# PRECISION TEST & MEASUREMENT INSTRUMENTS

# PRODUCT GUIDE



REED TEST & MEASURE INSTRUMENTS

THERMOGRAPHY | HVAC | SAFETY | ELECTRICAL | INDUSTRIAL

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**Product Index** 

WE BACK UP ALL OUR PRODUCTS WITH A STANDARD 1 YEAR WARRANTY.

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# MINI POCKET MULTIMETER

- · Pocket-sized, auto-ranging digital multimeter
- Measures AC/DC voltage and current, resistance, frequency, capacitance and duty cycle
- . Diode test and continuity check functions
- . Cat. II, 600V safety rating
- · Includes test leads, battery and carrying case

# **Specifications**

DC Voltage Range: 400mV, 4, 40, 400, 600V

AC Voltage Range: 4, 40, 400, 600V

AC/DC Current Range: 400, 4000μA, 40, 400mA Resistance Range: 400Ω, 4, 40, 400kΩ, 4, 40MΩ Frequency Range: 99.9Hz, 0.999, 9.99, 99.9kHz

Capacitance Range: 4.000, 40.00, 400.0nF, 4.000, 40.00,  $100\mu F$ 



#### DESCRIPTION

R5006 Mini Pocket Multimeter

# **POCKET MULTIMETER + NCV**

- Auto-ranging multimeter & non-contact voltage detector
- · Built-in flashlight
- . Diode check and continuity test
- · Cat. III, 1000V safety rating
- · Includes test leads and batteries

## **Specifications**

AČ Voltage Range: 2.000, 20.00, 200.0, 600V DC Voltage Range: 200mV, 2.000, 20.00, 200.0, 600V AC/DC Current Range: 200.0, 2000µA, 20.00, 200mA Resistance Range: 200.00, 2.000, 20.00

200.0kΩ, 2.000, 20.00ΜΩ



# MODEL

# DESCRIPTION

ST-118 CA-05A Pocket Multimeter + NCV Soft Carrying Case

# TRMS WATERPROOF DIGITAL MULTIMETER

- True RMS AC/DC voltage and current measurements
- . Measures frequency, capacitance and temperature
- 4-20 mA process loop measurements with % readout
- . Data hold, Max/Min recording mode
- IP67 Rated (Dust and Waterproof)
- . Cat. IV, 600V & Cat. III, 1000V safety ratings
- Includes temperature input adapter, Type K thermocouple wire probe, test leads, battery and carrying case

#### Specifications

AC/DC Voltage Range: 1000V AC/DC Current Range: 10A Resistance Range: 40MΩ Frequency Range: 10MHz Capacitance Range: 40mF Duty Cycle Range: 99.9%

Temperature Range: 1400°F (760°C)



# MODEL

#### **DESCRIPTION**

R5010 True RMS Waterproof Digital Multimeter
FC-300 Fused Test Lead Set

REED

# **AUTORANGING MULTIMETER**

- Auto ranging AC/DC digital multimeter with temperature function
- . Diode check and continuity test
- · Data hold function
- · Double molded plastic housing
- · Cat. III, 600V safety rating
- Includes temperature input adapter, type K thermocouple wire probe, test leads, battery and carrying case

#### **Specifications**

AC/DC Voltage Range.: 600V AC/DC Current Range: 10A Resistance Range: 40MΩ Frequency Range: 10MHz Capacitance Range: 200μF Duty Cycle Range: 99.9%

Temperature Range: 1400°F (760°C)



MODEL	DESCRIPTION
R5008	Autoranging Multimeter
FC-300	Fused Test Lead Set

# TRMS AUTORANGING MULTIMETER + NCV

- Measures AC/DC voltage and current, resistance, frequency ratio, variable frequency voltage (VFC) capacitance and temperature
- True RMS AC voltage and current measurements
- Also capable of detecting non-contact AC voltage and current measurements (with optional clamp-on adapter)
- · Diode test and continuity check functions
- · Max/Min, Data hold and Relative modes
- · Auto and manual ranging
- Cat. III, 600V safety rating
- Includes test leads, type K thermocouple probe with adapter and batteries

#### Specifications

AC/DC Voltage Range: 60.00, 600.0mV, 6.000, 60.00, 600.0V, 600V

AC/DC Current Range: 600.0, 6000μA, 60.00, 600.0mA, 6.000, 10.00A

Resistance Range:  $600.0\Omega$ , 6.000, 60.00,  $600.0k\Omega$ , 6.000,  $60.00M\Omega$ 

Capacitance Range: 9.999nF, 99.99nF to 999.9µF, 9.999 to 99.99mF

VFC Range: 200.0 to 600V

Frequency Range: 9.999Hz to 9.999MHz

Temperature Range: -40 to 1832°F (-40 to 1000°C)

Duty Cycle: 0.1 to 99.9% Diode Test: Around 3V





ELECTRICAL

Fused Test Lead Set



FC-300



# TRMS BLUETOOTH/WATERPROOF

**MULTIMETER** 

- AC and DC voltage and current, resistance, capacitance, frequency and duty cycle measurements
- 10MHz frequency counter
- · Temperature measurement capability
- · True RMS AC voltage and current measurements
- Min/Max/Avg and Peak hold (>1ms) functions
- · Store up to 10,000 recorded events
- Log multiple sessions or log data continuously for over 200 hours
- Bluetooth interface
- IP67 Rated (Dust and Waterproof)
- Includes test leads, Type K temperature probe, rechargeable battery and software

## **Specifications**

AC/DC Voltage Range: 50, 500mV, 5, 50, 500, 1000V AC/DC Current Range: 500, 5000μA, 50, 500mA, 10A Resistance Range: 50, 500 $\Omega$ , 5, 50, 500k $\Omega$ , 5, 50M $\Omega$  Capacitance Range: 5, 50, 500nF, 5, 50, 500μF, 10mF Frequency Range: 50, 500Hz, 5, 50, 500kHz, 5, 10MHz Temperature Range: -58 to 1832°F (-50 to 1000°C)



MODEL	DESCRIPTION
R5005	True RMS Multimete
EC-300	Fused Test Lead Set

# **AC CURRENT ADAPTER**

- · Ideal tool to extend the current range for all multimeters
- Voltage output of 1 mV/A via standard banana inputs

#### **Specifications**

AC Current Range: 200A



MODEL	DESCRIPTION
CP-09	AC Current Adapte

# AC/DC CURRENT ADAPTER

 Converts any digital multimeter into an AC/DC current clamp

## **Specifications**

AC/DC Current Range: 200A, 2000A



MODEL	DESCRIPTION
CA-203	AC/DC Current Adapter



# AC CLAMP METER + NCV, 400A

- Measures AC current, AC and DC voltage, resistance, capacitance, as well as temperature with the included Type K thermocouple probe
- . Diode test and continuity check
- · Cat. III, 600V safety rating
- Includes test leads, temperature probe, batteries and carrying case

# **Specifications**

AC Current Range: 40.00, 400.0 A

DC Voltage Range: 400.0mV, 4.000, 40.00, 400.0, 600.0V

Temperature Range: -4.0 to 1400.0°F (-20.0 to 760.0°C)

AC Voltage Range: 4.000, 40.00, 400.0, 600.0V

Resistance Range: 40.0Ω, 4.000, 40.00, 400.0kΩ, 4.000, 40.00MΩ Capacitance Range: 40.00, 400.0nF, 4.000, 40.00, 100.0μF

MODEL DESCRIPTION
R5020 AC Clamp Meter, 400A
FC-300 Fused Test, Lead Set

# TRMS AC/DC CLAMP METER + NCV. 500A

- Measures AC/DC current, AC/DC voltage, resistance, capacitance, frequency, duty cycle & temperature with a type K thermocouple probe
- . Non-contact AC voltage detector in clamp tip
- Max/Min, Data hold and Relative functions
- · Cat. III, 600V safety rating
- · Includes test leads, temperature probe, batteries and carrying case

# **Specifications**

AC/DC Current Range: 50.00, 500.0A

AC Voltage Range: 500.00mV, 5.0000, 50.000, 500.00, 750.0V DC Voltage Range: 500.00mV, 5.0000, 50.000, 500.00, 1000.0V

Resistance Range:  $500.00\Omega$ , 5.000, 50.000,  $500.00k\Omega$ , 5.0000,  $50.000M\Omega$ 

Frequency Range: 10.000kHz

Capacitance Range: 500.00, 5000.0nF, 50.00, 500.0µF, 5.000mF Temperature Range: 148.0 to 1832.0°F (-100.0 to 1000.0°C)

MODEL	DESCRIPTION	
R5030	TRMS AC/DC Clamp Meter + NCV, 500A	
FC-300	Fused Test Lead Set	

# TRMS AC/DC CLAMP METER + NCV, 1000A

- Measures AC and DC voltage and current, resistance, capacitance and frequency as well as temperature with the included type K thermocouple probe
- Diode and continuity test with beeper
- Max/Min and Relative (zero) functions
- Cat. III, 600V safety rating
- Includes test leads, temperature probe, battery and carrying case

#### Specifications

AC/DC Current Range: 500.00, 1000.0A

AC Voltage Range: 500.00mV, 5.000, 50.00, 500.0, 750.0V DC Voltage Range: 500.00mV, 5.000, 50.00, 500.0, 1000.0V Resistance Range:  $500.00\Omega$ , 5.000, 50.00, 5

Capacitance Range: 500.00, 5000.0nF, 50.00, 500.0µF, 5.000mF Frequency Range: 10.000kHz

Temperature Range: -148.0 to 1832.0°F (-100.0 to 1000.0°C)

MODEL	DESCRIPTION	
R5040	TRMS AC/DC Clamp Meter, 1000A	
FC-300	Fused Test Lead Set	





# TRMS AC/DC CLAMP METER, 10004

- . Max/Min and Data Hold functions
- · Peak Hold function
- · Diode and continuity test with beeper
- · Auto or manual ranging
- . Cat. II, 1000V & Cat. III, 600V safety ratings
- . Includes test leads, battery and carrying case

#### Specifications

Current Range: 40A, 400A, 1000A AC/DC Voltage Range: AC: 400V, 750V; DC: 400V, 1000V

Resistance Range: 400Ω, 4000Ω Frequency Range: A & V: 4kHz, 10kHz



#### MODEL DESCRIPTION R5050 TRMS AC/DC Clamp Meter, 1000A FC-300 Fused Test Lead Set

# TRMS AC/DC CLAMP METER, 2000A

- · Full function autoranging digital multimeter includes AC/DC voltage, current, resistance, capacitance, frequency, duty cycle, diode and continuity
- · DC current push button zero, relative measurements and data hold
- · Cat. III, 1000V safety rating
- · Includes test leads and battery

## **Specifications**

CM-9930

AC/DC Current Range: 400A, 2000A AC Voltage Range: 4V, 40V, 400V, 1000V

DC Voltage Range: 400mV

Resistance Range:  $400\Omega$ ,  $4k\Omega$ ,  $40k\Omega$ ,  $400k\Omega$ ,  $4M\Omega$ ,  $40M\Omega$ Frequency Range: 5Hz, 50Hz, 500Hz, 5kHz, 50kHz, 100kHz



FC-300 Fused Test Lead Set **CA-05A** Soft Carrying Case

# EARTH RESISTANCE CLAMP METER

- Resolution of 0.001Ω for low resistance measurements
- Stores up to 99 resistance measurements
- Measures leakage current to 1mA and neutral current to 20A
- Includes 3 resistance calibration loops (1Ω, 5Ω and 10Ω), batteries and hard carrying case

# Specifications

Resistance Range:  $0.01-0.999\Omega$ ,  $1-9.99\Omega$ ,  $10-99.9\Omega$ ,  $100-199.9\Omega$ ,  $200-400\Omega$ ,  $400-600\Omega$ ,  $600-1200\Omega$ 

Current Range: 100mA, 300mA, 1A, 3A, 10A, 20A

MODEL	DESCRIPTION
MS2301	Farth Resistance Clamp Meter





TRMS AC/DC Clamp Meter, 2000A

# AC LEAKAGE CURRENT TESTER

- 10µA resolution
- · Max/Min and Data hold
- · Overload protection
- · Includes test leads, batteries and soft carrying case

## **Specifications**

Current Range: 40mA to 100A AC

Voltage Range: 400 VAC Resistance Range: 40 to 400Ω

Continuity Test: 400 threshold, beeper at 2.5kHz



# MODEL DESCRIPTION

ST-9809 AC Leakge Current Tester
FC-300 Fused Test Lead Set

# INSULATION TESTER

- Test voltage combinations: 250V, 500V or 1000V
- 1mA test current for MΩ range at rated voltage
- · 200mA test current for continuity range
- · Continuity test with beeper
- · Data hold switch
- . Test button may be locked on for hands-free operation
- · Cat. III. 1000V safety rating
- · Includes test leads, batteries and hard carrying case

## **Specifications**

Test Voltages: 250V, 500V, 1000V

Insulation Resistance Range: 200MΩ, 2000MΩ

Resistance Range: 200Ω, 2000Ω Voltage Range: 750VAC; 1000VDC Continuity Range: Beeps ≤40Ω

Test Current: ≤200mA



MODEL	DESCRIPTION	
R5600	Insulation Tester	
FC-300	Fused Test Lead Set	

# INSULATION TESTER

 $\bullet$  Wide range measurements from 500V to 5000V and up to  $60G\Omega$ 

Sources up to 1.2mA current during tests to offset capacitance load

- Polarization index measurement (PI)
- Dielectric absorption ratio measurements (DAR)
- · Max/Min, Peak, Relative value and Data Hold functions
- · Cat. IV, 600V safety rating
- Includes test leads, batteries and carrying case

## **Specifications**

Insulation Resistance

Test Voltages: 500V, 1000V, 2500V, 5000V DC

Measurement Range: 0 to 60.0GΩ

Resistance Tests

Measurement Range: 0.1 to 6000Ω

Voltage Tests

Measurement Range: 0.5 to 600.0V AC/DC

MODEL DESCRIPTION	
R5002	Insulation Tester



# 3-PHASE & MOTOR ROTATION TESTER

Tests phase orientation of 3-phase power sources

 Indicates phase orientation (clockwise or counter-clockwise and whether each of the three phases is live)

- Easy to open alligator clips with wide jaws
- · Cat. III, 600V safety rating
- Includes cables with 3 color-coded alligator clips, battery and carrying case



Input Voltage: 40 to 600 VAC Operating Frequency: 2 to 400 Hz

R5004 3-phase & Motor Rotation Tester

DUAL INPUT TRMS AC VOLTAGE/ CURRENT DATA LOGGER

 Simultaneously measure 2 True RMS AC voltage inputs OR 2 AC current inputs OR 1 AC voltage and 1 AC current input

- User programmable sample rates from 1 second to 24 hours
- Stores up to 256,000 measurements
- User programmable high/low alarms
- LCD indicates time/date, current readings, Max/Min, Peak hold and whether alarm settings have been exceeded
- Download collected data through USB interface
- Includes AC current clamp sensor and voltage sensor, USB cable, software and battery

#### **Specifications**

AC Current Range: 10 to 200A; Accuracy: ±(2% rdg. ±1A) AC Voltage Range: 10 to 600V; Accuracy: ±(2% rdg. ±1V)

#### MODEL DESCRIPTION

R5003 Dual Input TRMS AC Voltage/Current Data Logger

# WATT METER

- True RMS Current and Voltage measurements
- . Measures Watt (AC), AC A, AC V, and pF
- Large dual display LCD with Backlight
- · Full function Auto Range
- Max & Min. Record
- Data Hold
- RS232 Computer Interface
- Low-Battery Indicator
- Includes 1 Pair ofTest Leads (Red & Black)



MODEL	DESCRIPTION
R5000	Watt Meter
FC-300	Fused Test Lead Set
CA-05A	Soft Carrying Case

# DECADE BOXES

- · 3 binding posts permit isolated substitutions
- · Slide switches allow user to simply add or subtract for desired value
- · Excellent for circuit development

## Specifications

CBOX-406

Range: 100 pF to 11,111 µF, 5 ranges Resolution: CBOX-406: 100 pF per step

Accuracy: ±1% of reading

RBOX-408

Range: 1 to 11,111,110 $\Omega$ , 7 ranges Resolution: RBOX-408: 1Ω increments

Accuracy: ±1% of reading



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MODEL CBOX-406 Capacitance Decade Box **RBOX-408** Resistance Decade Box

# MILLIOHMMETER

- 4 terminal input for high accuracy of low resistance
- Measuring Range: 0.1mΩ to 2000Ω, 5 ranges
- Large LCD display
- · LSI circuitry provides high accuracy, reliabilityand durability
- · Zero adjustment
- Built-in overload protection
- Includes 4-wire with 2 Kelvin clips



\*\*\*\* (a) (b)

MODEL DESCRIPTION K5090 Milliohmmeter, 110V K5090-230V Milliohmmeter, 230V

# LCR METER

- Measure inductance/capacitance/resistance with secondary parameters including dissipation factor (D), quality factor (Q), phase angle (Ø), equivalent series/parallel resistance (ESR or Rp)
- Autoranging operation for AC impedance and DE resistance measurement
- Auto LCR smart check and measurement.
- Series/Parallel modes
- Ls/Lp/Cp with D/Q/Ø/ESR parameters
- Support DCR mode 200 to  $200M\Omega$
- · High accuracy with 4 or 5 terminal Kelvin measurement
- Testing frequency is up to 10kHz and output frequency is up to 100kHz
- IP67 Rated (Dust and Waterproof)
- · Includes test leads and batteries

# Specifications

Inductance (F=1kHz)

Range: 2000.0µH/20.000/200.0/2000.0mH/20.000/200.00/2000.0H

Capacitance (F=1kHz)

Range: 2000.0pF/20.000/200.00/2000.0nF/20.00/200.00/2000µF

Resistance (F=1kHz)

Range:  $20.000/200.00\Omega/2.0000/20.000/200.00k\Omega/2.0000/20.000/200.0M\Omega$ 

Test Frequencies: 100/120/1k/10k/100k Hz

MODEL DESCRIPTION

R5001 LCR Meter



# VOLTAGE/CURRENT CALIBRATOR

- Measure and calibrate current signals
- Provides a precise current and DC mV source
- · Able to power or measure a 2-wire current loop
- Drives loads up to 500Ω
- LCD display with a maximum of 1999 counts
- · Includes test leads and battery

## **Specifications**

Source & Measurement

Current Range: 0 to 19.99mA; 0 to 24mA

Resolution: 0.01mA: 0.1mA

Accuracy:  $\pm (0.25\% \text{ f.s.} + 1 \text{ dgt.}); \pm (0.5\% \text{ f.s.} + 1 \text{ dgt.})$ 

DC mV Source

Voltage Range: -199.9mV to +199.9mV

Resolution: 0.1mV

Accuracy:  $\pm$ (0.25% f.s. + 1 dgt.)

MODEL

R8800 Voltage/Current Calibrator
CA-05A Soft Carrying Case

# VOLTAGE/CURRENT CALIBRATOR

- Measure loop current (0-22 mA) signals with very high accuracy of 0.03% and 0.001 mA resolution
- Measure voltage output process signals from PLCs, transmitters
- · Source or simulate 22 mA loop current
- Source voltage to 20V
- 24V loop supply with simultaneous current measurement
- · Ramp output function
- USB computer interface
- Includes test leads, USB cable and software, battery and carrying case

## Specifications

Source & Measurement Current Range: 0 to 22mA Resolution: 0.001mA

Accuracy: ±(0.03% f.s. + 2 dgt.) Voltage Range: 0 to 20V

Resolution: 0.001V

Accuracy: ±(0.03% f.s. + 2 dgt.)

Loop Power Supply: 24VDC

Accuracy: ±10%



#### DESCRIPTION

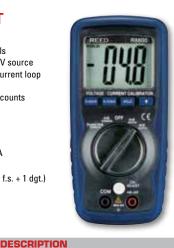
R8801

Voltage/Current Calibrator

We are proud to offer our customers quality products at economical s.



WE BACK UP ALL OUR PRODUCTS WITH A STANDARD 1 YEAR WARRANTY.





# VOLTAGE/CURRENT SIMULATOR

- · Sources voltage and current
- · Automatic calibration
- · User selectable auto power-off
- · Selectable step or ramp outputs
- Includes test leads, alligator clips, protective holster, carrying case and battery

# Specifications

DC Voltage Range: 10V
Output Range: 0.00 to 11.000V
Accuracy: ±0.05% setting
DC Current Range: 20mA
Output Range: 0.000 to 22.000mA
Accuracy: ±0.05% setting + 4µA
Analog Transducer: -20mA
Output Range: 0.000 to -22.000mA
Accuracy: ±0.05% setting + 4µA
Loop Power: 24V

Accuracy: ±10%



MODEL

DESCRIPTION

VCO4

Voltage/Current Simulator

# LOOP CALIBRATOR

- mA sourcing, simulation and measurement
- 0-28 VDC measurement to check loop voltage
- Simulate mA and % of span display
- 24V loop power supply
- 0.02% accuracy and 0.001% of span display
- · Selectable step or ramp outputs
- Includes test leads, alligator clips, protective holster, soft carrying case and battery

#### **Specifications**

Measurement Function
DC Voltage Range: 28V
Output Range: -0.200 to 28.000V
Accuracy: ±0.02% reading ± 2mV
DC Current Range: 20mA
Output Range: -1.000 to 22.000mA
Accuracy: ±0.02% reading + 4μA
Loop Current Range: 20mA
Output Range: 0.000 to 22.000mA
Accuracy: ±0.02% reading + 4μA
Output Range: 0.002% reading + 4μA
Output Function

Current Range: 20mA
Output Range: 0.000 to 22.000mA

Accuracy: ±0.05% setting + 4µA Analog Transducer: -20mA Output Range: 0.000 to -22.000mA Accuracy: ±0.05% setting + 4µA

Loop Power: 24V Accuracy: ±10%



MODEL VC05 DESCRIPTION

Loop Calibrator

MULTIMETER COMBO KIT

Includes the following:

- REED R5008 Autoranging Multimeter
- REED R5040 TRMS AC/DC Clamp Meter, 1000A
- REED R5100 AC Voltage Detector with Flashlight
- . REED AC-006 AC Line Splitter
- REED TL-88-1 Safety Test Leads
- REED TP-01 Type K Thermocouple Wire Probe
- REED AD-1 Temperature Input Adapter
- REED C-833R Multi-tool Carrying Case



MODEL

DESCRIPTION

Multimeter Combo Kit

ST-MULTIKIT

**ELECTRICIAN'S COMBO KIT** 

Includes the following:

- REED R5020 AC Clamp Meter, 400A
- REED R5006 Autoranging Multimeter
- REED R5100 AC Voltage Detector with Flashlight
- REED AD-1 Temperature Input Adapter
- REED TL-88-1 Safety Test Leads
- REED TP-01 Type K Thermocouple Wire Probe
- REED C-833R Multi-tool Carrying Case



MODEL

DESCRIPTION

ST-ELECTRICKIT

Electrician's Combo Kit

# ELECTRICIAN'S COMBO KIT

Includes the following:

- REED R5010 True RMS Waterproof Digital Multimeter
- REED AD-1 Temperature Input Adapter
- REED TP-01 Type K Thermocouple Wire Probe
- REED TL-88-1 Safety Test Leads
- REED CP-09 AC Current Adapter
- REED AC-006 AC Line Splitter
- REED C-833R Multi-tool Carrying Case



MODEL

ST-ELECTRICKIT2

Electrician's Combo Kit



INDUSTRIAL COMBO KIT

Includes the followina:

- REED R5010 True RMS Waterproof Digital Multimeter
- REED R5020 AC Clamp Meter, 400A
- REED R5100 AC Voltage Detector with Flashlight
- REED TL-88-1 Safety Test Leads
- REED TP-01 Type K Thermocouple Wire Probe
- REED AD-1 Temperature Input Adapter
- REED C-833R Multi-tool Carrying Case



**MODEL** 

ST-INDUSKIT

Industrial Combo Kit

# HVAC COMBO KIT

Includes the following:

- REED R5010 True RMS Waterproof Digital Multimeter
- REED R5030 TRMS AC/DC Clamp Meter + NCV, 500A
- REED R5100 AC Voltage Detector with Flashlight
- REED AD-1 Temperature Input Adapter
- REED TL-88-1 Safety Test Leads
- REED TP-01 Type K Thermocouple Wire Probe
- REED C-833R Multi-tool Carrying Case



MODEL

ST-HVACKIT

HVAC Combo Kit

# ELECTRICAL COMBO KIT

Includes the following:

- · REED R2100 Thermal Imaging Camera, 160x120
- REED LM-8000 Environmental Meter
- REED R5010 True RMS Waterproof Digital Multimeter
- REED CP-09 AC Current Adapter
- REED AC-006 AC Line Splitter



MODEL

DESCRIPTION

REED-ELECTRICAL-KIT

Electrical Combo Kit

# INDUSTRIAL TEST LEADS

#### Model FC-108:

- ø4mm, 100cm long safety test leads (one black, one red)
- · Right angle sheathed banana plug to straight sheathed banana plug

To be used in conjunction with FC-108:

#### Model FC-A23:

Safety alligator clips

# Model CF-734760:

· Push-on safety test clips with insulated, nickel-plated jaws for gripping objects up to 3/8"

#### Model FC-105:

. Tips include banana-style spring contacts with nickel-plated brass ends

#### Model FC-105A:

· Push-on safety test probes with stainless steel tips Model FC-170A:

# Industrial test probes with stainless steel tips

Model FC-178A:

· Safety jaw clips Model FC-A18:

MODEL

FC-108

FC-A23

FC-105

FC-105A

FC-170A

FC-178A

FC-A18

CF-734760

Tapered tips for probing electronic components

# DESCRIPTION

Safety Test Leads Safety Alligator Clips Safety Test Clips Basic Test Probes Safety Test Probes Safety Test Probes Safety Jaw Clips

Electronic Test Probes

# INDUSTRIAL TEST LEADS

## Model TL-88-1 Safety Test Leads

- . Set of two 48" long leads, one black and one red
- Flexible silicone insulated safety test leads are heat and cold resistant
- · Distinctive comfort grip test probes with stainless steel tips

#### Model FC-A15 Safety Alligator Clips

- · Slide-on style for test probes
- Jaws open to 8mm

#### Model TL-88-A15 Safety Test Leads

Same as above with FC-A15 alligator clips

#### Model FC-300 Fused Test Leads

- · Fused test lead set
- · Lead length: 1.4 meters
- · Compatible with all instruments that accept standard 4mm shrouded banana connectors

Model P-15 Weatherproof Plug



FC-300-0.2A/250V





# MODEL

Safety Test Leads TL-88-1 FC-A15 Safety Alligator Clips

TL-88-A15 Safety Test Leads w/ Alligator Clips FC-300 Fused Test Leads

FC-300-0.2A/250V Replacement Fuses P-15 Weatherproof Plugs



# INDUSTRIAL TEST LEAD KITS

#### Model FC-108G Safety Test Leads Kit

- FC-108 safety test leads
- FC-A23 alligator clips
- . FC-105A test probes
- CA-52A carrying case

#### Model FC-A23G Deluxe Safety Test Leads Kit

- . TL-88-1 safety test leads
- . FC-108 safety test leads
- FC-A15 alligator clips
- . FC-A23 alligator clips
- FC-A18 electronic test probes
- · FC-105 test probes
- FC-105A test probes
- FC-170A industrial test probes
- FC-178A safety jaw clips
- CF-734760 test clips
- · CA-05A carrying case



MODEL
FC-108G
FC-A23G

## DESCRIPTION

Safety Test Lead Kit Deluxe Safety Test Lead Kit

# **AC LINE SPLITTER**

- Enables clamp meter user to measure AC current on a 2-wire or 3-wire power cord to 15A
- Plugging the power connector into the line splitter separates the hot/ live conductor from the neutral and ground
- Provides safe measurements of current without the need to cut off the plug and separate the conductors
- · Voltage check function



MODEL	DESCRIPTION
AC-006	ΔC Line Splitter

# TEMPERATURE INPUT ADAPTER

 Converts a type K probe with a mini connector to standard 3/4" banana jacks



MODEL	DESCRIPTION	
AD-1	Temperature Input Adapter	

# AC VOLTAGE DETECTOR WITH FLASHLIGHT

- . Detects the presence of AC voltage without contact
- Signals the presence of voltage with an LED light and audible buzzer
- Built-in flashlight
- Double insulated housing for increased safety
- · Cat. III, 1000V & Cat. IV, 600V safety ratings
- Includes batteries

#### Specifications:

AC Voltage Range: 90 to 1000V Max. Working Current: 32mA



R5100 AC Voltage Detector with Flashlight

# **OUTLET CIRCUIT TESTER**

- Verifies that the outlet can provide power to a device
- · Tests whether the outlet is properly wired
- Performs the entire array of tests by simply plugging the device into the outlet once and observing the state of the lights
- Easy to read light pattern chart is printed on tester, enabling the user to quickly match the results to the corresponding wiring problem

# Specifications:

Rated Working Voltage: 110 to 125 VAC

MODEL DESCRIPTION
R5200 Outlet Circuit Tester

# CIRCUIT BREAKER FINDER/ RECEPTACLE TESTER

- 3-in-1: Circuit Breaker Finder, Circuit Tester and GFCI Receptacle Tester
- Identify correct circuit breaker protecting a specific electrical circuit without service interruption
- · Consists of a transmitter and a receiver
- Transmitter generates a signal by a plug style tool that also verifies the correct wiring of outlets with colored LED's and includes GFCI test functionality
- With the transmitter plugged in and the receiver at the circuit breaker panel, the receiver will detect the signature emitted from the transmitter and confirm the line between receptacle and circuit
- As the receiver scans over the breaker panel, an audible alarm ("tick" sound) and bright LED (flashing red) will alert the user as it approaches the breaker associated with the circuit under test
- Adjustable sensitivity to help quickly identify circuit breaker
- · Receiver operates on one 9 volt battery (included)

## Specifications:

Rated Working Voltage: 90 to 120 VAC Power Supply: 9V battery (receiver)



R5500 Circuit Breaker Finder/Receptacle Tester





# INFRARED THERMOMETER, 8:1, 536°F (280°C)

- Safely measure surface temperatures of hot, hazardous or hard-to-reach objects without contact
- · Built-in laser pointer identifies target area
- Fixed emissivity covers 90% of applications
- Display backlight
- Includes battery

# **Specifications**

Temperature Range: -58 to 536°F (-50 to 280°C)

Resolution: 0.1°F (0.1°C)

Accuracy: ±2% of reading or 4°F (2°C)

Distance to Spot Ratio: 8:1 Emissivity: Fixed at 0.95 Spectral Response: 8 to 14µm

MODEL R2001 **DESCRIPTION** 

IR Thermometer, 8:1, 536°F (280°C)

COMPACT INFRARED THERMOMETER, 8:1, 932°F (500°C)

- Precise non-contact temperature measurements
- Built-in laser pointer identifies target area
- · Fixed emissivity covers 90% of all applications
- · Automatic ambient temperature compensation
- · Max/Min temperature display
- Trigger lock
- · Includes battery and carrying case

## Specifications

Temperature Range: -58 to 932°F (-50 to 500°C)

Resolution: 0.1°F (0.1°C)

Accuracy: ±2% of reading or 4°F (2°C)

Distance to Spot Ratio: 8:1 Emissivity: Fixed at 0.95 Spectral Response: 6 to 14µm

MODE

**DESCRIPTION** 

R2002 Compact IR Thermometer, 8:1, 932°F (500°C)

# INFRARED THERMOMETER 30:1, 1922°F (1050°C), TYPE K T/C

- IR thermometer with Type K thermocouple input
- Adjustable emissivity from 0.10 to 1.0
- · High and low alarms
- Max, Min, Avg, Diff record
- 20 data points of memory
- Trigger lock
- Includes Type K T/C probe, battery and carrying case

#### Specifications

Type K Temp. Range: -58.0 to 2498°F (-50.0 to 1370°C) IR Temp. Range: -58.0 to 1922.0°F (-50.0 to 1050.0°C)

Distance to Spot Ratio: 30:1

Emissivity: Adjustable from 0.10 to 1.0 Spectral Response: 8 to 14µm

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DESCRIPTION

R2005

IR Thermometer 30:1, 2498°F (1370°C)





INFRARED THERMOMETER, 50:1, 2012°F (1100°C)

- Built-in dual lasers to assist with target area identification
- 50:1 distance to spot ratio measures smaller surface areas at a greater distance
- . Digitally adjustable emissivity from 0.10 to 1.0
- · High and low alarm set points
- . Max, Min and Dif. Avg. temperature displays
- . Large LCD with backlight and display hold
- · Includes battery and soft carrying case

#### Specifications

Temperature Range: -58 to 2012°F (-50 to 1100°C)

Accuracy: ±2% rdg. or 2°C Distance to Spot Ratio: 50:1

Emissivity: Adjustable from 0.10 to 1.0

MODEL

**DESCRIPTION** 

R2007 IR Thermometer, 50:1, 2012°F (1100°C)

# FOOD SERVICE INFRARED THERMOMETER 8:1, 392°F (200°C)

- · Designed to meet food service industry requirements
- User settable alarm, with audible/visual signal if temperature is exceeded, assures food safety by maintaining optimal temperatures for the cooking, serving and storing of food products
- Fixed emissivity covers 90% of all applications
- Includes battery and carrying case

## Specifications

Temperature Range: -58 to 392°F (-50 to 200°C)

Resolution: 0.1°F (0.1°C)

Accuracy: +/-2% of reading or 4°F (2°C)

Distance to Spot Ratio: 8:1 Emissivity: Fixed at 0.95

MODEL

DESCRIPTION

FS-200 Food Service IR Thermometer, 8:1, 329°F (200°C)

# VIDEO INFRARED THERMOMETER

- . Dual lasers identify exact measuring spot where they converge
- . Adjustable emissivity from 0.10 to 1.00
- . Type K thermocouple input
- Air temperature, humidity, dew point and wet bulb temperature measurement
- 2.2" TFT color LCD and built-in 640 x 480 pixels camera
- · Transmit images and videos via USB interface
- Datalogger capabilites with date and time
- Includes type K thermocouple probe, AC adapter, USB adapter, mini-tripod and hard carrying case

#### Specifications

IR Temp. Range: -58 to 3992°F (-50 to 2200°C)

Distance to Spot Ratio: 50:1

Spectral Response: 8 to 14µm

Emissivity: Adjustable from 0.10 to 1.00

Type K Temp. Range: -58 to 2498°F (-50 to 1370°C)

Accuracy: ±0.5% or 0.9°F (±0.5°C)

Air Temp. Range: 32 to 122°F (0 to 50°C)

Dew Point & Wet Bulb Temp. Range: 32 to 122°F (0 to 50°C)

Humidity Range: 0 to 100% RH

R2020

DESCRIPTION

Video Infrared Thermometer





# THE THERMOGRAPHY **SPECIALISTS**

THERMOGRAPHY is an accurate and non-destructive method to assess the condition of industrial, mechanical and electrical equipment through temperature mapping.

# Some applications include:

- Plant/General Maintenance
- HVAC/R & Plumbing
- Transportation/Automotive
- Cooling and Reheating
- Serving areas
- Food Service Equipment
- Cold Storage
- Home & Building Inspection
- Electrical & Mechanical Inspection
- Predictive Maintenance
- Health & Safety
- Equine & Veterinary
- Road Construction
- Workplace Ergonomics





# THERMAL IMAGING CAMERA, 80x80

- Infrared resolution of 80 x 80 (6,400 pixels)
- High thermal sensitivity of 0.1°F (0.1°C)
- 2.8" color 240 x 320 pixel LCD display
- Built-in laser and white LED flashlight
- 5 Megapixel digital camera
- 32X continuous digital zoom
- Infrared and visual images and picture-in-picture with infrared overlay
- · Automatic hot/cold spot indicator
- Automatic level/span function
- · Automatic power off
- · 4 infrared color palettes
- · Video recording with voice annotations
- 8Gb micro SD memory card
- 7 languages
- 2m drop tested

# **Specifications**

IR Resolution: 80 × 80 (6,400 pixels) Thermal Sensitivity / NETD:

< 0.1°F @ +86°F (+30°C) / 100 mK

Temperature Range: -4°F to +302°F (-20°C to +150°C); +32°F to +662°F (0°C to +350°C)

Accuracy:  $\pm 3.6$ °F ( $\pm 2$ °C) or  $\pm 2$ % of reading Spot: Center Spot

Built-in Digital Camera: 5 Megapixels Display: 2.8" LCD, 240 × 320 pixels

Image Modes: IR image, Visual image, Picture-in-Picture

Storage Media: 8GB Micro SD Card Video Output: HDMI

Drop Tested: 2m



MODEL

DESCRIPTION

R2050 R2050-3.7V Thermal Imaging Camera, 80x80 Spare Battery

# THERMAL IMAGING CAMERA, 160x120

#### **High Resolution IR Images**

19,200 pixels (160 x 120) Infrared resolution

#### **Visible Light Digital Camera**

640x480 resolution with flash provides sharp images regardless of lighting conditions

#### **Picture in Picture**

Displays thermal image super-imposed over a digital image

#### **LED Flashlight**

Allows the visual camera and fusion to be used in poorly lit environments

## Wide Temperature Range

From -4 to 752°F (-20 to 400°C) targeting electrical and industrial applications

#### ±3.6°F% (±2°C%) Accuracy

Reliable temperature measurement

#### Thumbnail View

Easy to view and analyze images quickly

#### **Automatic Lens Recognition**

Automatically identifies the temperature calibration data associated with each of the interchangeable lenses

#### Audio Recorded with the Video Image

A speaker to listen to audio recorded with the video image

#### **Capacitive Touch Screen**

More easy, productive and effective to operate

# Lithium Polymer Rechargeable Battery

Lasts >4hrs continuous use; replaceable

#### Copy to USB

Easily uploads images from camera to USB memory card

#### Area (Min/Max) Mode

Shows the Minimum or the Maximum Temperature reading in the selected area



# **INTERCHANGEABLE LENSES**

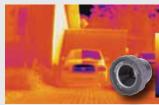
- · Increase camera resolution at longer distances
- · No camera calibration required

Standard Lens (included) 29.8° 7.5mm Lens



D:S @ 50': 26.64 x 19.98' Resolution = 2" (51mm)

RL-11 Replacement Lens 20.6° 11mm Lens



D:S @ 50': 18.16 x 13.62' Resolution = 1.36" (35mm)



# **INTERCHANGEABLE LENSES**



RL-22 Replacement Lens 10.4° 22mm Lens



D:S @ 50': 9.12 x 6.84' Resolution = 0.68" (17mm)

RL-33 Replacement Lens 6.9° 33mm Lens



D:S @ 50': 6.08 x 4.56' Resolution = 0.46" (12mm)

MODEL	DESCRIPTION	
R2100	Thermal Imaging Camera, 160x120	
RL-11	20.6° 11mm Replacement Lens	
RL-22	10.4° 22mm Replacement Lens	
RL-33	6.9° 33mm Replacement Lens	
R2100-7.4V	Spare Battery	



MODEL

DESCRIPTION

REED-HVAC-KIT

HVAC Combo Kit

BUILDING COMBO KIT

Includes the following:

- REED R2100 Thermal Imaging Camera, 160x120
- REED 8706 Digital Psychrometer
- REED R6013 Pin-type Moisture Meter
- REED R6010 Pinless Moisture Meter



MODEL

DESCRIPTION

REED-BUILDING-KIT

Building Combo Kit

# HOME INSPECTION COMBO KIT

Includes the following:

• REED 8706 Digital Psychrometer

- REED R6015 Wood Moisture Detector
- REED R6010 Pinless Moisture Meter
- REED R8002 Laser Distance Meter
- · REED R2001 Infrared Thermometer
- REED C-833R Soft Carrying Case



MODEL

DESCRIPTION

ST-INSPECTKIT

Home Inspection Combo Kit

# **DIGITAL STEM THERMOMETER**

- Stainless steel stem thermometer offers a quick response and laboratory accuracy
- Waterproof construction
- . Easy to read LCD display
- · Fahrenheit/Celsius switchable
- · Display updates every 2 seconds
- Front panel calibration button
- · Includes protective probe cover and battery

#### **Specifications**

Temperature Range: -40 to 450°F (-40 to 230°C)

Resolution: 0.1°F (0.1°C)

Accuracy: ±1.0°F: 0 to 230°F; ±3.6°F: <0°F & >230°F

#### MODEL

#### DESCRIPTION

R2000 Digital Stem Thermometer

# DIGITAL STEM THERMOMETER

- Stainless steel stem thermometer offers a quick response and laboratory accuracy
- · Easy to read LCD display
- Fahrenheit/Celsius switchable
- Display updates every 2 seconds
- · Max/Min memory records highest and lowest temperatures
- · Data Hold button lets you freeze a reading
- · Auto power off
- · Includes protective probe cover and battery

#### Specifications

Temperature Range: -40 to 482°F (-40 to 250°C)

Resolution: 0.1°F (0.1°C)
Accuracy: ±1.5% of reading ±2°

#### MODEL

#### **DESCRIPTION**

R2222

Digital Stem Thermometer

# WATERPROOF RTD THERMOMETER

- Platinum resistor temperature sensor requires less temperature compensation than thermocouple units
- Selectable sensor types: Pt-100, Pt-500, Pt-1000 (4 wires)
- °F/°C switchable
- Min/Max/Avg functions
- Relative mode and Data hold
- · Low battery indication with auto power off
- IP67 Rated (Dust and Waterproof)
- Includes piercing type temperature probe

#### Specifications

Temperature Range: -148 to 572°F (-100 to 300°C)

Resolution: 0.1°F (0.1°C)

Accuracy: ±0.1% reading +0.8°F (+0.4°C) Temp. Coefficient: <18°C & >28°C:

0.01% reading +0.03°C



#### DESCRIPTION

C-370 Waterproof RTD Thermometer
TP-R01 Pt-100 Temperature Probe
CA-05A Soft Carrying Case



# SINGLE INPUT THERMOCOUPLE THERMOMETER

- Single input thermocouple thermometer designed for field use
- · Large LCD display with backlight
- · User selectable °C, °F or °Kelvin
- User selectable resolution of 0.1 or 1°F (0.1 or 1°C)
- Includes holster, TP-01 wire probe and battery
- Accepts K-type thermocouple probes (sold separately)
- Model ST-610BDELUXE includes: ST-610B Thermocouple Thermometer, LS-109 Surface Probe, LS-103 Air/Gas Probe, LS-107 General-purpose Probe and hard carrying case

## **Specifications**

Temperature Range: -58 to 2000°F (-50 to 1300°C) Accuracy:  $\pm$ (0.5% of reading + 2°F (1°C))



#### MODEL

#### DESCRIPTION

ST-610B ST-610BDELUXE Thermocouple Thermometer
Thermocouple Thermometer Kit

BS-6 Tripod

# 4-CHANNEL THERMOCOUPLE THERMOMETER/DATA LOGGER

- Measures & displays 4 separate temperatures simultaneously
- · Calculates and displays temperature differentials (T1-T2)
- Accepts Type K, J, R, S, E, T thermocouples & Pt 100Ω RTD
- · Data hold and Max/Min record
- Real time SD memory card datalogger with a built-in clock and calendar
- · Sampling time set from 1 second to 3600 seconds
- No extra software needed, just plug the SD card (sold seperately) into the computer and it downloads directly to Excel
- . Easy to read LCD with backlight
- · Auto power off or manual power off
- Model ST-947DELUXE includes: Thermocouple Thermometer, LS-103 Air/Gas Probe, LS-107 General purpose Probe, LS-109 Surface Probe, LS-134A Needle Tip Probe and hard carrying case



Type K Temp. Range: -148.0 to 2372°F (-100.0 to 1300.0°C)

Type J Temp. Range: -148.0 to 2192°F (-100.0 to 1200.0°C)

Type T Temp. Range: -148.0 to 752.0°F (-100.0 to 400.0°C)
Type E Temp. Range: -148.0 to 999.9°F (-100.0 to 900.0°C)

Type R Temp. Range: 32 to 3092°F (0 to 1700°C)

Type S Temp. Range: 32 to 2732°F (0 to 1500°C)

RTD Temp. Range: -327.9 to 1562.0°F (-199.99 to 850.0°C)



#### DESCRIPTION

SD-947 4-Channel Thermocouple Thermometer, Data Logger
SD-947DELUXE Thermocouple Thermometer Kit

SD-4GB 4GB SD Memory Card

**TP-01** Type K Thermocouple Wire Probe

USB-01 USB Cable

SW-U801-WIN Data Acquisition Software

Tripod

CA-05A Soft Carrying Case

AP-9VA-110V AC Adapter



**BS-6** 

# TYPE K THERMOCOUPLE PROBES - YELLOW

#### Model LS-103 Air/Gas Probe

Specially designed to measure air or gases in heating & cooling units, ovens and engine exhausts. Maximum 1472°F (800°C).

#### Model LS-104 Right Angle Surface Probe

Great for monitoring temperature inside pipes, flat surfaces, without keeping hands over heated area. Maximum 752°F (400°C)

#### Model LS-107 General Purpose Probe

Used to measure both air or liquids, but is best recommended for immersion applications. Maximum 1292°F (700°C).

#### Model LS-109 Surface Probe

Ribbon-style surface probe. Maximum 752°F (400°C).

#### Model LS-134A Needle Tip Probe

Medium gauge hypodermic needle tip, used to measure softer food stuffs, rubbers and solids. Max. 1472°F (800°C).

#### Model LS-139 Surface Probe

Spring loaded probe is ideal for high temperature surface measuring requirements. Not recommended for use as an immersion probe. Maximum 932°F (500°C).

Model TP-01 Type K Thermocouple Wire Probe Model LS-181 & LS-182 Thermocouple Connector

MODEL	DESCRIPTION	
LS-103	Air/Gas Probe	
LS-104	Right Angle Surface Probe	
LS-107	General Purpose Probe	
LS-109	Surface Probe	
LS-134A	Needle Tip Probe	
LS-139	Surface Probe	
TP-01	Type K Thermocouple Wire Probe	
LS-181	Thermocouple Connector	
LS-182	Thermocouple Connector	

# TYPE K THERMOCOUPLE PROBES - GREEN

#### Model R2500 Air/Gas Probe

Specially designed to measure the temperature of air or gases. Thermocouple protected by perforated stainless steel shield. Max. 1652°F (900°C).

#### Model R2501 Surface Probe

For flat or convex surface temperature measurements. Max. 932°F (500°C).

#### Model R2502 Right Angle Surface Probe

For flat or convex surface temperature measurements Right angle design allows temperature of hard to reach areas to be taken. Max. 932°F (500°C).

# Model R2503 Beade Wire Probe

Good choice for the measurement of gas temperature. Insulated with a Teflon coating.Max. 500°F (260°C).

#### Model R2504 Immersion Probe

Recommended for immersion applications; excellent for checking the temperature of water, oils and non-corrosive fluids and gels. Entire probe covered with protective metal coating. Max. 1112°F (600°C).

#### Model R2505 Needle Tip Probe

Needle tip used to measure the temperature of softer food stuffs, rubbers and solids. Entire probe covered with protective metal coating. Max. 1112°F (600°C).

MODEL	DESCRIPTION
R2500	Air/Gas Probe
R2501	Surface Probe
R2502	Right Angle Surface Probe
R2503	Beaded Wire Probe
R2504	Immersion Probe
R2505	Needle Tip Probe

# TEMPERATURE SIMULATOR

- Source 8 thermocouple types (R, S, B, E, K, J, T & N) and 7 RTD types (Cu10, Cu50, Pt10, Pt100, Pt200, Pt500 & Pt1000)
- Also provides direct setting for electrical output signals, volts and ohms
- . Basic accuracy of 0.05%
- · Internal cold junction compensation
- · Quick reset with zero button
- . 6-digit LCD readout, °C or °F selectable
- Includes set of industrial test leads, alligator clips, thermocouple adapter, protective holster, soft carrying case and battery

# **Specifications**

Output Voltage Range: 100mV; 1000mV Resistance Range: 400Ω, 4000Ω

MODEL R2800 DESCRIPTION

Temperature Simulator

# THERMOCOUPLE CALIBRATOR

- Operable with eight types of thermocouple including R, S, B, E, K, J, T, N, plus volts
- · Measure temperature from thermocouple probes
- · Simulate TC output
- · Calibrate linear TC transmitters with mV source function
- · Internal cold junction compensation
- · Quick reset with zero button
- 6-digit LCD readout; selectable °C or °F
- Thermocouple mini-jack termination
- Includes set of industrial test leads, alligator clips, thermocouple adapter, protective holster, batteries and user manual

#### Specifications

Output Voltage Range: 100mV; 1V

Accuracy: 0.05% rdg. + 30µV; 0.05% rdg. + 0.3mV

MODEL R2810 DESCRIPTION

Thermocouple Calibrator

# INFRARED TEMPERATURE CALIBRATOR

- For calibrating non-contact infrared thermometers up to 932°F (500°C)
- Wide field of view to compensate for optical variations in individual infrared thermometers
- Simply set the desired temperature in increments of 0.1°, wait for the calibrator to attain equilibrium, point the infrared thermometer at the target, and measure the radiated energy
- Contact RTD reference well is located directly behind the blackbody target to assure even higher accuracies of  $\pm 0.1^{\circ}\text{C}$

#### Specifications

Temperature Range: 122.0 to 932.0°F (50.0 to 500.0°C)

Resolution: 0.1°F (0.1°C)

Accuracy: ±1.6°F (±0.8°C): 212°F (≤100°C);

 $\pm 3.2$ °F ( $\pm 1.6$ °C): 212 to 392°F (100 to  $\leq 200$ °C);

±5.6°F (±2.8°C): 392 to ≤932°F

(200 to ≤500°C)

Target Emissivity: Fixed at 0.95

Cooling Time: 45 minutes to 122°F (100°C)

Heating Time: 40 minutes to maximum

Aperture Diameter: 57mm



MODE

Infrared Temperature Calibrator







**GENERAL COMBO KIT** 

Includes the following:

- REED R5008 Autoranging Multimeter
- REED R2002 Compact Infrared Thermometer, 8:1, 932°F (500°C)
- REED R5100 AC Voltage Detector with Flashlight
- REED TL-88-1 Safety Test Leads
- REED TP-01 Type K Thermocouple Wire Probe
- REED AD-1 Temperature Input Adapter
- REED C-833R Multi-tool Carrying Case



MODEL

ST-TEMPKIT

# DESCRIPTION

General Combo Kit

# **HVAC COMBO KIT**

Includes the following:

- REED R2005 Infrared Thermometer 30:1, 2498°F (1370°C)
- REED C-380 Refrigerant Leak Detector
- REED C-383 Combustible Gas Detector

 REED R5100 AC Voltage Detector with Flashlight



MODEL

DESCRIPTION

ST-HVACKIT2

HVAC Combo Kit

# COMBINATION KITS

Save with our Extensive Selection of Application Specific Combo Kits



# THERMO-HYGROMETER

- · Large dual display shows ambient temperature and relative humidity
- User selectable °F/°C
- · Data Hold and Min/Max function
- · Compact and lightweight
- · Includes battery

Humidity Range: 10 to 95% RH

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



# THFRMO-HYGROMFTFR

- · Dual LCD readout displays ambient temperature and relative humidity
- User selectable °F / °C
- . Min/Max memory for both functions
- Data hold and Relative functions
- Auto power off
- Includes battery

Humidity Range: 0 to 100% RH

Temperature Range: -4 to 140°F (-20 to 60°C)



MODEL	DESCRIPTION	
R6001	Thermo-Hygrometer	
RHA-33	33% Humidity Calibration Standard	
RHA-75	75% Humidity Calibration Standard	
CA-05A	Soft Carrying Case	

# THERMO-HYGROMETER/DATA LOGGER

- Measures relative humidity as well as temperature with a type J/type K thermocouple thermometer
- Also measures dew point and wet bulb temperatures
- Automatic temperature compensation
- . Data hold and Max/Min record
- Just plug the SD card (sold seperately) into the computer and it downloads directly to Excel
- · Includes Humidity/Temp. probe

Humidity Range: 5% to 95% RH

Temperature Range: 32 to 122°F (0 to 50°C) Dew Point Range: 13.5 to 120.1°F (-25.3 to 48.9°C)

Wet Bulb Range: -6.9 to 122.0°F (-21.6 to 50.0°C) Type K Temp.Range: -148.0 to 2372°F (-100.0 to 1300.0°C)



SD-3007 Thermo-Hygrometer/Data Logger TP-01 Type K Thermocouple Wire Probe SD-4GB 4GB SD Memory Card USB-01 USB Cable CA-05A

Soft Carrying Case SW-U801-WIN Data Acquisition Software

**BS-6** Tripod AP-9VA-110V AC adapter



# TEMPERATURE/HUMIDITY **DATA LOGGER**

 Stores up to 16.000 temperature and 16.000 humidity readings

- User selectable measurement rate from 2s to 24h
- Alarm displays if user-defined max/min values are exceeded
- · Simply plug into your USB port to begin downloading stored information
- · Includes wall mount bracket and PC compatible software

Humidity Range: 0 to 100% RH

Temperature Range: -40 to 158°F (-40 to 70°C)

**DESCRIPTION** 

R6020 Temperature/Humidity Data Logger

# TEMPERATURE/HUMIDITY **DATA LOGGER**

- · Records up to 32,700 ambient temperature and relative humidity readings
- · User selectable recording intervals from 1s to 24h
- · Minimum/Maximum function with alarm
- Download data directly to a PC via USB cable
- Includes mounting bracket with screws, USB cable, software diskette, security lock and battery

Humidity Range: 0 to 100% RH

Temperature Range: -40 to 158°F (-40 to 70°C)

R6030

Temperature/Humidity Data Logger

# TEMPERATURE/HUMIDITY DATA LOGGER

- Records up to 16,000 readings
- · Logs data for days, weeks or months
- · Programmable sampling rate from 1 second to 2 hours
- · Real-time clock stores data and time
- User-defined min/max alarm settings
- Program by RS232 serial port and Windows® compatible software (requires 8818)
- \* Must order 8818 when purchasing 8829

Humidity Range: 0 to 100% RH Temperature Range:

-40 to 185°F (-40 to 85°C)



8829

9801

DESCRIPTION

8829 Temperature/Humidity Data Logger 8818 RS232 Cable & Software

9801 Printer



# DIGITAL PSYCHROMETER

- Measures temperature, RH and external temperature (probe required)
- · Quickly calculates wet bulb and dew point temperatures

#### Specifications

Humidity Range: 0 to 100% RH

Internal Temp. Range: -4 to 122°F (-20 to 50°C)

Dew Point Range: -109.7 to 122°F (-78.7 to 50°C)

Wet Bulb Range: -6.9 to 122°F (-21.6 to 50°C)



MODEL	DESCRIPTION
8706	Digital Psychrometer
87P6	External Temperature Probe
RHA-33	33% Humidity Calibration Standard
RHA-75	75% Humidity Calibration Standard

# **POCKET SIZE MOISTURE METER**

- Measures the moisture content of sawn timber (also cardboard and paper) and hardened materials like plaster, concrete and mortar
- · Impact-proof plastic housing

# **Specifications**

Measuring Range: Wood: 6 to 44% Moisture Content; Hardened Material: 0.2 to 2.0% Moisture Content



MODEL	DESCRIPTION
R6013	Pocket Size Moisture Meter
R6013-P	Replacement Electrode Pin
CA-52A	Soft Carrying Case

# WOOD MOISTURE METER

- Measure moisture content in wood either directly with integral moisture pins or with a remote hand-press probe
- Memory contains 8 wood groups with calibrations for approx.170 species of wood
- Includes remote hand-press moisture electrode, temperature probe, protective cap, replacement pins, batteries and carrying case



#### Specifications

Measuring Range: 6 to 99.9% Moisture Content

MODEL	DESCRIPTION			
R6015	Wood Moisture Meter			
R6015-P	Replacement Electrode Pin			

# PINLESS MOISTURE METER

- Detects moisture content in building materials of all kinds, as well as detects moisture distribution in walls, ceilings and floors
- Non-destructive moisture sensor runs smoothly over the surface being tested without scratching or penetrating the surface
- · Classifies moisture status as: dry, at risk or wet

#### Specifications

Measuring Range: 0.0 to 100.0% Moisture Content

Moisture Status Display:

Gypsum: <30%: Dry; 30-60%: At risk; >60%: Wet Cement: <25%: Dry; 25-50%: At risk; >75%: Wet Wood: <50%: Dry; 50-80%: At risk; >80%: Wet

MODEL	DESCRIPTION
R6010	Pinless Moisture Meter
CA-05A	Soft Carrying Case



# COATING THICKNESS GAUGE

- Dual technology provides automatic recognition for ferrous (F) and non-ferrous (NF) metal substrates
- Magnetic induction for ferrous metal substrates and Eddy current measurement for non-ferrous metal substrates
- · User-settable high/low alarms
- Min/Max/Average
- Memory stores 400 readings
- Includes batteries, USB cable, software, calibration iron, calibration aluminum, precision standards and carrying case

# **Specifications**

Measuring Range: 0 to 1250µm, 0 to 49.21mils

Accuracy: 0 - 850μm: ±3% +1μm, 850 - 1250μm: ±5%; 0 - 33.46mils: ±3% +0.039mils, 33.46 - 49.21mils: ±5%

Min. Area Diameter: F: 7mm; NF: 5mm Min. Substrate Thickness: F: 0.5mm; NF: 0.3mm



#### DESCRIPTION

ST-156 Coating Thickness Gauge

# COATING THICKNESS GAUGE

- Measure the thickness of non-magnetic coatings on magnetic or non-magnetic metal substrates
- Choice of remote probe; F probe measures the thickness of non-magnetic coatings on magnetic metal substrates; N probe measures the thickness of non-magnetic coatings on non-magnetic metal substrates
- · Automatic probe recognition
- Automatic calibration
- Includes hard carrying case and batteries

#### Specifications

Measuring Range: 0 to 1000  $\mu$ m, 0 to 40 mil Accuracy:  $\pm 1$  to 3% or 2  $\mu$ m, whichever is greater



18N

REED

MODEL

#### **DESCRIPTION**

CM-8822

Coating Thickness Gauge

# **ULTRASONIC THICKNESS GAUGE**

 Measures the thickness of steel, cast iron, aluminum, red copper, zinc, quartz glass, polyethylene, PVC, gray cast iron and nodular cast iron

Exclusive micro-computer LSI circuit and crystal time base offer high accuracy

- Display sound velocity at the touch of a button
- Broad band receiving sensitivity means the meter can read probes of different frequencies
- Automatic material calibration
- Selectable metric or imperial
- Includes a bottle of ultrasonic couplant gel, carryingcase, and batteries

# Specifications

Measuring Range: 0.05 to 7.9"/1.5 to 200mm (#45 steel)

Accuracy: ±(0.5% + 0.2"/0.1mm) Velocity Range: 500 to 9000 m/s



DESCRIPTION

TM-8811PROBE

Ultrasonic Thickness Gauge Replacement Probe



# ULTRASONIC THICKNESS GAUGE

- Able to gauge thickness measurement without requiring access to both sides of the test piece
- Capable of performing measurements on a wide range of material including metals, plastic, ceramics, composites, epoxies, glass, and other ultrasonic conductive materials
- · Zero function and sound velocity calibration
- Capable of logging 5 files with up to 100 measurements for each file (total of 500 logs)
- 128 x 64 LCD with LED backlight displays metric and Imperial units of measure, user selectable
- Coupling status indicator
- · Includes transducer, couplant, batteries, and carrying case

## Specifications

Measuring Range: 0.65 to 400.0mm (0.03 to 15.7")

Sound Velocity Range: 1000 to 9999 m/s (0.039 to 0.394 in/µs)

Transducer Frequency: 5MHz

Minimum Area: Ø20mm × 3.0mm (Ø0.8" × 0.12")

MODEL

DESCRIPTION

R7900

Ultrasonic Thickness Gauge

# HARDNESS TESTER

- Rebound hardness testing is particularly useful for large, coarse grained materials, forged parts and all types of cast materials because the spherical tip of the impact device processes the characteristics of the casting structure better
- Capable of automatically converting and displaying measurements into Rockwell (HRC, HRB, HRA), Brinell (HB), Leeb (HL), Vickers (HV) and Shore (HS) hardness values
- Operates on a rechargeable lithium battery
- Includes universal D impact device, small supporting ring, Leeb test block, nylon brush, battery charger, data processing software, communication cable and carrying case

#### **Specifications**

Hardness Scale: HL, HRC, HRB, HRA, HV, HB, HS

Meauring Range: HLD: 170 to 960; HRA: 59 to 85; HRB: 13 to 100;

HRC: 20 to 68; HB: 19 to 651; HV: 80 to 967; HS: 30 to 100

Measuring Direction: 360° Communication Port: Mini USB

Internal Memory: 48 to 350 groups of data

MODEL R9030 DESCRIPTION

Hardness Tester

# "A" SCALE DUROMETER

- · Digital durometer for Shore A hardness testing
- Designed to measure the penetration hardness of rubber, elastomers and other rubber like substances such as neoprene, silicone and vinyl
- Meets DIN 53505, ASTM D2240, ISO 7619 and JISK 7215
- Measures maximum value
- · Push button zero calibration

# Specifications

Measuring Range: 0 to 90 HA

Deviation: ±1 HA



DESCRIPTION

"A" Scale Durometer







FORCE GAUGE/DATA LOGGER, 20KG

· Measures tension and compression

- · Data Record in Peak hold or Normal mode
- Force is measured in kg, lb or Newtons
- Real time data logger with integral 2GB SD memory card (optional)
- Includes flat head, cone head, chisel head and hook adapters,
   120mm extension rod and carrying case

# **Specifications**

Measuring Capacity: 20.00 kg/44.10 lb/196.12 N

Full Scale Deflection: 0.1mm max.

Sampling Time: Normal: 1 second to 8 hours; Peak hold: 10 to 500 ms



# MODEL DESCRIPTION SD-6020 Force Gauge. Data Logo

SD-6020 Force Gauge, Data Logger, 20kg
WG-01 Wedge Grip
SD-4GB 4GB SD Memory Card
USB-01 USB Cable

SW-U801-WIN Data Acquisition Software

AP-9VA-110V AC Adapter

# FORCE GAUGE/DATA LOGGER, 100KG

- Measures tension and compression
- · Data Record in Peak hold or Normal mode
- Force is measured in kg, lb or Newtons
- Real time data logger with integral 2GB SD memory card (optional)
- Includes separate load cell sensor with 2 hooks and cable and carrying case

## Specifications

Measuring Capacity: 100.0 kg / 220.5 lb / 980.6 N

Full Scale Deflection: Less than 1mm

Sampling Time: Normal: 1 second to 8 hours;

Peak hold: 10 to 500 ms



# MODEL DESCRIPTION

SD-6100 Force Gauge/Data Logger, 100kg
WG-01 Wedge Grip
SD-4GB 4GB SD Memory Card
USB-01 USB Cable

SW-U801-WIN Data Acquisition Software AP-9VA-110V AC Adapter

# **TEST STAND FOR FORCE GAUGE**

- · Optional test stand for force gauges
- Useful tool for material tension and compression analysis
- Dimensions: 650 x 250 x 230mm (25.6 x 9.8 x 9")
- Weight: 6.9kg (15.2 lb)



MODEL FS-1001 DESCRIPTION

Test Stand for Force Gauge



# NON-CONTACT PHOTO TACHOMETER

- Provides fast and accurate rpm measurements of rotating objects without contact
- Laser targeting
- Built-in memory recalls maximum, minimum values as well as last value stored
- · Includes reflective tape, carrying case and batteries

# **Specifications**

Range: 2 to 99,999 rpm

Accuracy: ±(0.05% rdg. + 1 dgt.)
Detection Distance: 50 to 500mm
Sampling Time: 0.5 sec. over 120 rpm

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# DESCRIPTION

AT-6 Non-Contact Photo Tachometer
RT100 Reflective Tape

# CONTACT/NON-CONTACT PHOTO TACHOMETER

- Dual function unit with both contact and non-contact capabilities
- · Non-contact function utilizes laser light beam
- · Removeable contact adapter for contact measurements
- · Recalls Max/Min and last values
- Includes large and small cone tip, battery and carrying case

# **Specifications**

Range: Photo: 5 to 99,999 rpm; Contact: 5 to 19,999 rpm; Surface Speed: 0.05 to 1,999 mpm

Accuracy: ±(0.05% + 1 digit)
Update Time: 1X/second





# **MODEL**

# DESCRIPTION

R7100 Contact/Non-Contact Photo Tachometer
ST-WHEEL Replacement Measuring Wheel
ST-CONE Replacement Cone Tip, Large
ST-FUNNEL Replacement Funnel Tip
ST-SHAFT Replacement Extension Shaft
RT100 Reflective Tape

# CONTACT/NON-CONTACT PHOTO TACHOMETER

- Photo tachometer and contact tachometer in one precision instrument
- · Surface speed measurements in fpm or mpm
- Retains Min/Max and last reading for later recall
- Laser light for improved accuracy at a greater distance in photo mode
- Includes 3 contact adapters (2 cones, 1 funnel), surface speed wheel, reflective tape, batteries and hard carrying case

## **Specifications**

Range: Photo: 10 to 99,999 rpm; Contact: 0.5 to 19,999 rpm;

Surface Speed: 0.05 to 1,999.9 mpm (0.2 to 6560 fpm)

Detection Distance: 50 to 2,000mm

Sampling Rate: Photo: 1 sec. over 60 rpm; Contact: 1 sec. over 6 rpm Laser: Class 2 red laser diode. 645nm wavelength



#### DESCRIPTION

DT-1236L Contact/Non-Contact Photo Tachometer RT100 Reflective Tape



#### CONTACT/NON-CONTACT PHOTO TACHOMETER

- Automatically holds last reading for 5 minutes and recalls minimum and maximum readings
- Characters on the 5-digit display reverse direction depending on which measurement mode you are in
- Includes 3 contact adapters (2 cones, 1 funnel), surface speed wheel, reflective tape, batteries and hard carrying case

#### **Specifications**

Range: Photo: 5 to 99,999 tr/min; Contact: 0.5 to 20,000 tr/min; Surface Speed: 0.05 to 1,999.9 mpmin/0.2 to 6,560 fpm

Sampling Time: Photo: 1 sec. > 6 rpm; Contact: 1 sec. > 60 tr/min Detecting Distance: 50 to 150 mm (2" to 6") typically; 300 mm (12") max.



# MODEL DESCRIPTION K4010 Contact Non-Contact Photo Tachometer AS-35C Replacement Measuring Wheel CONE Replacement Cone Tip RT100 Reflective Tape

#### STROBOSCOPE

- Digital strobocope freezes the motion and measures the speed of a rotating object, without contact
- Simply aim and synchronize the strobe's flash rate (fpm) with the speed (rpm) of the object
- . Direct reading of RPMs
- Tripod mountable AC operated with 6' power cord
- Plastic injection case, plastic lens, mirror type reflector

#### **Specifications**

Flash/Speed Rate: 100 to 10,000 fpm/rpm

Sampling Time: 1X/second

MODEL	DESCRIPTION
K4020	Stroboscope, 110 VAC
K4020-230V	Stroboscope, 230 VAC
K4020-BULB	Replacement Bulb

#### STROBOSCOPE

- Freeze the motion and measure the speed of a rotating object, without contact
- Push button that doubles and one that divides in half the flashing and display rate with just one activation
- Duty cycles from 10 minutes to 2 hours depending on rpm range
- RS232 serial interface

#### Specifications

Flash Range: 10 to 10,500 rpm Stability: 1 digit within 10 min.



MODEL	DESCRIPTION
K4030	Stroboscope, 110 VAC
K4030-230V	Stroboscope, 230 VAC
SW-U801-WIN	Data Acquisition Softwar
USB-01	USB Cable



#### VIBRATION METER/DATA LOGGER

- Measures vibration levels in machinery by measuring velocity and acceleration
- Frequency range meets ISO 2954 standards
- · RMS, Peak hold, and Max/Min record
- Real time data logger with integral 4GB SD memory card (sold seperately)
- Just plug the SD card into the computer and it downloads directly to Excel
- Includes vibration sensor with cable, magnetic base, batteries and hard carrying case

#### Specifications

 $\label{eq:velocity} Pange: 0.5 to 199.9 \ mm/s; 0.05 to 19.99 \ cm/s; 0.02 to 7.87 \ in/s \\ Acceleration Range: 0.5 to 199.9 \ m/s^2; 0.05 to 20.39 \ g; 2 to 656ft/s^2$ 



#### MODEL

SD-VMB

#### DESCRIPTION

SD-8205 Vibration Meter/Data Logger
SD-8205PROBE Vibration Probe

Vibration Probe Magnetic Base

SD-4GB 4GB SD Memory Card
USB-01 USB Cable

SW-U801-WIN Data Acquisition Software

BS-6 Tripod
AP-9VA-110V AC Adapter

#### **TORQUE METER**

- High resolution torque meter with separate 15kg-cm torque sensor
- · Peak, Data hold, Zero, Min/Max and Fast/Slow functions
- · RS232 and USB output
- Includes carrying case and batteries

#### **Specifications**

Measuring Range: 15 kg-cm; 13 in-lb; 147.1 N-cm



#### MODEL

#### TQ-8800

**SW-U801-WIN** 

UPCB-01

USB-01

BS-6

#### DESCRIPTION

Torque Meter

Data Acquisition Software

RS232 Cable

USB Cable

Tripod



#### VANE ANEMOMETER

- . Measuring Units: m/s, kph, mph, fpm and knots
- Data hold, Record (Max/Min)
- Integral vane design for one hand operation
- Pocket-sized
- Includes battery

#### Specifications

Air Velocity Range: 80 to 5910 fpm: 0.4 to 30.0 m/s: 0.9 to 67 mph: 1.4 to 108 km/h; 0.8 to 58.3 knots



#### MODEL DESCRIPTION LM-81AM Vane Anemometer CA-52A Soft Carrying Case

#### VANE THERMO-ANEMOMETER

- Integral rotary vane sensor for one hand operation
- Simultaneous display or air velocity and temperature
- · Continuous moving air velocity averaging of measurements for up to 2 hours
- Displays Min/Max/Avg velocity with temperature values
- Includes hard carrying case and batteries

#### Specifications

Air Velocity Range: 80 to 6900 fpm; 0.4 to 35 m/s; 0.9 to 78 mph; 1.4 to 126 km/h: 0.8 to 68 knots

Temperature Range: 14 to 122°F (-10 to 50°C)



#### MODEL **DESCRIPTION** 8906 Vane Thermo-Anemometer

#### VANE THERMO-ANEMOMETER / DATA LOGGER

- · Measures air velocity as well as temperature with
- a type J/type K thermocouple thermometer Low friction ball-bearing, rotating vane probe
- ensures high accuracy readings Air velocity is measured in m/s, fpm, km/h, mph
- or knots
- Temperature is measured in °C or °F
- Real time data logger with integral 4GB SD memory card (sold seperately)
- Just plug the SD card into the computer and it downloads directly to Excel
- · Includes anemometer probe and hard carrying case



Air Velocity Range: 0.4 to 30.0 m/s; 1.4 to 126.0 km/h; 0.9 to 78.3 mph; 79 to 6890 fpm; 0.8 to 68.0 knots Type K Temp. Range: -148.0 to 2372°F (-100.0 to 1300.0°C) Type J Temp. Range: -148.0 to 2192°F (-100.0 to 1200.0°C)



#### MODEL DESCRIPTION SD-4207 Vane Thermo-Anemometer/Data Logger

TP-01 Type K Thermocouple Wire Probe SD-4GB 4GB SD Memory Card USB-01 USB Cable SW-U801-WIN Data Acquisition Software

**BS-6** Tripod AP-9VA-110V AC Adapter



HOT WIRE THERMO-ANEMOMETER/ **DATA LOGGER** 

- Measures air velocity as well as temperature with a type J/type K thermocouple thermometer
- Hot wire probe for precise low air velocity measurements
- Air velocity is measured in m/s, fpm, km/h, mph or knots
- Temperature is measured in °C or °F
- . Data hold and Max/Min record
- · Real time data logger with integral 4GB SD memory card (optional)
- . Just plug the SD card into the computer and it downloads directly to Excel
- · Includes telescope probe and hard carrying case

#### Specifications

Air Velocity Range: 0.2 to 25.0 m/s: 0.7 to 72.0 km/h: 0.5 to 44.7 mph; 40 to 3940 fpm; 0.4 to 38.8 knots

Type K Temp. Range: -148.0 to 2372°F (-100.0 to 1300.0°C) Type J Temp. Range: -148.0 to 2192°F (-100.0 to 1200.0°C)



#### MODEL

#### **DESCRIPTION**

SD-4214 Hot Wire Thermo-Anemometer/Data Logger TP-01 Type K Thermocouple Wire Probe SD-4GB 4GB SD Memory Card HSR-01 USB Cable **BS-6** Tripod

SW-U801-WIN Data Acquisition Software AP-9VA-110V AC Adapter

#### ENVIRONMENTAL METER/DATA LOGGER

- · Measures relative humidity, air velocity, light levels and temperature with a type J/type K thermocouple thermometer
- · Also measures sound level with optional adapter
- · Air velocity is measured in m/s, ft/min, km/h, mph or knots
- Temperature is measured in °C or °F
- . Data hold and Max/Min record
- · Real time data logger with integral 4GB SD memory card (sold seperately)
- and it downloads directly to Excel
- hard carrying case

#### **Specifications**

Air Velocity Range: 0.4 to 30.0 m/s; 1.4 to 128.0 km/h; 0.9 to 78.3 mph; 79 to 6890 fpm; 0.8 to 68.0 knots

Humidity Range: 0 to 95% RH

Light Range: 0 to 20,000 lux (0 to 1,860 Ft-cd)

Type K Temp.Range: -148.0 to 2372°F (-100.0 to 1300.0°C) Type J Temp.Range: -148.0 to 2192°F (-100.0 to 1200.0°C)





#### MODEL

#### **DESCRIPTION**

SD-9300 Environmental Meter/Data Logger SL-417 Sound Level Adapter

TP-01 Type K Thermocouple Wire Probe

SD-4GB 4GB SD Memory Card USB-01 USB Cable

SW-U801-WIN Data Acquisition Software AP-9VA-110V AC Adapter

#### **ENVIRONMENTAL METER**

- 4-in-1 multi-function meter... anemometer, humidity meter, light meter and type-K digital thermometer
- · Velocity Units: m/s, kph, mph, knots, and fpm
- °F or °C and lux or Ft-cd selectable
- · Includes battery

#### **Specifications**

Air Velocity Range: 0.2 to 30.0 m/s; 1.4 to 108.0 kph; 0.9 to 67.0 mph; 80 to 5910 fpm; 0.8 to 58.3 knots

Temperature Range: -148 to 2372°F (-100 to 1300°C)

Humidity Range: 0 to 95% RH

Light Range: 0 to 20,000 lux (0 to 2000 Ft-cd)

MODEL LM-8000 DESCRIPTION

**Environmental Meter** 

## PITOT TUBE DIFFERENTIAL PRESSURE MANOMETER

- Measure and display air velocity, air flow volume, pressure and ambient temperature with a single, compact unit
- · Air velocity displayed in m/s, fpm, km/h, mph or knots
- · Air flow displayed in cfm or cmm
- Pressure displayed in psi, mbar, inH<sub>2</sub>O, mmH<sub>2</sub>O or Pa
- Max., Min. and Avg. readings
- · Push button calculation of rectangular or circular duct areas
- · Large LCD display with backlight
- Includes black and white silica tubes, Pitot tube, battery, power adapter, USB cable, CD software and carrying case

#### **Specifications**

Pressure Range:  $\pm 5000$  Pa; 0.752 psi; 50.00mbar; 20.07 inH $_2$ 0; 509.8 mmH $_2$ 0

Air Velocity Range: 1.00 to 80.00 m/s; 200 to 15,733 fpm; 3.6 to 288.0 km/h; 2.24 to 178.66 mph; 2.0 to 154.6 knots

Air Flow Range: 0 to 99.999 ft<sup>3</sup>/min; 0 to 99.999 m<sup>3</sup>/min

Temperature Range: 32.0 to 122.0°F (0 to 50.0°C)

MODEL R3001 BS-6 DESCRIPTION

Pitot Tube Differential Pressure Manometer

Tripod

# DIFFERENTIAL PRESSURE MANOMETER. 0 TO 5PSI

- Measures gauge and differential pressure from 0 to 5 psi
- 11 selectable units of measure: psi, inH<sub>2</sub>O, bar, mbar, kPa, inHg, mmHg, ozin<sup>2</sup>, ftH<sub>2</sub>O, cmH<sub>2</sub>O, kgcm<sup>2</sup>
- Max/Min/Avg record with time stamp
- Data Hold freezes the displayed reading
- Push button zero adjust and offset readings
- · Includes USB cable, tubing, hard carrying case and battery

#### **Specifications**

Pressure Range: 5.000 psi; 138.3 inH<sub>2</sub>0; 344.7 mbar; 34.47 kPa; 1.018 inHg; 258.5 mmHg; 80.00 ozin<sup>2</sup>; 11.53 ftH<sub>2</sub>0; 351.5 cmH<sub>2</sub>0; 0.351 kgcm<sup>2</sup>; 0.344 bar

Maximum Pressure: 20 psi



MODEL	DESCRIPTION

R3002 Differential Pressure Manometer, O to 5psi BS-6 Tripod



### DIFFERENTIAL PRESSURE MANOMETER. O TO 30PSI

- · Digital display of gauge or differential pressure
- Select from one of 11 different pressure units: psi, kPa, mbar, bar, in Hg, mmHg, cmH<sub>2</sub>O, inH<sub>2</sub>O, ftH<sub>2</sub>O, oz-in<sup>2</sup>, kg/cm<sup>2</sup>
- · Data Hold freezes the displayed reading
- Max/Min Record
- · Includes connection hose, battery and hard carrying case

#### **Specifications**

Pressure Range: 0 to ±30 psi Maximum Pressure: 60 psi



MODEL	DESCRIPTION
R3030	Differential Pressure Manometer, O to 30psi

## DIFFERENTIAL PRESSURE MANOMETER. O TO 100PSI

- · Digital display of gauge or differential pressure
- Select from one of 11 different pressure units: psi, kPa, mbar, bar, in Hg, mmHg, cmH<sub>2</sub>O, inH<sub>2</sub>O, ftH<sub>2</sub>O, oz-in<sup>2</sup>, kg/cm<sup>2</sup>
- · Data Hold freezes the displayed reading
- · Max/Min Record
- · Includes connection hose, battery and hard carrying case

#### **Specifications**

MODEL

R3100

Pressure Range: 0 to ±100 psi Maximum Pressure: 150 psi



MECHANICAL COMBO KIT Includes the following:  • REED R2100 Thermal Imaging Camera, 160x120  • REED R8100 Video Inspection Camera  • REED R7100 Non-Contact Photo Tachometer  • REED R5100 AC Voltage Detector with Flashlight  • REED R2000 Digital Stem Thermometer	
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**DESCRIPTION** 

Differential Pressure Manometer, O to 100psi

MODEL

REED-MECHANICAL-KIT

DESCRIPTION

Mechanical Combo Kit

#### LIGHT METER, 20,000 LUX

- Designed for one-hand operation and to fit easily into a tool belt or pocket
- · Auto-ranging
- · User selectable lux / Footcandles
- . Min/Max and Data hold functions
- · Auto shut off and zero adjustment button
- Includes battery

#### **Specifications**

Measuring Range: 0 to 20,000 lux; 0 to 2,000 Fc

Accuracy: ±5% of reading Sampling Time: 1 time/second



LM-81LX Light Meter, 20,000 lux CA-52A Soft Carrying Case

#### LIGHT METER, 20,000 LUX

- Digital dual filter light meter designed to measure a wide range of lighting types
- Large, 3-digit, 0.5" high, LCD display provides clear readouts even in high ambient light levels
- Data hold function
- Zero adjustment screw
- Over range and low battery indication
- · Includes battery

#### Specifications

Measuring Range: 0 to 20,000 lux Accuracy: ±5% of reading Sampling Time: 2 times/second



#### MODEL

#### YK-10LX

CA-52A

Light Meter, 20,000 lux Soft Carrying Case

#### LIGHT METER, 50,000 LUX

- · User selectable lux / Footcandles
- . Max and Data hold function
- · Auto shut off
- · Compact and lightweight
- · Includes carrying case and battery

#### Specifications

Measuring Range: 0 to 50,000 lux, 0 to 5,000 Fc

Accuracy:  $\pm 5\%$  of reading < 10,000 lux

Sampling Time: 1.5 times/second



MODEL

DESCRIPTION

ST-1301

Light Meter, 50,000 lux



#### LIGHT METER/DATA LOGGER, 100,000 LUX

- Measures ambient light levels as well as temperature with a type J/type K thermocouple thermometer
- Light levels are measured in foot-candles or lux
- Temperature is measured in °C or °F
- · Data hold and Max/Min record
- . Plug the 4GB SD card (sold seperately) into a computer and it downloads directly to Excel
- RS232 and USB computer interface
- · Includes soft carrying case and battery

#### Specifications

Measuring Range: 2,000, 20,000, 100,000 lux; 200, 2,000, 10,000 Ft-cd Type K Temp. Range: -148.0 to 2372.0°F (-100.0 to 1300°C) Type J Temp. Range: -148.0 to 2192.0°F (-100.0 to 1200°C)



#### MODEL

#### DESCRIPTION

SD-1128 Light Meter/Data Logger, 100,000 lux TP-01 Type K Thermocouple Wire Probe SD-4GB 4GB SD Memory Card

USB-01 USB Cable SW-U801-WIN Data Acquisition Software AP-9VA-110V AC Adapter

#### SOUND LEVEL METER

- . Meets IEC651 Type 2 requirements
- Dual measuring range (High/Low)
- Fast/Slow time weighting "A & C" frequency weighting
- . Data Hold, Max Hold functions and low battery indication
- 1/2" electret condenser microphone
- · Tripod mount for long-term monitoring
- Includes microphone windshield ball, battery and carrying case

#### Specifications

Measuring Range: Low: 35 to 100 dB; High: 65 to 135 dB

Frequency Range: 31.5 Hz to 8 kHz

MODEL	DESCRIPTION
R8050	Sound Level Meter
R8090	Acoustic Calibrator
SB-01	Windshield Ball
BS-6	Tripod

#### SOUND LEVEL METER, BARGRAPH

- Meets IEC 61672 Type 2 requirements
- · 60dB dynamic space in each range
- "A & C" frequency weighting "Fast/Slow" time weighting
- Min/Max function Analog bargraph display
- 1/2" electret condenser microphone
- · Tripod mount for long-term monitoring
- Includes microphone windshield ball, battery and carrying case

#### Specifications

Measuring Range: Low: 30 to 90 dB; Med: 50 to 110 dB; High: 70 to 130 dB

Frequency Range: 20 Hz to 8 kHz



#### DESCRIPTION

Sound Level Meter R8090 Acoustic Calibrator Windshield Ball SB-01 BS-6 Tripod







#### SOUND LEVEL METER/DATA LOGGER

- . Meets IEC 61672-1 Class 2 requirements
- . 60dB dynamic space in each range
- · Fast/Slow time weighting
- · "A & C" frequency weighting
- · Min/Max function
- · Backlit LCD display with analog bargraph
- . Records up to 64,000 datapoints (1MB)
- · Real time clock and calender
- USB Interface
- Includes windscreen, USB cable, Windows software, batteries and hard carrying case

#### Specifications

Measuring Range: 30 to 90 dB, 50 to 110 dB, 70 to 130 dB

Accuracy: ±1.4 dB @ 94 dB Frequency Range: 20 Hz to 8 kHz

MODEL	DESCRIPTION
R8080	Sound Level Meter/Data Logger
R8090	Acoustic Calibrator
SB-01	Windshield Ball
BS-6	Tripod

#### SOUND LEVEL METER/DATA LOGGER

- · Complies with IEC61672 Class 2 requirements
- A/C frequency weighting
- · Fast/Slow time weighting
- · Peak hold, Data hold and Max/Min record
- · Easy to read LCD with backlight
- · Real time data logger with SD memory card (sold seperately)
- Just plug the SD card into the computer and it downloads directly to Excel
- · Includes batteries

#### **Specifications**

Measuring Range: 30 to 130dB

Accuracy: 31.5Hz  $\pm$  3.5 dB, 63 Hz  $\pm$  2.5 dB, 125 Hz  $\pm$  2.0 dB, 250 Hz  $\pm$  1.9 dB, 500 Hz  $\pm$  1.9 dB, 1 kHz  $\pm$  1.4 dB, 2 kHz  $\pm$  2.6 dB,

4 kHz ± 3.6 dB, 8 kHz ± 5.6 dB Frequency Range: 31.5 Hz to 8 kHz

#### MODEL DESCRIPTION

SD-4023 Sound Level Meter/Data Logger R8090 Sound Level Calibrator SB-01 Wind Shield Ball SD-4GB 2GB SD Memory Card USB-01 USB Cable SW-U801-WIN Data Acquisition Software **CA-05A** Soft Carrying Case BS-6 Tripod

#### SOUND LEVEL CALIBRATOR

- Generates a stable acoustic signal at a controlled frequency and amplitude to verify the accuracy of your sound level meter
- Complies with IEC 942 Class 2

AP-9VA-110V

- Output sound pressure levels of 94dB and 114dB
- Accommodates sound meters with 1/2" diameter microphones
- Simply place calibrator on microphone, turn on and adjust your sound level meter









AC Adapter

#### **HEAT STRESS WBGT METER**

- Wet Bulb Globe Temperature (WBGT) considers the effects of temperature, humidity and direct or radiant sunlight
- Heat Stress Index measures how hot it feels when humidity is combined with temperature, air movement and radiant heat
- View individual temperatures or indices in either °F or °C
- User adjustable WBGT threshold with audible alarm if threshold is exceeded
- · Includes batteries

#### Specifications

Humidity Range: 0 to 100% RH

Air Temp. Range: 32 to 122°F (0.0 to 50.0°C)

Black Globe Temp. Range: 32 to 176°F (0.0 to 80.0°C)

WBGT Temp. Range: 32 to 122°F (0.0 to 50.0°C)



MODEL	DESCRIPTION	
8778	Heat Stress WBGT Meter	
BS-6	Tripod	
HR33	33% Humidity Calibration Standard	
HR75	75% Humidity Calibration Standard	

#### HEAT STRESS WBGT METER/ DATA LOGGER

- Wet Bulb Globe Temperature (WBGT) considers the effects of temperature, humidity and direct or radiant sunlight
- Also measures humidity, wet bulb, dew point and air temperatures
- User adjustable WBGT threshold with audible alarm if threshold is exceeded
   No extra coffware peopled, just plug the SD cord (cold).
- No extra software needed, just plug the SD card (sold seperately) into the computer and it downloads directly to Excel
- Includes brass black globe with sensor and carrying case

#### **Specifications**

Humidity Range: 5 to 95% RH

Air Temp. Range: 32 to 122°F (0 to 50°C)

Dew Point Temp. Range: -13.5 to 120.1°F (-25.3 to 48.9°C) Wet Bulb Temp. Range: -6.9 to 122.2°F (-21.6 to 50.0°C) WBGT Temp. Range: Indoor: 32 to 138°F (0 to 59°C);

Outdoor: 32 to 132°F (0 to 56°C)



MODEL	DESCRIPTION
	 14 /D OT 14

SD-2010 Heat Stress WBGT Meter/Data Logger
SD-4GB 4GB SD Memory Card
SW-U801-WIN Data Acquisition Software

 USB-01
 USB Cable

 BS-6
 Tripod

 AP-9VA-110V
 AC Adapter



WE BACK UP ALL OUR PRODUCTS WITH A STANDARD 1 YEAR WARRANTY.



PORTABLE INDOOR AIR QUALITY METER

- Simultaneously monitors carbon dioxide (CO<sub>2</sub>), relative humidity and temperature
- Instantaneous readings are displayed on a high resolution LCD with backlight
- Dew point and wet bulb temperatures can also be displayed
- Displays STEL readings (Short-Term Exposure Limit) over a 15-minute period and TWA readings (Time-Weighted Average) over a period of 8 hours
- · Hold function freezes displayed reading
- Maximum, minimum and average functions
- Audible warning alarm of excessive CO<sub>2</sub> concentrations

#### **Specifications**

Ranges: CO<sub>3</sub>: 0 to 5,000 ppm;

Temperature: 14 to 140°F (-10 to 60°C);

Humidity: 0 to 99.9% RH;

Dew Point: -100.12 to 140°F (-73.4 to 60°C); Wet Bulb: 8.06 to 140°F (-13.3 to 60°C)

Alarms: Audible: 80dB Response Time: 30 seconds



REED

10,4901

# MODELDESCRIPTIONR9900Portable Indoor Air Quality MeterRHA-3333% Humidity Calibration StandardRHA-7575% Humidity Calibration Standard

#### INDOOR AIR QUALITY METER/ DATA LOGGER

- Measures CO<sub>2</sub>, CO, O<sub>2</sub>, humidity and temperature
- Records readings from 3 probes simultaneously
- · Audible alarm setpoint
- Data hold and Max/Min record
- Real time data logger with integral 4GB SD memory card (sold seperately)
- Just plug the SD card into the computer and it downloads directly to Excel
- Includes humidity probe, CO probe, CO<sub>2</sub> probe, O<sub>2</sub> probe, and hard carrying case

#### **Specifications**

CO<sub>2</sub> Sensor: Non-dispersive infrared Range: 0 to 4,000 ppm

CO Sensor: Galvanic cell Range: 0 to 1,000 ppm

 $O_2$  Sensor: Galvanic cell Range:  $0 - 30\% O_2$ 

Alarm Threshold: <18.0% 0,

Humidity Sensor: Precision capacitive

Range: 5 to 95% RH

Temperature Range: 32 to 122.0°F (0 to 50.0°C)

Dew Point Temp. Range: -13.5 to 120.1°F (-25.3 to 48.9°C)

Wet Bulb Temp. Range: -6.9 to 122.1°F (-21.6 to 50°C)

#### MODEL

#### DESCRIPTION

SD-9901 IAQ Meter/Data Logger SD-4GB 4GB SD Memory Card BS-6 Tripod

TP-01 Thermocouple Wire Probe

USB-01 USB Cable
SW-U801-WIN Data Acquisition Software

**REED** 

AP-9VA-110V

AC Adapter

#### CARBON MONOXIDE METER

- · Large LCD dual display shows both carbon monoxide (CO) and temperature measurements
- · Stabilized electrochemical CO specific sensor and thermistor temperature sensor
- · Adjustable alarm limits
- Automatic zero point adjustment
- . Max. Data hold and Auto shut off
- Backlit LCD display
- · Includes battery and carrying case

#### **Specifications**

CO Range: 1 to 1000 ppm

Accuracy: 5% of reading or ±5 ppm

Temperature Range: -4 to 158°F (-20 to 70°C)

Accuracy: ±0.8°C (±1.5°F)

MODEL **DESCRIPTION** 

R9400 Carbon Monoxide Meter

#### COMBUSTIBLE GAS DETECTOR

- · Detects a wide variety of gases, including some toxic gases and nuisance vapors
- · Following is a partial list of the more common gases detected: Natural Gas; Propane; Butane; Methane; Acetone; Alcohol; Ammonia; Steam; Carbon Monoxide; Gasoline; Jet Fuel; Hydrogen Sulfide; Smoke; Industrial Solvents; Lacquer Thinner; Naphtha
- Audible (variable tick rate) and visible indications help to pinpoint leak sources
- · Adjustable sensitivity helps to eliminate background gas concentrations in contaminated environments
- Includes batteries and earphone jack for noisy environments

#### **Specifications**

Sensitivity: 50 ppm methane Response Time: < 2 seconds

Alarm Limit: At 10% LEL for methane (can be calibrated for other concentrations or gases up to 40% LEL)

Probe Length: 16" gooseneck

#### MODEL DESCRIPTION

GD-3300 Combustible Gas Detector TGS2611-C00 Replacement Sensor Tip

#### COMBUSTIBLE GAS DETECTOR

- · Gases sensed: gasoline, propane, natural gas or fuel oil
- Detects leaks as small as 5ppm of gasoline
- Audible and visual leak indications
- · Includes reference leak source, batteries and hard carrying case

#### Specifications

Sensitivity: Variable, as low as 5 ppm (gasoline) Alarm Settings: 7 LED tricolor bar indicator;

variable intensity audible alarm

Probe Length: 15.5" (400mm)





MODEL	DESCRIPTION	
C-383	Combustible Gas Detector	
S-100B	Replacement Sensor	



#### REFRIGERANT LEAK DETECTOR

- Detects and pinpoints even small leaks of refrigerant gases
- · Detects all halogenated refrigerants
- Quickly and accurately mark any leak spot
- · Audible and visual leak indications
- · No user calibration required
- · Includes reference leak source, batteries and carrying case

#### **Specifications**

Gases Sensed: CFCs: R11, R12, R13; HCFCs: R22, R502, R500; HFCs: R134a, R123, R125, R23, R404A, R407C, R410A and other halogen based compounds

Accuracy: ±5% or ±10 ppm, whichever is greater Alarm Settings: Buzzer, Tricolor LED bar indicator Response Time: Less than 1 second

Probe: 15" (390mm) flexible stainless probe MODEL **DESCRIPTION** 

C-380 Refrigerant Leak Detector R-134A Replacement Sensor LC-RO1 Replacement Reference Leak Source

#### ULTRASONIC LEAK DETECTOR

- Locates leaks generated by pressure, vacuum, conduit, water, gas or air
- Leakage level is displayed by an LED bargraph and audible sound
- · Ultrasonic Transmitter sends a 40 kHz signal which, when detected by the meter, indicates the location and magnitude of a leak (sold separately)
- · Includes rubber bottle plug with plastic tubing, 1/2" PVC pipe assembly for attaching to top of detector, battery and carrying case



#### MODEL **DESCRIPTION**

GS-5800 Ultrasonic Leak Detector GS-400 Ultrasonic Transmitter

### REED REED COMBINATION **KITS** Save with our Extensive Selection of **Application Specific** Combo Kits

#### MICROWAVE LEAKAGE DETECTOR

- · Detect very low levels of microwave leakage
- · Audible (beep) and visual (flashing red light) alarm signals
- · Built-in memory recalls maximum, minimum values as well as last value stored
- . Highly visible 5-digit LCD with backlight
- Includes soft carrying case and battery

#### Specifications

Measuring Range: 0 to 9.99 mW/cm2

Accuracy: ±1mW/cm2 Alarm Level: 5.0 dB



MODEL

#### DESCRIPTION

R9200

Microwave Leakage Detector

#### ELECTROMAGNETIC **FIELD METER**

- . Detects DC and AC magnetic fields
- Measures in milliGauss (mG) or microTesla (µT)
- · N pole/S pole indicator
- · High precision magnetometer can even measure the absolute environment of the Earth's magnetic field as reference
- · Zero adjustment button for relative measurements
- Data hold, record Max./Min. readings
- RS232/USB computer interface
- Includes probe and hard carrying case

#### Specifications

Measuring Range: -3000 to 3000mG, -300 to 300µT Frequency Response: AC/DC: 40 Hz to 10 KHz Field Direction: Uniaxial



#### MODEL

#### **DESCRIPTION**

GU-3001 USB-01 SW-U801-WIN BS-6

Electromagnetic Field Meter USB Cable Data Acquisition Software Tripod

#### RADIATION METER, BLUETOOTH

- Monitors the environment to alert users to the presence of radioactive material
- · Detects Alpha, Beta, Gamma, and X-radiation
- Adjustable indication of average time
- Can store 4000 groups of data internally
- Inte
- Incli

#### Spec

Radia Pulse

Accur

Accur Avera

orfaces to a computer via Bluetooth ludes hard carrying case	ากกวั
<mark>cifications</mark> tion Dose Rate Range: 0.0001 - 1000µSv/h ! Dose Rate Range: 0 - 4000cpm/cps	
mulated Radiation Dose Value: 0.001µSv - 9999Sv mulated Pulse Dose Rate: 0 - 9999 age Time: Adjustable 2 to 12 seconds	<b>9</b> •0





#### STUD/METAL/AC VOLTAGE DETECTOR

- · Stud/metal/AC voltage finder with laser line level
- · Select Normal Scan, detect up to 3/4" depth, or Deep Scan, detection up to 1-1/2" depth
- . 180° pivoting laser plane with level and plumb vials
- Thumb dial adjustment feet for leveling the laser
- · 20' laser line projection onto work surface with 90° squaring
- · LED display with continuous live wire detection
- · LCD sensing and mode display with target graphics
- Vertical and horizontal mounting holes
- Ergonomically designed for comfort and grip
- · Auto power off

#### Specifications

Laser Type: 650nm Class IIIA diode Laser Accuracy: 1/2" at 20 ft. Length of Laser Line: up to 20 ft.



MODEL

**DESCRIPTION** 

LA-1010 CA-05A

Stud/Metal/AC Voltage Detector Soft Carrying Case

**ULTRASONIC DISTANCE METER** (52FT/16M)

- · Ultrasonic distance meter measures in imperial/metric
- Laser target pointer
- · Measurements taken from front or rear of unit
- Data store/recall
- · Computes areas and volumes
- 5 groups of value in memory
- Sum of lengths
- · Auto/manual shut-off
- LCD backlight
- Audible confirmation of reading
- · Includes soft carrying case and batteries

#### **Specifications**

Measuring Range: 1.64" to 52.48' (5cm to 16m)

Accuracy: ± 1% of reading + 1 digit



MODEL

DESCRIPTION

DM-01

Ultrasonic Distance Meter (52ft/16m)





# LASER DISTANCE METER (147FT/45M)

- Easily measure hard-to-access areas, like high ceilings, with laser targeting
- Instant measurement with one-button operation
- Quick calculation of area (square footage) and volume
- Easy addition and subtraction of measurements
- Pythagoras calculation for determining distance indirectly from two or three other measurements
- Maximum/Minimum measurements
- · Reference point setting function
- Metric or Imperial units of measure
- Display backlight
- Storage of last 10 measurement results
- Includes battery

#### **Specifications**

Measuring Range: -0.05 to 45m

Accuracy: ≤10m: ±2.00mm; >10m: ±2mm ±0.05

x distance in metres -10)

Laser Type: Class 2, <1mW, 620 to 690 nm



#### MODEL

#### DESCRIPTION

R8002

Laser Distance Meter (147ft/45m)

# LASER DISTANCE METER (164FT/50M)

- One-person distance measuring and estimating tool that measures difficult to reach places
- · Laser target pointer
- · Auto horizontal distance
- · Indirect measurement using Pythagoras
- Angle, slope and pitch measured by placing body of meter on the slope itself or aligning it at the desired angle
- Area and volume calculations
- Addition/subtraction functions
- Min/max distance tracking
- · Store/recall up to 20 measurements
- · Multi-line display with illumination
- · Buzzer indication of reading
- . IP54 (Dust and splash-proof)
- Includes battery

#### **Specifications**

Measuring Range: 5cm to 50m (2" to 164')

Accuracy: ±1.5 mm (±0.06") Laser: Class 2, 635nm, <1mW



#### MODEL

#### DESCRIPTION

R8001

Laser Distance Meter (164ft/50m)

# COMBINATION KITS

Save with our Extensive Selection of Application Specific Combo Kits



#### VIDEO INSPECTION CAMERA

 High definition inspection scope detects and diagnoses problems without direct physical or visual access

gooseneck retains configured shape and is waterproof

Gooseneck is expandable up to 30' with optional cable extensions

. 17mm imager head with 1m flexible

 Four high visibility LED lights provide illumination in

dark locations with brightness control

Includes magnet, hook, mirror attachments and batteries



TFT LCD Size: 2.4"

Display Resolution: 480 x 234

Viewing Distance: 5.9 to 9.8" (15 to 25cm)

Viewing Angle: 0 to 180° Max. Resolution: 640 x 480

Depth of Field (DOF): 10mm to infinity

Camera Diameter: 0.66" (17mm); Length: 39" (1m)

### MODEL DESCRIPTION R8100 Video Inspection Camera

BS-C6 6' Cable Extension BS-15-9C3 9mm Replacement Camera Head w/ 3' Cable

#### VIDEO INSPECTION CAMERA

· Comfortable pistol grip design and forward

facing controls make it easy to detect and diagnose the unreachable

 High visibility 3.2" color TFT LCD monitor with 320x240 pixel resolution

 Camera and video functions allows you to save high resolution JPG images and live video

TV compatible

Rechargeable lithium-ion battery

. Transfer files to a computer via USB cable and optional 2GB SD memory card

 Includes video borescope, imager head, magnet, hook and mirror attachments, 3.7V lithium battery, DC power supply, USB cable, video output cable and hard carrying case

#### **Specifications**

Viewing Distance: 5.9 to 9.8" (15 to 25cm)

Viewing Angle: 0 to 180°

LCD Monitor: 640 x 480 pixels, 320 x 240 pixels max. resolution

Camera Diameter: 0.66" (17mm); Length: 39" (1m) Dimensions: 9.5 x 3.9 x 6.3" (240 x 100x 160mm)

#### MODEL DESCRIPTION

BS-150 Video Inspection Camera SD-4GB 4GB SD Memory Card BS-C6 6' Cable Extension

BS-15-9C3 9mm Replacement Camera Head w/ 3' Cable

BS-150/BATTERY Replacement Battery

#### HD VIDEO PIPE INSPECTION SYSTEM

- Cost effective portable inspection camera designed to deliver quality video inspection in a wide range of applications including: sewers, building ducts/piping, wells, and power plants
- · System includes camera head, cable reel, battery pack and DVR
- High resolution CCD chip is designed to capture bright, crisp, color video of the inspection area
- 7" TFT LCD display presents a live crisp color image at your fingertips
- · Cable reel is mounted and rotatable in the case
- Camera head contains 12 white LED lights, a flexible spring coiled joint to navigate corners, a scratch-resistant sapphire lens cover and a stainless steel housing that allows the camera to withstand various hits
- · Sun visor is included to act as a sun shield for outdoor inspections
- Includes camera head, cable reel and push cable, re-mote control, toolbox with DVR, battery pack and cable, car charger, fuse (x2), ball guide (x2), plastic skid, screw (x2), nut (x2) and waterproof ring, adapters, screwdriver

#### **Specifications**

#### Camera

Focus Distance: 20cm (approx)
Depth-of-View: 100cm (approx)
Lighting: Built-in12 white LED

Waterproof: 20m water (camera fixed on cable)

Cable Wheel

Cable Length: 20m

DVR

Screen: 7" 16:9 high-definition color LCD

Resolution: 800 x 480 RGB

External Memory:

Supports SD memory card up to 32GB

Battery Pack

Running Time: 7 hour (Record), 9 hour (Play Back)



#### DESCRIPTION

MODEL R9000 R9000-RCH

HD Video Pipe Inspection System Replacement Camera Head





We are proud to offer our customers quality products at economical s.

#### PH METER

- Dual displays of temperature and pH
- One touch calibration for up to 3 points
- · Replaceable pH electrode module
- Data hold IP65 rated (waterproof)
- · Protective sensor cap keeps sensor moistened
- · Includes batteries

#### Specifications

pH Range: 0.00 to 14.00 pH

Temperature Range: 0 to 32 to 140°F (60.0°C)

MODEL	DESCRIPTION
8689	Digital pH Pen
86P8	Replacement pH Electrod
PH-04	4.0 pH Buffer Solution
PH-07	7.0 pH Buffer Solution

#### PH/ORP METER/DATA LOGGER

- . Measures pH and ORP levels in water
- Auto 3-point calibration for pH 4.0, pH 7.0 and pH 10.0
- · Plug the SD card (sold seperately) to download directly to Excel
- Model SD-230-KIT2 Kit, includes: SD-230 pH/ORP Meter/ Data Logger, ORP-14 ORP Electrode & PE-11 pH Electrode



pH Range: 0 to 14.00 pH mV Range: -1999 to 1999 mV

#### DESCRIPTION MODEL

SD-230 pH/ORP Meter/Data Logger SD-230-KIT2 pH/ORP Meter Kit pH Electrode, 9.5mm dia, x 130mm PF-01 PE-03 pH Electrode, 12.3mm dia, x 160mm

PE-11 pH Electrode, 10mm dia. x 130mm ORP-14 **ORP Electrode** PH-04 4.0 pH Buffer Solution PH-07 7.0 pH Buffer Solution

TP-07 ATC Temperature Probe SD-4GB 4GB SD Memory Card USB-01 USB Cable

SW-U801-WIN Data Acquisition Software AC Adapter AP-9VA-110V

#### CONDUCTIVITY/TDS/SALINITY METER/DATA LOGGER

- . Measures conductivity, total dissolved solids (TDS) and salt levels in water
- · Plug the SD card (sold seperately) to download directly to Excel
- RS232 and USB computer interface
- · Includes probe and hard carrying case

#### Specifications

Conductivity Range: 200µS, 2mS, 20mS, 200mS TDS Range: 200, 2000, 20,000, 200,000 ppm Salinity Range: 0 to 12% salt (% weight)



SD-4307 Conductivity/TDS/Salinity Meter/Data Logger

SD-4GB 4GB SD Memory Card TP-01 Thermocouple Wire Probe

USB-01 **USB** Cable Data Acquisition Software SW-U801-WIN

AP-9VA-110V AC Adapter













#### SALINITY REFRACTOMETER

- Salinity refractometers are useful for measuring the concentration of natural or artificial seawater in aquariums, holding tanks, and breeding ponds
- They can also be used for controlling the saltwater concentration when preparing pickles, measuring the concentration of saltwater used in rinsing and cooking sea products

#### Specifications

Range: 0 to 28% Resolution: 0.2% Accuracy: ±0.2%



MODEL DESCRIPTION R9600 Salinity Refractometer RPDPA1 Lens Cover

#### BRIX REFRACTOMETER

- · A Brix Refractometer shows the concentration percentage of the soluble solids content (total solids) of a sample (water solution)
- Brix% is calibrated to the number of grams of cane sugar contained in 100g of cane sugar solution (When measuring a sugar solution, the Brix% should perfectly match the actual concentration)
- The soluble solids content is the total of all the solids dissolved in the water beginning with sugar, salts, protein, acids, etc. and the measurement reading value

#### Specifications

Range: 0 to 32% Resolution: 0.2% Accuracy: ±0.2%



MODEL DESCRIPTION R9500 **BRIX Refractometer** RPDPA1 Lens Cover

#### BATTERY COOLANT REFRACTOMETER

- It is essential to know the concentration and freezing point of anti-freeze coolants for vehicular safety
- . This tester monitors the freezing point of both Ethylene Glycol and Propylene Glycol
- · In addition, it indicates battery recharge level
- This tester is simple to use; requiring only a few drops to provide accurate readings within seconds

#### **Specifications**

Propylene Glycol

Range: -50 to 32°F (-45.5 to 0°C)

Ethylene Glycol

(-45.5 to 0°C)



MODEL R9700

DESCRIPTION

Battery Coolant Refractometer

Lens Cover

RPDPA1

#### **CALIPER & MICROMETER**

- · 6-digit LCD display
- mm/inch select and zero button

#### Model DC-515 Caliper

Range: 0 to 6" x 0.0005"/ Resolution: 0 to 150mm x 0.01mm Dimensions: 235 x 75 x 15mm

#### Model DC-516 Micrometer

Range: 1" x 0.00005"

Resolution: 25mm x 0.001mm Dimensions: 156 x 56 x 22mm



MODEL	DESCRIPTION	
DC-515	Digital Caliper	
DC-516	Digital Micrometer	

#### **DIGITAL STOP WATCH**

- · High contrast digital display
- Records real time and split times
- 1/100th second resolution
- . Displays hour, minute, second, and day of the week
- · Alarm and snooze functions
- · Shock and water resistant case
- · Includes neck lanyard and battery



REFO

MODEL	DESCRIPTION	
SW600	Digital Stop Watch	

#### **HEAT STRESS STOP WATCH**

- Measures temperature and humidity, and calculates heat index as well as dew point
- Combines air temperature and relative humidity measurements in an attempt to determine the human-perceived equivalent temperature or "how hot it feels"
- · Calendar mode displays day, date and time
- Stopwatch/chronograph mode with 1/100 second resolution
- Fastest/Slowest/Average Lap recall
- 99 lap counter with 30 lap/split memory
- 10 hour countdown timer with audible beeper warning for the last 5 seconds
- 12 or 24 hour clock operation
- · Full LCD display with LED backlight
- Silent operation option
- Dual power: solar panel and battery
- 1 ATM water resistant (IPX4 rated)

#### Specifications

Timing Capacity: 9 hrs, 59 mins, and 59 secs

Accuracy: ±3 seconds per day

Heat Index Range: 70 to 122°F (22 to 50°C) Temperature Range: 23 to 122°F (-5 to 50°C)

Humidity Range: 1 to 99% RH



DESCRIPTION

Heat Stress Stop Watch



#### **DIGITAL SCALE**

- . LCD display with automatic backlight
- Platform size: 195mm x 150mm x 40mm
- Cabinet size: 150mm x 145mm x 48mm

#### Model GM-600G

- 600g capacity x 1g resolution
- Measures in grams, ounces and parts counting

#### Model GM-3KG

- 3000g capacity x 1g resolution
- Measures in grams, pounds and parts counting
- · Self calibration with memory



#### MODEL

GM-600G GM-3KG AP-9VA-110V

#### DESCRIPTION

Digital Scale, 600g Digital Scale, 3000g AC Adapter

# ELECTRONIC SCALE, 5000G

- 5000g measuring capacity with 1g resolution
- Dual range, gram or ounces, selected by internal slide switch
- · Single push button control on front panel
- Battery or 9VDC adapter power supply
- · Stainless steel platform
- RS232 serial interface



#### MODEL

GM5000 AP-9VA-110V

#### DESCRIPTION

Electronic Scale, 5000g AC Adapter



#### **CARRYING CASES**



#### MODEL

#### DESCRIPTION

CA-52A Soft Carrying Case, 7"L x 3"W x 2"D C-820 Soft Carrying Case, 8"L x 5"W x 2"D CA-05A Soft Carrying Case, 9"L x 4"W x 2"D C-833R Multi-tool Carrying Case, 11"L x 9"W x 2"D MC-2 Attache-style Carrying Case, 17"L x 14"W x 5"D R8888 Deluxe Carrying Case, 13"L x 12"W x 5.8"D R9999 Industrial Tool Bag, 15.8"L x 7.8"W x 11.8"D

#### **ACCESSORIES**









#### MODEL

#### **DESCRIPTION** 4GB SD Memory Card

SD-4GB SD-MINI(8GB) BS-6

8GB Micro SD Memory Card Tripod



## NEW PRODUCTS

Check out some of the latest additions to our extensive line of test & measurement instruments.

#### R5500 CIRCUIT BREAKER FINDER

See page 15



R2007 DUAL LASER INFRARED THERMOMETER

See page 17



See page 32





#### R2800 TEMPERATURE SIMULATOR

See page 26



See page 26



#### REFERENCE GUIDE

#### **ELECTRICAL**

Electrical Safety Standards - To ensure the safe operation of electrical instruments, the IEC61010 has established safety standards for electrical environments. There are four categories, which are always stated with the designated voltage, for example "CAT III, 150 V" or "CAT IV. 1000 V".

CAT I - Applicable to instruments and equipment, which are not intended to be connected to the mains supply. Examples: low voltage electronic circuits, load circuits of bench power supplies, etc.

CAT II - Defines circuits which are intended for direct connection into mains sockets or similar points. Example: a device connected to a 120 V mains socket.

CAT III - For circuits which can be connected to the mains installation of a building. Example: 120/240 V distribution boards, busbars, or equipment permanently connected to the 3-phase power supply (e.g. electric motors).

CAT IV - Includes circuits which are connected directly to the source of power for a given building. There are very high levels of available energy and arc flash can occur. Example: measurements on a cable connecting the power transformer and a building (i.e. before the circuit breakers in the building).

True Root Mean Square (TRMS) - When measuring the value of an alternating current signal it is often necessary to convert the signal into a direct current signal of equivalent value (known as the root mean square, RMS value). This process can be quite complex and most low-cost instrumentation and signal converters carry out this conversion by filtering the signal into an average rectified value and applying a correction factor.

Volt - The unit by which an electromotive force or voltage is measured. The volt is a measure of electric potential. Electrical potential is a type of potential energy, and refers to the energy that could be released if electric current is allowed to flow.

Ampere (Amp) - Amperage or Amps provided by an electrical service is the flow rate of "electrical current" that is available.

Ohm - The unit of measurement for resistance. One ohm is that resistance that limits the current to one ampere when a potential of one volt exist across its terminals.

Watt - The unit of measurement for power. One watt equals to the work done when one joule is used per second.

Capacitance - The ability of two conductors separated by an insulator to store an electrical charge.

#### TEMPERATURE, HUMIDITY AND MOISTURE

Distance to Spot - The field of view of an infrared thermometer is similar to that of a flashlight, the further the object is from the flashlight, the bigger the diameter of the beam. The further you are from your target, the larger the area of measurement spot. Optical resolution is defined by the ratio between the distance from the object being measured to the size of the object being measured (D:S). The greater the D:S ratio, the higher the optical resolution. A thermometer with a higher resolution allows you to measure smaller objects from greater distances.

Emissivity - Term used to express the effectiveness of a given material in emitting energy as thermal radiation.

Relative Humidity - Relative humidity is the amount of moisture in the air compared to what the air can "hold" at that temperature. When the air can't "hold" all the moisture, then it condenses as dew.

Dry-Bulb Temperature (DBT) - The dry-bulb temperature is the temperature of air measured by a thermometer freely exposed to the air but shielded from radiation and moisture. DBT is the temperature that is usually thought of as air temperature.

Wet-Bulb Temperature (WBT) - The wet-bulb temperature is the temperature a parcel of air would have if it were cooled to saturation (100% relative humidity) by the evaporation of water into it.

Thermocouples (T/C) - A temperature-measuring device consisting of two dissimilar conductors that contact each other at one or more spots, where a temperature differential is experienced by the different conductors (or semiconductors). It produces a voltage when the temperature of one of the spots differs from the reference temperature at other parts of the circuit.

Heat index (HI) - An index that combines air temperature and relative humidity in an attempt to determine the human-perceived equivalent temperature—how hot it feels.

WBGT - The wet-bulb globe temperature (WBGT) is a composite temperature used to estimate the effect of temperature, humidity, wind speed (wind chill), and visible and infrared radiation (usually sunlight) on humans.

#### REFERENCE GUIDE

Data Logger - An electronic device that is capable of recording data over time or in relation to location either built in to the instrument or sensor or via external instruments and sensors

Moisture Content - Moisture content is the quantity of water contained in a material.

#### INDUSTRIAL

Stroboscope - Also known as a strobe, it is used to make a cyclically moving object appear to be slow-moving, or stationary. It consists of either a rotating disk with slots or holes or a lamp such as a flashtube which produces brief repetitive flashes of light. When a rotating or vibrating object is observed with the stroboscope at its vibration frequency (or a submultiple of it), it appears stationary.

Tachometer - An instrument measuring the rotation speed of a shaft or disk, as in a motor or other machine. The device usually displays the revolutions per minute (RPM).

**Durometer** - One of several measures of the hardness of a material. Hardness may be defined as a material's resistance to permanent indentation.

**Refractometer** - A refractometer is a laboratory or field device for the measurement of an index of refraction (refractometry).

Anemometer - An anemometer or windmeter is a device used for measuring wind speed.

Lux (LX) - The unit of illuminance and luminous emittance, measuring luminous flux per unit area. It is equal to one lumen per square metre.

Foot-candle (FC) - A unit of measure of the intensity of light falling on a surface equal to 1 lumen per square foot.

#### GAS

Carbon Monoxide (CO) - is a colorless, odorless, and tasteless gas that is slightly less dense than air. It is toxic to humans when encountered in concentrations above about 35 ppm.

Indoor Air Quality (IAQ) - is a term which refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants. IAQ can be affected by gases (including carbon monoxide), microbial contaminants (mold, bacteria), or any mass or energy stressor that can induce adverse health conditions.

Lower explosive limit (LEL) - The lowest concentration (percentage) of a gas or a vapor in air capable of producing a flash of fire in presence of an ignition source (arc, flame, heat)

Parts per million (PPM) - Just as per cent means out of a hundred, so parts per million or ppm means out of a million. Usually describes the concentration of something in water or soil.

#### WATER QUALITY

pH - Is the negative log of the activity of the hydrogen ion in an aqueous solution. Solutions with a pH less than 7 are said to be acidic and solutions with a pH greater than 7 are basic or alkaline. Pure water has a pH of 7.

Oxygen Reduction Potential (ORP) - ORP stands for oxidation-reduction potential, which is a measure, in millivolts, of the tendency of a chemical substance to oxidize or reduce another chemical sub- stance. OXIDATION.

Oxidation - Oxidation is the loss of electrons or an increase in oxidation state by a molecule, atom, or ion.

Reduction - Reduction is the gain of electrons or a decrease in oxidation state by a molecule, atom, or ion.

Total Dissolved Solids (TDS) - Total Dissolved Solids is directly related to the purity of water. It is the measurement for the combined content of all inorganic and organic substances in a given volume of water, expressed in units of mg per unit volume of water (mg/L) or parts per million (ppm).

Dissolved Oxygen (DO) - Dissolved oxygen refers to the level of free, non-compound oxygen present in water or other liquids.

Salinity - Salinity is the saltiness or dissolved salt content of a body of water.

Automatic Temperature Compensation (ATC) - Automatic correction for the influence of temperature at the measurement source.



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