemens) and 2 to 20 mS (MicroSiemens) conductivity; 0 to 1300 ppm and 1.3 to 13ppt for TDS; 0 to 1000 ppm and 1 to 12 ppt for salinity; 32° to 194°F (0° to 90°C) for temperature

- Measurement Accuracy: ±2% of full-scale value for conductivity, TDS, salinity; ±0.4°F (0.2°C) + 1 digit for temperature
- ♦ Measurement Resolutions: 1µS/0.01mS for conductivity; 1ppm/0.01ppt for TDS and salinity
- ◆ Dimensions:

7.7 x 1.6 x 1.4 in. (195 x 40 x 36mm)

- ♦ Weight: 4.8 oz. (135g)
- ◆ Power Source: 4 "AAA" batteries (included)

INCLUDES:

- Standard Solution 1413 µS/cm
- Hard Case
- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
01254.3	DCM7021



DCM7021

CE

CONDUCTIVITY METER - CO502

Ideal for field measurements.

FEATURES:

- · Digital display
- Automatic temperature compensation
- Pocket-sized
- Lightweight
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 10 to 9990 µS (MicroSiemens)
- ♦ Dimensions:

6.2 x 1.5 x 1.3 in. (157 x 38 x 33mm)

- ♦ Weight: 4 oz. (113g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES:

- Hard Carrying Case
- Calibration Solution
- Calibration Screwdriver
- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
41400 2	C0502

POCKET EC METER – EC506

Ideal for measuring the effectiveness of water treatment or pollution control systems. **FEATURES:**

- · Digital display
- Pocket-sized
- Automatic temperature compensation
- Lightweight
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 20 EC (electrical conductivity) units;
- 1 EC = 1 mS (milliSiemens)/cm
- ♦ Dimensions:

6.2 x 1.5 x 1.3 in. (157 x 38 x 33mm)

- ♦ Weight: 4 oz. (113g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Hard Carrying Case
- Calibration Solution
- · Calibration Screwdriver
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
41415 6	EC506





CO502

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EC506



General Tools & Instruments I-109

TDS/Conductivity Meters

RoHS

DCM22CT





DCM4300





CTOP2001

NATER QUALITY

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DIGITAL CONDUCTIVITY/TDS METER - DCM22CT

Ideal for lab and field use.

FEATURES:

- Min/Max memory + data hold
- Automatic temperature compensation (ATC)
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)

SPECIFICATIONS:

 Measurement Ranges: Conductivity: 0 to 20mS (MilliSiemens) and 0 to 2mS TDS: 0 to 20,000ppm and 0 to 2000ppm

TDS: 0 to 20,000ppm and 0 to 2000ppm Temperature: 32° to 140°F (0° to 60°C) ♦ Power Source: 1 "9V" battery (not included)

INCLUDES

- CTOP2001 Conductivity/TDS probe
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
41450 7	DCM22CT
41442 2	CTOP2001 Replacement Probe
41410 0	LSFTKIT PC Interface Kit (Optional)

DIGITAL CONDUCTIVITY METER – DCM4300

Ideal for field checks of water-based solutions.

FEATURES & SPECIFICATIONS:

- Includes CP4300 conductivity probe
- Also accepts optional CTOP2001 conductivity/TDS probe
- Measures conductivity from 0 to 20 mS over two ranges
- Jumbo LCD display with 0.84 in. (21.5mm) digit height
- ATC
- Data hold
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- Hard Case
 CP4300 Conductivity Probe
- User's Manual
 1-Year Limited Warranty

UPC	NO.
41445 3	DCM4300
41442 2	CTOP2001 Conductivity/TDS Probe (optional)
41446 0	CP4300 Conductivity Probe
41410 0	LSFTKIT PC Interface Kit (optional)

PROFESSIONAL CONDUCTIVITY/TDS METER - DCT2001

Ideal for laboratory use, beverage production or water conditioning applications. **FEATURES**:

- Includes CTOP2001 conductivity/TDS probe
- ATC for conductivity, TDS measurements
- Measures and displays temperature in °F or °C
- Min/Max memory + data hold
- Jumbo LCD
- RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- Auto Power Off (can be disabled for data logging)
- CE and RoHS approved

SPECIFICATIONS:

- Measurement Ranges: 0 to 20 mS for conductivity; 0 to 13,200 ppm for TDS; 32° to 140°F (0° to 60°C) for temperature
- Measurement Accuracies: ±3% of full-scale reading + 1 digit for conductivity and TDS; ±1.5°F (±0.8°C) for temperature

- ♦ Temperature Compensation Factor: Adjustable from 0 to 5% per °C
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) for meter, 32° to 140°F (0° to 60°C) for probe
- ♦ Dimensions:
- 7.6 x 2.6 x 1.2 in. (195 x 68 x 30mm)
- ♦ Weight: 8.8 oz. (250g)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- Hard Case CTOP2001 Conductivity/TDS Probe
- User's Manual 1-Year Limited Warranty

UPC	NO.
41440 8	DCT2001
41410 0	LSFTKIT PC Interface Kit (optional)
41442 2	CTOP2001 Replacement
	Conductivity/TDS Probe (optional)

CONDUCTIVITY/TDS REPLACEMENT PROBE FOR DCT2001, DCM22CT, DCM4300 – CTOP2001

FEATURES

- Automatic or manually adjustable temperature compensation
- CE and RoHS approved
- 1-Year limited warranty

SPECIFICATIONS:

- Measurement Ranges: Conductivity: 0 to 20mS (MilliSiemens) and 0 to 2mS
 - TDS: 0 to 20,000ppm and 0 to 2000ppm
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)

	'	
UPC	NO.	
41442 2	CTOP2001 Replacement	
	Conductivity/TDS Probe	



COMPLETE WATERPROOF SELF CALIBRATING WATER QUALITY TEST KIT: PH, MV, TEMP, COND, TDS, SALT – WK7200

For water treatment plants, industrial pollution control, lab and field use. **FEATURES:**

- Measures pH, ORP (with optional probe), conductivity, TDS, salinity, temperature
- Automatic temperature compensation
- IP-57 waterproof (unit floats)
- · Pocket sized
- Lightweight
- Min/Max memory + data hold
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Ranges: 0 to 14 for pH; -1000 to 1000mV for ORP; 0 to 2000 µS (MicroSiemens) for conductivity; 0 to 1300 ppm for TDS; 0 to 1000 ppm for salinity; 32° to 194°F (0° to 90°C) for temperature
- ♦ Measurement Accuracy: ±0.01 pH units + 1 digit for pH; $\pm 0.01 \mu S + 1$ digit for conductivity; ±2 ppm + 1 digit for TDS; ±2% of full-scale value for salinity; ±0.4°F $(0.2^{\circ}C) + 1$ digit for temperature

- ♦ Dimensions:
- 7.7 x 1.6 x 1.4 in. (195 x 40 x 36mm)
- ♦ Weight: 4.8 oz. (135g) Kit: 27.5 oz. (780g)
- ◆ Power Source: 6 "AAA" batteries (included)

INCLUDES:

- Standard Solution 1413 μS/cm
- Soaking Solution
- Buffer Solutions pH 4 & 7
- pH and Conductivity Probes
- Hard Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

Optional: ORP probe UPC NO.

01248 2	WK7200
01398 4	DPH70110RP ORP probe (optional)



WK7200

Patented

pH, ORP, DO, CD, TDS, SALT METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – WK2017SD

Accurately measures conductivity, Total Dissolved Solids (TDS) and salt concentration of a liquid. Optional probes measure pH, ORP (Oxidation-Reduction Potential) and Dissolved Oxygen (DO).

FEATURES:

- . Measures pH, ORP and conductivity, and TDS, salt and DO content using included and optional electrodes and probes
- Choose an electrode or probe with the right characteristics for your application from the list at lower right
- D0 measurements can be compensated for salt, altitude and temperature
- · Also measures oxygen content of a volume of air
- Optional ATC probe automatically temperaturecompensates pH electrode
- Min/Max memory + data hold
- Performs real-time automatic datalogging at sampling time settable from 1 sec. to 9 hrs.
- · Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Auto power off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display Size: 2.05 x 1.5 in. (52 x 38mm)
- ◆ Parameters Measured: pH, ORP, conductivity, TDS content, DO content, salt content
- ♦ Measurement Ranges:
- For pH: 0 to 14
- For ORP: -1999 mV to +1999 mV
- For conductivity: up to 200 mS (MilliSiemens)
- For TDS: 0 to 132,000 ppm
- For D0: 0 to 20 mg/L
- For salt: 0 to 12% by weight

- ♦ Measurement Accuracy:
 - For pH: $\pm (0.02 \text{ pH units} + 2 \text{ digits})$
 - For ORP: $\pm (0.5\% \text{ of reading} + 2 \text{ digits})$
 - For conductivity: ±2% of full-scale reading + 1 digit
- For TDS: ±2% of full-scale reading + 1 digit
- For temperature: ±0.8°C/±1.5°F
- For D0: ±0.4 mg/L in solution
- For oxygen: ±0.1% for oxygen in air
- For salt: ±0.5% of value
- ♦ Temperature Compensation:
- Automatic between 32° and 150°F (0° and 65°C) with optional ATC temperature probe
- Manually settable between 32° and 212°F (0° and 100°C) without ATC probe
- ◆ Operating Temperature:
- 32° to 122°F (0° to 50°C) @<85%RH
- ♦ Dimensions:
 - 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)
- ♦ Weight: 1.08 lb. (489g)
- ♦ Power Supply: 6 "AA" batteries or optional 9-VDC AC adaptor

INCLUDES:

- Hard Carrying Case
- Combination Conductivity/ TDS/Salt Probe
- 2 GB SD Memory Card

1-Year Limited Warranty

User's Manual



UPC

O

NO.



WK2017SD

01458	5 WK2017SD
ptional	Accessories:
01506 3	AC1 9VDC adaptor for 110V power supply
01492 9	ORP14 ORP probe
54144 1	TP07 ATC temperature probe
41439 2	D0P2201 Oxygen probe
01493 6	PHS1 Professional-grade 0 to 14 pH electrode
01540 7	PHS4HD Heavy-duty spear tip pH electrode
01539 1	PHS6HD Heavy-duty spear tip pH electrode
01542 1	PHS3K7 Combination pH electrode/temperature
	probe with automatic temperature
	compensation
01500 5	CDDD1 CD Cord Doodor

01502 5 SDRD1 SD Card Reader 01574 2 CDPB03 Conductivity/TDS/Salt Probe



DPH7011

DIGITAL PH METER - DPH7011

$\label{thm:lemma$

- FEATURES:
- Also measures ORP with optional probe
 Automatic temperature compensation (ATC)
- IP-57 waterproof (unit floats)
- Pocket-sized
- Lightweight
- Min/Max memory + data hold
- CE and RoHS approved

SPECIFICATIONS:

- Measurement Ranges: 0 to 14 for pH; -1000 to 1000mV for ORP; 32° to 194°F (0 to 90°C) for temperature
- ♦ Measurement Accuracies: ±(0.01 + 1 digit) fpr pH; ±(2mV + 1 digit) for ORP; ±(0.4°F (0.2°C) + 1 digit) for temperature
- ♦ Measurement Resolutions: 0.01 for pH; 1mV for ORP; 0.1° (F or C) for temperature

- ♦ ATC Range: 32° to 194°F (0 to 90°C)
- ♦ Dimensions:

7.7 x 1.6 x 1.4 in. (195 x 40 x 36mm)

- ♦ Weight: 4.8 oz. (135g)
- ◆ Power Source: 4 "AAA" batteries (included)

INCLUDES:

- Soaking Solution
- Buffer Solutions pH 4 & 7
- Hard Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01235 2	DPH7011
01398 4	DPH70110RP ORP probe (optional)

C E RoHS



ЈРПВОУО

FIELD CALIBRATABLE 45 DEGREE READ pH INSTRUMENT - DPH8690

Ideal for food preparation and solution balancing applications.

FEATURES:

- · Easy-to-read 45° angle
- Automatic calibration at the touch of a button
- · Simultaneously displays pH and temp
- °F/°C switch
- Replaceable head
- Data hold
- · Durable waterproof housing
- Auto power off; low battery indicator
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 14 pH units
- ♦ Measurement Accuracy: ±0.05 pH units
- ♦ Measurement Resolution: 0.01 pH units
- ◆ Dimensions:

5.85 x 1.65 x 1.45 in. (149 x 42 x 37mm)

- ♦ Weight: 2.4 oz. (68g)
- ◆ Power Source: 2 "CR2023" batteries (included)

INCLUDES:

- Soft Carrying Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
41330 2	DPH8690
41335 7	8690P Replacement Head

(E RoHS



POCKET pH METER - PH501

Ideal for cooling towers.

FEATURES:

- Digital display
- Pocket sized
- Automatic temperature compensation (ATC)
- Lightweight
- · CE and RoHS approved

SPECIFICATIONS:

- ♦ Measurement Range: 0 to 14 pH units
- ♦ Measurement Accuracy: ±0.2 pH units
- ♦ Measurement Resolution: 0.1 pH units

- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)
- ♦ Dimensions:
- 6.2 x 1.5 x 1.3 in. (157 x 38 x 33mm)
- ♦ Weight: 4 oz. (113g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Hard Carrying Case
- Calibration Solution
- Calibration Screwdriver
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
41350 0	PH501

PH501

WATER QUALITY





GENERAL

For lab work or for measuring acidity of pools, aquariums or water-treatment systems. **FEATURES:**

- Accepts any optional pH electrode with BNC connector
- pH electrodes calibratable at pH 4, 7 or 10 using optional buffer solution
- Min/Max memory + data hold
- · Manual temperature compensation via front panel
- · RS-232 output jack; optional PC data logging kit includes RS-232 to USB adaptor
- · Auto Power Off (can be disabled for data logging)
- CE and RoHS approved

- **SPECIFICATIONS:**
- ♦ Measurement Range: 0 to 14 pH units
- ♦ Measurement Accuracy: $\pm (0.02 \text{ pH units} + 2 \text{ digits})$
- ♦ Sampling Time: 0.8 seconds
- ♦ Dimensions:

7.7 x 2.7 x 1.2 in. (195 x 68 x 30mm)

♦ Power Source: 1 "9V" battery

INCLUDES:

- User's Manual
- 1-Year Limited Warranty

UPC	NO.
41430 9	DPH208R
41410 0	LSFTKIT PC Interface Kit (optional)





pH, ORP METER WITH EXCEL-FORMATTED DATA LOGGING SD CARD – DPH230SD

Accurately measures pH and ORP (Oxidation-Reduction Potential). **FEATURES:**

- . Measures pH and ORP using optional electrodes
- Choose an electrode or probe with the right characteristics for your application from the list at lower right
- Optional ATC temperature probe (#TP07) automatically calibrates pH electrode to pH 4, pH 7 and pH 10
- Min/Max memory + data hold
- Big (2.5 in. diagonal) front-panel green backlit LCD is easy to read
- · Auto power off (can be disabled for data logging)

SPECIFICATIONS:

- ♦ Display: 2.05 x 1.5 in. (52 x 38mm) LCD
- Measurement Ranges:
 - For pH: 0 to 14
 - For ORP: -1999 mV to +1999 mV
- ♦ Measurement Accuracies:
 - For pH: $\pm (0.02 \text{ pH units} + 2 \text{ digits})$
 - For ORP: ±(0.5% of reading + 2 digits)
- ◆ Temperature Compensation:
 - Automatic between 32° and 150°F (0° and 65°C) with optional ATC temperature probe
 - Manually settable between 32° and 212°F (0° and 100°C) without ATC probe

- ◆ Data Logging Sampling Time: 1 second to 9 hours
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C) @<85%RH
- ♦ Dimensions: 6.97 x 2.68 x 1.77 in. (177 x 68 x 45mm)
- ♦ Weight: 1.08 lb. (489g)
- ♦ Power Source: 6 "AA" batteries or optional 9-VDC AC adaptor

- · Carrying Case
- 2 GB SD Memory Card
- User's Manual
- 1-Year Limited Warranty

	UPC	NO.
	01451 6	DPH230SD
Optional Accessories:		

- 01506 3 AC1 9VDC adaptor for 110V power supply
- 01492 9 **ORP14** ORP probe
- 41441 5 TP07 Automatic temperature compensation (ATC) temperature probe
- PHS1 Professional-grade 0 to 14 pH electrode 01540 7 **PHS4HD** Heavy-duty spear tip pH electrode
- 01539 1 PHS6HD Heavy-duty spear tip pH electrode 01542 1 PHS3K7 Combination pH electrode/temperature probe with automatic temperature compensation
- 01502 5 SDRD1 SD Card Reader







Wireless Rain Gauge/Thermometer

CE





RGR150 N

WIRELESS RAIN GAUGE WITH THERMOMETER AND CLOCK - RGR150

Ideal for monitoring rainfall, indoor/outdoor temperatures and more.

- · Wireless transmission from the remote temperature sensor to the main unit up to 100 feet (30 meters) away
- · Rainfall may be displayed in inches or mm
- Programmable rain alarm
- 7 days of rain collection history
- Built-in rain gauge installation level
- Indoor and remote temperature display
- Min/Max memory for indoor/outdoor temperature
- · Hourly, daily and weekly rainfall history
- Monitors temperature in up to 3 remote locations
- · Quartz clock with calendar
- Programmable time zones
- Day of the week in English, German, French, Spanish or Italian
- Dual crescendo alarm with snooze
- Programmable ice warning alarm
- Wall mount or desktop option
- · Low battery indicator
- · Backlit 3-line LCD display on main unit
- · CE and RoHS approved

SPECIFICATIONS:

- **MAIN UNIT**
- ♦ TIME:

12/24 hour display in hh:mm format Date Format: month-day or day-month

Day of the Week Language Options: English, Spanish, French, German, Italian

WEATHER

Rainfall Measurement Range: 0 to 78.74 in. (0 to 2m) Rainfall Resolution: 0.04 in. (1mm) Indoor Temperature Measurement Range: 23° to 122°F (-5° to 50°C) Temperature Resolution: 0.2°F (0.1°C)

+ REMOTE RAIN GAUGE

Operating Temperature: 23° to 122°F (-5° to 50°C) RF Transmission Frequency: 433 MHz RF Transmission Range: maximum 100 ft. (30m) Rainfall Transmission Cycle: approximately 183 seconds

SPECIFICATIONS:

♦ REMOTE TEMPERATURE SENSOR

Temperature Measurement Range with Alkaline Batteries:

-4° to 158°F (-20° to 70°C)

Measurement Range with Lithium Batteries: -38° to 158°F (-39° to 70°C)

Temperature Resolution: 0.2°F (0.1°C) Temperature Transmission Cycle: approximately 45 seconds

♦ Power Source:

Main Unit: 2 "AA" batteries (not included) Remote Sensor: 2 "AA" batteries (not included)

Remote Rain Gauge: 2 "AA" batteries (not included)

♦ Dimensions:

Main Unit:

2.75 x 5.43 x 1.02 in. (70 x 138 x 26mm) Remote Sensor:

2.37 x 4 x 1 in. (60 x 102 x 25mm)

Remote Rain Gauge:

6.49 x 6.89 x 4.72 in. (165 x 175 x 120mm)

- · Main Display Unit
- Wireless Rain Collection Bucket with Mounting Hardware
- Remote Temperature Sensor
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01273 4	RGR150
01296 3	RS150 Additional Remote Temperature Sensor (optional)







Rain Gauge & Lightning Detectors

WIRELESS RAIN GAUGE WITH TEMPERATURE DISPLAY, REMOTE RAIN BUCKET AND TEMPERATURE SENSOR - RGR126

Provides rain history and temperature. **FEATURES:**

- · Daily rainfall and past 9 day history
- Cable free rain collection canister is self-emptying
- Total rainfall is displayed with registered date
- Rainfall display in inches or millimeters
- Long range capability allows the collector to be placed up to 300 feet from the main unit
- Rainfall alarm
- · Daily alarm
- Indoor temperature display with °F/°C switch
- Min/Max temperature memory
- 12 or 24 hour clock with calendar
- Displays data on an attractive, easy-view LCD console
- Table or wall mountable
- CE and RoHS approved

SPECIFICATIONS:

- ◆ Total Rainfall Range: 0 to 999.99 in. (0 to 25.4m)
- ◆ Daily Rainfall Range: 0 to 99.99 in. (0 to 2.54m)
- ♦ Rainfall Resolution: 0.04 in. (1mm)

- ◆ Temperature Measurement Range: 23° to 122°F (-5° to 50°C)
- ♦ Temperature Resolution: 0.1°F (0.1°C)
- ♦ Transmission Frequency: 433 MHz
- ◆ Transmission Range: 300 ft. (100m)
- ◆ Temperature Sensing Cycle: approximately 30 seconds
- ♦ Dimensions of Display Unit: 5.25 x 3.5 x 1.5 in. (133 x 89 x 38mm)
- ♦ Power Source: Main unit: 2 "AA" batteries (not included) Remote Sensor: 2 "AA" batteries (not included)

INCLUDES:

- Main Display Unit
- · Wireless Rain Collection Bucket with Mounting Hardware
- · Remote Sensor With Mounting Hardware
- · User's Manual
- 1-Year Limited Warranty

UPC	NO.	
60340 6	RGR126	



RGR126

DELUXE LIGHTNING DETECTOR – LD50

Ideal for storm warning and storm direction. **FEATURES:**

- . Detects storms within 40 miles
- Senses if the storm is moving towards, away from, or parallel to your location
- Identifies severe thunderstorms as well as storms that can produce dangerous winds, heavy rains or tornadoes
- Starts detecting thunderstorms up to 70 miles away, registers activity at 40 miles
- · Used by Little League teams, golf courses, and recreational districts
- · Uses LEDs as display
- Hand-held or table mountable
- · Optional wall mount accessory

SPECIFICATIONS:

- ♦ Ranges:
- 0 to 3 mi; 3 to 8 mi; 8 to 20 mi; 20 to 40 mi
- ♦ Dimensions: 6.5 x 3.1 x 1.5 in. (165 x 79 x 38mm)
- ♦ Weight: 10.8 oz. (306g) (w/o batteries)
- ◆ Power Source: 2 "9V" batteries (included)

INCLUDES:

- · Rugged, Weather-Resistant Plastic Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPG	NU.	
60600 1	LD50	
60615 5	LD50MB	Wall Mount Accessory



LD50

LIGHTNING SEEKER™ PERSONAL LIGHTNING DETECTOR – LD7

Ideal for early storm warnings and storm directions and protection for any outdoor activity.

FEATURES:

- Can be clipped on your belt or hung from your belt loop
- · Gives you early warning of pending storms and lightning at various distances from 0 to 40 miles away
- Multiple alarm signals include an audible alarm, a vibration alarm and sequentially illuminating LED's at various distance intervals: 24 to 40 miles, 12 to 24 miles, 6 to 12 miles and 0 to 6 miles
- Determines if the danger is approaching, stationary or departing
- FCC, CE, RoHS, WEEE approved

SPECIFICATIONS:

- ♦ Ranges: 0 to 6 miles; 6 to 12 miles; 12 to 24 miles; 24 to 40 miles
- ◆ Dimensions: 3.31 x 2.17 x 0.96 in. (84 x 55 x 24mm)
- ♦ Weight: 2.6 oz. (74g) ♦ Power Source:
- 2 "AAA" batteries (included)

INCLUDES:

- · Carabiner Clip · Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01368 7	LD7







LD7

Weather Station



PROFESSIONAL WIRELESS WEATHER STATION – WS821

Ideal for pro-am forecasters



FEATURES:

- Wirelessly transmits outdoor temperature, humidity, quantity of rainfall, wind velocity and direction from the exterior sensors to the display station from up to 325 ft. (100m) away
- Expandable up to 5 outdoor temperature/ humidity transmitters for climate control of remote rooms, e.g. children's room, wine-cellar, greenhouse
- Indoor temperature and humidity with comfort level indicator of indoor climate
- Weather forecast with symbols and trend of atmospheric pressure
- Absolute and relative atmospheric pressure with 24 hours history
- Bar graph indication of atmospheric pressure, temperature or humidity for the last 24 hours
- Radio controlled clock with different alarms and snooze functions
- Display of date and day of the week (6 languages)
- Time of rising and setting of sun and moon
- Indication of moon phase
- · Wind chill factor and dew point
- Programmable alarms for temperature and storm conditions
- · Maximum and minimum values
- LED Backlight with light sensor (in continuous operation with power adaptor)
- · For wall mounting or table standing
- · CE and RoHS approved

INCLUDES:

- Display Station
- Power Adaptor 7.5V AC/DC
- Temperature-Humidity Sensor
- Wind Sensor with Mounting Materials
- · Rain Sensor with Mounting Materials
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
08210 2	WS821
01523 D	TR831 A

TR831 Additional Temperature-Humidity Wireless Transmitter (optional)

SPECIFICATIONS:

- ♦ Radio Frequency: 433 MHz Transmission Range: up to 328 ft. (100m)
- ♦ Barometric Pressure:

Measuring Range: 14.75 to 32.44 inHg (500 to 1100Hpa); (374.5 to 823.8 mmHg)

Resolution: 0.003 inHg (0.1 Hpa, 0.08 mmHg)

Accuracy: ±0.015 inHg (5 Hpa; 0.38 mmHg)

Sampling Interval: 20 minutes
Altitude Compensation Range:

ititude Compensation Range: -657 to 16404 ft. (-200 to 5000m)

◆ Temperature: (Main unit) Operating Range:

14.2° to 140°F (-9.9° to 60°C)

Resolution: 0.2°F (0.1°C) Accuracy: ±2°F (1°C)

Sampling Interval: 10 seconds

♦ Temperature: (Remote unit)

Range: -40° to 176°F (-40° to 80°C)

Resolution: 0.2°F (0.1°C) Accuracy: ±2°F (1°C)

Transmitting Interval: around 47 seconds

♦ Humidity: (Main unit)
Operating Range: 0 to 99%
Resolution: 1%

Accuracy: ±5% Sampling Interval: 10 seconds

◆ Humidity: (Remote unit)
Operating Range: 0 to 99%

Resolution: 1% Accuracy: ±5%

Sampling Interval: 10 seconds Transmitting Interval: around 47 seconds

♦ Wind Direction: Range: 0° to 360° Resolution: 22.5° Accuracy: ±11.25°

Starting Threshold: 3mph (4.8 kmph) Transmitting Interval: 33 seconds ♦ Wind Speed:

Range: 0 to 199.9mph (199.9 kmph, 173.7 Knots, 89.3 m/s)

Resolution: 0.1mph (0.16 kmph) Accuracy: ±(2mph + 5%)

Starting Threshold: 3mph (4.8 kmph)
Wind/Gust Speed Display Update Interval:
33 seconds

Wind/Gust Sampling Interval: 11 seconds

♦ Rainfall:

1h/24h/Yesterday Range: 0 to 78.73 in. (0 to 1999.9mm)

Last Week/Last Month Range: 0 to 787.3 in. (0 to 19999mm)

Resolution: 0.03 in. (0.6578mm) Accuracy: ±(5% +0.03 in. (0.69mm))

Transmitting Interval: 183 seconds

 Power Source: Total of 10 "AA" batteries (not included)

MAIN UNIT: 4 "AA" batteries; 7.5V AC/DC power adaptor (200mA; center pin positive)

REMOTE THERMO-HYGROMETER:

2 "AA" batteries

REMOTE ANEMOMETER: 2 "AA" batteries **REMOTE RAIN GAUGE:** 2 "AA" batteries

♦ Dimensions:

Main Unit:

7.31 x 5.39 x 1.26 in. (185.8 x 136.9 x 32mm) Remote Thermo - Hygrometer:

2.37 x 4 x 1 in. (60 x 101 x 25mm)
Remote Anemometer: 19.16 x 19.16 x

15.35 in. (486.6 x 486.6 x 390mm) Remote Rain Gauge:

6.49 x 6.89 x 4.72 in. (165 x 175 x 119mm)

♦ Weight (without batteries)

Main unit: 8.15 oz. (231g) Remote Thermo-Hygrometer: 2.29 oz. (65g) Remote Anemometer: 11.12 oz. (315g)

Remote Rain Gauge: 10.24 oz. (290g)

C€



Data Logging Weather Station

WIRELESS DATA LOGGING WEATHER STATION - WS831DL

The most complete, feature-packed data logging weather station in the world.

FEATURES:

- Wirelessly transmits outdoor temperature, humidity, quantity of rainfall, wind velocity and direction from the exterior sensors to the display station from up to 325 ft. (100m) away
- Expandable up to 5 outdoor temperature/ humidity transmitters, for climate control of remote rooms, e.g. children's room, wine-cellar, greenhouse
- Indoor temperature and humidity with comfort level indicator of indoor climate
- · Weather forecast with symbols and trend of atmospheric pressure
- Absolute and relative atmospheric pressure with 24 hours history
- · Bar graph indication of atmospheric pressure, temperature or humidity for the last 24 hours
- · Radio controlled clock with different alarms and snooze functions
- Display of date and day of the week (6 languages)
- . Time of rising and setting of sun and moon
- Indication of moon phase
- · Wind chill factor and dew point
- · Programmable alarms for temperature and storm conditions
- · Maximum and minimum values
- · Backlit LCD with light sensor (in continuous operation with power adaptor)
- · For wall mounting or table standing
- Data logging software (Weather View PC) and cable included
- CE and RoHS approved

SPECIFICATIONS:

- ♦ Radio Frequency: 433 MHz
- ♦ Transmission Range: up to 328 ft. (100m)
- ♦ Barometric Pressure:

Measuring Range: 14.75 to 32.44 inHg (500 to 1100Hpa); (374.5 to 823.8 mmHg)

Resolution: 0.003 inHg (0.1 Hpa, 0.08 mmHg)

Accuracy: ±0.015 inHg (5 Hpa; 0.38 mmHg) Sampling interval: 20 minutes

Altitude Compensation Range: -657 to 16404 ft. (-200 to 5000m)

◆ Temperature: (Main unit)

Range: 14.2° to 140°F (-9.9° to 60°C)

Resolution: 0.2°F (0.1°C) Accuracy: ±2°F (1°C)

Sampling Interval: 10 seconds

◆ Temperature: (Remote unit) Range: -40° to 176°F (-40° to 80°C)

Resolution: 0.2°F (0.1°C) Accuracy: ±2°F (1°C)

Transmitting Interval: around 47 seconds



♦ Humidity: (Main unit) Range: 30 to 80% Resolution: 1% Accuracy: ±5%

Sampling Interval: 10 seconds

♦ Humidity: (Remote unit) Range: 30 to 80% Resolution: 1% Accuracy: ±5%

Sampling Interval: 10 seconds

Transmitting Interval: around 47 seconds

♦ Wind Direction: Range: 0° to 360° Resolution: 22.5° Accuracy: ±11.25° Starting Threshold: 3mph (4.8 kmph) Transmitting Interval: 33 seconds

♦ Wind Speed:

Range: 0 to 199.9mph (199.9 kmph, 173.7 Knots, 89.3 m/s)

Resolution: 0.1mph (0.16 kmph) Accuracy: $\pm (2mph + 5\%)$

Starting Threshold: 3mph (4.8 kmph) Wind/Gust Speed Display Update Interval:

33 seconds

Wind/Gust Sampling Interval: 11 seconds

♦ Rainfall:

1h/24h/Yesterday Range: 0 to 78.73 in. (0 to 1999.9mm) Last Week/Last Month Range:

0 to 787.3 in. (0 to 19999mm) Resolution: 0.03 in. (0.6578mm)

Accuracy: $\pm (5\% + 0.03 \text{ in. } (0.69 \text{mm}))$ Transmitting Interval: 183 seconds



WS831DL

♦ Power Source: Total of 10 "AA" batteries (not included) **MAIN UNIT:**

4 "AA" batteries or 7.5V AC/DC power adaptor (200mA; center pin positive)

REMOTE THERMO-HYGROMETER:

2 "AA" batteries each

REMOTE ANEMOMETER:

2 "AA" batteries

REMOTE RAIN GAUGE:

2 "AA" batteries

♦ Dimensions:

Main Unit: 7.31 x 5.39 x 1.26 in. (185.8 x 136.9 x 32mm) Remote Thermo-Hygrometer:

2.37 x 4 x 1 in. (60 x 101 x 25mm)

Remote Anemometer:

19.16 x 19.16 x 15.35 in. (486.6 x 486.6 x 390mm)

Remote Rain Gauge:

6.49 x 6.89 x 4.72 in. (165 x 175 x 119mm)

♦ Weight: (without batteries) Main Unit: 8.15 oz. (231g) Remote Thermo-Hygrometer: 2.29 oz. (65g) Remote Anemometer: 11.12 oz. (315g) Remote Rain Gauge: 10.24 oz. (290g)

- Main Display Unit
- Remote Thermo-Hygrometer
- Remote Anemometer
- Remote Rain Gauge
- Data Logging Software (Weather View PC)
- Cable
- · User's Manual
- 1-Year Limited Warranty

UPC	NO.
01298 7	WS831DL
01523 0	TR831 Additional Temperature-Humidity
	Wireless Transmitter (optional)

Barometers / Weather Forecasters



ANALOG BAROMETER – ABAR300

The original weather forecaster. **FEATURES:**

- · Brass housing
- · Classic design

SPECIFICATIONS:

- ♦ Pressure Measurement Range: 27.5 to 31.5 in./Hg (940 to 1060 millibar)
- ◆ Dimensions: 3 in. dial diameter
- ♦ Weight: 10 oz. (283g)

UPC	NO.
61205 7	ABAR300

DIGITAL WEATHER FORECASTER – DBAR880

Measures and displays indoor and outdoor temperature, humidity and barometric pressure.

FEATURES:

- Also displays 12-hour barometric pressure history
- · Min/Max temperature and humidity memory
- Temperature trend indicator
- . Moon cycle with tide indicator
- Alarm clock with snooze, day and date
- Full calendar
- · Hi precision barometric weather forecast
- · Forecast: sunny, partial sunny, cloudy, rainy,
- · 3-Channel wireless thermometer
- Backlit display
- °F/°C. 12/24 hour clock selectable

SPECIFICATIONS:

- ♦ Barometric Pressure Range: 800 to 1100 mbar (23.6 to 32.5 in.Hg)
- ♦ Barometric Pressure Accuracy: ±5 mbar (±0.15 in.Hg)
- ♦ Barometric Pressure Resolution: 1 mbar
- ◆ Temperature Range: Base Station: 32° to 122°F (0° to 50°C) Remote Sensor: -4° to 140°F (-20° to 60°C)

- ♦ Temperature Accuracy: ±1.8°F (1°C) from 32° to 104°F (0° to 40°C); ±2.7°F (1.5°C) from 104° to 122°F (40° to 50°C); not guaranteed for remote sensor from -4° to 32°F (-20° to 0°C) or from 122° to 140°F (50° to 60°C)
- ◆ Temperature Resolution: 1.8°F (1°C)
- ♦ Relative Humidity (RH) Range: 20% to 99%
- ♦ RH Accuracy: ±5% from 30% to 90%RH: not guaranteed from 20% to 29%RH or from 91% to 99%RH
- ♦ Altitude Compensation Range: -984 to 3937 ft. (-300 to 1200m)
- ◆ Dimensions: Base Unit: 27.5 (L) x 4.125 (W) in. (699 x 105mm)

Remote Unit: 3.5 (L) x 2.5 (W) in. (89 x 64mm)

♦ Power Source: Base Unit: 2 "AA" batteries (not included) Remote Unit: 2 "AAA" batteries (not included)

INCLUDES:

- Base and remote units User's Manual
- 1-Year Limited Warranty

UPC	NO.
60018 4	DBAR880

DBAR880 N



DIGITAL POCKET WEATHERMAN – SAM700BAR

Checks temperature, humidity and barometric pressure.

- Displays barometric pressure, dew point, temperature and humidity
- · Easy field set-up
- · New ergonomic design
- Min/Max memory + data hold
- Fast 2 second response time
- Large digital display
- °F/°C switch
- Auto power off
- Low battery indicator
- CE and RoHS approved

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -4° to 122°F (-20° to 50°C)
- ♦ Pressure Measurement Range: 8.86 to 32.48 in/Hg (300 to 1100 hPa)
- ◆ Temperature Measurement Accuracy: ±1.8°F
- ♦ Humidity Measurement Range: 5 to 95%
- ♦ Pressure and Dew Point Accuracy: ±3%
- ♦ Humidity Accuracy: ±5%
- ♦ Dimensions: 6.88 x 1.57 x 0.91 in. (175 x 40 x 23mm)
- ◆ Power Source: 1 "CR2032" battery (included)

INCLUDES:

- Pocket Clip
 Battery
 User's Manual
- 1-Year Limited Warranty

UPC SAM700BAR 101155







MULTI-FUNCTION BLACK STOPWATCH - SW100A

FEATURES:

- Count-up to 23:59:59
- Displays lap time, minutes, seconds, month, day and date
- Daily alarm and hourly chime
- 1/100 second precision (for first 30 minutes)
- 12 or 24 hour selectable clock with snooze feature
- Water resistant
- · Easy to hold design

SPECIFICATIONS:

- ♦ Color: black ♦ Digit Height: 0.28 in. (7mm)
- ♦ Display Size: 0.82 x 0.43 in. (21 x 11mm)
- ♦ Dimensions:
- 2.4 x 2 x 0.5 in. (61 x 51 x 13mm)
- ◆ Power Source: 1 "CR2016" battery (included)

INCLUDES:

- Lanyard Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
30999 5	SW100A





MULTI-FUNCTION YELLOW STOPWATCH - SW100AY

FEATURES:

- Count-up to 23:59:59
- · Displays lap time, minutes, seconds, month, day and date
- · Daily alarm and hourly chime
- 1/100 second precision (for first 30 minutes)
- 12 or 24 hour selectable clock with snooze feature
- · Water resistant
- · Easy to hold design

SPECIFICATIONS:

- ♦ Color: yellow ♦ Digit Height: 0.28 in. (7mm)
- ♦ Display Size: 0.82 x 0.43 in. (21 x 11mm)
- ♦ Dimensions:
 - 2.4 x 2 x 0.5 in. (61 x 51 x 13mm)
- ◆ Power Source: 1 "CR2016" battery (included)

INCLUDES:

- Lanyard Battery User's Manual
- 1-Year Limited Warranty

	UPC	NO.
Ī	31002 1	SW100AY





STOPWATCH WITH CLOCK - SW269

FEATURES:

- Count-up to 39:59:59
- Displays lap time, hours, minutes, seconds, month, day and date
- 1/100 second precision (for first 40 minutes)
- Daily alarm and hourly chime
- 12 or 24 hour selectable clock with alarm feature
- Water resistant

SPECIFICATIONS:

- ◆ Color: black ◆ Digit Height: 0.27 in. (6.9mm)
- ♦ Display Size: 1.2 x 0.8 in. (30 x 20mm)
- ♦ Dimensions:
- 2.6 x 2.1 x 0.55 in. (66 x 53 x 14mm)
- ◆ Power Source: 1 "CR2016" battery (included)

INCLUDES:

- Lanyard Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
31005 2	SW269



DIGITAL STOPWATCH WITH BACKLIGHT - SW888M

FEATURES:

- 1/100 second precision with lap counter
- Displays lap time, date, month, day, hour, minute, second
- · Calendar and time (12/24 hour format)
- · Daily alarm, snooze and hourly chime
- Jumbo display
- Water resistant
- · Shock resistant

SPECIFICATIONS:

- ♦ Color: gray ♦ Digit Height: 0.48 in. (12mm)
- ♦ Display Size: 1.3 x 0.63 in. (33 x 16mm)
- ♦ Dimensions:
 - 3 x 2.35 x 0.78 in. (76 x 60 x 20mm)
- ♦ Power Source:
 - 1 "CR2016" battery (included)

INCLUDES:

- Lanyard
 Battery
 User's Manual
- 1-Year Limited Warranty

UPG	NU.
31035 9	SW888N







THREE LINE STOPWATCH - SW888L

FEATURES:

- Three-line display
- 16 lap and split memory with 1/100 second precision
- Fastest and slowest lap calculation
- Countdown timer
- Pacer with programmable memory
- Calendar and time (12/24 hour format)
- · Daily alarm
- Memory full indicator
- Water resistant Shock resistant

SPECIFICATIONS:

- ♦ Color: black ♦ Digit Height: 0.23 in. (6mm)
- ♦ Display Size: 1.35 x 0.9 in. (35 x 23mm)
- ♦ Dimensions:
 - 2.8 x 2.2 x 0.6 in. (71 x 96 x 15mm)
- ◆ Power Source: 1 "CR2016" battery (included)

- Lanyard Battery User's Manual
- 1-Year Limited Warranty

UPG	NO.
31025 0	SW888L





C322

DIGITAL DESK CLOCK WITH ALARM AND BACKLIGHT - C322

FEATURES:

- Jumbo display
- Bright blue backlight
- Snooze alarm repeats every 8 min.
- 12 or 24 hour time format
- Extra loud alarm
- Cordless
- Easy one touch operation

SPECIFICATIONS:

- ♦ Color: black
- ♦ Digit Height: 1.25 in. (32mm)
- ♦ Display Size: 2.9 x 1.45 in. (74 x 37mm)
- ♦ Dimensions:
 - 3.65 x 3.5 x 2.25 in. (93 x 89 x 57mm)
- ♦ Weight: 6 oz. (170g)
- ◆ Power Source: 2 "AAA" batteries (included)

INCLUDES:

- Batteries User's Manual
- 1-Year Limited Warranty

UPG	NU.
32000 6	C322



CMOR11

ANALOG WALL CLOCK WITH TEMPERATURE AND HUMIDITY DISPLAY — CMOR11

FEATURES:

- · Displays time, humidity and temperature
- For home or office use
- Quartz movement
- °F temperature readout
- Easy to read
- · Green fluorescent markings

SPECIFICATIONS:

- ◆ Temperature Measurement Range: -20° to 140°F
- ◆ Temperature Measurement Accuracy: ±4°F
- ♦ Humidity Measurement Range: 0 to 100%
- ♦ Humidity Measurement Accuracy: ±6%
- ♦ Dimensions: 8.5 in (216mm) diameter
- ♦ Weight: 1 lb. (454g)
- ◆ Power Source: 1 "AA" battery (included)

INCLUDES:

- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
32050 1	CMOR11



DJC381

DIGITAL JUMBO DISPLAY CLOCK WITH TEMPERATURE - DJC381

FEATURES:

- Displays time, temperature, day and date
- Calendar to December 31, 2030
- 12 or 24 hour switch
- · Clear convex lens for easy viewing at any angle
- °F/°C switch
- Extra large display



SPECIFICATIONS:

- ♦ Temperature Measurement Range: -58° to 158°F (-50° to 70°C)
- ♦ Color: metallic black
- ♦ Digit Height: 2.15 in. (55mm)
- ♦ Display Size: 6 x 3.65 in. (152 x 93mm)
- ♦ Dimensions:
- 9 x 8.25 x 0.75 in. (229 x 210 x 93mm)
- ♦ Weight: 1.5 lbs. (680g)
- ♦ Power Source: 4 "AAA" batteries (included)

- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
32010 5	DJC381



BIG DIGIT DESKTOP DUAL TIMER/CLOCK - TI872

FEATURES:

- · Clock with 2 count-down timers and stopwatch
- Count-down from 23:59:59
- Count-up to 23:59:59
- Timer and clock display hours, minutes and seconds
- · Counts-up after reaching zero
- . Memory function recalls previous timing cycle
- 12 or 24 hour selectable clock
- · Extra large display

SPECIFICATIONS:

- ♦ Digit Height: 0.75 in. (19mm)
- ♦ Display Size: 2.25 x 0.8 in. (57 x 20mm)
- 2.65 x 2.4 x 0.65 in. (67 x 61 x 17mm)

♦ Dimensions:

- ♦ Weight: 2.5 oz. (71g)
- ♦ Power Source: 1 "AAA" battery (included)

INCLUDES:

- · Magnet on Back
- Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
30065 7	TI872





TI872

JUMBO DISPLAY WATERPROOF TIMER - TI110

FEATURES:

- Displays hours and minutes or minutes and seconds
- · Removable stand and magnet
- Super large LCD
- · Rubber keypad
- Waterproof

SPECIFICATIONS:

- ♦ Range: 0 to 19 hours, 59 minutes/0 to 99 minutes, 59 seconds
- ♦ Digit Height: 1.25 in. (32mm)

- ♦ Display: 2.75 x 1.5 in. (70 x 38mm)
- ♦ Dimensions: 3.5 x 3 x 1.1 in. (90 x 75 x 28mm)
- ♦ Weight: 5.3 oz. (150g)
- ♦ Power Source: 1 "AAA" battery (included)

- Battery User's Manual
- 1-Year Limited Warranty

	UPC	NO.
Π	301128	TI110





TI110 N

3-IN-1 TIMER FOR THE VISUALLY AND HEARING IMPAIRED - TI150

Ideal for physical therapy or noisy environments.

FEATURES:

- Count hours + minutes or minutes + seconds
- Choose 1, 2 or 3 countdown alarms: red flasher, loud beeper and/or vibration
- . Mounts with spring clip, stand or magnet

SPECIFICATIONS:

- ♦ Range: 0 to 19 hours, 59 minutes/0 to 99 minutes, 59 seconds
- ♦ Digit Height: 0.63 in. (16mm)
- ♦ Display Size: 1.2 x 0.7 in. (30 x 18mm)
- ◆ Dimensions:
- 2.9 x 1.9 x 1.2 in. (73 x 49 x 30mm)
- ♦ Weight: 2 oz. (57g)
- ♦ Power Source: 2 "AAA" batteries (included)

- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
30110 4	TI150









GENERAL

TI170

TI239

100 MINUTE COUNT-UP AND COUNT-DOWN TIMER - TI170

FEATURES:

- Timer and stopwatch
- Count-down from 99:59
- Count-up to 99:59
- · Displays minutes and seconds
- Automatic memory
- · Loud alarm
- Large display



COUNT UP/COUNT DOWN DIGITAL TIMER - TI239

SPECIFICATIONS:

- ◆ Color: white
- ♦ Digit Height: 0.5 in. (13mm)
- ♦ Display Size: 1.9 x 0.83 in. (48 x 21mm)
- ♦ Dimensions: 3.1 x 2.7 x 1 in. (79 x 69 x 25mm)
- ♦ Weight: 2.25 oz. (64g)
- ♦ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Magnet
 Stand and clip on back
- Battery User's Manual
- 1-Year Limited Warranty

UPC NO. 30105 0 TI170

- Timer and stopwatch
- Count-down from 99:59
- Count-up to 99:59

FEATURES:

- · Displays minutes and seconds
- · Counts-up after reaching zero
- · Easy to operate

SPECIFICATIONS:

- ♦ Color: navy
- ♦ Digit Height: 0.35 in. (9mm)
- ♦ Display Size: 1.4 x 0.4 in. (36 x 10mm)
- ♦ Dimensions:

2.45 x 2.25 x 0.4 in. (62 x 57 x 10mm)

- ♦ Weight: 1.5 oz. (43g)
- ♦ Power Source: 1 "LR44" battery (included)

INCLUDES:

- Magnet Stand and Clip on Back
- 1-Year Limited Warranty

UPC NO. 300206 TI239

TI267



JUMBO DISPLAY DIGITAL TIMER - TI267 **FEATURES:**

- Count-down from 19:59
- · Displays hours and minutes
- Extra large digits
- Easy to operate
- Loud alarm

SPECIFICATIONS:

- ♦ Color: white
- ♦ Digit Height: 0.75 in. (19mm)
- ♦ Display Size: 1.8 x 0.75 in. (46 x 19mm)
- ♦ Dimensions:
- 3.5 x 2.3 x 0.75 in. (89 x 58 x 19mm)
- ♦ Weight: 1.5 oz. (43g)
- ◆ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Magnet and Clip on Back
- Battery
 User's Manual
- 1-Year Limited Warranty

UPC NO. 30025 1 TI267

DIGITAL FOUR CHANNEL TIMER/CLOCK – TI388



TI388 N



FEATURES:

- 4 independent count-down timers/stopwatches
- Count-down from 99:59:59
- Count-up to 99:59:59
- 1 minute alarm
- . Memory recalls previous time setting
- · Automatically counts-up after reaching zero
- 12 or 24 hour clock display
- · LCD displays hours, minutes & seconds

SPECIFICATIONS:

- ♦ Color: white
- ♦ Digit Height: 0.63 in. (16mm)
- ♦ Display Size: 1.88 x 0.88 in. (48 x 22mm)
- ♦ Dimensions:

2.88 x 2.5 x 0.63 in. (73 x 64 x 16mm)

- ♦ Weight: 2.25 oz. (64g)
- ♦ Power Source: 1 "LR44" battery (included)

- Magnet Stand and Clip on Back
- 1-Year Limited Warranty

UPC	NO.
30050 3	TI388



TRIPLE TIMER WITH CLOCK - TI891B

Displays 3 count-down timers at once.

FEATURES:

- Timer, stopwatch and clock
- Count-down from 19:59:59
- Count-up to 19:59:59
- · Timer displays hours, minutes and seconds
- 12 or 24 hour clock display
- 1/100 sec. stopwatch precision
- · Automatic memory
- · Counts-up after reaching zero

SPECIFICATIONS:

- ♦ Color: black
- ♦ Digit Height: 0.35 in. (9mm)
- ♦ Display Size: 1.55 x 1.55 in. (39 x 39mm)
- ◆ Dimensions:
 - 3.35 x 2.5 x 0.8 in. (85 x 64 x 20mm)
- ♦ Weight: 3 oz. (85g)
- ◆ Power Source: 1 "AAA" battery (included)

INCLUDES:

- · Magnet on Back
- 1-Year Limited Warranty

UPC	NO.
30055 8	T1891E



TI891B

DUAL TIMER / CLOCK WITH JUMBO DISPLAY – TI895B

Two count-down timers work simultaneously.

FEATURES:

- Count-down from 23:59:59
- Count-up to 19:59:59
- · Large digital display
- 12 or 24 hour clock
- · Lock mode
- · Bracket for wall mounting



SPECIFICATIONS:

- ♦ Color: black
- ♦ Digit Height: 1 in. (25mm)
- ♦ Display Size: 3 x 2.5 in. (76 x 64mm)
- ♦ Dimensions:
- 5.5 x 3.75 x 1 in. (140 x 95 x 25mm)
- ♦ Weight: 6.5 oz. (184g)
- ♦ Power Source:
 - 1 "AAA" battery (included)

INCLUDES:

- MagnetStand and Clip on BackBatteryUser's Manual
- 1-Year Limited Warranty

UPC	NO.
30075.6	TIRGSE



T1895B N

JUMBO DISPLAY DIGITAL TIMER - T1899B

- · Clock, stopwatch and countdown timer
- 10 hour (600 minute) range
- One second resolution
- Count down from 9:59:59
- Count up to 9:59:59
- Jumbo display
- 12/24 hour format
- · Magnetic back with stand

SPECIFICATIONS:

- ♦ Color: black
- ♦ Digit Height: 0.75 in. (19mm)
- ♦ Display Size: 2.25 x 0.88 in. (57 x 22mm)
- ♦ Dimensions:
- 3 x 2.5 x 0.75 in. (76 x 64 x 19mm)
- ♦ Weight: 3.2 oz. (91g)
- ◆ Power Source: 1 "AAA" battery (included)

INCLUDES:

- Magnet Stand and clip on back
- Battery
 User's Manual
- 1-Year Limited Warranty

UPC NO. 30095 4 T1899B



T1899B



Multimeter Electrical Kits



KIT INCLUDES:

- One DMM570 Rugged TRMS Multimeter with NCV Detection and Low-Z Mode (see p. I-132) and 3-year limited warranty
- One IRT730K 30:1 Ultra Wide-Range IR Thermometer with "K" Port (see p. I-40) and 3-year limited warranty
- One pipe wrap thermocouple
- One "K" type bead thermocouple probe
- One "K" type stem thermocouple probe
- One adaptor for thermocouples with spade lugs
- One pair of CAT III 1000V rated test leads with alligator clips
- One magnetic meter hanging strap
- One custom padded carrying case
- Instrument batteries and user's manuals

01664 0 KHV57030



Ideal for MRO professionals and electricians working residential and commercial jobs.

KIT INCLUDES:

- One DMM570 Rugged TRMS Multimeter with NCV Detection and Low-Z Mode (see p. I-132) and 3-vear limited warranty
- One DAMP60 Auto Ranging 600A AC Clamp Meter (see p. I-126) with 1-year warranty
- One "K" type stem thermocouple probe
- One adaptor for thermocouples with spade lugs
- One pair of CAT III 1000V rated test leads with alligator clips
- · One pair of CAT III 600V rated test leads with hard points
- · One magnetic meter hanging strap
- One custom padded carrying case
- Instrument batteries and user's manuals

UPC 016626 KEL57060



HVAC DMM KIT - KHVP57068

Ideal for HVAC/R professionals who routinely measure current.



KIT INCLUDES:

- One DMM570 Rugged TRMS Multimeter with NCV Detection and Low-Z Mode (see p. I-132) and 3-year limited warranty
- One DAMP68 Auto Ranging AC/DC TRMS 400A AC Clamp Meter (see p. I-126) with 1-year limited warranty
- One pipe wrap thermocouple
- One "K" type bead thermocouple probe
- One "K" type stem thermocouple probe
- One adaptor for thermocouples with spade lugs
- One pair of CAT III 1000V rated test leads with alligator clips
- One pair of CAT III 600V rated test leads with hard points
- · One magnetic meter hanging strap
- One custom padded carrying case
- Instrument batteries and user's manuals

UPC NO. KHVP57068 016633

KHVP57068



Clamp Meter Comparison Chart

Modern clamp meters combine a voltmeter and a current meter. **Because the** current meter responds to voltages induced by flows in the conductor within its jaws, clamp meters can measure larger currents than a multimeter and in a safer manner.





AC & AC/DC TRMS Clamp Meters



AUTO RANGING AC/DC TRUE RMS 400 AMP CLAMP METER - DAMP68

Ideal for HVAC/R technicians. Also measures capacitance, frequency and temperature. **FEATURES:**

- 11 functions, 34 ranges
- Measures temperature from -40° to 752°F (-40° to 400°C) using included "K" type thermocouple
- Computes and displays True RMS values
- Verifies integrity of diodes and checks circuits for continuity
- Jumbo 3-3/4 digit (4000 count) backlit LCD + analog bar graph
- Ergonomic design with rugged rubber housing
- · Hall effect clamp jaw
- Auto and Manual ranging and MIN/MAX display
- Data HOLD and REL (zero) buttons
- Safe for CAT III 600V use
- CE approved

SPECIFICATIONS:

- ♦ AC Current Measurement Range / Accuracy: 0 to 400A / \pm (3% + 10 digits)
- ◆ DC Current Range (via clamp) / Accuracy: 0 to 400A / \pm (3% + 5 digits)
- ♦ AC Voltage Ranges / Accuracy: 0 to 400mV/4V/40V/400V/600V / $\pm (2\% + 10 \text{ digits})$ or better
- ♦ DC Voltage Ranges / Accuracy: 0 to 400mV/4V/40V/400V/600V / $\pm (0.8\% + 5 \text{ digits})$
- ♦ Resistance Ranges / Accuracy: 0 to $400\Omega/4k\Omega/40k\Omega/400k\Omega/4M\Omega/40M\Omega$ / $\pm (2\% + 5 \text{ digits})$ or better

- ♦ Frequency Ranges / Accuracy: 0 to 100Hz/1kHz/ 10kHz/100kHz/1Mhz/10MHz / ±2%
- ♦ Capacitance Ranges / Accuracy: 0 to 40nF/400nF/4µF/40µF/400µF/4000µF / $\pm (4\% + 5 \text{ digits})$
- ◆ Temperature Range (via "K" type thermocouple) / Accuracy: 40° to 752°F (-40° to 400°C) $\pm (1.2\% + 6 \text{ digits}) \text{ from } 32^{\circ} \text{ to } 212^{\circ}\text{F}$
- ♦ Maximum Resolutions: 0.1A, 0.1mV, 0.1Ω, 0.01Hz, 0.01nF, 1°
- ♦ Clamp Jaw Type / Opening: Coil-Type + Hall effect / 1.48 in. (37.5mm)
- ♦ Dimensions: 11.38 x 6.25 x 2.75 in. / (289 x 159 x 70mm)
- ♦ Weight: 19 oz. (539g)
- ♦ Power Source: 3 "AAA" batteries (included)

INCLUDES:

- "K" Type Stem Thermocouple Probe
- Test Leads
- Soft Carrying Case
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01369 4	DAMP68
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. I-129)



AUTO RANGING 600A AC CLAMP METER – DAMP60

Ideal for general-purpose work.

FEATURES:

- 7 functions, 19 ranges
- · Verifies integrity of diodes and checks circuits
- Jumbo 3-1/2 digit (2000 count) backlit LCD
- · Ergonomic design with rugged rubber housing
- · Coil-type clamp jaw
- · Autoranging and MAX display options
- . Data HOLD and REL (zero) buttons
- . Safe for CAT III 600V use
- CE approved

SPECIFICATIONS:

- ♦ AC Current Measurement Ranges/Accuracy: 0 to 200A/600A / \pm (3% + 5 digits)
- ♦ AC Voltage Ranges / Accuracy: 0 to $2V/20V/200V/600V / \pm (1\% + 5 \text{ digits})$
- ♦ DC Voltage Ranges / Accuracy: 0 to 200mV/2V/20V/200V/600V / $\pm (0.8\% + 5 \text{ digits})$
- ♦ Resistance Ranges / Accuracy: 0 to 200 $\Omega/2k\Omega/20k\Omega/200k\Omega/2M\Omega/20M\Omega$ / \pm (2% + 5 digits) or better
- ♦ Frequency Range / Accuracy: 10 to $1999Hz / \pm (3\% + 10 \text{ digits})$

- ♦ Max Resolutions: 0.1A, 0.1mV, 0.1Ω , 1Hz
- ◆ Clamp Jaw Type / Opening: Coil type / 1.48 in. (37.5mm)
- ♦ Dimensions: 11.25 x 6.13 x 2.75 in. / (286 x 156 x 70mm)
- ♦ Weight: 17 oz. (482g)
- ♦ Power Source: 2 "AAA" batteries (included)

- Test Leads
- Soft Carrying Case
- Batteries
- · User's Manual
- 1-Year Limited Warranty

UPC	NO.
01356 4	DAMP60
01521 6	ACL10 15A Line Splitter (optional)
01639 8	FX3000 3000 Amp Flex Clamp Adaptor (optional, see p. I-129)



AC/DC TRMS Clamp Meters

RUGGED AUTO RANGING TRMS AC/DC CLAMP METERS WITH NCV DETECTION

CM660: 0 TO 600A RANGE, 0.01A MAX RESOLUTION
CM700: 0 TO 1000A RANGE, 0.1A MAX RESOLUTION
CM770: 0 TO 1000A RANGE, 0.1A MAX RESOLUTION WITH INTEGRATED IRT

Ideal for electricians, HVAC/R contractors, building maintenance professionals and maintenance/repair/operations (MRO) technicians

FEATURES:

- 16 functions, 49 ranges (CM660/CM700); 17 functions, 51 ranges (CM770)
- Measures temperature from -58° to 1112°F (-50° to 600°C) using included "K" type stem thermocouple
- · Also measures surface temperature from -4° to 662°F (-20° to 350°C) using 6:1 D:S detachable IR thermometer with fixed emissivity and measurement hold button (CM770 only). When IRT is re-attached, its reading is optically coupled onto meter's display.
- · Uses beeper to verify integrity of diodes and check circuits for continuity
- 0 to 200µA/2000µA AC/DC ranges for measuring flame rod current with 0.1µA/1µA resolution using included test leads
- Built-in Non-Contact Voltage (NCV) detector with 4 sensitivity settings & audible and visual alerts
- Large backlit digital LCD with two 6000-count readouts for simultaneous display of real-time current or voltage on primary readout and line frequency on secondary readout
- Fast-response analog bar graph
- Bright LED work light
- Auto and Manual ranging and MIN/MAX options
- Data HOLD and REL (zero) buttons
- INRUSH mode for measuring surge current during motor startup
- 1.65 in. (42mm) jaw opening (largest in its class) for conductors up to 550 MCM resists side torque
- Rugged housing can withstand multiple drops onto concrete from height of 5 ft. (1.6m)
- ETL certified CAT III 600V. CAT II 1000V



SPECIFICATIONS:

- ♦ AC Voltage Ranges / Accuracy: 0 to 600mV/6V/60V/600V/1000V / ±(0.8% + 3 digits)
- ♦ DC Voltage Ranges / Accuracy: 0 to 600mV/6V/60V/600V/1000V / $\pm (0.5\% + 3 \text{ digits})$
- ♦ AC Current Measurement Ranges / Accuracy: 0 to 60A/600A (CM660), 0 to 60A/600A/1000A $(CM700/CM770) / \pm (1.8\% + 5 counts)$
- ♦ DC Current Ranges (via clamp) / Accuracy: 0 to 60A/600A (CM660), 0 to 60A/600A/1000A $(CM700/CM770) / \pm (3\% + 5 \text{ digits})$
- ♦ Resistance Ranges / Accuracy: 0 to $600\Omega/6k\Omega/60k\Omega/600k\Omega/6M\Omega/60M_{\odot}$ / $\pm (0.8\% + 3 \text{ digits}) @<1M\Omega; \pm (1.2\% \text{ of reading})$ + 3 digits)@ \geq 1M Ω
- ♦ Frequency Ranges / Accuracy: 10Hz to 60Hz/600Hz/6kHz (clamp iaw): 10Hz to 60Hz/600Hz/6kHz/60kHz/600kHz/6MHz/60MHz (test leads) $/ \pm (1.5\% + 5 \text{ digits})$ (clamp jaw); $\pm (0.3\% + 5 \text{ digits})$ (test leads in Hz mode)
- ♦ Capacitance Ranges / Accuracy: 0 to 6nF/60nF/600nF/6µF/600µF/ $6000\mu\text{F}/60,000\mu\text{F}/\pm(4\% + 5 \text{ digits})@>10\text{nF})$
- ♦ IRT Emissivity: Fixed at 0.95
- ♦ Laser Power (CM770 only): <1mW (Class 2)
- ◆ Temperature Range (via "K" type thermocouple) / Accuracy: -58° to 1112°F (-50° to 600°C) / $\pm (2\% + 2 \text{ digits})$
- ♦ Temperature Range (via integrated IRT)/ Accuracy (CM770 only): -58° to 1112°F $(-50^{\circ} \text{ to } 600^{\circ}\text{C})/ \pm 4.5^{\circ}\text{F from } -4^{\circ} \text{ to } 32^{\circ}\text{F};$ $\pm (1.5\% + 3.6^{\circ}F)$ from 32° to 662°F
- ♦ Duty Cycle Range / Accuracy: 1 to 99% / ±3%
- ♦ Maximum Resolutions: 0.1A (CM600), 0.01A (CM700/CM770), 0.1mV, 0.1Ω , 0.01Hz, 0.001nF, 2°F/1°C, 0.1%
- ♦ Clamp Jaw Opening: 1.65 in. (42mm)
- ♦ Dimensions of CM660/CM700: 8.86 x 3.31 x 1.30 in. / (225 x 84 x 33mm) Dimensions of CM770: 9.37 x 3.62 x 1.97 in. (238 x 92 x 50mm)
- ♦ Weight (including batteries): 14.8 oz. (420g)
- ♦ Power Source (included): 3 "AAA" batteries (CM660, CM700); 3 "AAA" batteries + 2 "LR44" batteries (CM770)

INCLUDES:

- Double-Insulated Test Leads with Screw-On **Alligator Clips**
- . "K" Type Stem Thermocouple Probe and Plug Adaptor
- Batteries
- Soft Pouch
- User's Manual
- 3-Year Limited Warranty

UPC	NO.
01629 9	CM660
01633 6	CM700
01640 4	CM770
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. I-129)
	(optional, see p. I-129)



General Tools & Instruments T-177

Data Logging Clamp Meter System

CEF©

CMR35 SYSTEM

U.S. Patent No. 7,075,289 B2

WIRELESS TRUE RMS CAT III 600V CLAMP METER/DATA LOGGING SYSTEM - CMR35, CMR35T, CMR35R

Ideal for process/power plant operators, HVAC/R contractors, building maintenance technicians.

FEATURES:

 Collects data from up to six clamp meters/transmitters (available as options) operating on different channels

- Software displays four windows: A main monitor (dashboard), separate tabular and graphic displays of up to six logs, and a running estimate of monitored equipment's power cost
- Excel-formatted software facilitates USB data transfers to PC for storage and display
- · Wireless range of up to 333 ft. (100m) with no obstructions
- Min/Max memory + data hold
- . Hi and Lo audible alarms for voltage and current level
- Adjustable transmission span (extends battery life)
- Clamp meter also operates in standalone mode
- Standard USB computer interface

SPECIFICATIONS:

RECEIVER

CMR35R

CMR35T Wireless Clamp Meter-Transmitter/ CMR35R Wireless Controller Data Logger-Receiver:

- ♦ Transmission/Reception Frequency: 910MHz
- ♦ Wireless Range: Up to 333 ft. (100m) with no obstructions
- ◆ Sampling Rate: 3x/sec (not transmitting); 1x/sec (transmitting)
- ♦ Operating Temperature/Humidity: 14° to 122°F (-10° to 50°C)/80% R.H. max
- ♦ LCD Size ((CMR35T): 1.77(H) x 1.04(W) in. (45 x 26.5mm)
- ♦ LCD Size (CMR35R): 2.05(H) x 1.14(W) in. (52 x 29mm)
- ♦ Jaw Opening: 30mm (1.18 in.)
- ♦ Voltage Measurement Range/Accuracy: 0 to 600V (AC or DC) \pm (0.75% of reading + 3 digits)
- ♦ Voltage Measurement Resolution: 0.001V
- ♦ Current Measurement Range/Accuracy: 0 to 600A (AC or DC) \pm (1% of reading + 5 digits)

- ♦ Resistance Measurement Range: 0 to 40MΩ
- ♦ Frequency Measurement Range: 0 to 100kHz
- ♦ Transmission Span: 2, 10, 30, 60 or 120 seconds (user-selectable)
- ♦ Input Impedance: 10MΩ
- lacktriangle Continuity Threshold: 100Ω or less
- ◆ Diode Check Voltage: 1.5V (open circuit)
- ♦ Safety Rating: CAT III 600V
- ♦ Dimensions (CMR35T): 8.66(L) x 2.52(W) x 1.38(H) in. (220 x 64 x 35mm)
- ♦ Dimensions (CMR35T): 7.05(L) x 2.83(W) x 1.26(H) in. (179 x 72 x 32mm)
- ♦ Weight (CMR35T): 8.85 oz. (251g)
- ♦ Weight (CMR35R): 6.24 oz. (177g)
- ♦ Power Source (CMR35T): 2 "AA" batteries or external 3VDC supply @ 10 mA
- ♦ Power Source (CMR35R): 2 "AA" batteries or external 3VDC supply @ 10 mA

INCLUDES:

- CMR35T Transmitter
- CMR35R Receiver
- · Carrying Case
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01448 6	CMR35
01487 5	CMR35T
01488 2	CMR35R
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. I-129)









TRANSMITTER CMR35T



Clamp Meters, Electrical Kit

DIGITAL 1000A CLAMP METER - DAMP206

Ideal for maintaining and repairing plant equipment or HVAC/R systems. **FEATURES:**

- 10 functions, 34 ranges
- . Measures AC/DC voltage, AC current, resistance, capacitance, frequency, temperature and duty cycle
- · Also checks for continuity and diode integrity
- . Designed to meet CAT II 600V, CAT III 300V safety standard
- Auto ranging
- Jumbo 3-3/4-digit (4000 count) backlit LCD

SPECIFICATIONS:

- ♦ AC Voltage Measurement Range/Accuracy: 0 to $600V/\pm(1.2\% + 5 \text{ digits})$
- ♦ AC Current Measurement Range/Accuracy: 0 to $1000A/\pm(2\% + 5 \text{ digits})$
- ◆ DC Voltage Measurement Range/Accuracy: 0 to $600V/\pm(0.8\% + 1 \text{ digit})$
- ♦ Resistance Measurement Range/Accuracy: 0 to $40M\Omega/\pm(1\% + 2 \text{ digits})$

- ◆ Capacitance Measurement Range/Accuracy: 1nF to $200\mu\text{F}/\pm(3\%+5\text{ digits})$ from 40nF to $40\mu\text{F}$
- ♦ Frequency Measurement Range/Accuracy: 10Hz to $10MHz/ \pm (0.1\% + 3 digits)$
- ♦ Temperature Measurement Range/Accuracy: -40° to 1832°F (-40° to 1000°C)/ \pm (1% of reading +3 digits)
- ♦ Jaw Opening: 1.57 in. (40mm)
- ♦ Dimensions:
 - 10.2 x 4.1 x 2 in. (260 x 104 x 51mm)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Soft Case All Weather Test Leads
- "K" Type Bead Thermocouple Probe
- Batterv

UPC	NO.
50026 2	DAMP206
01521 6	ACL10 15A Line Splitter (optional)
016398	FX3000 3000 Amp Flex Clamp Adaptor (optional, see below)



Makes it possible to attach a clamp meter to a line carrying up to 15 AC Amps without separating its conductors.

- Two clamp positions/sensitivities: x1 for direct readings; x10 for low-current measurements
- · Includes voltage check outlet

SPECIFICATIONS:

- ♦ Maximum Line Voltage/Current: 120 VAC/15 Amps
- ♦ Clamp Jaw Opening: 1.0 x 1.0 in.

UPC	NO.
01521 6	ACL10

3000 AMP FLEX CLAMP ADAPTOR - FX3000

FX3000 enables any clamp meter or multimeter to enclose thick or hard-to-reach conductors while increasing its AC current measurement range to up to 3000A.

FEATURES & SPECIFICATIONS:

- Three Ranges: 0 to 3000A (full-scale), 0 to 300A, 0 to 30A
- Output: 1mVAC/A in 3000A range; 10mVAC/A in 300A range; 100mVAC/A in 30A range
- Accuracy: ±1% of full-scale value
- Position Error: ±1% @ 1 in. from conductor: ±2% @ 2 in.; ±3% a@ 3 in.
- Safety Rating: CAT III 1000V, CAT IV 600V (probe); CAT II 1000V, CAT III 600V (converter)
- Probe Length: 18 in. 458mm); creates 6 in. diameter loop
- Cable Length (probe to converter): 6 ft. (1.8m)
- Input Impedance: 10kΩ, minimum
- Power Source: (2) "AAA" batteries (included)
- 1-Year Limited Warranty

UPC	NO.
01639 8	FX3000



DAMP206 N



ACL₁₀



3000 AMP CLAMP METER KIT - CK700FX

Ideal for MRO professionals and electricians working commercial or light industrial jobs. **KIT INCLUDES:**

- One CM700 Rugged Auto Ranging AC/DC TRMS 0 to 1000A Clamp Meter (see p. I-127) with 3-year limited warranty
- One FX3000 3000 Amp Flex Clamp Adaptor (see above) with 1-year limited warranty
- One "K" type stem thermocouple probe
- One adaptor for thermocouples with spade lugs
- One pair CAT III 1000V rated test leads with alligator clips
- · One custom padded carrying case
- Instrument batteries and user's manuals



Multimeter Comparison Chart

General puts the "Multi" in "Multimeter" with advanced features such as wireless operation, true RMS measurement, data logging, and non-contact voltage/current (NCV/NCC) detection















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see page I-135

see page I-134

see page I-133

see page I-133

Model #	DMM570	GT520	GT310, GT320	DMM45	DMM40
Name	Rugged TRMS Multimeter with NCV Detection & Low-Z mode	Wireless TRMS Data Logging Multimeter with Detachable Display and NCV/NCC Detection	Wireless Data Logging Multimeter with NCV/NCC Detection	Auto Ranging CAT III 600V Digital Multimeter	Manual Ranging CAT III 600V Digital Multimeter
Figure of Merit	19 functions, 48 ranges	15 functions, 36 ranges	12 functions, 33 ranges	8 functions, 25 ranges	6 functions, 19 ranges
Parameters Measured	AC/DC voltage, AC/DC current, resistance, capacitance, frequency, duty cycle, continuity, diode integrity	AC/DC voltage, AC/DC current, resistance, capacitance, temperature, frequency, duty cycle, continuity, diode integrity	AC/DC voltage, AC/DC current, resistance, capacitance, continuity, diode integrity	AC/DC voltage AC/DC current, resistance, diode integrity	AC/DC voltage, DC current, resistance, diode integrity
Ranging Options	Auto/Manual	Auto/Manual	Auto/Manual	Auto	Manual
Voltage Measurement Range	0 to 1000VDC/750VAC	0 to 750VAC/1000VDC	0 to 750VAC/1000VDC	0 to 500VAC/VDC	0 to 500VAC/VDC
Voltage Resolution	10μV	0.1mV	0.1mV	0.5mV	0.5mV
DC Voltage Measurement Accuracy	±(0.8% of reading + 2 digits) or better	±(0.6% of reading + 3 digits) from 0 to 400V; ±1% of reading from 400 to 1000V	±(0.5% of reading + 2 digits) 0 to 400V; ±1% of reading from 400 to 1000V	±(0.5% of reading + 5 digits)	±(1.2% of reading + 2 digits)
Overvoltage Protection Level	1kV	1kV	1kV	600V	600V
Safety Rating	CAT III 1000V CAT IV 600V	CAT III 1000V CAT IV 600V	CAT III 1000V CAT IV 600V	CAT III 600V	CAT III 600V
Safety Listing (ETL,UL,CE)	CE & ETL	CE	CE & ETL	CE	CE
Current Measurement Range	0 to 10A AC/DC	0 to 500mA AC/DC	0 to 400mA AC/DC	0 to 200mA AC/DC	0 to 200mA AC/DC
Micro Amp Ranges	0 to 660μA AC/DC	0 to 400μA/4mA AC/DC	0 to 400μA/4mA AC/DC	0 to 200μA/2000uA AC/DC	0 to 200μA/ 2000μA DC
Non-contact Voltage (NCV) Detection Range	10 to 600V	50 to 1000V	50 to 1000V	No	No
Non-contact Current (NCC) Detection Range	100mA to 1000A	100mA to 1000A	100mA to 1000A	No	No
Resistance Measurement Range	0 to 66MΩ	0 to 60MΩ	0 to 40MΩ	0 to 20MΩ	0 to 2MΩ
Capacitance Measurement Range	0.001uF to 60,000μF	52nF to 60,000μF	1 to 100μF	N/A	N/A
Display	Backlit 3-3/4 digit (6,600 count) dual readout LCD	Backlit 3-3/4 digit (6,000 count) dual readout dot-matrix LCD	Backlit 3-3/4 digit (4,000 count) dual readout 7-segment LCD (GT310) or dot-matrix LCD (GT320)	Backlit 3-1/2 digit (2,000 count) LCD	Backliit 3-1/2 digit (2,000 count) LCD
Display Options	Hold, Max, Min, Rel (Zero)	Rel (Zero), Hold (both can also be activated from detachable display)	Hold	Hold	Hold
Auto Power Off	Yes	Yes	Yes	No	No
Magnetic Hanging Strap	Yes	Yes	Yes	No	No
Limited Warranty	3 years	1 year	1 year	1 year	1 year
Other Features	Also measures temperature from -58" to 1112" with included "K" type stem thermocouple probe, Analog bar graph, IP54 water/dust/oil protection, 6 ft. drop-resistant, Lo-Z option avoids detection of "ghost" voltages	Data logging (requires optional sofware) w/wireless interface to PC, second GT520, or GT310 or GT320 within 33 ft; Detachable wireless display; Fused, double-insulated test leads with screw-on alligator clips; Lo-Z input impedance option	Data logging (GT320 requires optional sofware) w/wireless interface to PC, second GT310/GT320 or GT520, or remote display within 33 ft. Fused, double-insulated test leads with screw-on alligator clips	Also measures temperature from -40" to 752"F with included "K" type thermocouple	



Multimeter Comparison Chart











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see page I-136

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see page I-136

see page I-136

DMM51F8G	DMM333	DMM830HS	DMM20UL	AM35UL
Digital Service Multimeter	Digital Credit Card Style Multimeter	Economy Digital Multimeter with LED and Continuity Beeper	Digital UL Listed Multimeter	Analog Multimeter
8 functions, 34 ranges	7 functions, 25 ranges	7 functions, 20 ranges	6 functions, 20 ranges	4 functions, 13 ranges
AC/DC voltage, AC/DC current, resistance, continuity, diode integrity	AC/DC voltage, AC/DC current, resistance, continuity, diode integrity	AC/DC voltage, DC current, resistance, continuity, diode integrity	AC/DC voltage, DC current, resistance, continuity, diode integrity	AC/DC voltage, DC current, resistance
Manual	Auto	Manual	Manual	Manual
0 to 750VAC/1000VDC	0 to 500VAC/VDC	0 to 750VAC/1000VDC	0 to 600VAC/VDC	0 to 500VAC/VDC
100uV	0.5mV	0.5mV	0.5mV	100mV
±(0.8% of reading + 2 digits)	±(0.5% of reading + 5 digits)	±(1.2% of reading + 2 digits)	±2.5% of reading	±2.5% of reading
1kVDC, 750VAC	1kVDC, 750VAC	1kV	600V	500V
CAT I 1000V CAT II 600V CAT III 300V	CAT II 500V CAT III 300V	CAT II 500V	CAT I 600V	CAT II 500V
No	No No	No	UL	UL
0 to 10A AC/DC	0 to 200mA AC/DC	0 to 10A DC	0 to 10A DC	0 to 250mA DC
0 to 20μA DC 0 to 200μA AC	0 to 200μA/2000μA AC/DC	0 to 200μA DC	0 to 2000μA DC	0 to 500μA DC
No	No	No	No	No
No	No	No	No	No
0 to 200MΩ	0 to 20MΩ	0 to 2MΩ	0 to 20MΩ	0 to 1MΩ
N/A	N/A	N/A	N/A	N/A
3-1/2 digit (2,000 count) LCD	3-1/2 digit (2,000 count) LCD	3-1/2 digit (2,000 count) LCD	3-1/2 digit (2,000 count) LCD	Analog readout
N/A	Hold, Max	N/A	Hold	N/A
No	Yes	No	No	No
No	No	No	No	No
1 year	1 year	1 year	1 year	1 year
0 to 20µA and 0 to 200µA DC ranges for measuring flame rod current		* Also measures transistor hFE (current gain) *Single-pole ACV test		

Rugged True RMS Multimeter















RUGGED TRMS MULTIMETER WITH NCV DETECTION & LOW-Z MODE -**DMM570**

Ideal for electrical contractors, HVAC/R technicians and MRO professionals.

FEATURES:

- 19 functions, 48 ranges
- Measures AC/DC voltage, AC/DC current, resistance, capacitance, frequency, duty cycle
- Also measures temperature from -58° to 1112°F (-50° to 600°C) with included "K" type stem thermocouple
- · Checks continuity and diode integrity
- TRMS measurements
- IP54 water/dust/oil protection
- 6 ft. (1.8m) drop-resistant
- Designed to meet CAT III 1000V, CAT IV 600V safety standard
- · Auto or manual ranging
- Non-contact voltage (NCV) detection
- Lo-Z low-impedance mode; avoids "ghost" readings due to capacitive coupling of voltage from power supply conductors onto adjacent unused conductors
- Backlit 3-3/4 digit (6,600 count) dual readout LCD
- 66-segment fast-response analog bar graph at bottom of LCD
- Hold, Max, Min, Rel (Zero) display options
- Auto Power Off (can be disabled)
- Magnetic hanging strap
- CE approved
- · ETL certified
- 3-Year Limited Warranty

SPECIFICATIONS:

- ◆ DC Voltage Measurement Ranges: 0 to 660mV/6.6V/66V/600V/1000V
- ♦ AC Voltage Measurement Ranges: 0 to 660mV/6.6V/66V/600V/750V
- ◆ DC Voltage Measurement Accuracy: $\pm (0.8\% \text{ of reading} + 2 \text{ digits}) \text{ or better}$
- ♦ AC Voltage Measurement Accuracy: ±(1.5% of reading + 2 digits) or better
- ♦ Voltage Measurement Resolution: 10µV
- ♦ NCV Detection Range: 12 to 600VAC
- ♦ Overvoltage Protection Level: 1kV
- ♦ AC/DC Current Measurement Ranges: 0 to 660µA/6.6mA/6.6mA/660mA/10A
- ◆ DC Current Measurement Accuracy: ±(2% of reading + 5 digits) in 10A range; \pm (1% of reading + 5 digits) in other ranges
- ♦ AC Current Measurement Accuracy: \pm (3% of reading + 5 digits) in 10Å range; $\pm (1.5\% \text{ of reading} + 5 \text{ digits}) \text{ in other ranges}$
- ♦ Resistance Measurement Ranges: 0 to $660\Omega/6.6k\Omega/666k\Omega/660k\Omega/6.6M\Omega/66M\Omega$

- ♦ Resistance Measurement Accuracy: $\pm (0.8\% \text{ of reading} + 5 \text{ digits})$
- ◆ Capacitance Measurement Ranges: 0 to 6.6nF/66nF/660nF/6.6µF/660µF/ 6.6mF/66mF
- ◆ Capacitance Measurement Accuracy: $\pm (3\% \text{ of reading} + 5 \text{ digits})$
- ♦ Temperature Measurement Range: 32° to 1832°F (0° to 1000°C)
- ◆ Temperature Measurement Accuracy: $\pm (1\% \text{ of reading} + 3 \text{ digits})$
- ♦ Frequency Measurement Ranges (in AC Voltage mode w/12VAC input): 10 to 66Hz/660Hz/6.6kHz/10kHz
- ♦ Frequency Measurement Ranges (in Frequency mode w/5V p-p 1kHz square wave input): 0 to 66Hz/660Hz/6.6kHz/66kHz/660kHz/ 6.6MHz/66MHz
- ♦ Frequency Measurement Accuracy in AC Voltage and Frequency modes: $\pm (1.5\% \text{ of reading } + 5 \text{ digits})$
- ♦ Duty Cycle Measurement Range (w/5V p-p 1kHz square wave input): 10 to 90%
- ♦ Continuity Threshold: <30Ω
- ◆ Diode Integrity Check Voltage: up to 3.2V
- ◆ Data Update Frequency: 3X/sec
- ♦ Auto Power Off Trigger: 15 minutes of front-panel inactivity
- ◆ Operating Temperature: 32° to 104°F (0° to 40°C)
- ♦ Dimensions:
- 6.9 x 3.3 x 2.1 in. (176 x 84 x 54mm)
- ♦ Weight: 13.4 oz. (380g)
- ♦ Power Source: 1 "9V" battery (included)

- "K" Type Stem Thermocouple Probe with -58° to 1112°F (-50° to 600°C) Range
- Adaptor for thermocouples with spade lugs
- CAT III 1000V/10A Rated Test Leads with **Alligator Clips**
- . Magnetic Meter Hanging Strap
- Cloth Pouch with Belt Loop
- Battery
- User's Manual
- 3-Year Limited Warranty

UPC	NO.
016428	DMM570
016398	FX3000 3000 Amp Flex Clamp Adaptor
	(optional, see p. I-129)

CE



Multimeters/Capacitor Tester

MANUAL RANGING CAT III 600V DIGITAL MULTIMETER - DMM40

FEATURES:

- 6 functions, 19 ranges
- Measures 1) AC voltage, 2) DC voltage, 3) DC current, 4) resistance
- Uses beeper to 5) verify integrity of diodes and 6) check circuits for continuity
- Large 3-1/2 digit (2,000 count) LCD
- LIGHT (backlight) and data HOLD buttons
- Designed to meet CAT III 600V safety standard
- CE approved

SPECIFICATIONS:

 Measurement Ranges/Accuracies: AC Voltage: 0 to 500V/±(2.5% of reading + 5 digits)

DC Voltage: 0 to $500V/\pm(1.2\%)$ of reading + 2 digits)

DC Current: 0 to 200mA/±(1.8% of reading + 2 digits)

Resistance: 0 to $2M\Omega/\pm(1.5\%)$ of reading + 2 digits)

 Overload Protection Level: 600VAC/DC with internal fuse

◆ Operating Temperature: 32° to 122°F (0° to 50°C)@<75%RH</p>

♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Battery
- 1 pair double-insulated 20 AWG test leads with 1A (max) rating
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
50122 1	DMM40
016398	FX3000 3000 Amp Flex Clamp Adapto
	(optional, see p. I-129)



DMM40



AUTO RANGING CAT III 600V DIGITAL MULTIMETER - DMM45

Ideal for measuring AC/DC voltage, AC/DC current, resistance and temperature.

FEATURES:

- · 8 functions, 25 ranges
- Measures 1) AC voltage, 2) DC voltage,
 3) DC current, 4) AC current, 5) resistance,
 6) temperature using included "K" type stem thermocouple probe
- Uses beeper to 7) verify integrity of diodes and 8) check circuits for continuity
- Large 3-1/2 digit (2,000 count) LCD
- 15 minute Auto Power Off and 15 second backlight
- Designed to meet CAT III 600V safety standard
- CE approved
- 1-year limited warranty

SPECIFICATIONS:

- Measurement Ranges/Accuracies:
 AC Voltage: 0 to 500V/±(0.8% of reading + 5 digits)
- DC Voltage: 0 to 500V/±(0.5% of reading + 2 digits)
- AC Current: 0 to 200mA/±(1.8% of reading + 3 digits)
- DC Current: 0 to 200mA/±(1.8% of reading + 2 digits)
- Resistance: 0 to $20M\Omega/\pm(1.5\%)$ of reading + 2 digits)
- Temperature: -40° to 752°F (-40° to 400°C)/ ±(1.2% of reading + 7 digits) from 32° to 212°F (0° to 100°C)

- ♦ Overload Protection Level: 600VAC/DC with internal fuse
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C)@<75%RH</p>
- ♦ Power Source: (2) "AAA" batteries (included)

INCLUDES

- "K" type stem thermocouple probe
- 1 Pair Double-Insulated 20 AWG Test Leads
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC	NO
50123 8	DMM45
01639 8	FX3000 3000 Amp Flex Clamp Adaptor (optional, see p. I-129)





DMM45

CE

Wireless Data Logging Multimeters

Patented

WIRELESS DATA LOGGING MULTIMETER WITH DUAL 7-SEGMENT LCD OR DOT MATRIX LCD (GT320) PLUS NCVD/NCCD -GT310 & GT320

Ideal for making electrical measurements more safely from a distance using patented wireless data-link communication protocol.

- 12 functions, 33 ranges
- Measures AC/DC voltage, AC/DC current, resistance and capacitance
- Also checks for continuity and diode integrity
- Includes non-contact AC voltage and current (NCVD/NCCD) sensors with audible alarm
- Designed to meet CAT III 1000V, CAT IV 600V safety standard
- · Wirelessly interfaces to PC, second GT310 or GT320, GT520, or RD330 Remote Display with Memory (included with GT320, optional with GT310) up to 33 ft. (10m) away
- Includes PC display software + USB minidongle receiver (GT320) or PC display/data logging software + USB mini-dongle receiver (GT310); Video-capable data logging software/USB dongle package (No. GTFS10) is available
- Large backlit 3-3/4 digit (4000 count) LCD: 2-row, 7-segment (GT310); graphical dot matrix
- · Includes double-insulated test leads; red lead includes fast-acting ceramic fuse
- · Auto ranging or manual ranging
- 10 available channels centered on 2.4 GHz
- 15-minute Auto Power Off (can be disabled for data logging)
- · Data hold and zero adjust buttons
- CE approved

SPECIFICATIONS:

- ♦ AC Voltage Measurement Range/Accuracy: 0 to $750V/\pm0.6\%$ of reading \pm 3 digits from 0 to 400V; $\pm 1\%$ of reading from 400 to 750V
- ♦ DC Voltage Measurement Range/Accuracy: 0 to $1000V/\pm0.5\%$ of reading \pm 2 digits from 0 to 400V; 0.7% of reading from 400 to 1000V
- ♦ AC Current Measurement Range/Accuracy: 0 to $400\text{mA}/\pm0.15\%$ of reading \pm 5 digits
- ◆ DC Current Measurement Range/Accuracy: 0 to $400\text{mA/}\pm0.12\%$ of reading \pm 3 digits (μ A range); $\pm 0.15\%$ of reading ± 5 digits (mA range)
- ♦ Resistance Measurement Range/Accuracy: 0 to 40M Ω /from ±2.0% to ±6 digits (depends on scale)

- ◆ Capacitance Measurement Range/Accuracy: 52nF to $100\mu F$ from $\pm 10\%$ to ± 10 digits (depends on scale)
- ♦ Non-Contact AC Voltage Detection Range: 50V to 1000V
- ♦ Non-Contact AC Current Detection Range: 100mA to 1000A
- ♦ Wireless Link Type/Frequency: Half-duplex/2.4 GHz
- ♦ Wireless Range/Channel Options: 33 ft. (10m)/10 channels
- ♦ Maximum Line Voltage/Current: 120VAC/15A
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ <80%RH
- ♦ Dimensions: 7.09 x 3.74 x 2.13 in. (180 x 95 x 54mm)
- ♦ Weight (w/out battery): 15.9 oz. (450g)
- ♦ Power Source: (1) "9V" battery

- RD330 Remote Display with Memory (GT320 only; RD330 is optional accessory for GT310)
- PC display software + USB mini-dongle receiver (GT320); PC display/data logging software + USB mini-dongle receiver (GT310)
- Fused, Double-Insulated Test Leads with Screw-On Alligator Clips
- Battery
- · Soft Carrying Case
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01507 0	GT310
01508 7	GT320
01509 4	RD330
01531 5	TL300 Fused, Double-Insulated Test
	Leads with Screw-On Alligator Clips
01529 2	GTSF10 Video-capable Data Logging
	Software/ USB Dongle Package (optional)







Wireless Data Logging Multimeters

WIRELESS DATA LOGGING MULTIMETER WITH DETACHABLE DISPLAY AND NCV/NCC DETECTION - GT520

Ideal for making electrical measurements more safely from a distance using patented wireless data-link communication protocol.

- 15 functions, 36 ranges
- Measures AC/DC voltage, AC/DC current, resistance, capacitance, temperature (using included "K" type bead thermocouple), frequency and duty cycle
- · Also checks for continuity and diode integrity
- Includes non-contact AC voltage and current (NCVD/NCCD) sensors with audible alarm and signal strength display
- Designed to meet CAT III 1000V, CAT IV 600V safety standard
- · Wirelessly interfaces to PC, second GT520, or GT310 or GT320 up to 33 ft. (10m) away
- Detachable slave display unit can 1) wirelessly receive readings from master unit from up to 33 ft. away; 2) hold readings; 3) wake up master unit; 4) adjust readings to zero; 5) be charged through mini-USB jack
- Includes PC display software + USB minidongle receiver; Video-capable data logging software/USB dongle package (No. GTFS10) is available
- Large backlit 3-3/4 digit (6000 count) graphical dot matrix LCD
- Includes double-insulated test leads with screw-on alligator clips; red lead includes fast-acting ceramic fuse
- 99 reading memory
- · Auto ranging or manual ranging
- 10 available channels centered on 2.4 GHz
- 15-minute Auto Power Off (can be disabled for data logging)
- Data hold and zero adjust buttons
- CE approved

SPECIFICATIONS:

- ♦ AC Voltage Measurement Range/Accuracy: 0 to 750V/ \pm 0.6% of reading \pm 2 digits from 0 to 400V; ±1% of reading from 400 to 750V
- ◆ DC Voltage Measurement Range/Accuracy: 0 to $1000V/\pm0.6\%$ of reading \pm 3 digits from 0 to 400V; 0.7% of reading from 400 to 1000V
- ♦ AC Current Measurement Range/Accuracy: 0 to 500mA/ \pm 0.15% of reading \pm 5 digits
- ♦ DC Current Measurement Range/Accuracy: 0 to 500mA/ \pm 0.12% of reading \pm 3 digits (μ A range); $\pm 0.15\%$ of reading ± 5 digits (mA range)

- ♦ Resistance Measurement Range/Accuracy: 0 to $60M\Omega/\text{from }\pm 2.0\%$ to ± 6 digits (depends
- ♦ Capacitance Measurement Range/Accuracy: 52nF to $60,000\mu F$ from $\pm 10\%$ to ± 10 digits (depends on scale)
- ◆ Temperature Measurement Range (using included "K" type thermocouple): -40° to 752°F (-40° to 400°C)
- ♦ Frequency Measurement Range/Accuracy: 10Hz to 10MHz
- ◆ Duty Cycle Measurement Range: 0.1 to 99.9%
- ♦ Non-Contact AC Voltage Detection Range: 50V to 1000V
- ♦ Non-Contact AC Current Detection Range: 100mA to 1000A
- ♦ Wireless Link Type/Frequency: Half-duplex/2.4 GHz
- ♦ Wireless Range/Channel Options: 33 ft. (10m)/10 channels
- ♦ Maximum Line Voltage/Current: 120VAC/15A
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ <80%RH
- ♦ Dimensions: 7.9 x 3.9 x 2.0 in. (200 x 100 x 50mm)
- ♦ Weight: 18 oz. (510g)
- ♦ Power Source: (1) "9V" battery

- PC display software + USB mini-dongle receiver
- · Fused, Double-Insulated Test Leads with Screw-On Alligator Clips
- "K" type bead thermocouple probe
- Mini-USB cable for charging detachable display
- · Magnetic meter hanging strap
- Battery
- · Soft Carrying Case
- User's Manual
- 1-Year Limited Warranty

UPC	NO.
01535 3	GT520
01531 5	TL300 Fused, Double-Insulated Test
	Leads with Screw-On Alligator Clips
01529 2	GTSF10 Video-capable Data Logging
	Software/ USB Dongle Package (optional)







Multimeters



AM35UL





ANALOG MULTIMETER – AM35UL

Old-school meter still gets the job done.

FEATURES:

- 4 functions, 13 ranges
- Measures AC/DC voltage, DC current, resistance
- Fuse and diode protected
- UL listed

SPECIFICATIONS:

- ◆ AC/DC Voltage Measurement Range: 0 to 500V
- ◆ DC Current Measurement Range: 0 to 250mA
- ♦ Resistance Measurement Range: 0 to $1M\Omega$
- ♦ Dimensions: 4 x 2.5 x 0.75 in. (102 x 64 x 19mm)
- ♦ Weight: 2.75 oz. (78g)
- ♦ Power Source: 1 "AA" battery (included)

INCLUDES:

- Test leads
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC NO. 50005 7 AM35UL



DIGITAL UL LISTED MULTIMETER - DMM20UL

· Ideal for making basic measurements safely.

FEATURES:

- 6 functions, 20 ranges
- Measures AC/DC voltage, DC current, resistance
- · Also checks for continuity and diode integrity
- Large LCD
- Safety-recessed test lead sockets
- High-impact thermoplastic case
- UL listed

SPECIFICATIONS:

- ♦ AC Voltage Measurement Range/Accuracy: 0 to 600V/±2.5%
- ◆ DC Voltage Measurement Range/Accuracy: 0 to 600V/±2%
- ◆ DC Current Measurement Range/Accuracy: 0 to 10A/±1%

- ♦ Resistance Measurement Range/Accuracy: 0 to 20MΩ/±1.5%
- ◆ Dimensions: 9.00 x 5.50 x 1.25 in. (228.6 x 139.7 x 31.75mm)
- ♦ Weight: 8.00 oz. (226.8g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Test Leads
- Battery
- User's Manual
- 1-Year Limited Warranty

UPC NO. 50121 4 DMM20UL



DMM333



DIGITAL CREDIT CARD STYLE MULTIMETER – DMM333

Ideal for technicians on the go. Fits in shirt pocket.

FEATURES:

- 7 functions, 25 ranges
- Measures AC/DC voltage, AC/DC current, resistance
- · Also checks for continuity and diode integrity
- Auto ranging
- Large 2000-count LCD
- Data hold + max hold
- Low battery indicator
- Auto power off

SPECIFICATIONS:

- ♦ AC Voltage Range/Accuracy: 0 to 500V/±(0.8% + 1 digit)
- ◆ DC Voltage Range/Accuracy: 0 to 500V/±(0.5% + 5 digits)
- ♦ AC/DC Current Range/Accuracy: 0 to 200mA/±(1.8% + 5 digits)

- ♦ Resistance Range/Accuracy: 0 to 20MΩ/± (0.8% + 5 digits)<1MΩ, ±(2% + 5 digits)>1MΩ
- ♦ Input Impedance (in DCV mode): 10MΩ
- ◆ Operating Temperature: 32° to 140°F (0° to 60°C) @ <75%RH
- ♦ Dimensions: 4.5 x 2.3 x 0.5 in. (115 x 58 x 12mm)
- ♦ Weight: 3 oz. (84g)
- ♦ Power Source: 2 "LR44" batteries (included)

INCLUDES:

- Test Leads
- Batteries
- User's Manual
- 1-Year Limited Warranty

UPC NO. 50105 4 DMM333



Multimeters/Capacitor Tester

DIGITAL SERVICE MULTIMETER – DMM51FSG

Ideal for HVAC/R and industrial applications.

FEATURES:

- 8 functions, 34 ranges
- Measures AC/DC voltage, AC/DC current, resistance, bipolar transistor forward current gain (hFE)
- · Also checks for continuity and diode integrity
- 0 to 20µA and 0 to 200µA DC ranges for measuring flame rod current
- Jumbo 3-1/2-digit (1999 count) LCD
- Protective boot with 3-position tilt stand
- Low battery alert

SPECIFICATIONS:

- ♦ AC Voltage Range/Accuracy: 0 to 750V/±(1.2% + 3 digits) or better
- ◆ DC Voltage Range/Accuracy: 0 to 1000V/±(0.8% + 2 digits) or better
- ♦ AC/DC Current Range/Accuracy: 0 to 10A/±(3% + 7 digits) or better
- Resistance Range/Accuracy: 0 to $200M\Omega/\pm(0.8\% + 10 \text{ digits}) < 2M\Omega$, $\pm(5\% + 10 \text{ digits})$ or better> $2M\Omega$

- Input Impedance: $10M\Omega$ for all ranges
- ♦ hFE Measurement Range: 0 to 1000
- ♦ Display Digit Height: 1.06 in. (27mm)
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ <80%RH</p>
- ♦ Dimensions: 7.5 x 3.5 x 1.3 in. (190 x 88 x 34mm)
- ♦ Weight: 19.4 oz. (550g) with test leads, holster and tilt stand
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- All Weather Test Leads
- Rubber Holster Battery User's Manual
- 1-Year Limited Warranty

ı	UPG	NU.
	50190 0	DMM51FSG
	016398	FX3000 3000 Amp Flex Clamp Adaptor
		(optional, see p. I-129)





DMM51FSG

ECONOMY DIGITAL MULTIMETER WITH LED AND CONTINUITY BEEPER – DMM830HS

Ideal for bench work.

FEATURES:

- 7 functions, 20 ranges
- Measures AC/DC voltage, DC current, resistance, bipolar transistor forward current gain (hFE)
- · Also checks for continuity and diode integrity
- 3-1/2-digit (1999 count) LCD

SPECIFICATIONS:

- ♦ AC Voltage Range/Accuracy: 0 to 750V/±(1.2% + 10 digits) or better
- ◆ DC Voltage Range/Accuracy: 0 to 1000V/±(1.2% + 2 digits) or better
- ◆ DC Current Range/Accuracy: 0 to 10A/±(2% + 2 digits) or better
- Resistance Range/Accuracy:
 0 to 2MΩ/±(1% + 2 digits)

- lacktriangle Input Impedance: 10M Ω for all ranges
- ♦ hFE Measurement Range: 0 to 1000
- ♦ Display Digit Height: 0.5 in. (13mm)
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @ <80%RH
- ♦ Dimensions: 5.2 x 2.8 x 1.0 in. (132 x 70 x 25mm)
- ♦ Weight: 4.9 oz. (138.9g)
- ◆ Power Source: 1 "9V" battery (included)

INCLUDES:

- Test leads Battery User's Manual
- 1-Year Limited Warranty

UPC	NO.
50100 9	DMM830HS
016398	FX3000 3000 Amp Flex Clamp Adapto
	(optional, see p. I-129)





DMM830HS

AUTOMATIC DIGITAL CAPACITOR TESTER - CAP1500

FEATURES:

- Wide measurement range
- Uses precision dual slope A/D converter
 Allignment also leads for in a line in the state of the stat
- Alligator clip leads for in-circuit testingZero adjust switch and low battery indicator
- a 2 1/2 digit (1000 count) LCD
- 3-1/2-digit (1999 count) LCD
- · Fuse-protected from overloads

SPECIFICATIONS:

- Measurement Range: 0 to 20mF over 9 ranges (0 to 200pF/2000pF/20nF/200nF/2μF/20μF/ 200μF/2000μF/20mF)
- Measurement Accuracy: ±(0.5% + 1 digit) or better below 20μF; ±(5% +5 digits) or better above 20μF
- ♦ Sampling Time: 0.4 seconds
- ◆ Operating Temperature: 32° to 122°F (0° to 50°C) @ <75%RH</p>

- ◆ Dimensions: 5.3 x 2.8 x 1.4 in. (135 x 71 x 36mm)
- ♦ Weight: 7.1 oz. (201g)
- ♦ Power Source: 1 "9V" battery (included)

INCLUDES:

- Alligator Clip Test Leads
- Soft Case
- Batterv
- User's Manual
- 1-Year Limited Warranty

UPC NO. 50192 4 CAP1500





CAP1500

TL360W

TL13



ALL WEATHER TEST LEADS – TL360W

Ideal for cold weather.

FEATURES:

- Flexible soft leads
- Medium alligator clips with insulated boots
- 1-Year Warranty

SPECIFICATIONS:

- ♦ Maximum Current: 10A
- ♦ Maximum Voltage: 300V
- ♦ Lead Thickness: 18 Gauge
- ♦ Length: 3 ft. (914mm)
- ♦ Weight: 4.2 oz. (118g)

UPC	NU.
51135 0	TL360W



TEST LEADS WITH HARD POINT - TL13

FEATURES:

- Comfort-grip probe with PVC-insulated leads
- Safety-shrouded, right-angle plugs
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01344 1	TL13	



TEST LEADS - TL108

FEATURES:

- One pair PVC-insulated leads with right-angle plugs
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01351 9	TL108	



TEST LEADS - TL20K

FEATURES

- Includes 2 each: alligator clips, industrial test grip, right-angle silicon test leads
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01350 2	TL20K	



ALLIGATOR CLIP SET 1000V - ETL111

FEATURES:

- 1 pair alligator clips with boots
- CAT III 1000V, CAT IV 600V, 10A rating
- 1-Year Warranty

UPC	NO.	
01348 9	ETL111	



Test Leads/Starter Switch

TEST CORD (MALE) - CT600M

Brings power to areas without a 110V outlet.

- · Red and black heavy duty boots
- Large clips
- 2 wire
- 1-Year Warranty

SPECIFICATIONS:

♦ Maximum Current: 13A

♦ Maximum Voltage: 125V

♦ ASWG: 16

♦ Length: 6 ft. (1.83m)

♦ Weight: 8 oz. (227g)

UPC	NO.
50601 1	CT600M





TEST CORD (FEMALE) - CT700F

Brings power to areas without a 110V outlet.

FEATURES:

- Red and black heavy duty boots
- Large clips
- 3 wire
- Brings power to remote areas without 110V outlet
- 1-Year Warranty

SPECIFICATIONS:

- ♦ Maximum Current: 13A
- ♦ Maximum Voltage: 125V
- ♦ ASWG: 16
- ♦ Length: 2 ft. (610mm)
- ♦ Weight: 5.7 oz. (163g)

UPC	NO.
51095 7	CT700F





MULTI-COLORED TEST LEADS - CT800

Handy set of jumpers.

FEATURES:

- 10 alligator-clip leads: 2 each white, red, black, yellow and green
- 1-Year Warranty

SPECIFICATIONS:

- ♦ Maximum Voltage: 300V
- ♦ ASWG: 22
- ♦ Length: 18 in. (457mm)
- ♦ Weight: 2.9 oz. (82g)

UPC	NO.	
51105 3	CT800	





CT800

SSC₆

STANDARD TEST LEADS - TL100

Ideal for use as AC jumpers.

FEATURES:

- 3 ft. long
- 1 each Red & Black
- 1-Year Warranty

SPECIFICATIONS:

- ♦ Maximum Current: 10A
- ♦ Maximum Voltage: 300V
- ♦ ASWG: 20
- ♦ Length: 3 ft. (914mm)
- ♦ Weight: 1.9 oz. (54g)
- UPC NO. 51125 1 TL100





STARTER SWITCH 16/2, 20 AMP, PUSH BUTTON (UL SWITCH) - SSC6

Quickly hooks up motors/machinery for testing.

FEATURES:

- Red and black heavy duty boots
- Large clips
- Replaces any C-6 start switch
- 1-Year Warranty

SPECIFICATIONS:

- ♦ Maximum Current: 15A
- ♦ ASWG: 16/2
- ♦ Length: 2 ft. (610mm)
- ♦ Weight: 8.3 oz. (240g)

UPC	NO.
51145 9	SSC6



Circuit Breaker Finders







BF20





TRANSMITTER/ SOCKET TESTER

CIRCUIT BREAKER FINDER WITH NCV DETECTOR AND GFCI OUTLET

- · Automatically locates the breaker or fuse associated with any 110V outlet without tripping the breaker or blowing the fuse
- · Indicates five common outlet wiring faults in GFCI and non-GFCI outlets
- · Checks the functioning of a outlet's ground fault circuit interrupter
- Uses audible (beeper) and visual (LED) indications to safely (in non-contact fashion) detect "hot" (energized) outlets, lines and
- White LED work light
- Designed to safety standard IEC 61010-1
- · 3-year limited warranty

SPECIFICATIONS:

- ◆ Safety atings: ETL CAT II 125V (transmitter), ETL CAT II 600V (receiver)
- ♦ Outlet Wiring Indications: Correct wiring, Open ground, Open neutral, Open hot wire, Hot wire & ground reversed, Hot wire & neutral reversed
- ♦ NCV Detection Distance: 0.25 in. (6.2mm), max
- ♦ Operating Temperature: 32° to 122°F (0° to 50°C)
- Transmitter: 2.8 x 2.5 x 2.3 in. (71 x 64 x 58mm) Receiver: 7.4 x 1.8 x 1.5 in. (188 x 46 x 38mm)
- ♦ Weight: Transmitter: 2.1 oz. (60g); Receiver: 4.3 oz. (122g)
- ♦ Power Source: 1 "9V" battery for receiver

INCLUDES:

♦ Dimensions:

- Battery
- User's Manual
- 3-Year Limited Warranty

UPC NO. BF20 01606 0





CA10



Voltage Testers/Circuit Analyzers

AC CIRCUIT ANALYZER - CA10

Ideal for identifying 110/220VAC power circuit and wiring problems that can cause overheating, short circuits, fires, equipment failures and poor equipment performance. Also checks performance of ground fault circuit interrupter (GFCI) outlets and residual current devices (RCDs).

- · Measures a branch circuit's line voltage, peak voltage and neutral-to-ground voltage
- Calculates a circuit's voltage drop in response to 12A, 15A and 20A loads
- . Measures the impedance of hot, neutral and ground conductors as well as available shortcircuit current (ASCC)
- Identifies wiring configurations and detects wiring faults and missing ground wires
- Tests the reliability and response time of GFCI outlets and RCDs
- . Displays True RMS readings of all voltages except peak voltages
- . Works with 2- and 3-phase circuits
- Jumbo LCD with 30-second backlight
- Familiar menu/sub-menu operation
- Data HOLD button and 30-minute auto power off
- · 3-year limited warranty

SPECIFICATIONS:

- ♦ Line Voltage Measurement Range/Accuracy: 85 to 265VAC/± (1.0%+ 0.2V)
- ♦ Peak Voltage Measurement Range/Accuracy: 121 to 374VAC/± (1.0%+ 0.2V)
- ♦ Line Frequency Measurement Range/Accuracy: 45 to 65 Hz/± (1.0%+ 0.2Hz)
- ♦ Voltage Drop Measurement Range/Accuracy: 0.1 to 99.9\%/ \pm (2.5\%+0.2\%)

♦ Load Voltage Measurement Range/Accuracy: 10 to $265V/ \pm (2.5\% + 0.2V)$

♦ Neutral-to-Earth Voltage Measurement Range/Accuracy: 0 to $10VAC/\pm(2.5\%+0.2V)$

- ♦ Hot, Neutral and Ground Line Impedance Measurement Range/Accuracy: 0 to $3\Omega/ \pm (2.5\% + 0.02\Omega)$
- ♦ RCD Triggering Time Measurement Range/ Accuracy: 1ms to 6.5 seconds/ $\pm (1.0\% + 2ms)$
- ♦ RCD Triggering Current Measurement Range/Accuracy: 30 to $37\text{mA}/\pm(1.0\% + 0.2\text{mA})$
- ♦ GFCI Triggering Time Measurement Range/Accuracy: 1ms to 6.5 seconds/ $\pm (1.0\% + 2ms)$
- ♦ Operating/Storage Temperature: 32° to 122°F (0° to 50°C) @ <80% RH
- ◆ Dimensions: 7.6 x 3.1 x 1.5 in. (193 x 78 x 39mm)
- ♦ Weight (without Batteries): 10.4 oz. (295g)
- ♦ Power Source: 6 "AAA" batteries (included)

INCLUDES:

10.4 oz. (295g)

- 12 AWG, 20 in. (0.5m) Long Test Cable
- Batteries Soft Carrying Case
- User's Manual 3-Year Limited Warranty

UPC NO. 01566 7 CA10



LCD is backlit for easy reading in dark places

Specifications:			
Parameter	Measurement Range	Measurement Accuracy	Display Resolution
Line Voltage	85 to 265VAC	± 1.0% ± 0.2V	0.1V
Peak Voltage	121 to 374VAC	± 1.0% ± 0.2V	0.1V
Line Frequency	45 to 65 Hz	± 1.0% ± 0.2Hz	0.1Hz
Voltage Drop	0.1 to 99.9%	± 2.5% ± 0.2%	0.1%
Load Voltage	10 to 265V	± 2.5% ± 0.2V	0.1V
Neutral-to-Earth Voltage	0 to 10VAC	± 2.5% ± 0.2V	0.1V
Hot, Neutral and Ground Line	0 to 3Ω	\pm 2.5% \pm 0.02Ω	0.01Ω
Impedance	>3Ω	NA	
GFCI Triggering Time	1ms to 6.5 sec.	± 1.0% ± 2ms	1ms
RCD Triggering Time	1ms to 6.5 sec.	± 1.0% ± 2ms	1ms
RCD Triggering Current	30 to 37mA	± 1.0% ± 0.2mA	0.1mA
Operating/Storage Temperature	e 32° to 122°F (0° to 50°C) @ <80% RH		
Dimensions	7.6 x 3.1 x 1.5 in. (193 x 78 x 39mm)		

The short test cable improves voltage-drop measurement accuracy

Weight (without Batteries)



AUDIBLE/VISUAL NON-CONTACT VOLTAGE TESTER, ETL CERTIFIED – VS3000A

Ideal for safely detecting energized wires and the hot side of AC outlets.

FEATURES:

- Beeper sounds and LED lights when voltage is detected
- Safe for CAT III 1000V use
- · ETL certified
- · Automatic battery check function

SPECIFICATIONS:

- ♦ Detection Range: 70 to 1000V @ 50 to 500Hz
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ <85% RH
- ◆ Regulatory Compliance: ETL certified Conforms to UL 61010-1 and 61010-2-030

Certified to CAN/CSA C22.2 Nos. 61010-1 and 61010-2-030

- ◆ Dimensions:
- 6.0 x 1.1 x 0.9 in. (152 x 27 x 23.5mm)
- ♦ Weight (with batteries): 1.4 oz. (39g)
- ◆ Power Source: 2 "AAA" batteries (included)

INCLUDES:

- Batteries User's Manual
- 1-Year Limited Warranty

UPC	NO.
51000 1	VS3000A

VS3000A

VR40

HEWI

NON-CONTACT VOLTAGE DETECTOR WITH ADJUSTABLE SENSITIVITY AND 4:1 INFRARED THERMOMETER – VR40

Enables anyone to check in a safe (non-contact) way whether a line, cable or AC outlet is "hot" (energized).

FEATURES:

- Beeper sounds and red LED flashes when voltage is detected
- Unique adjustable sensitivity feature enables accurate non-contact detection of voltage on 12VAC to 480VAC branch circuits and makes individual live wires in bundles easier to isolate
- Safe for CAT III 600V, CAT II 1000V use
- · Also checks 110VAC outlets for wiring faults
- 4:1 IRT with measurement range of -4° to 626°F (-20° to 330°C)
- 4-digit (2000 count) LCD temperature readout in °F or °C
- Powerful built-in LED flashlight
- 15-second Auto Power Off (APO)
- · Pocket clip on back

INCLUDES:

- Batteries User's Manual
- 3-Year Limited Warranty

SPECIFICATIONS:

- ♦ Four Detection Ranges: 12 to 25VAC, 70 to 125VAC, 150 to 240VAC, 250 to 1000VAC
- ♦ Max Non-contact Detection Distance: 0.25 in. (6.2mm)
- ◆ IRT Measurement Accuracy: ±3.8°F (2°C) or ±1% of reading (whichever is greater) above 32°F
- ♦ IRT Emissivity: Fixed at 0.95
- ♦ IRT Laser Power: <1mW (Class 2)
- ◆ Operating Temperature: 32° to 113°F (0° to 45°C)
- ◆ Dimensions: 6.0 x 1.2 x 1.2 in. (152 x 31 x 31mm)
- ♦ Weight (with batteries): 7.8 oz. (220g)
- ◆ Power Source: 2 "AAA" (LR03) batteries (included)

UPC	NO.
016343	VR40



Laser radiation!

Do not stare into beam!

BRIGHT RED LED SCREWDRIVER/CONTINUITY TESTER – ST600LED

Ideal for checking for continuity and voltage.

FEATURES:

- . Bright red LED indicates hot side and continuity
- Continuity and polarity checks
- · Microwave leakage test
- · Checks fuses and bulbs
- Drop-resistant to 10 ft.
- 1-Year limited warranty

SPECIFICATIONS:

- ♦ AC Voltage Test Range: 70 to 250V (contact method); 70 to 600V (non-contact method)
- ♦ DC Voltage Test Range: 0 to 250V
- ♦ Continuity Test Range: 0 to 50MΩ
- ♦ Polarity Test Range: 1.5 to 36VDC
- ♦ Microwave Leakage Test: >5mW/cm²
- ♦ Power Source: 1 "LR44" battery (included)

UPC NO. 51115 2 **ST600LED**



Checks for hot side of outlet.

FEATURES

- Visual indication of 80 to 250V (AC or DC)
- Easy to use; no test leads or battery needed
- UL approved
- Double-insulated housing
- Pocket clip

SPECIFICATIONS

- ♦ Voltage Detection Range: 80 to 250VAC/DC
- ♦ Operating Temperature: 41° to 104°F (5° to 40°C) @ <80%RH
- ◆ Dimensions: 5.63 in. (143mm) long x 0.5 in. (13mm) maximum diameter
- ♦ Weight: 1 oz. (28g)

W Worgitt. I	02. (20g)	
UPC	NO.	
51005 6	ST400	





LINE VOLTAGE TESTER - CT101

Ideal for checking outlet wiring.

FEATURES

- Visual indication of AC or DC voltage
- Easy to use
- UL approved
- Insulated housing
- · Pocket clip on back



SPECIFICATIONS

- ♦ Voltage Detection Range: 80 to 500VAC/DC
- ♦ Maximum Current: 0.3A @ 50/60Hz
- ♦ Safety Rating: CAT III 600V
- ♦ Lead Thickness: 18 AWG
- ♦ Weight: 0.6 oz. (17g)
- ♦ Operating Temperature: 41° to 104°F (5° to 40°C) @ <80%RH (<60%RH above 88°F/31°C)

`	
UPC	NO.
51025 4	CT10



LOW VOLTAGE LINE TESTER - CT102

Ideal for checking doorbell transformers and low voltage relays.

- · Visual indication of AC or DC voltage
- · Versatile alligator clip leads with boots
- ETL approved
- · Double insulated housing and leads
- · Pocket clip on back

SPECIFICATIONS

- ◆ Voltage Detection Range: 5 to 50V AC/DC
- ♦ Maximum Current: 5A
- ♦ Safety Rating: CAT I
- ♦ Lead Thickness: 20 AWG
- ◆ Operating Temperature: 41° to 104°F (5° to 40°C) @ <85%RH (decreasing linearly to <50%RH at 104°F/40°C)
- ♦ Weight: 0.6 oz. (17g)

UPC	NO.
51035 3	CT102



MULTI-VOLTAGE LINE TESTER – CT103

Checks for voltage levels and hot wires.

FEATURES

- · Different visual indications of eight common voltagesfour AC and four DC
- UL approved
- · Double-insulated housing and leads
- Self-storing leads
- · Pocket clip on back



SPECIFICATIONS

- ♦ Working Voltages: 110V, 220V, 277V and 460V (AC or DC)
- ♦ Maximum Current: 0.3A @ 50/60Hz
- ♦ Safety Rating: CAT II 600V
- ♦ Lead Thickness: 20 AWG
- ♦ Operating Temperature: 41° to 104°F (5° to 40°C) @ <80%RH
- ♦ Weight: 2.6 oz. (74g)

UPC	NO.
51045.2	CT10



3 WIRE CIRCUIT ANALYZER - CT300 3 WIRE RECEPTACLE TESTER WITH GFCI - GF1302

Ideal for checking wall outlets.

FEATURES:

- Detects faulty wiring in 3-wire receptacles (CT300)
- Detects faulty wiring in 3-wire receptacles with ground fault circuit interrupters (GF1302)
- · Different combinations of three lights indicate six different fault types
- · Designed for 120VAC circuits
- UL listed
- 1-Year Limited Warranty

UPC	NO.
01359 5	CT300
51067 4	GF1302



Cable & Pipe Locator



CABLE AND PIPE LOCATOR – CL10

Ideal for pinpointing the location of electrical cables and metal, water, or gas pipes behind walls, above ceilings or under floors. Can also trace circuits, detect open- and short-circuits, find outlets covered by plaster, identify a circuit's breaker, and locate blockages in plastic pipes.

- . Makes it safe to break through any wall by revealing and locating hidden infrastructure up to 6.6 ft. (2m) behind it
- · Eliminates need to find and read construction drawings before starting a job
- · Transmitter and receiver communicate on any of eight channels and display readings on a big, bright, multi-function graphic LCD. Both units also include a flashlight (for illuminating dark areas) and a buzzer that can be muted.
- · Makes it easy to identify the breaker associated with an energized or de-energized AC outlet
- Transmitter can also operate as an AC/DC voltmeter with a range of 12 to 600V
- Transmitter has three power levels; receiver has variable sensitivity
- · Receiver's display can be backlit
- · Compatible with one- or two-pole circuits
- · Second transmitter is available to make locating short-circuits and cable leaks more accurate
- Used with a metal rod, system can locate blockages and constrictions in plastic pipes
- Transmitter is powered by one 9V battery; receiver by 6 "AAA" batteries
- 3-year limited warranty

SPECIFICATIONS:

Transmitter

- ♦ Output Frequency: 125 kHz
- ♦ Measurement Range/Accuracy in Voltmeter Mode: 12 to 600VDC or VAC (@60Hz)/±2.5%
- ♦ Display: LCD, with function display and column
- ♦ Overvoltage Rating: CAT III 300V
- ♦ Current Consumption: 31mA (min), 115mA (max)
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C) @ 80%RH
- ♦ Dimensions: 7.5 x 3.5 x 1.7 in. (190 x 89 x 42.5mm)

- ♦ Weight: Without battery: 12.7 oz. (360g) With battery: 14.8 oz. (420g)
- ♦ Power Source: 1 "9V" battery (included)

Receiver

- ♦ Tracking Depth (max): In cable locating mode: 2m for one-pole circuit, 0.5m for two-pole circuit, 2.5m for single-loop line; in grid voltage identification mode: 0.4m
- ♦ Display: LCD, with function display and column
- ◆ Current Consumption: 32mA (min), 89mA (max)
- ♦ Operating Temperature: 32° to 104°F (0° to 40°C)) @<80%RH
- ♦ Dimensions: 9.5 x 3.1 x 1.5 in. (242 x 78 x 39mm)
- ♦ Weight: Without batteries: 9.9 oz. (280a) With batteries: 12.3 oz. (350g)
- ♦ Power Source: 6 "AAA" batteries (included)

INCLUDES:

- Transmitter
- Receiver and 1 Pair of 5 ft. (1.5m) Long Red and Black Test Leads with Attachable Test Probes and Alligator Clips
- Grounding Rod
- Soft Carrying Case
- Batteries
- User's Manual
- 3-Year Limited Warranty

UPC 015643 **CL10**



DURABLE, SOFT CANVAS CARRYING CASE





Tracing a cable behind a wall



Locating a circuit breaker



Includes: A Grounding Rod and 1 set of 5 ft. (1.5m) long Red and Black Test Leads with 1 pair each attachable Test Probes and Alligator Clips

RECEIVER



Stud/Voltage Detectors & Distance Meter

3-IN-1 LED STUD/VOLTAGE/METAL DETECTOR - MSV250

Ideal for locating studs, objects/wires carrying voltage, hidden metal.

FEATURES:

- Uses four low-power LEDs and beeper to indicate direction and position of stud, batten, metal object or wiring
- Detects/distinguishes between metal pipes/tubes and wires
- · Also distinguishes between battens and studs
- · Simultaneously detects studs, metal and wiring
- Needs no probe

SPECIFICATIONS:

- ◆ Dimensions: 6.1 x 2.6 x 1.3 in. (155 x 65 x 32mm)
- ♦ Weight: 6.3 oz. (178g)
- ♦ Power Source: 1 "9V" battery (not included)

INCLUDES:

- User's Manual
- 1 Year Limited Warranty

UPC	NO.
01276 5	MSV250





MSV250

DIGITAL 3-IN-1 LCD STUD/VOLTAGE/METAL DETECTOR - MSV350D

Ideal for locating studs, pipes, wires carrying voltage and hidden metal.

FEATURES:

- Uses LCD scanning indicators and buzzer to indicate direction and position of stud, batten, metal object or wiring
- Detects/distinguishes between metal pipes/tubes and hot wires with variable sensitivity
- · Also distinguishes between battens and studs
- · Simultaneously detects studs and metal/wiring
- Needs no probe
- · Battery charge indicator
- Auto power off

UPC NO. 012175 8 **MSV350D**



SPECIFICATIONS:

- ◆ Dimensions: 6.1 x 2.6 x 1.3 in. (155 x 65 x 32mm)
- ♦ Weight: 6.5 oz. (185g)
- Power Source:1 "9V" battery (not included)
- Warranty: 1 year (limited)



- User's Manual
- 1 Year Limited Warranty



MSV350D

NORTH POLE/SOUTH POLE MAGNETIC DETECTOR – AMY6

FEATURES:

- Finds north and south poles of magnetic fields
- Two color LED indication (red for "N", green for "S")
- Loud buzzer
- Pocket clip

SPECIFICATIONS:

- ♦ Operating Voltage: 6V
- ♦ Power Source: 4 "LR44" batteries (included)

INCLUDES:

- Batteries
 User's Manual
- 1 Year Limited Warranty

UPC	NO.
55300 8	AMY

AMY6

LASER DISTANCE METER 200 FT. (60m) RANGE

Ideal for contractors, carpenters, painters, realtors and HVAC/R specialists who need to measure lengths, widths, heights, areas and volumes quickly and accurately.

FEATURES

- Saves enough time to pay for itself in weeks
- Eliminates need to rearrange a room to measure it; laser shoots over furniture and behind curtains
- Eliminates measurement errors; laser's accuracy is ±0.06 in. (±1.5mm)
- Turns many two-person jobs into one-person jobs
- Displays distances in meters, decimal feet or fractional feet
- Calculates areas, circumferences and volumes
- Uses Pythagorean geometry to make indirect measurements
- Large backlit 4-line LCD
- Addition, subtraction, continuous measurement (tracking) and min/max distance (to a reference) modes
- 20 measurement memory
- · Splashproof and dustproof to IP54 standard
- · Pocket-sized and lightweight

SPECIFICATIONS

- ♦ Measurement Range (indoor): 0.33 to 197 ft. (0.1 to 60m)
- ♦ Measurement Accuracy: ±0.06 in. (±1.5mm)
- ♦ Resolution: 1mm (0.04 in.)
- ♦ Battery Life: 3000 measurements, typical
- ◆ Operating Temperature: 32° to 104°F (0° to 40°C)
- ♦ Dimensions:
 - 4.3 x 1.9 x 1.1 in. (110 x 48 x 28mm)
- ♦ Weight: 3 oz. (84g) without batteries or holster
- ♦ Power Source: 2 "AAA" batteries (included)

INCLUDES:

- Toolbelt Holster Batteries
- User's Manual 3 Year Limited Warranty

UPC	NO.
01525 4	LDM6



LDM60

Instrument Accessories





B2400, B1500, B1604



P80MIN



P2005DAF



P8901



P8912



MP7012





MP7003

INSTRUMENT ACCESSORIES IN ALPHABETICAL ORDER BY CATEGORY

INST	RUM	ENT	ACCESSORIES IN ALPHABETICAL ORDER BY CATEGORY
MODEL NO.	UPC	KEY	DESCRIPTION
ACCES	SORIES	S	
			MENT VANES & PROBES
FW450-12		Z	12MM WINDSPEED IMPELLER FOR FLOW WATCH
FW450-50	01473 8	Z	15M SOUNDING CABLE WITH WATER SPEED IMPELLER FOR FLOW WATCH
P8901	400067	Z	REPLACEMENT VANE/TEMPERATURE PROBE FOR DCFM8901
P8912	01291 8	Z	REPLACEMENT VANE/TEMPERATURE PROBE FOR WDCFM8912
P4204	40121 7	Z	REPLACEMENT HOT WIRE AIR/TEMPERATURE PROBE FOR HWA4204HA
P80M	40136 1	<u>Z</u>	REPLACEMENT VANE/TEMPERATURE PROBE FOR DAF80PWM
P80MIN	40137 8	Z	REPLACEMENT TELESCOPING HOT WIRE PROBE FOR DAF80MIN REPLACEMENT ANE/TEMPERATURE PROBE FOR DAF4207SD AND DAF80PW
P80P PHWA2005	40131 6 01259 8	Z Z	REPLACEMENT AND TEMPERATURE PROBE FOR DATA207SD AND DATASUPW REPLACEMENT HOT WIRE AIR/TEMPERATURE PROBE FOR HWA2005DL
P2005DAF	01239 6		REPLACEMENT VANE/TEMPERATURE PROBE FOR DAF2005MDL
P4214SD			REPLACEMENT HOT WIRE AIR/TEMPERATURE
P4207SD	01549 0	*Z, S0	VANE TYPE PROBE FOR DAF4207SD
AC ADAPTO	RS		
AC1	10166 7	* Z	110VAC TO 9VDC ADAPTOR FOR ALL 16 SD CARD METERS (MODEL NOS. ENDING IN SD)
AC2	01568 1		REPLACEMENT AC ADAPTOR/CHARGER FOR THE DCS400 SERIES
AC314			110VAC TO 9VDC ADAPTOR FOR DTH314DL
ACA115	01437 0	* Z	AC ADAPTOR FOR DT304, DT306DL, DT309DL
Z110VADPT	210147	Z SO	110VAC TO 9VDC ADAPTOR FOR CDM77535, DCFM8901, DCFM8906, DM8200, DM8205, DM8215, DM8230, DM8252, DM8252RS, DSM8922, DT8852, DT8855, DT8856, WDCFM8912
BATTERIES			DINOZOZNO, DOMOSZZ, D1000Z, D10000, D1000U, WDUI W031Z
BA10	72015 8	*	"1/2 AA" BATTERY FOR HT10, HT20, HT50 and DSM20
B1300	72005 9	Z	"D" ALKALINE BATTERIES - MINIMUM ORDER 12
B1400	72005 9	Z	"C" ALKALINE BATTERIES - MINIMUM ORDER 12
B1500	72015 8	Z	"AA" CELL ALKALINE BATTERIES - MINIMUM ORDER 12
B1604	72025 7	Z	"9V" ALKALINE BATTERIES - MINIMUM ORDER 12
B2400	72045 5	Z	"AAA" CELL ALKALINE BATTERIES - MINIMUM ORDER 12
LR44	72125 4	Z	REPLACEMENT BATTERY FOR: HDT304K; CT500AV & MOST DIGITAL STEM THERMOMETERS - MIN ORDER 12
BLACK LIGI		/\/ NIOI	DATTEDY OPERATED DIAGO LIGHT
BL6		X NUL	BATTERY OPERATED BLACK LIGHT
HR33	15060 3		CALIBRATION SALT MGCL 33% FOR CDM77232, CDM77535, CMM880, DTH184DL, DTH3007SD, EM8716, EP8703,
าเกออ	13000 3		EP8706, EP8709, EP8710, PTH8708, LAM880D, LRTH185DL, LTH809DL, RHMG650, SAM990DW
HR33LJ	16120 3	Z	CALIBRATION SALT MGCL 33% FOR PTH8707, WBGT8758, WBGT8778
HR75	15070 2		CALIBRATION SALT MGCL 33% FOR CDM77232, CDM77535, CMM880, DTH184DL, DTH3007SD, EM8716, EP8703,
			EP8706, EP8709, EP8710, PTH8708, LAM880D, LRTH185DL, LTH809DL, RHMG650, SAM990DW
HR75LJ	161203	Z	CALIBRATION SALT NACL 75% FOR PTH8707, WBGT8758, WBGT8778
			ETECTORS REPLACEMENT SENSOR
NGD8800SEN		* Z	REPLACEMENT SENSOR FOR NGD8800
ELECTRICA GTSF10	01529 2		DATA LOGGING SOFWARE FOR GT310 AND GT320; OUTPUT IN ACCESS AND EXCEL FORMAT
EC4031R			ENCLOSURE FOR PB RELAYS
INSTRUME			LINGLOODILE FORT DIRECTO
C16	01264 2		CASE FOR DLAF8000, DLAF8000C
C17	01524 7	* Z	CLEAR PLASTIC WATERPROOF POUCH FOR INSTRUMENTS
81001	013199 X	(X NCL	ZIP-TOP TOOL AND METER BAG, 16 IN. WIDE
	TEMPERA	TURE 8	& HUMIDITY REPLACEMENT PROBES AND SENSORS
MP7003			EXTERNAL PIN TYPE PROBE FOR MMD7003
MP7021	70604 6	Z	EXTERNAL PIN TYPE PROBE FOR MM70, MM70D
MP7022	07070 3	<u>Z</u>	EXTERNAL ROLLER TYPE PROBE FOR MM70, MM70D
MP905	01655 8	7	5 INCH DEEP WALL MOISTURE SENSOR FOR MMD950, MMD900 EXTERNAL PIN TYPE PROBE FOR MM700D
MP7011 MP7012	07040 6 07050 5	<u>Z</u> Z	ROLLER TYPE PROBE FOR MM700D
PIND4E	01499 8	* Z	REPLACEMENT PINS FOR MMD4E
P930SD			EPLACEMENT COMBINATION PROBE FOR DLAF930SD
P3007SD			REPLACEMENT TEMPERATURE-HUMIDITY PROBE FOR DTH3007SD
THGR268	60073 3	Z	REPLACMENT/EXTRA WIRELESS TEMPERATURE-HUMIDITY SENSOR FOR EMR963HG
			IT SENSORS
P112SD			REPLACEMENT LIGHT SENSOR WITH COVER FOR DLM112SD
			M930SD PRESSURE METER
PS2	01491 2	Z	PRESSURE SENSOR FOR PM930SD 2BAR
PS5			PRESSURE SENSOR FOR PM930SD 5BAR
PS10			PRESSURE SENSOR FOR PM930SD 10BAR
PS20 PS50			PRESSURE SENSOR FOR PM930SD 20BAR PRESSURE SENSOR FOR PM930SD 20BAR PRESSURE SENSOR FOR PM930SD 20BAR
PS100			PRESSURE SENSOR FOR PM930SD 50 BAR PRESSURE SENSOR FOR PM930SD 100 BAR
PS400			PRESSURE SENSOR FOR PM930SD 400BAR
			PRESSURE SENSOR FOR PRISSUSD 400DAK MENT WICKS/THERMOMETERS
P8706	10043 1	Z	EXTERNAL TEMPERATURE PROBE FOR EP8706
RTSP	10202 2	Z	(2) REPLACEMENT °C THERMOMETERS FOR TSP200R (RED SPIRIT)
SPR108	10260 2	Z	(2) REPLACEMENT °F THERMOMETERS FOR SP100FR
SPR109	10265 7	7	(2) REPLACEMENT °C THERMOMETERS FOR SP100CR

(2) REPLACEMENT °C THERMOMETERS FOR SP100CR

SPR109



Instrument Accessories

MODEL NO.	UPC	KEY	DESCRIPTION
SPR120	10270 1	Z	(6) REPLACEMENT WICKS FOR ALL PSYCHROMETERS
KRSTPW			REPLACEMENT THERMOMETER WICK SET
RS380	01378 6	Z	TOR REPLACEMENT SENSOR REPLACEMENT SENSOR FOR RLD380L & RLD382P
SOFTWARE			TIEL EAGLINENT GENOOTT OT TIEDSOOF & TIEDSOOF
ASFTKIT	12710 0	Z	PC INTERFACE KIT FOR CDM77535, DCFM8901, DCFM8906, DM8200, DM8205, DM8215, DM8230, DM8252, DM8252RS, DSM8922, DT8852, DT8855, DT8856, WDCFM8912
LSFTKIT	41420 0	Z	PC INTERFACE KIT FOR DAF2005MDL, DAF80MIN, DAF80PW, DAF80PWM, DCM22CT, DCM4300, DCT2001, DPHC2001, DPH208R, DTH3009DL, HWA2005DL, HWA4204HA, PM9100, TQ8800, UVC254, VB8201HA, VC9200
SDRD1 DT300RSCB	01502 5	* Z * Z	SD CARD READER FOR ALL 16 SD CARD METERS (MODEL NOS. ENDING IN SD) RS232 CABLE FOR DT306DL AND DT309DL
DT300RSCB	01441 7	* Z	PC DATA LOGGING SOFTWARE FOR DT306DL AND DT309DL
RS232-USB		* Z	RS232-USB CONVERTER FOR DT2000RTD
DT2000U80		* Z	PC DATA LOGGING SOFTWARE FOR DT2000RTD
SOUND ME		* Z	RS232 CABLE FOR DT2000RTD
SC941	01570 4		SOUND LEVEL PROBE/PLUG ADAPTOR FOR DLAF930SD
TACHOMET	ER ACCES	SSORY	
RT800	43021 4		REFLECTIVE TAPE FOR NON-CONTACT LASER TACHOMETERS
RTDTP100		3ES * Z	DTD DDADE EAD DTD2000DTD 9 DT4047CD
0C119	52504 0	Z	RTD PROBE FOR DTR2000RTD & DT4947SD "K" TYPE OVEN PROBE W/ CLIP
SSP144	25045 7	Z	"K" TYPE RIGID PLUG-IN SURFACE PROBE
SSP145	25050 1	Z	"K" TYPE RIGID PLUG-IN GENERAL PURPOSE/PIERCING PROBE
SSP146 TPK02	25055 6 25001 3	Z 	"K" TYPE RIGID PLUG-IN AIR PROBE "K" TYPE HIGH TEMPERATURE GENERAL PURPOSE PROBE WITH EXTENDABLE CORD (80PK2A)
TPK03	25003 7	Z	"K" TYPE SURFACE THERMOCOUPLE PROBE WITH EXTENDABLE CORD FOR DTH3007SD & HWA4214SD
TPK04	25004 4	Z	"K" TYPE AIR PROBE WITH EXTENDABLE CORD (80PK4A)
TPK05 TP07	25005 1	* 7 NCI	"K" TYPE PIERCING PROBE, STAINLESS STEEL WITH EXTENDABLE CORD FOR DTH3007SD & HWA4214SD ATC TEMPERATURE PROBE FOR DPH230SD & WK2017SD
TPK500	25015 0	Z IVOL	"K" TYPE PROBE FOR UP TO 500°F FOR DTH3007SD & HWA4214SD
TPK900	25020 4		"K" TYPE PROBE FOR UP TO 900°F
TPK2500 TPKAP	25080 8 25075 4		"K" TYPE HIGH TEMPERATURE PROBE, 2500°F "K" TYPE SURFACE PROBE WITH HANDLE
TPKH	25070 9	NCL Z	"K" TYPE PROBE THERMOCOUPLE PROBE EXTENDER
TPKPP	25060 0	Z	"K" TYPE EXPOSED TIP PROBE WITH PIPE CLAMP
			A ACCESSORIES
L09 L12	01610 7	* Y * CO V	9° TELEPHOTO LENS FOR GTi10, 20, 30 12° LENS (2x) FOR GTi10, 20, 30 - MADE TO ORDER ONLY - 4 WEEKS LEAD TIME
L38	01607 7	* Y	38° LENS FOR GTI10, 20, 30
L512	016152	* Ү	12° 2X TELEPHOTO LENS (12 x 9) FOR GTi50
L548 L6P4	01613 8 01611 4	* Y	48 ° 2X WIDE ANGLE LENS (48 x 36) FOR GTi50 6.4° TELEPHOTO LENS FOR GTi10, 20, 30
SWGT3N5	01623 7	* Y	PROFESSIONAL VERSION SOFTWARE FOR GTi30 and GTi50 ONLY, SUPPORTING STREAMING VIDEO
CRCHGTI	01637 4	* Ү	CAR CHARGER FOR GTi10/20/30/50
BTTGTi	01617 6	* Y	BATTERY FOR GTi10/20/30/50
ADPTRGTi TRIPODS	016169	* Y	AC ADAPTOR FOR GTi10, 20, 30, 50
TRIPODFL	01431 8	* Z	FLOOR MOUNT TRIPODS FOR INSTRUMENTS, TELESCOPING
TRPDGTi	016183	* Y	TRIPOD ADAPTOR FOR GTi10, 20, 30, 50
TRIPODBT UV LIGHT N			BENCHTOP TRIPODS FOR INSTRUMENTS, TELESCOPING
UVCAL4000			UV A& B CALIBRATION CHAMBER
VIBRATION	METER R	EPLAC	EMENT SENSOR
P8205SD	01547 6	* S0 Z	REPLACEMENT VIBRATION SENSOR FOR VM8205SD
WATER QUA 8690P	41335 7	TERS RI Z	EPLACEMENT PROBES ph replacement head for DPH8690
CDPB03	01574 2		CONDUCTIVITY/TDS/SALT REPLACEMENT PROBE FOR DCT430SD AND WK2017SD
CP22CT	41451 4	Z	CONDUCTIVITY REPLACEMENT PROBE FOR DCM22CT
CP4300 CT0P2001	41446 0	Z	CONDUCTIVITY REPLACEMENT PROBE FOR DCM4300 REPLACEMENT CONDUCTIVITY/TDS PROBE FOR DCT2001, DCM4300, DCM22CT,
D0P2001	41442 2 41439 2	Z XX	DISSOLVED OXYGEN REPLACEMENT PROBE FOR: DPHC2001
DPH70110RF		* NCL	ORP ELECTRODE REPLACEMENT PROBE FOR DPH7011
ORP14	01492 9	* Z	ORP REPLACEMENT PROBE FOR DPH230SD, WK2017SD
OXPB11 PCT430SD	01530 8 01545 2		OXYGEN REPLACEMENT PROBE FOR WK2017SD CONDUCTIVITY/TDS/SALT REPLACEMENT PROBE FOR DCT430SD
PHS1	01493 6	* Z	ph replacement electrode for dph230SD, WK2017SD
PHS2	01538 4	* S0 Z	PH REPLACEMENT ELECTRODE FOR DPH230SD, WK2017SD
PHS3			COMBINATION PH ELECTRODE/TEMPERATURE PROBE FOR DPH230SD, WK2017SD
PHS3K7 PHS4HD			COMBINATION pH ELECTRODE/TEMPERATURE PROBE WITH ATC FOR DPH230SD, WK2017SD HEAVY-DUTY SPEAR TIP pH ELECTRODE FOR DPH230SD, WK2017SD
PHS6HD	01539 1	* S0 Z	HEAVY-DUTY SPEAR TIP pH ELECTRODE FOR DPH230SD, WK2017SD
			IN GAUGE ACCESSORIES
TR831 RS150			WIRELESS TEMPERATURE AND HUMIDITY TRANSMITTER FOR WS831DL AND WS821 REPLACEMENT TEMPERATURE SENSOR FOR RGR150
110100	012303	IVUL	THE ENGLISHERT TERM ENVIOUR SERVOUTTOUTHUITIOU



SDRD1



RT800



TPK02



TPKH





CTOP2001



DOP2201

Instrument Accessories

MODEL NO.

P18ART-1SM

P18ART-2SM

P18ART-3SM

DCS18ART3

P16ART-1SM

HIGH PERFORMANCE SYSTEMS

014196

01477 6

01489 9

01418 9

VIDEO INSPECTION/SECURITY (See also I-8 - I-33)

DCS1800 SYSTEMS

HIGH PERFORMANCE SYSTEMS - PROBE ACCESSORIES (See also Probe Compatibility Chart: I-12 & I-13)

















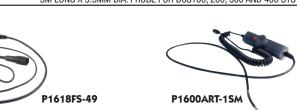
PM003



P16181HP



(5		
P455-3N	01470 7	3M
P455-2N	01460 1	2M
P455-1N	01466 0	1M
P495-3N	01468 4	2M
P495-2N	01467 7	2M
P495-1N	01423 3	1M







	P16ART-2SM	01476 9	*	2M LONG X 6.0MM DIA. ARTICULATING PROBE FORDCS800, DCS1600, DCS1700 SYSTEMS
	P16ART-3SM	01500 1	*	3M LONG X 6.0MM DIA. ARTICULATING PROBE FOR DCS800, DCS1600, DCS1700 SYSTEMS
Ī	HIGH PERFOR	MANCE SY	YSTEMS -	- FLEXIBLE-OBEDIENT PROBE OPTIONS (See also Probe Compatibility Chart: I-12 & I-13)
_	P16181SR-M	01408 0		1M LONG X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS
	P16182SR-M	01409 7		2M LONG X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS
	P16183SR-M	014103		3M LONG X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS
	P1618SV-1SR	01406 6	* NCL	1M LONG X 5.5MM DIA. SIDE VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS"
	HIGH PERFOR	MANCE SY	YSTEMS -	
_	P16181SM-M	01411 0		1M LONG X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS
	P16183SM-M	014127		3M LONG X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS
	P16185SM-M	01414 4		5M LONG X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS
	P161810SM-M	01414 1		10M X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS - MUST BE
				PURCHASED TOGETHER W/ RP1618 REEL TO MINIMIZE POTENTIAL DAMAGE DURING USE. REEL NOT INCLUDED
	P161830SM-M	014158		30M LONG X 5.5MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1600, DCS1700, DCS1800 SYSTEMS - MUST
_				BE PURCHASED TOGETHER W/ RP1618 REEL TO MINIMIZE POTENTIAL DAMAGE DURING USE. REEL NOT INCLUDED
	HIGH PERFOR	MANCE SY	YSTEMS -	- SPECIALTY PROBE OPTIONS (See also Probe Compatibility Chart: I-12 & I-13)
	P1839-M	01424 0		0.75M LONG X 3.9MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1100, DCS1600, DCS1700, DCS1800 SYSTEMS
	P16182-39	015568	*	2M LONG X 3.9MM DIA. FORWARD VIEW PROBE FOR DCS800, DCS1100, DCS1600, DCS1700, DCS1800 SYSTEMS
	P16183-39	01557 5	*	3M LONG X 3.9MM DIA. FORWARD VIEW PROBE
	P1618FS-49	01481 3	*	1M LONG X 4.9MM DIA. SWITCHABLE FRONT/SIDE VIEW PROBE FOR DCS800, DCS1100, DCS1600, DCS1700,
_				DCS1800 SYSTEMS
	P16182-49	01553 7	*	2M LONG X 4.9MM DIA. SWITCHABLE FRONT/SIDE VIEW PROBE FOR PROBE FOR DCS800, DCS1100, DCS1600,
				DCS1700, DCS1800 SYSTEMS
	P16183-49	05514 4	*	3M LONG X 4.9MM DIA SWITCHABLE FRONT/SIDE VIEW PROBE FOR DCS800, DCS1100, DCS1600, DCS1700,

3M LONG X 6.0MM DIA. ARTICULATING PROBE FOR DCS1800ART SYSTEMS

01567 4 * SO NCL ARTICULATING 5.5M DIA X 3M LONG PROBE ST. PR AUDIO-VIDEO (SO)

- ARTICULATING SOFT METAL PROBE OPTIONS (See also Probe Compatibility Chart: I-12 & I-13)

1M LONG X 6.0MM DIA. ARTICULATING PROBE FOR DCS1800ART SYSTEMS

2M LONG X 6.0MM DIA. ARTICULATING PROBE FOR DCS1800ART SYSTEMS

1M LONG X 6.0MM DIA. ARTICULATING PROBE FOR DCS800, DCS1600, DCS1700 SYSTEMS

	PM003	01370 0		SET OF THREE MIRRORED VIEWING TIPS (70°, 90°, 110°) FOR ALL 5.5MM PRÓBES EXCEPT P16181/2/3HP
	DCS1618M	01395 3	NCL	CLICK 'N MEASURE SOFTWARE & MEASURING TIP FOR DCS1800 AND DCS1600
	RP1618	01520 9	*	REEL STAND FOR LONG PROBES, 10M OR LONGER
	HT1618	01673 2	*	TELESCOPING RIGID HOLDING TUBE FOR SOFT METAL PROBES
•	HIGH PERFOR	RMANCE SY	STEMS	- PROBE CONTROLLERS (See also I-23)
	H17	01648 0	*	DCS1700 VIDEO BORESCOPE HANDHELD RECORDING CONSOLE
	H16	01580 3	*	DCS1600 VIDEO BORESCOPE HANDHELD RECORDING CONSOLE
	H8	01647 3	*	DCS800 VIDEO BORESCOPE HANDHELD RECORDING CONSOLE
	DCS1800-TR	01475 2	*	WIRELESS HANDLE/TRANSMITTER FOR DCS1800ART SYSTEMS
	HIGH PERFOR	RMANCE SY	STEMS	- SUPER HIGH-PERFORMANCE PROBE OPTIONS (See also I-24 & I-25)
	P16HPART	01575 9	*	1M LONG X 6MM (0.23 in.) DIA. VGA RESOLUTION ARTICULATING 1M LONG X 6MM (0.23 in.) DIA. VGA
	P16HP2ART	01621 3	*	2M LONG X 6MM (0.23 in.) DIA. VGA RESOLUTION ARTICULATING PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
	P16HP3ART	01622 0	*	3M LONG X 6MM (0.23 in.) DIA. VGA RESOLUTION ARTICULATING PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
	P16181HP	01576 6	*	1M LONG X 5.5MM (0.22 in.) DIA. VGA RESOLUTION PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
	P16182HP	01644 2	*	2M LONG X 5.5MM (0.22 in.) DIA. VGA RESOLUTION PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
	P16183HP	01645 9	*	3M LONG X 5.5MM (0.22 in.) DIA. VGA RESOLUTION PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
	THE SEEKER"	SERIES A	CCESSO	RIES (See also I-26 - I-32)
	RCV100	01446 2		WIRELESS USB RECEIVER, COMPATIBLE W/ DCS100 AND DCS400 SERIES
	AC2	01568 1	* Z	REPLACEMENT AC ADAPTOR/CHARGER FOR THE DCS400 SERIES
	ADP05V	01497 4	* Z	CAR CHARGER FOR DCS400 AND DCS100 SERIES
	PT12	01559 9		MIRROR, MAGNETIC PICKUP AND PICKUP HOOK ACCESSORIES FOR 12MM DIAMETER PROBES
	PT5	01561 2		MIRROR, GUIDE BALL AND THREAD PROTECTOR ACCESSORIES FOR 5.5MM DIAMETER PROBES
	PT9	01560 5		MIRROR, MAGNETIC PICKUP, PICKUP HOOK AND THREAD PROTECTOR ACCESSORIES FOR 9MM DIAMETER PROBES
	THE SEEKER"	" SERIES -	FLEXIBL	E-OBEDIENT PROBE OPTIONS (See also I-27)

HIGH PERFOR	MANCE SY	YSTEMS	SUPER HIGH-PERFORMANCE PROBE OPTIONS (See also I-24 & I-25)
P16HPART	01575 9	*	1M LONG X 6MM (0.23 in.) DIA. VGA RESOLUTION ARTICULATING 1M LONG X 6MM (0.23 in.) DIA. VGA
P16HP2ART	01621 3	*	2M LONG X 6MM (0.23 in.) DIA. VGA RESOLUTION ARTICULATING PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
P16HP3ART	01622 0	*	3M LONG X 6MM (0.23 in.) DIA. VGA RESOLUTION ARTICULATING PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
P16181HP	01576 6	*	1M LONG X 5.5MM (0.22 in.) DIA. VGA RESOLUTION PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
P16182HP	01644 2	*	2M LONG X 5.5MM (0.22 in.) DIA. VGA RESOLUTION PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
P16183HP	01645 9	*	3M LONG X 5.5MM (0.22 in.) DIA. VGA RESOLUTION PROBE W/ LIGHT BOOST AND ANTI-REFLECTION
THE SEEKER™	SERIES A	CCESSO	IES (See also I-26 - I-32)
201100	01446.0		WIDELECCTION DECENTED COMPATINE W/ DOCADO AND DOCADO CEDICO

THE SEEKER"	" SERIES - F	LEXIBL	E-OBEDIENT PROBE OPTIONS (See also I-27)
PT9	01560 5		MIRROR, MAGNETIC PICKUP, PICKUP HOOK AND THREAD PROTECTOR ACCESSORIES FOR 9MM DIAMETER PROBE
PT5	01561 2		MIRROR, GUIDE BALL AND THREAD PROTECTOR ACCESSORIES FOR 5.5MM DIAMETER PROBES
PT12	01559 9		MIRROR, MAGNETIC PICKUP AND PICKUP HOOK ACCESSORIES FOR 12MM DIAMETER PROBES
ADP05V	01497 4	* Z	CAR CHARGER FOR DCS400 AND DCS100 SERIES
AC2	01568 1	* Z	REPLACEMENT AC ADAPTOR/CHARGER FOR THE DCS400 SERIES
HUV IUU	U1440 Z		WIRELESS USB RECEIVER, CUMPATIBLE W/ DCSTUU AND DCS400 SERIES

THE SEEKER™	SERIES - FLEXIBL	E-OBEDIENT PROBE OPTIONS (See also I-27)
P400-1	01393 9 XX NCL	REPLACEMENT PROBE W/CAMERA -OLD STYLE
P230-1	01386 1	CLOSE FOCUS 1M LONG X 12MM DIAMETER PROBE FOR ALL SEEKER SYSTEMS
P230-1F	01474 5	FAR FOCUS 1M LONG X 12MM DIAMETER PROBE FOR ALL SEEKER SYSTEMS
P230-1X	01387 8	1M (3.3 FT.) EXTENSION FOR 12MM DIAMETER PROBES
P230-2X	01390 8	2M (6.6 FT.) EXTENSION FOR 12MM DIAMETER PROBES
P230-3X	01391 5	3M (9.8 FT.) EXTENSION FOR 12MM DIAMETER PROBES
P495-1N	01423 3	1M LONG X 9MM DIA. PROBE FOR DCS100, 200, 300 AND 400 SYSTEMS AND DCS280/DCS350
P495-2N	01467 7	2M LONG X 9MM DIA. PROBE FOR DCS100, 200, 300 AND 400 SYSTEMS AND DCS280/DCS350
P495-3N	01468 4	2M LONG X 9MM DIA. PROBE FOR DCS100, 200, 300 AND 400 SYSTEMS AND DCS280/DCS350
P455-1N	01466 0	1M LONG X 5.5MM DIA. PROBE FOR DCS100, 200, 300 AND 400 SYSTEMS AND DCS280/DCS350
P455-2N	01460 1	2M LONG X 5.5MM DIA. PROBE FOR DCS100, 200, 300 AND 400 SYSTEMS AND DCS280/DCS350
P455-3N	01470 7	3M LONG X 5 5MM DIA PROBE FOR DC\$100, 200, 300 AND 400 SYSTEMS AND DC\$280/DC\$350

Instruments Reference



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TEMPERATURE & HUMIDITY MEASUREMENTS

Distance-to-Spot ratio (D:S)

The distance-to-spot ratio (D:S) is the ratio of the distance to the object and the diameter of the temperature measurement area. For instance if the D:S ratio is 8:1, measurement of an object 8 inches away will average the temperature over a 1 inch diameter area. For better accuracy the spot needs to be kept on the object being meas-

Emissivity

Emissivity is measured by the amount of energy radiated when the surface is directly observed. The emissivity of a black body is unity at all wavelengths whereas painted surfaces are typically 0.95.

Sling Psychrometer

A sling psychrometer consists of two thermometers mounted together within a handle. One thermometer is ordinary. The other has a cloth wick over its bulb and is called a wet-bulb thermometer. It is used in determining the relative humidity.

Fahrenheit or F

Celsius or C

 $^{\circ}\mathbf{F} = (1.8 \times ^{\circ}\text{C}) + 32$ $^{\circ}$ **C** = ($^{\circ}$ F-32) x 0.555 **Kelvin** = ${}^{\circ}$ C + 273.15 **Rankin** = ${}^{\circ}$ F + 459.67

Dry-bulb

Dry-bulb temperature is the temperature registered by the dry-bulb thermometer of a psychrometer. It is identical to the temperature of the air.

Wet-bulb temperature is the temperature that the air would have if cooled to saturation by the evaporation of water.

The degree of water vapor or wetness in the air.

Relative Humidity (RH)

The amount of water vapor in a sample of air compared to the maximum amount of water vapor the air can hold at any specific temperature. It ranges from 1 to 100% RH.

Thermistor

A semiconductor material whose resistivity changes with temperature.

Thermocouples

A widely used type of temperature sensor that can also be used as a means to convert thermal potential difference into electric potential difference. They are sets of two dissimilar metals used to measure temperature. Some of the most commonly used types of thermocouples are:

J (Fe/constantan) **K** (chromel/alumel) T (Cu/constantan) E (chromel/constantan) **R** (Pt/Pt - 30% RH) **S** (Pt/Pt -10% RH) N (NiCrSi-NiSi).

Heat index

The temperature the body feels when heat and humidity are combined. The body dissipates heat by varying the rate and depth of blood circulation, by losing water through the skin and sweat glands, and, as a last resort, by panting, when blood is heated above 98.6°F (37° C). Sweating

cools the body through evaporation. However, high relative humidity retards evaporation, robbing the body of its ability to cool itself. When heat gain exceeds the level the body can remove, body temperature begins to rise, and heat related illnesses and disorders may develop.

Wind chill

The term used to describe the rate of heat loss on the body resulting from the combined effect of low temperature and wind. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and eventually the internal body temperature.

Data Logger

An instrument that records or logs data, much of which may be real-time and later downloaded to a computer for studies.

Moisture content

The amount of moisture in material being tested. Some moisture meters directly read % material moisture and others provide a relative scale.

WATER QUALITY

A measure of acidity and alkalinity of a solution on a scale in which a value of 7 represents neutrality and lower numbers indicate increasing acidity and higher numbers increasing alkalinity. Each unit of change represents a tenfold change in acidity or alkalinity and is the negative logarithm of the effective hydrogen-ion concentration or hydrogen-ion activity in gram equivalents per liter of the solution. It ranges from 0 to 14.

Oxygen Reduction Potential (ORP)

This is basically a measurement to oxidize contaminants. It is the only practical method we have to electronically monitor sanitizer effectiveness.

Reduction/Oxidation Reaction (Redox)

This describes all chemical reactions in which atoms have their oxidation number (oxidation state) changed.

Oxidation

This describes the loss of electrons by a molecule, atom or ion.

Reduction

This describes the gain of electrons by a molecule, atom or ion.

Total Dissolved Solids (TDS)

This is a measurement for the combined content of all inorganic and organic substances present within a liquid. Total Dissolved Solids (TDS) of the water tells you the quality of water. It may be used to check if your reverse osmosis water system is working properly. It may also be used to decide if the membrane or cartridges should be changed

Dissolved Oxygen (DO)

This is the relative amount of oxygen that is dissolved in a given sample.

Electrical Conductivity (EC)

This is the measurement of the electrical conductivity of water. Clean water has a low EC. When you add nutrients and pH adjusters, the EC will increase.

Conductivity (u.S)

This is a measurement of the number of ions in a liquid. It is commonly used to measure the quality of a solution.

Automatic temperature compensation (ATC) Automatic correction for the influence of temperature on a given measurement.

SOUND MEASUREMENTS

A-frequency-weighting is mandated for the protection of workers against noise-induced deafness. The weighting averages acoustic energy over periods of times ranging from 8 hours to several years.

Class I and Class 2 define two categories of sound measurement accuracy in IEC 61672. Class I sound level meters are more accurate than Class 2 meters.

C-frequency-weighting is primarily used in the measurement of the peak value of a noise.

GAS MEASUREMENTS

Carbon Monoxide (CO)

An odorless and very toxic gas. CO is formed as a product of the incomplete combustion of carbon or a carbon compound.

Carbon Dioxide (CO₂)

This gas is naturally present in the atmosphere at levels of approximately 0.035%. Short-term exposure to CO2 at levels below 2% (20,000 parts per million or ppm) has not been reported to cause harmful effects. Higher concentrations can affect respiratory function and cause excitation followed by depression of the central nervous system. High concentrations of CO₂ can displace oxygen in the air, resulting in lower oxygen concentrations for breathing. Therefore, effects of oxygen deficiency may be combined with effects of CO2 toxicity. It is often monitored with IAQ equipment.

Indoor Air Quality (IAQ)

This is used to determine the health of the workplace or building by measuring gasses such as carbon dioxide.

Lower explosive limit (LEL)

This is the lowest amount of gas that will cause an explosion. Detectors that sense lower levels of gas will warn you more quickly of the presence of a combustible gas than detectors that sense higher levels.

Parts per million (ppm)

This is the ratio of how much of the tested solid, liquid or gas is present within a million of the sampled solid, liquid (solution) or gas (air) molecules.

LIGHT MEASUREMENTS

A photometric unit of illuminance or illumination equal to one lumen per square meter.

Foot-candle (fc)

A unit of illuminance or illumination equal to one lumen per square foot.

fc = 10.76 x luxlux = fc / 10.76

Ultraviolet light (UV)

This is the part of the electromagnetic spectrum



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which is adjacent to and greater in energy than visible light. The ultraviolet spectrum extends from 180 to 400 nanometers (nm) and is divided into three categories: shortwave (UV-C), medium-wave (UV-B), and longwave (UV-A).

UV-A Ultraviolet radiation in the wavelength band of 320 - 390nm with a peak in energy at about 365 nm; a component of the spectrum of solar radiation that can tan human skin or cause redness in sensitive skin.

UV-B Ultraviolet radiation in the wavelength band of 290 - 320nm with a peak in energy at about 312 nm; a component of the spectrum of solar radiation that can cause sunburn and skin cancer. This band is only partially blocked by the atmospheric ozone layer.

UV-C Ultraviolet radiation in the wavelength band of 200 - 290nm with a peak in energy at about 254 nm; a very harmful component of the spectrum of solar radiation that can cause chromosome mutations, death of single-cell organisms, and damage to the cornea of the eye.

This band is almost completely blocked by the atmospheric ozone layer.

EMF/BTU MEASUREMENTS

Electro-Magnetic Interference (EMI)

Radiation which may affect the performance of electronic equipment.

Electromagnetic field (EMF)

This is the field comprised of the electric field and the magnetic field (magnetic induction). The field can be viewed as the combination of an electric field and a magnetic field. All electric and magnetic fields are electromagnetic fields and can't be divided.

British thermal unit (BTU or Btu)

This is a unit of energy commonly used in the power, steam generation, and heating and air conditioning industries.

Manometer

These are instruments (such as a pressure gauge) for measuring the pressure of gases and vapors.

Barometric pressure

The pressure in the atmosphere at any given location typically measured in inHg.

AIRFLOW MEASUREMENTS

Anemometer

This is an instrument for measuring and indicating the force or speed of the air movement.

Area of a rectangular duct LxW Area of a circular duct Pi R^2 Pi = 3.14 CFM (ft³/min) =

Air Velocity (ft/min) x Area (ft²)

CMM $(m^3/min) =$

Air Velocity (m/min) x Area (m²)

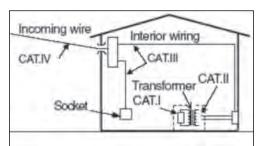
Square feet /144 = square inches

ELECTRICAL MEASUREMENTS

Measurement categories (Over-voltage categories).

To ensure safe operation of measuring instruments, IEC61010 establishes safety standards for various electrical environments, categorized as CAT I to CAT IV, and called measurement categories. Higher-numbered categories correspond to electrical environments with greater momentary energy, so a measuring instrument designed for CAT III environments can endure greater momentary energy that one assigned for

- CAT I: Secondary electrical circuits connected to an AC electrical outlet through a transformer or similar device.
- CAT II: Primary electrical circuits of equipment connected to an AC electrical outlet by a power cord.
- CAT III: Primary electrical circuits of the equipment connected directly to the distribution panel, and feeders from the distribution panel to outlets.
- CAT IV: The circuit from the service drop to the service entrance, and to the power meter and primary over-current protection device (distribution panel).



Power (W) = voltage (V) X current (A) (RMS reading) x (1.414) =

Peak to Peak reading

True Root Mean Square (TRMS)

A TRMS meter is used to measure non sinusoidal waveforms (harmonics).

Volt (E) is the unit of electric pressure or electromotive force. It is the potential that will produce a current of 1 ampere through a resistance of 1 ohm. The volt (symbol: V) is the SI derived unit of electric potential difference or electromotive force.

Ampere (I) is the unit of electrical current (coulombs per second). The ampere, in practice often shortened to amp, (symbol: A) is a unit of electric current, or amount of electric charge per

Ohm (R) is the unit of electrical resistance (volts/ampere). The ohm (symbol: Ω) is the SI unit of electrical impedance or, in the direct current case, electrical resistance,

Watts (W) and Kilowatts (KW) are units of electric power.

Kilovolt-ampere (KVA) is a measurement of apparent electric power.

Kilowatt hour (Kwhr) is a unit of electrical energy or work performed.

Joule (J) is a metric unit of energy: watt per second. 1 Kwhr = 2,655,224 ft-lb = 1.341hp-hr = 3412 Btu = 3,600,000 joules.

Ohm's law relationships (direct current)

 $\mathbf{E} = IR = W/I = \sqrt{WR}$

 $W = I^2R = E^2/R = EI$

 $I = E/R = W/E = \sqrt{W/R}$

 $\mathbf{R} = E/I = W/I^2 = E^2/W$

Capacitance

The ability an electronic component has to store energy as an electrical charge.

Insulation Resistance

The property of a material to resist the flow of electrical current and expressed in Megohms as the ratio of an applied electrical potential divided by the flow of electrical current.

INDUSTRIAL

NIST Certification - Traceability

Calibration in accordance with and against standards traceable to NIST (National Institute of Standards and Technology, USA). Traceability to NIST is a means of ensuring that reference standards remain valid and their calibration remains current.

Peak Hold

Output of the maximum measurement indicated by an instrument during the time duration for which this display mode has been active.

Refractometer

An instrument for measuring refractive indices in a fluid or solution.

Stroboscope

An instrument for determining the speed of cyclic motion that causes the motion to appear slowed or stopped.

Tachometer

A device for indicating speed of rotation.

Fiber optic inspection scope

This type of scope has the ability to see around a bend and see or capture images of hard-toreach places.

IP RATINGS EXPLAINED

The IP system indicates the particular degree of protection offered by the enclosure with the letters "IP" followed by two numbers.

- First Number This number indicates the degree of protection of persons against the ingress of dust.
- Second Number This number indicated the degree of protection of the equipment of the equipment from the ingress of water.

Many of General's Tools & Instruments maintain ratings of IP55 through IP68.

First Number

- 5. Protected against the deposit of dust
- 6. Protected against the access of dust

Second Number

- 5. Protected against water jets
- 6. Protected against heavy seas
- 7. Protected against the effects of immersion
- 8. Protected against submerged state

MUNI

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