CEM

Product Catalogue 2016

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National Testing Center for Digital Electronic Product (TDE)
Shenzhen Academy of Metrology and Quality Inspection (SMQ)

Certificate
Of
Compliance

No: WT08800188?

The applicant
SHENZHEN EVERBEST MACHINERY INDUSTRY CO.,LTD

19th Building, 5th Region, Baiwangxin Industrial Park, Songbai Rd., Baimang, Xili, Nanshan, Shenzhen, China

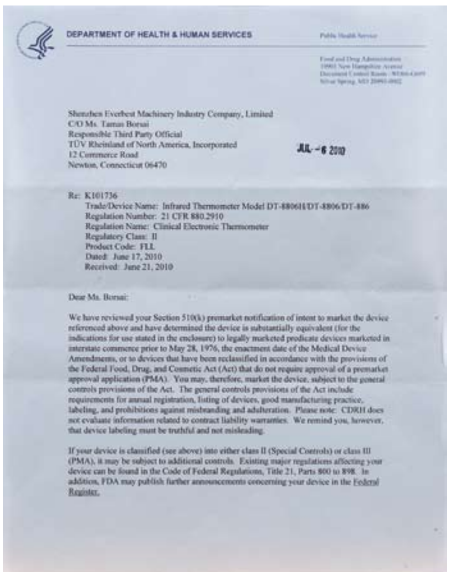
has successfully demonstrated that its product

Infrared Thermometer
DT-8806

is compliant with
FCC part15 Subpart B

The certificate of compliance shows that the tested sample technically complies with the standards listed above. The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production.

Authorized Signer:
Issued Date: Sep 17, 2008


DEPARTMENT OF HEALTH & HUMAN SERVICES

Shenzhen Everbest Machinery Industry Company, Limited
C/O Ms. Tamas Borsai
Responsible Third Party Official
TÜV Rheinland of North America, Incorporated
12 Commerce Road
Newton, Connecticut 06470

JUL - 6 2010

Re: K101736
Trade/Device Name: Infrared Thermometer Model DT-8806H/DT-8806/DT-886
Regulation Number: 21 CFR 880.2910
Regulation Name: Clinical Electronic Thermometer
Regulatory Class: II
Product Code: FLL
Dated: June 17, 2010
Received: June 21, 2010

Dear Ms. Borsai:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.


质量管理体系认证证书
QUALITY MANAGEMENT SYSTEM CERTIFICATE

兹证明
This is to certify that

深圳华盛昌机械实业有限公司
SHENZHEN EVERBEST MACHINERY INDUSTRY CO., LTD.

建立的质量管理体系符合标准
Has been awarded this certificate for compliance with the standard

GB/T19001-2008/ISO9001:2008

Scope: Digital Multimeters and Infrared Thermometers Etc.

董事长
President

Best Quality

Products

For over 24 years, **CEM, SHENZHEN EVERBEST MACHINERY INDUSTRY CO. LTD.** has been a leading chinese manufacturer specialising in Infrared Thermometers, Digital Multimeters, Clamp-on Meters, Insulation Testers, Electrical Testers, Light Meters, Sound Level Meters, Thermo-Anemometers, Gas Detectors, Manometers and various measuring instruments.

Over two decades of manufacturing experience has given us the confidence to guarantee the quality of all our exports. Our factory in Shenzhen, China, spreads across three buildings occupying an area of 24,000 square metres. Three R & D centres are on hand for customers' requirements, constantly working on and innovating new products to meet their ever- changing demands.

More than 900 employees and five production departments ensure prompt and timely deliveries.

Our processes and systems are setup and implemented as per ISO9001 standards. Consequently, our products are approved by UL, GS, CE and RoHS. In 2009, CEM has also approved an ISO13485 quality certificate for our medical products.

Let Everbest's decades of export experience work for you. Find out more about our range of products and services and for any enquiries, please feel free to contact us today.

ISO-9001

TÜV Rheinland / CCIC (Qingdao)

CERTIFICATE

for a

Quality Management System

according to

EN ISO 13485:2003+AC:2007

TÜV Rheinland / CCIC (Qingdao) hereby certifies that the

Manufacturer: Shenzhen Everbest Machinery Industry Co., Ltd. 19th Building,5th Region Baiwangxin Industrial Park,Songbai Rd., Baimang, Xili, Nanshan Shenzhen, Guangdong P.R. China

has established and maintains a quality management system. Conformance with the requirements of the standards has been audited. The organization is subject to a yearly surveillance audit.

Registration No.: SY 50164769 0001 — Report No.: 17012424 001

Date of expiry: 14.09.2014 — Scope: refer to Attachment

Certification Body

ISO-13485

CERTIFICATE

of Conformity

Registration No.: AK 50160783 0001

Report No.: 17012991 001

Holder: Shenzhen Everbest Machinery Industry Co., Ltd. 19th Building,5th Region Baiwangxin Industrial Park,Songbai Rd., Baimang, Xili, Nanshan Shenzhen, Guangdong P.R. China

Product:

Identification:

Tested acc. to:

Certification Body

Dipl.-Ing. C. Nasa

TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln

CE0197 CE GSFDA

Zertifikat Certificate

R&D

innovation

CEM engineers constantly work on innovative new products that combine the features and functions that our customers ask for, two R&D centers are on hand to meet the ever changing demand of customer's needs.

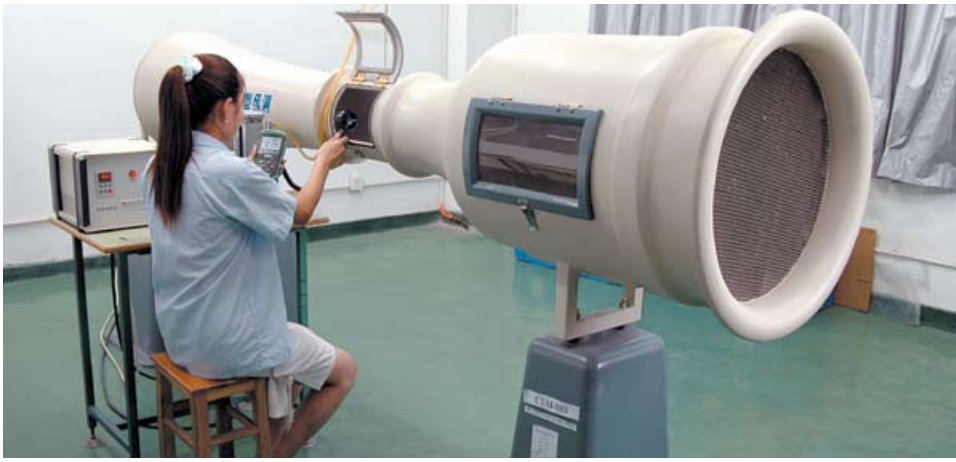
With the advanced production and R&D centre, having high precision calibration equipments and skilled engineers, we have been satisfying the needs of our OEM/ODM customers over the last 20 years.

Having satisfied our high profile customers and having gained acumen to manufacture high precision instruments, we now introduce some of our products with our own CEM brand. We understand how important are these instruments for all engineers and hence provide "48 HOURS SERVICE TURN-AROUND TIME" for all warranty issues.

after-sales service

Timely after-sales service : according to the different needs and feedback of customers, CEM provides quality and technical support to ensure fast and effecient after-sale service support.

Customer's satisfaction is the most important thing for our long good business relations.



Production & Quality

CEM

CEM has a plastic molding department to support operations and provide better quality control. Let CEM'S 20 years of export experience work for you.

CONTENTS

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High Performance High Resolution

Thermal Imagers

CEM High Performance Thermal Imager with high-resolution 384 x 288 pixels with options available for 160 x 120 as well, easily helps you to find the potential problems with innovative features and functionality, you can perform infrared inspections, faster and more efficiently, and thoroughly document problematic areas for additional analysis.

• DT-9875

• DT-9885

Accessories

- Hard Transport case • 22mm lens (For DT-9885 only)
- 7.5mm lens (For DT-9875/DT-9873B) • Sun Visor, Tripod base
- AC charger/Power supply • Earphone • Battery • Camera lens cap
- software CD-ROM • Handstrap • micro SD card
- USB cable & RCA cable • Test Certificate

Key Features
384x288 High Performance & high resolution Thermal Imager with TFT color LCD display for (DT-9885)
DT-9875 / DT-9873B has a resolution of 160 x 120
Professional IR-optical focus system ensures that images are in good focus for optimum image clarity and scanning convenience
Meter-box analysis system—quickly identify and keep track of inspection locations by adding digital images of important information and surrounding areas
Finds problems faster and easier by accurately identifying potential issues by combining digital and IR images
Picture in Picture function 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 -20 to +400°C targeting electrical and industrial applications
±2% Accuracy for reliable temperature measurement
The image rotation facility allows to automatically rotate the active image
Audio recording with the video image acts as a speaker to listen to audio recorded with the video image
Capacitive touch screen is easier, productive and effecient to operate
Lithium polymer Rechargeable Battery lasts >4hrs continuous use; and is replaceable
An easy-to-access thumbnail image gallery helps you to quickly review and find your thermal images.
Area (Min/Max) mode shows the Minimum or the Maximum Temperature reading in the selected area
A conveniently located button activates the laser pointer that will help you associate the hot or cold spot in the thermal image with the real physical target in the field.
In order to adapt the device to every situation both wide angle and tele-lenses are available.
Equipped with standard video, USB outputs as well as a removable SD card.

SPECIFICATIONS (Check the CEM web for detailed specifications)

Specifications	9885	9875	9873B
Imaging And Optical Data			
Field of view (FOV)/ Minimum Focus Distance	24.6°x 18.6°/ 0.3m	33° x 24°/ 0.3m	29.8° x 22.6°/ 0.2m
Spatial Resolution (IFOV)	1.14mrad	3.33mrad	3.33mrad
Thermal Sensitivity/NETD	< 0.06°C @ +30°C (+86°F) / 60 mK	<0.08°C @ +30°C (+86°F) / 80mK	< 0.08°C @ +30°C (+86°F) / 80 mK
Image Frequency	50Hz	50Hz	50Hz
Focus Mode	Manual	Manual	Manual
Zoom	1-20x continuous, digital zoom	1-20x continuous, digital zoom	0-20x continuous, digital zoom
Rotate	0°- 360°, continuous increased by 1°	0-360°, continuous increased by 1°	0-360°, continuous increased by 1°
Focal Length	22mm	7.5mm	7.5mm
Focal Plane Array (FPA) / Spectral Range	Uncooled microbolometer/ 8-14 pm	Uncooled microbolometer / 8-14µm	Uncooled microbolometer / 8-14 pm
IR Resolution	384 x 288 pixels	160 x 120 pixels	160 x 120 pixels
Image Presentation			
Display	Capacitive Touch screen, 3.5 in. LCD, 320 x 240 pixels	Capacitive Touch screen, 3.5 in. LCD, 320 x 240 pixels	Capacitive Touch screen, 3.5 in. LCD, 320 x 240 pixels
Image Modes	IR image, visual image, picture in picture, Image Fusion	IR image, visual image, picture in picture, Image Fusion	IR image only
Picture in Picture	IR area on visual image or visual image area on IR	IR area on visual image or visual image area on IR	
Color Palettes	IRON/Rainbow/Grey/GreyInverted/Sepia/Blue_Red / Hot_Cold/Humidity	Gray/Grayinv Iron/Ironinv/Rainbow/Feather	IRON/Rainbow/Grey/Grey Inverted/Sepia/Blue_Red/ Hot Cold/Humidity
Measurement			
Object Temperature Range	-20°C to +150°C (-4°F to +302°F) 0°C to +400°C (+32°F to +752°F)	-20°C to 150°C (-4°F to 302°F) 0°C to 400°C (32°F to 752°F)	-20°C to +150°C (-4°F to + 302°F) 0°C to + 400°C (+32°F to + 752°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading	±2°C (±3.6°F) or ±2% of reading	± 2°C (±3.6°F) or ± 2% of reading
Measurement Analysis			
Spot	3	3	Center Spot
Line	2 lines (horizontal and vertical)	2 lines (horizontal and vertical)	-
Area	3 boxes with max. /min. /average	3 boxes with max. /min. /average	-
Automatic Hot/Cold Detection	Auto hot or cold markers	Auto hot or cold markers	Auto hot or cold markers
Isotherm	Detect high/low temperature/interval	Detect high/low temperature/interval	Detect high / low temperature/interval
Emissivity Correction	Variable from 0.01 to 1.0	Variable from 0.01 to 1.0	Variable from 0.01 to 1.0
Measurement Corrections	Emissivity, ambient temperature, distance, relative humidity, offset temperature	Emissivity, ambient temperature, distance, relative humidity, offset temperature	Emissivity, ambient temperature, distance, relative humidity, offset temperature
Storage Of Videos			
Storage Media	4Gbytes Micro SD card	4Gbytes Micro SD card	4Gbytes Micro SD card
Video Storage Format	Standard MPEG-4, 640x480@30fps, on memory card > 60 minutes	Standard MPEG-4, 640x480@30fps, on memory card >60 minutes	Standard MPEG-4, 640x480@30fps, on memory card > 60 minutes
Video storage mode IR/visual images; simultaneous storage of IR and Visual Images			
Storage Of Images			
Image Storage Format	Standard JPEG, including measurement data, on memory card > 1000 pictures	Standard JPEG, including measurement data, on memory card >1000 pictures	Standard JPEG, including measurement data, on memory card > 1000 pictures
Image Storage Mode	IR/visual images; simultaneous storage of IR and visual images	IR/visual images; simultaneous storage of IR and visual images	IR images with annotation(audio or text)
Set-Up			
Laser	< class2	<Class2	< class2
Set-up Commands	Local adaptation of units, language, date and time formats, information of camera	Local adaptation of units, language, date and time formats, information of camera	Local adaptation of units, language, date and time formats, information of camera
Languages	Multinational	Multinational	Multinational
Digital Camera			
Built-in Digital Camera	640 x 480 pixels	640 x 480 pixels	640 x 480 pixels
Built-in Digital Lens Data	FOV 62.3°	FOV 62.3°	FOV 62.3°
Data Communication Interfaces			
Interfaces	USB-mini, audio, composite video, Micro SD slot	USB-mini, audio, composite video, Micro SD slot	USB-mini, audio, composite video, Micro SD slot
USB	Data transform between camera and PC	Data transform between camera and PC	Data transform between camera and PC
Video out	Composite(PAL and NTSC)	Composite(PAL and NTSC)	Composite(PAL and NTSC)
Power System			
Battery	Lithium polymer battery, 4.5 hours operating time	Lithium polymer battery, 4.5 hours operating time	Lithium polymer battery, 4.5 hours operating time
Input Voltage	DC 9V to 12V	DC 9V to 12V	DC 9V to 12V
Charging System	In camera (AC adapter)	In camera (AC adapter)	In camera (AC adapter)
Power management	Automatic shutdown and sleep mode (user selectable)	Automatic shutdown and sleep mode (user selectable)	Automatic shutdown and sleep mode
Environmental Data			
Operating Temperature Range	-20°C to + 50°C (-4°F to + 122°F)	-20°C to 50°C (-4°F to 122°F)	-20°C to +50°C (-4°F to +122°F)
Storage Temperature Range	-40°C to + 70°C (-40°F to + 158°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to +70°C (-40°F to +158°F)
Humidity (operating and storage)	10%-90%	10%-90%	10%-90%
Encapsulation	IP65	IP65	IP65
Drop Test	2m	2m	2m
Bump	25g (IEC60068-2-29)	25g (IEC60068-2-29)	25g (IEC60068-2-29)
Vibration	2g (IEC60068-2-6)	2g (IEC60068-2-6)	2g (IEC60068-2-6)
Physical Data			
Camera Weight, incl. Battery	920g	920g	920g
Camera Size (L x W x H)	243 x 103 x 160	243 x 103 x 160	243 x 103 x 160

High Performance Low Cost

Thermal Imagers

This Thermal Imager is handheld imaging camera used for predictive maintenance, equipment troubleshooting, and verification. Thermal and visual images are displayed on the LCD and can be saved to a Micro SD Memory card. Removing the SD memory card and connecting it to a PC accomplish transferring images to a PC through the included card reader. In addition to the features mentioned above, the Thermal Imager provides video recording with audio and play back.

DT-980 (80x80) Thermal Imagers are designed to make your work easier, more productive and effective. Temperature range from -20°C to 350°C (-4°F to 662°F), 32X continuous zoom, picture-in-picture, voice comment recording and text annotation on images. Hot/Cold spot marker automatically finds the hottest and coldest spots. It includes memory card, Lithium polymer battery & power supply, and USB cable.

This can be connected to PC for documentation and reporting purpose.

CE

EMC
EN: 61326-1
EN: 61010-1

Key features

High Resolution IR Images : (80x80) Infrared resolution

Visible Light Digital Camera : 5 Megapixels Digital camera 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 -20 to +350°C, targeting electrical and industrial applications, ±2% Accuracy, reliable temperature measurement

Thumbnail view : Easy to view and analyze images quickly, Audio recorded with the video image : A speaker to listen to audio recorded with the video image

Li-Ion Rechargable Battery: Lasts >4hrs continuous use; replaceable

HDMI : HDMI High resolution video output

Inside 100M Memory : About 80 pictures or one minute video record

Copy to USB : Easily uploads images from camera to USB memory card

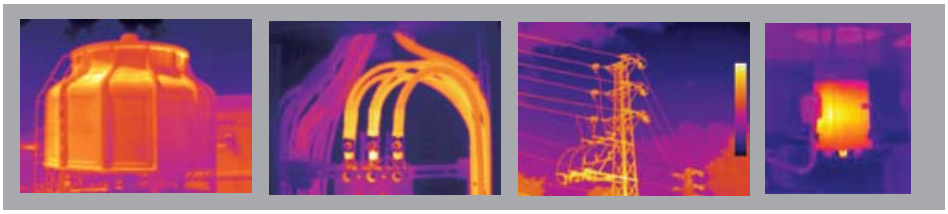
Area (Min/Max) Mode : Shows the Minumum or the Maximum Temperature reading in the selected area

EMC EN: 61326-1 EN: 61010-1

Laser Sighting : To aim at the target

Imaging and Optical Data	
Field of View (FOV) / Minimum Focus Distance	17° x 17° / 0.5m
Spatial Resolution (IFOV)	3.78mrad
Thermal Sensitivity / NETD	< 0.1°C@+30°C (+86°F) / 100 mK
Image Frequency	50Hz
Focus Mode	Manual
Zoom	1–32 × continuous, digital zoom
Focal Length	9mm
Focal Plane Array (FPA) / Spectral range	Uncooled microbolometer / 8–14 µm
IR Resolution	80 × 80 pixels
Image Presentation	
Display	2.8 in. LCD, 240 × 320 pixels
Image Modes	IR image, Visual image, Image Fusion
Color Palettes	IRON, Rainbow, Grey, Grey Inverted
Measurement	
Object Temperature Range	–20°C to +150°C (–4°F to + 302°F)
	0°C to +350°C (+32°F to + 662°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading
Measurement Analysis	
Spot	Center Spot
Automatic Hot / Cold Detection	Auto hot or cold markers
Emissivity Correction	Variable from 0.01 to1.0
Measurement Corrections	Emissivity, Reflected temperature
Storage of Videos	
Storage Media	8Gbytes Micro SD card
Video Storage Format	Standard MPEG-4 encode, 1280 x 960@30fps, on memory card > 60 minutes
Video Storage Format	IR/visual images; simultaneous storage of IR and visual images
Storage of Images	
Image Storage Format	Standard JPEG, including measurement data, on memory card > 2000 pictures
Image Storage Mode	IR/visual images; simultaneous storage of IR and visual images

Set-up	
Laser	< class2
Set-up commands	Local adaptation of units, language, date and time formats, information of camera
Languages	multinational
Digital Camera	
Built-in digital camera	5 Megapixels
Built-in digital lens data	FOV 59°
Data communication interfaces	
Interfaces	USB-mini, audio, HDMI
USB	Data transform between camera and PC Live video between camera and PC
Video out	HDMI
Power System	
Battery	Li-ion battery, 4 hours operating time
Input voltage	DC 5V
Charging system	In camera (AC adapter)
Power management	Automatic shutdown
Environmental data	
Operating temperature range	–20°C to +50°C (-4°F to +122°F)
Storage temperature range	–40°C to +70°C (–40°F to +158°F)
Humidity operating & storage	10%~90%
Drop test	2m
Bump	25g (IEC60068-2-29)
Vibration	2g (IEC60068-2-6)
Physical data	
Camera weight, incl. battery	<500g
Camera size (L x W x H)	224 x 77 x 96 mm



ACCESSORIES

- Lens • Li-Ion battery • Adaptor • Micro SD Card • USB Cable
- HDMI Cable • Earphone • Wrist Strip • User manual
- Warranty Card • PC Software installation CD • Carrying case,
- Test Certificate.

• DT-980

High Performance Low Cost
Thermal Imagers

• DT-9868

The device is a professional infrared 32 x 31 pixels imager thermometer with 2.2" color TFT LCD display & a micro SD memory card for capturing images (BMP) for viewing on your PC, providing fast ,easy and accurate reading for most surface temperature measurements. This product combines the convenience of an infrared thermometer with the visual advantage of a thermal imager creating a brand new tool category—a troubleshooting camera with infrared heat map.

Key Features
2.2", 320*240 TFT LCD Display
IR Temperature Measurement with Resolution 32 x 31 Pixels
Image Capture Frequency 9Hz
Thermal Sensitivity (NETD) ≤150mK
Hot Spot and Cold Spot Tracking
Visual Camera & Images Capture (BMP)
Micro SD Memory Card
Date/time Setup Controls, Adjustable Emissivity & Trigger Lock
Li-Ion Rechargeable Battery
USB Interface for Charge and Download Image form SD Memory
-20 to 300°C Measurement Range

32 x 31
IR resolution
32x31 pixels

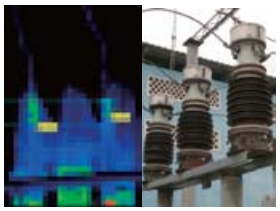
NETD 0.15°C
Thermal sensitivity
0.15°C (0.27°F)
@ 1Hz and 100°C

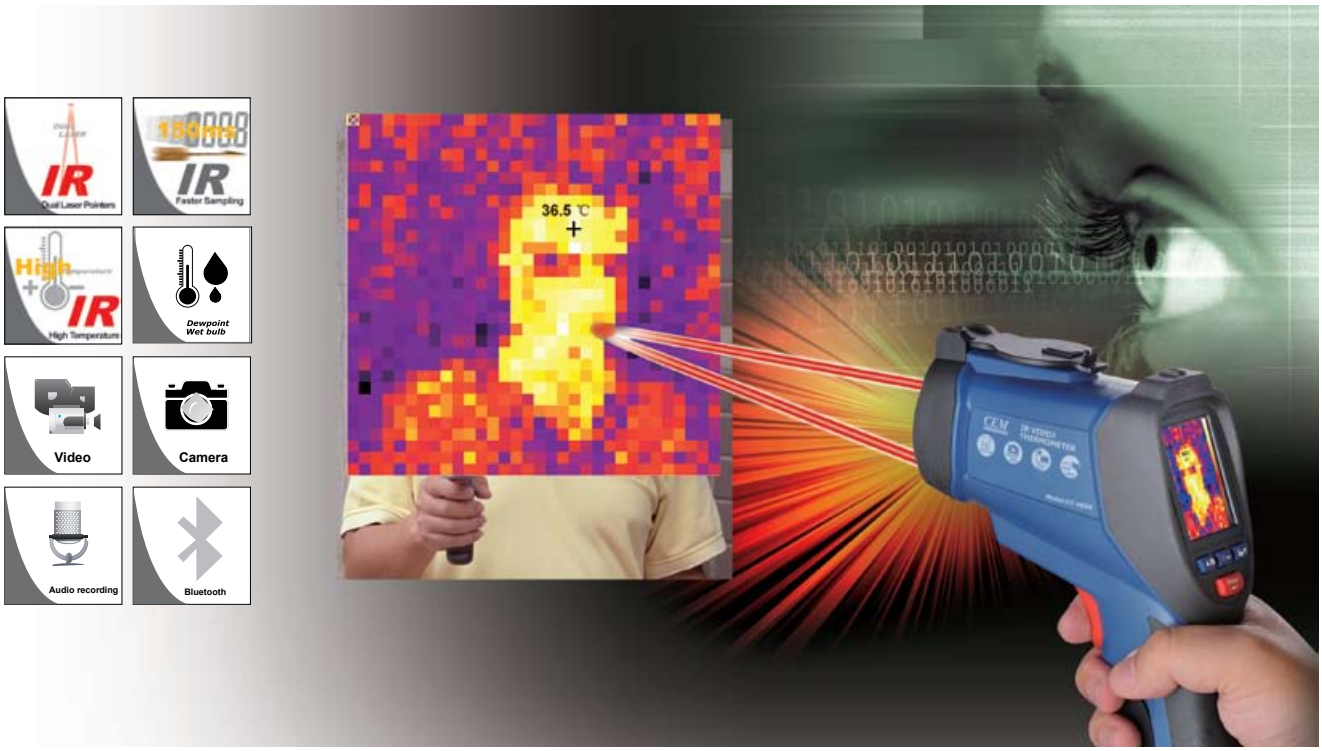

JPG imagees/3GP videos


Fold reading on the images


USBinerface &
Micro SD memory Card

CE
EMC
EN: 61326-1
EN: 61010-1





Temperature	
Temperature Measurement Range	-20°C to + 300°C
Temperature Measurement Accuracy	±2%±2°C as tested (at 25°C)
On-Screen Emissivity Correction	Yes
On-Screen Reflected Background Temperature Compensation	Yes
Image Performance	
Image Capture Frequency	9 Hz
Detector Type	Uncooled pyroelectric ceramic
Thermal Sensitivity (NETD)	≤150 mK
Infrared Spectral Band	6.5 µm to 14 µm
Visual Camera	48608 pixels
Field of View	38 x 38 Degrees
Focus Mechanism	Fixed Focus
Image Presentation	
Palettes	Hot Metal, Ironbow, Rainbow, Rainbow High Contrast, Grayscale (white hot) and Grayscale (black hot)
Level and Span	Auto
Blending Information	
Parallax Correction of Visual and IR Blending	0.5m, 1.0m, 2.0m, 3.0m
View Options	Blending of the visual and the infrared from full infrared to full visual in 25% steps
Hot Spot and Cold Spot Tracking	Yes
Image capture and data storage	
Image Capture	Image available for review before a save
Storage Medium	Micro SD memory card, stores up to 6,000 images / GB
File Format	BMP
Memory Review	Scroll through all saved images and view on-screen
Operating Temperature	0°C to + 50°C
Storage Temperature	-20°C to + 60°C
Relative Humidity	10% to 90% non-condensing
Display	2.2 in diagonal 320*240 TFT LCD

ACCESSORIES

- 3.7V Li battery • USB cable • Instruction Manual
- Carrying case • Test Certificate

PROFESSIONAL
INFRA RED THERMOMETER
WITH DUAL LASER

CEM Professional Infra Red Thermometer with dual laser is a very handy device to be used for all trouble-shooting engineers for taking temperature of areas that are inaccessible, moving targets and for surveillance of heat at various points in an area. These have adjustable emissivity between 0.10 to 1.00 to cover various materials whose temperature is measured.

These have Distance to sighting ratio of 12:1 and 20:1. This means that from a distance of 12 inches the area whose temperature is being measured would have a diameter of 1 inch. Similarly for 20:1 from a distance of 20 inches the area whose temperature is being measured would have a diameter of 1 inch. Hence the longer you want to keep the distance from the target the higher the Distance to sighting ratio should be

The instrument has a Red Dual Laser marker through which the user can pin point the exact area of the target whose temperature is to be measured. The temperature being measured is for the area between the two laser points.

In these meters you can set the lower and higher temperature. As soon as the temperature being measured exceeds the set limit the color of the backlit LCD changes.

• DT-8862B

Features
Rapid Detection Function
Precise Non-Contact Measurements
Dual Laser Sighting
Unique Flat Surface, Modern Housing Design
Automatic Data Hold
Emissivity Digitally Adjustable From 0.10 to 1.0
MAX Temperature Displays
Backlight LCD Display
Automatic Selection Range and Display Resolution 0.1°C(0.1°F)
Trigger lock
Set High and Low Alarms

Backlit LCD Display Color Changes With Respect to Measured Temperature as Compared to LOW and HIGH Set Temperature

• High Quality Lens & Dual Laser Pointers • Accurate Measurement • Triple LCD Display with White Backlit

- Dual laser pointers
- 150ms faster sampling time
- 1% accuracy

SPECIFICATIONS (Check the CEM web for detailed specifications)

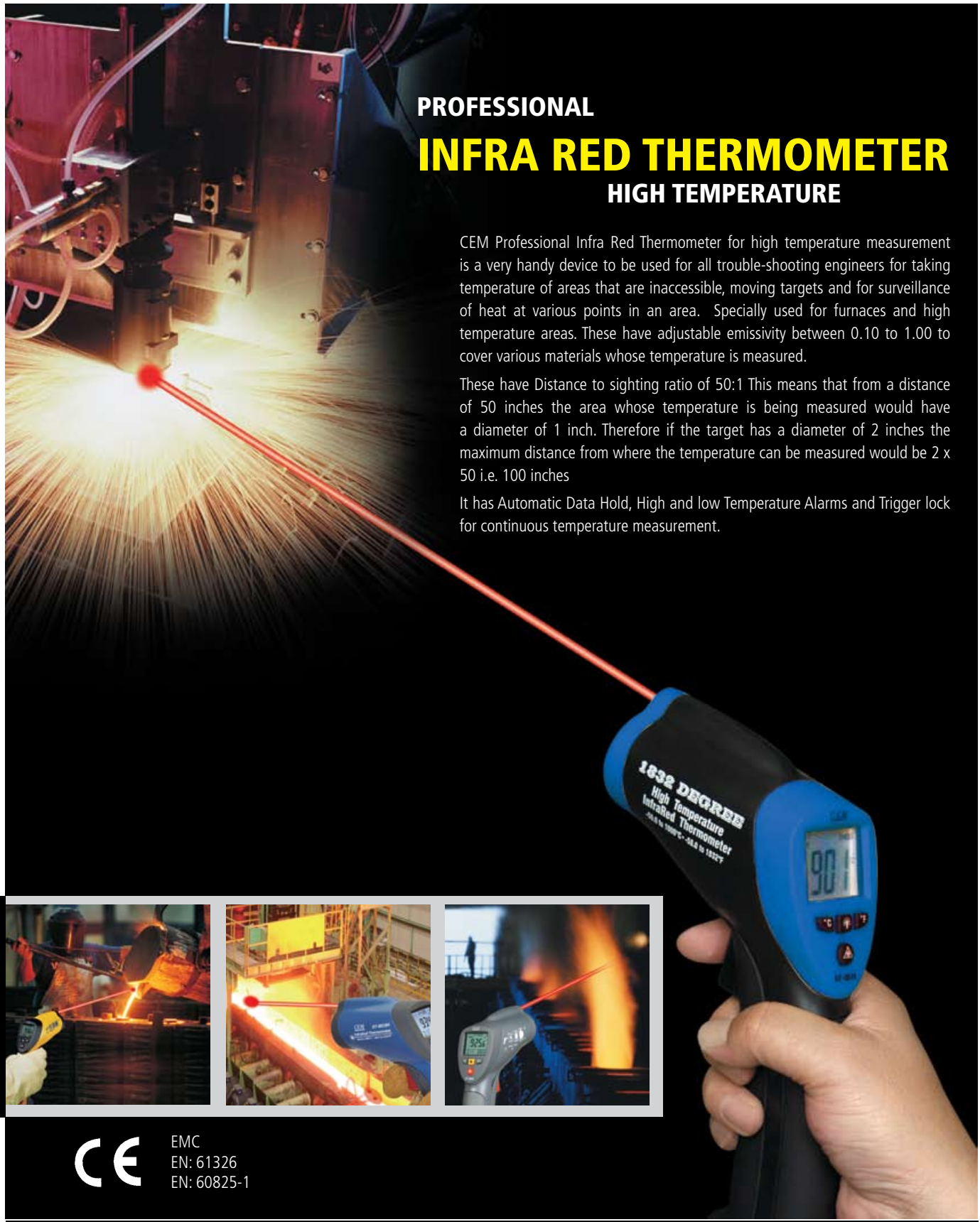
Parameters	DT-8862B	DT-8863B
Temperature Range	50 to 650°C (-58 ~ 1202°F)	-50 to 1000°C (-58 ~ 1832°F)
D:S	12:1	20:1
Display Resolution	0.1°C (0.1°F) <1000; 1° >1000	
Accuracy	-50 ~ 20°C (-58 ~ 68°F) ±2.5 (4.5)	
	20 ~300°C (68 ~572°F) ±1.0% ±1.0 (1.8)	
	300 ~650°C (DT-8862B) / 1000°C (For DT-8863B) (572 ~ 1202°F / 1832°F) ±1.5%	
Repeatability	-50~20°C(-58~68°F) ±1.3°C (2.3°F)	
	20~650°C (DT-8862B) / 1000°C (For DT-8863B) (68~1202 / 1832°F) ±0.5% or ±0.5 (0.9)	
Response Time	150mS	
Spectral Response	8 ~ 14um	
Emissivity	Digitally Adjustable from 0.10 to 1.0	
Over Range Indication	LCD will show	
Polarity	Automatic (no indication for positive polarity); Minus (-) sign for negative polarity	
Diode Laser	output<1mW,Wavelength 630~670nm, Class 2 laser product	
Operating Temperature	0 to 50°C (32°F to 122°F)	
Storage Temperature	-10 to 60°C (14 to 140)	
Relative Humidity	10%~90%RH operating, <80%RH storage	
Power Supply	9V battery, NEDA 1604A or IEC 6LR61,or equivalent	
Safety	" CE " Comply with EMC	

CE EMC
EN: 61326
EN: 60825-1

- DT-8863B

Accessories

- Carrying Case • Instruction Manual • Test Certificate • Battery.



PROFESSIONAL

INFRA RED THERMOMETER

HIGH TEMPERATURE

CEM Professional Infra Red Thermometer for high temperature measurement is a very handy device to be used for all trouble-shooting engineers for taking temperature of areas that are inaccessible, moving targets and for surveillance of heat at various points in an area. Specially used for furnaces and high temperature areas. These have adjustable emissivity between 0.10 to 1.00 to cover various materials whose temperature is measured.

These have Distance to sighting ratio of 50:1 This means that from a distance of 50 inches the area whose temperature is being measured would have a diameter of 1 inch. Therefore if the target has a diameter of 2 inches the maximum distance from where the temperature can be measured would be 2 x 50 i.e. 100 inches

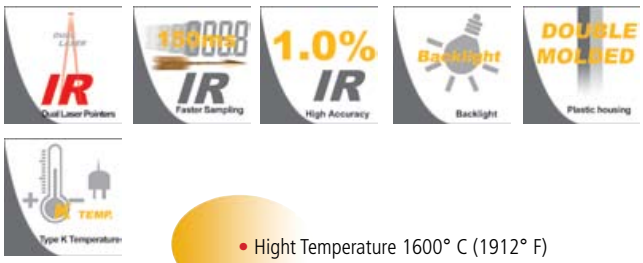
It has Automatic Data Hold, High and low Temperature Alarms and Trigger lock for continuous temperature measurement.

CE

EMC
EN: 61326
EN: 60825-1

Features

- Precise Non-Contact Measurements
- High Distance to Target Ratio Measures Smaller Surface Areas at Greater Distances
- Widest Temperature Range I Unique Flat Surface, Modern Housing Design
- Built-in laser pointer I Automatic Data Hold
- Emissivity Digitally Adjustable From 0.10 to 1.0
- MAX,MIN,DIF, AVG Temperature Display
- Backlight LCD Display
- Built-in Laser Pointer
- Automatic Selection Range and Display
- Resolution 0.1°C(0.1°F)
- Trigger lock
- Fast Response Time of 150mS **(for DT-8859H Only)**
- Set High and Low Alarms



- Hight Temperature 1600° C (1912° F)
- 50:1distance to spot size

- DT-8859H/8839

SPECIFICATIONS (Check the CEM web for detailed specifications)

Parameters	DT-8859H	DT-8839
Temperature Range	-50°C to 1600°C (-58°F to 2912°F)	-50°C to 1000°C (-58°F to 1832°F)
D:S	50:1	
Display Resolution	0.1° up to 2000°, 1° above 2000°	0.1°
Respose Time	150mS	Less than 1 Sec
Spectral Response	8 ~ 14um	
Emissivity	Digitally Adjustable from 0.10 to 1.0	
Over Range Indication	LCD will show "-------"	LCD will show "-OL", "OL"
Polarity	Automatic (no indication for positive polarity); Minus (-) sign for negative polarity	
Diode Laser	output <1mW, Wavelength 630-670nm, Class 2(11) laser product	
Operating Temperature	0 to 50°C (32 to 122°F)	
Storage Temperature	-20°C to 60°C (-4 to 140°F)	
Relative Humidity	10%-90%RH operating, <80%RH storage	
Power Supply	9V battery, NEDA 1604A or IEC 6LR61, or equivalent	
Weight	290g (10.2 oz.)	
Size	100 X 56 X 230mm (3.9 X 2.2 X 9.0")	
Safety	"CE" Comply with EMC	
Accuracy		
Assumes ambient operating temperature of 23 to 25°C (73 to 77°F)		
-50°-20°C (-58°F-68°F)	±3.0°C (5.4°F)	±5 °C (± 9)
20°C-500°C (68°F-932°F)	±1.0% ±1.0°C (1.8°F)	±1.5% ±2.0°C (3.6°F)
500°C -1000°C (932°F-1832°F)	±1.5%	±2% ±2.0°C (3.6°F)
1000°C-1600°C (1832°F-2912°F)	±3.5% ±5.0°C (9°F)	-

Accessories

- Hard Carrying Case • Instruction Manual • Battery • Test Certificate.

PROFESSIONAL HIGH TEMPERATURE

INFRA RED THERMOMETER

WITH PC INTERFACE

CEM Professional Infra Red Thermometer for high temperature measurement is a very handy device to be used for all trouble-shooting engineers for taking temperature of areas that are inaccessible, moving targets and for surveillance of heat at various points in an area. Specially used for furnaces and high temperature areas. These have adjustable emissivity between 0.10 to 1.00 to cover various materials whose temperature is measured.

These have Distance to sighting ratio of 50:1 This means that from a distance of 50 inches the area whose temperature is being measured would have a diameter of 1 inch. Therefore if the target has a diameter of 2 inches the maximum distance from where the temperature can be measured would be 2 x 50 i.e. 100 inches

The instrument has a Red Dual Laser marker through which the user can pin point the exact area of the target whose temperature is to be measured. The temperature being measured is for the area between the two laser points.

This is a combination of Contact type Thermometer and a Non-contact type Thermometer. A 'K' type thermocouple can be used to measure temperature in the contact mode. With the use of the instrument as a contact type thermometer, emissivity of any unknown material can also be depicted. It has data logging facility and USB PC Interface to see the reading online and for downloading the measured temperature for data analysis.

• DT-8886

• DT-8887H

Features
Rapid Detection
Precise Non-Contact Measurements
Dual Laser Sighting
Unique Flat Surface, Modern Housing Design
Automatic Data Hold
Emissivity Digitally Adjustable From 0.10 to 1.0
MAX MIN AVG DIF Temperature Displays
Backlight LCD Display
Automatic Selection Range and Display Resolution 0.1°C (0.1°F)
Trigger Lock
Set High and Low Alarms
Data Logger (LOG)
Transmits Data to PC with USB

SPECIFICATIONS (Check the CEM web for detailed specifications)

Parameters	DT-8886	DT-8886H	DT-8887H
Temperature Range	-50°C to 1200°C (-58°F to 2192°F)	-50°C to 1850°C (-58°F to 3362°F)	-50°C to 2200°C (-58°F to 3992°F)
D:S	50:1		
Display Resolution	0.1° up to 1000°, 1° above 1000°		
Respose Time	150mS		
Spectral response	8 ~ 14um		
Emissivity	Digitally Adjustable from 0.10 to 1.0		
Over Range Indication	LCD will show		
Polarity	Automatic (no indication for positive polarity); Minus (-) sign for negative polarity		
Diode Laser	output <1mW, Wavelength 630-670nm, Class 2(II) laser product		
Operating Temperature	0 to 50°C (32 to 122°F)		
Storage Temperature	-20°C to 60°C (-4 to 140°F)		
Relative Humidity	10%-90%RH operating, <80%RH storage		
Power Supply	9V battery, NEDA 1604A or IEC 6LR61, or equivalent		
Safety	CE Comply with EMC		
Accuracy			
Assumes Ambient Operating Temperature of 23 to 25°C (73 to 77°F)			
-50°-20°C (-58°F-68°F)	±3°C (5.4°F)		
20°C-500°C (68°F-932°F)	±1.0% ±1.0°C (1.8°F)		
500°C -1200°C (DT-8886) 1000°C (DT-8886H/DT-8887H) (932°F-2192°/1832F)	±1.5% ±2.0°C (3.6°F)		
1000°C -1850°C (1832°F-3362°F)		±2%	
1000°C -2200°C (1832°F-3992°F)			±2%
Repeatability			
-50°-20°C (-58°F-68°F)	±1.5°C (2.7°F)		
20°C -1200°C (DT-8886) 1000°C (DT-8886H/DT-8887H) (68°F-2192/1832°F)	±0.5% or 0.5°C (0.9°F)		
1000°C -1850°C (1832°F-3362°F)		±1%	
1000°C -2200°C (1832°F-3992°F)			±1%
When used as Contact type Thermometer			
Temperature Range	-50 to 1370°C (-58°F to 2498°F)		
Accuracy			
-50 to 1000°C	±1.5% ±3.0°C (5°F)		
1000 to 1370°C	±1.5% ±2.0°C (3.6°F)		
Resolution	0.1° up to 1000°, 1° above 1000°		
Repeatability			
-50 to 1370°C (-58°F to 2498°F)	±1.5% of reading		

Accessories

• Hard Carrying Case • USB Interface Cable • Software • Instruction manual • Battery • Test Certificate

CE EMC
EN: 61326
EN: 60825-1

PROFESSIONAL

INFRA RED VIDEO THERMOMETER

WITH TFT COLOR DISPLAY & CAMERA FUNCTION

• DT-9860S/9862S

CEM Brand Professional Infra Red Video Thermometer with TFT Color display & Camera Function not only measures temperature but can capture video or photos of the targets with temperature and time stamp. These pictures or videos can be stored in the Micro SD Card for which the slot is provided in the instrument.

These have Distance to sighting ratio of 50:1 This means that from a distance of 50 inches the area whose temperature is being measured would have a diameter of 1 inch. Therefore if the target has a diameter of 2 inches the maximum distance from where the temperature can be measured would be 2 x 50 i.e. 100 inches

The instrument has a Red Dual Laser marker through which the user can pin point the exact area of the target whose temperature is to be measured. The temperature being measured is for the area between the two laser points.

What enhances the functionality of the product is that it works as a data collector, data logger, photo collector, contact type thermometer, can also be used for online continuous measurement.

It has a high-resolution display and captures pictures in JPEG format and videos in AVI format. This instrument also measures Air temperature and humidity. The adjustable emissivity makes it possible to measure temperature of almost all the targets. Dew Point and Wet Bulb temperatures can also be measured. With the help of K type thermocouple, the instrument can also be used as a contact type thermometer. With the use of the instrument as a contact type thermometer, emissivity of any unknown material can also be depicted.

Features
2.2" TFT LCD Display
640*480 pixels (30 million pixels)
Micro SD Memory Card Support
Image (JPEG) and Video (AVI)
Humidity and Air Temperature Measurement
Dual Laser Targeting
Type-K Thermocouple Thermometer
Adjustable Emissivity
High Accuracy
Fast Response Time
Dew Point Temperature and Wet Bulb Temperature Measuring Facility
Rechargeable Battery and Battery Charger

SPECIFICATIONS

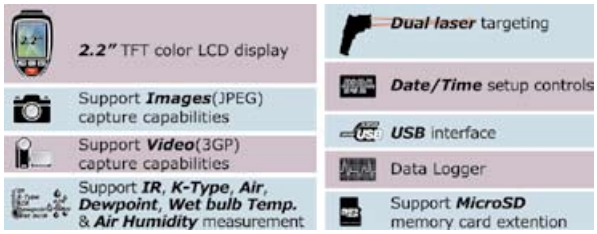
(Check the CEM web for detailed specifications)

Parameters	DT-9860S	DT-9862S
Temperature Range	-50°C to 1000°C (-58°F to 1832°F)	-50°C to 2200°C (-58°F to 3992°F)
D:S	50:1	
Display Resolution	0.1° up to 1000°, 1° above 1000°	
Respose Time	150mS	
Spectral response	8 ~ 14um	
Emissivity	Digitally Adjustable from 0.10 to 1.0	
Over Range Indication	Battery Annuciator displayes battery condition	
Polarity	Automatic (no indication for positive polarity); Minus (-) sign for negative polarity	
Diode laser	output <1mW, Wavelength 630-670nm, Class 2(II) laser product	
Operating Temperature	0 to 50°C (32 to 122°F)	
Storage Temperature	-20°C to 60°C (-4 to 140°F)	
Relative Humidity	10%-90%RH operating, <80%RH storage	
Power Supply	Rechargeable Battery	
Battery Charging Time	About 2 hours with AC adapter or USB connection	
Battery Life	About 4 hours continuous use	
Safety	CE Comply with EMC	
Accuracy		
Assumes Ambient Operating Temperature of 23 to 25°C (73 to 77°F)		
-50°-20°C (-58°F-68°F)	±3.5°C (6.3°F)	
20°C-500°C (68°F-932°F)	±1.0% ±1.0°C (1.8°F)	
500°C -1000°C (932°F-1832°F)	±1.5%	
1000°C -2200°C (DT-9862S only) (1832°F-3992°F)		±2%
Repeatability		
-50°-20°C (-58°F-68°F)	±1.5°C (2.7°F)	
20°C -1000°C (68°F-1832°F)	±0.5% or 0.5°C (0.9°F)	
1000°C -2200°C (for DT-9862S Only) (1832°F-3992°F)		±1%
Air Temperature Range	0 to 50°C (32 to 122°F)	
Dewpoint Temperature Range	0 to 50°C (32 to 122°F)	
Relative Humidity Range	0 to 100% RH	
Air Temperature Accuracy	0.5°C (0.9°F) 10 to 40°C ±1.0°C (1.8°F) others	
Dewpoint Temperature Accuracy	±0.5°C (0.9°F) 10 to 40°C ±1.0°C (1.8"F) others	
Relative Humidity Accuracy	±3%RH 40% to 60%	
	±3.5%RH 0% to 40% and 60% to 80%	
	±5%RH 0% to 20%and 80% to 100%	

When Used as Contact Type Thermometer

Parameters	DT-8886	DT-8886H
Temperature Range	-50 to 1370°C (-58°F to 2498°F)	
Accuracy		
-50 to 0°C	±2.5°C(4.5°F)	
0 to 1370°C	±0.5% ±1.0°C (2.7°F)	
Resolution	0.1° up to 1000°, 1° above 1000°	
Repeatability		
-50 to 1370°C (-58°F to 2498°F)	±1.5% of reading	

Temperature probe
(Optinal : NR-31B/TP-500/TCP-100)



CE

EMC
EN: 61326
EN: 60825-1

Accessories

- Hard Carrying Case • Tripod Stand • 3.7V Li battery • Type K Temp. probe
- USB Cable, Software • Instruction Manual • Test Certificate

MINI SERIES

INFRA RED THERMOMETERS

CEM Mini Series Infra Red Thermometer is a very handy device to be used for all trouble-shooting engineers for taking temperature of areas that are inaccessible, moving targets and for surveillance of heat at various points in an area. These have fixed emissivity of 0.95 that covers 90% of the various materials whose temperature is measured.

These have Distance to sighting ratio of 8:1. This means that from a distance of 8 inches the area whose temperature is being measured would have a diameter of 1 inch. Therefore if the target has a diameter of 2 inches the maximum distance from where the temperature can be measured would be 2 x 8 i.e. 16 inches.
The instrument has a Red Laser marker through using which the user can pin point the target whose temperature is to be measured.

• DT-810/812

CE EMC
EN: 61326-1
EN: 61010-1

Features
Precise Non Contact Measurements
Built in Laser Pointer I User Selectable °C / °F
MAX/MIN Temperature Display
Trigger Lock
Automatic Data Hold & Auto Power Off
Automatic Selection Range and Display Resolution 0.1°C (0.1°F)
The Meter at 8 inches Away Measures 1 inch Target
Backlit LCD Display

SPECIFICATIONS (Check the CEM web for detailed specifications)

Parameters	DT-810	DT-812
Measuring Range	-30°C to 260°C / -22°F to 500°F	-50°C to 500°C / -58°F to 932°F
Response Time	Less than 1 Second	
Over Range Indication	LCD will show	
Polarity	Automatic (no indication for positive polarity); Minus (-) sign for negative polarity	
Emissivity	0.95 fixed value	
Field of View	D/S=Approx. 8:1 ratio (D=distance, S=spot) (Has 90% encircled energy at the focal point)	
Diode Laser	Output < 1mW, wavelength 630 ~ 670 nm, Class 2 (II) Laser Product	
Spectral Response	6 ~ 14um	
Power Off	Automatic Shut Off after 8 seconds approx.	
Operating Temperature	0°C to 50°C / -32°F to 122°F	
Storage Temperature	-20°C to 60°C / -4°F to 140°F	
Relative Humidity	10% ~ 90% RH Operating, < 80% RH Storage	
Power Supply	9V battery, NEDA 1604A or IEC 6LR61, or equivalent	
Weight	180 g.	
Size	82 x 41.5 x 160mm	
Range	-30°C to 0°C (-22°F to 32°F)	-50°C to 0°C (-58°F to 32°F)
	0°C to 260°C (32°F to 500°F)	0°C to 500°C (32°F to 932°F)
Resolution	0.1°C / °F	
Accuracy	±4°C / ±7°F upto 0°C	
	±2% of reading or ±2°C / ±4°F from 0 to 260 / 500°C (32°F to 500/932°F)	

Accessories

- Carrying Case • Instruction Manual
- Battery • Test Certificate

SELECTION GUIDE FOR

INFRA RED THERMOMETER

Parameters	DT-810	DT-812	DT-8862B	DT-8863B	DT-8839	DT-8859H	DT-8886	DT-8886H	DT-8887H	DT-9860S	DT-9862S
Measuring Range	-30°C to 260°C / -22°F to 500°F	-50°C to 500°C / -58°F to 932°F	50 to 650°C (-58 ~ 1202°F)	-50 to 1000°C (-58 ~ 1832°F)	-50°C to 1000°C (-58°F to 1832°F)	-50°C to 1600°C (-58°F to 2912°F)	-50°C to 1200°C (-58°F to 2192°F)	-50°C to 1850°C (-58°F to 3362°F)	-50°C to 2200°C (-58°F to 3992°F)	-50°C to 1000°C (-58°F to 1832°F)	-50°C to 2200°C (-58°F to 3992°F)
D:S Ratio	8:1	8:1	12:1	20:1	50:1	50:1	50:1	50:1	50:1	50:1	50:1
Laser Sighting	Single Laser	Single Laser	Dual Laser	Dual Laser	Single Laser	Single Laser	Dual Laser	Dual Laser	Dual Laser	Dual Laser	Dual Laser
Battery	9V	9V	9V	9V	9V	9V	9V	9V	9V	Rechargeable	Rechargeable
Data Logging							Yes	Yes	Yes	Yes	Yes
USB PC Interface							Yes	Yes	Yes	Yes	Yes
Data Hold	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MAX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MIN	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes
DIF					Yes	Yes	Yes	Yes	Yes	Yes	Yes
AVG					Yes	Yes	Yes	Yes	Yes	Yes	Yes
K-Type Thermometer							Yes	Yes	Yes	Yes	Yes
Dew Point										Yes	Yes
Wet Bulb										Yes	Yes
Response Time	Less than 1 Sec	Less than 1 Sec	150mS	150mS	Less than 1 Sec	150mS	150mS	150mS	150mS	150mS	150mS
Picture Rec.										Yes	Yes
Video										Yes	Yes
CE Confirmation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Emissivity	0.95	0.95	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable


• DT-810


• DT-812


• DT-8862B


• DT-8863B


• DT-8839


• DT-8859H


• DT-8886


• DT-8886H


• DT-8887H


• DT-9860S


• DT-9862S

PORTABLE IR
CALIBRATORS BX-500

This is used for calibrating long distance Infrared Thermometer, which are designed as handheld and fixed units.

Whether you're using on-line or handheld infrared pyrometers, you need a high performance calibration standard to verify accuracy. Portable IR Calibrator provides a stable black body target for calibrating non-contact IR thermometers up to 500°C.

The portable IR calibrator features a large temperature controlled blackbody target with a diameter of 2.25" (57mm), which offers a wide field of view area for optical variations in IR thermometers. With an emissivity of 0.95, the isothermal target can be controlled in set-point increments of 0.1° from 50°C to 500°C.

For even higher precision, a contact calibration well is located directly behind the blackbody surface. Using an optional digital RTD thermometer and calibrated secondary probe, accuracies of ±0.1° can be achieved.


• BX-500

Features
Easily certify IR pyrometers to 500°C / 932°F
Large 2.25" (57mm) blackbody target
RTD (Resistance Thermometer detector) reference well for high precision

Included Accessories

Instruction Manual • AC power cable • Test Report

CE
EMC
EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

BX-500	
Temperature Range	50°C to 500°C / 122°F to 932°F
Accuracy	±0.5°C @ 100°C / ±1.0°F@212°F
	±1.8°C @ 500°C / ±3.6°F@932 °F
Stability	±0.1°C @ 100°C / ±0.2°F@212 °F
	±0.3°C @ 500°C / ±0.6°F@932°F
Target size	2.25"(57mm)
Target Emissivity	0.95
Resolution	0.1°C/°F
Heating Time	40 minutes to max
Cooling Time	45 minutes to max to 100°C
Power	230VAC(±10%), 1.5A; or 110V AC, 3A
Size (H*W*D)	180mm*114mm*233mm
Weight	2682g

DRY-WELL TEMPERATURE
CALIBRATORS BX-150

The new heat source to check your thermometer's accuracy up to 300°C/572°F. Simply set the heat source to the desired test point, insert the test probe into the best fitting well, and get a verification of the performance. It's that easy!


• BX-150

CE
EMC
EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

Range	33°C to 300°C / 91.4°F to 572°F
Resolution	0.1°C/°F
	±0.5°C (33 to 199°C) & ±1C (200 to 300°C)
Stability	±0.9°F (91.4 to 390.2°F) & ±1F(392 to 572°F)
	±0.5°C
Cooling Time	Ambient to 300°C (572°F) after10 minutes
Stabilization	300°C (572°F) to 100°C (212°F) after 10 minutes
Well Depth	5 minutes
Power	4"(100mm)
Size(H*W*D)	230 / 115volts
Weight	180mm*114mm*233mm
Size(H*W*D)	2200g
Weight	2682g

Included Accessories

• Power Chord • Instruction Manual • Test Report

INFRA-RED TEMPERATURE

CONTROLLER IR-91

• IR-91

EMC
EN: 61326
EN: 60825-1

This is a brand new CEM IR-91 CE certified digital non-contact infrared thermometer with built-in laser pointers and back-light LCD display. This top-of-the-line device has a super narrow **50:1 distance to spot ratio** and a wide range of **-31°F to 1652°F (-35°C to 900°C)**. Forget the old analog devices, this newly designed digital light weight device gives you accurate measurement from safe distance. The build-in laser pointer help you aim better at the object for an accurate result. The back light LCD screen allows you to read easily in the dark. The industrial panel design allows easy integration of the meter with the existing work bench. It keeps your work environment neat and clean.

SPECIFICATIONS (Check the CEM web for detailed specifications)

Emissivity	Adjustable 01. ~ 1.0
Low Battery Indication	
Set Min, Max, Lock	
IR Thermometer Measuring Range	-35° C to 900°C or -31°F to 1652°F
Resolution	0.1°C/°F
Accuracy	±1.5% or ± 2°C or 4°F
Power	230 VAC (±10%), 0.1A, 50/60 Hz
Dimension / Wt.	71 x 71 x 87mm / 268g

Features
Non-contact Infra-Red thermometer with laser pointer measures to 900°C / 1652°F
Easy to use for measuring temperature of hot or moving objects from a safe distance
Super narrow 50:1 field of view (measure 1" target at 50" distance)
Built-in laser pointers to improve aim
Fast sampling time (less than 500ms)
°C / °F switchable and Auto Power Off
Adjustable emissivity (0.1 ~ 1.0)
Automatic data hold
Stand, cable and mounting kit included
6A/230V Relay output

Included Accessories

• Stand • Cable • Temperature Sensor • Instruction Manual • Test Report

WATERPROOF FOLDING

THERMOMETER DT-161

The DT-161 is a waterproof folding thermometer, which offers handy, practical and strong support when carrying out temperature measurements. The thermometer features IP67 class protection and can be used under all conditions. It can also be easily cleaned under running water and has a rubber-coated surface for non-slip handling. The DT-161 has a large, illuminated display for easy and error-free viewing of measurement data under poor lighting conditions.

• DT-161

Features
Compact 5.9" size (15 cm)
Ideally suited to core temperature measurements
IP67 protection
Non-slip rubber coated surface
Large, illuminated readout display
ABS/TPE/Metal housing

CE

EMC
EN: 61326
EN: 13485
EN: 60825-1

SPECIFICATIONS (Check the CEM web for detailed specifications)

Range	-50°C to 290°C/-58°F to 554°F
Accuracy	±1°C / ±1.8°F (-50° TO -30°C/-58° to -22°F)
	±0.5°C / ±0.9°F (-30° to 120°C/-22° to 248°F)
	±1°C/±1.8°F (120° to 200°C/248° to 392°F)
	±2°C/3.6°F (200° to 290°C/392° to 554°F)
Resolution	0.1°C/0.1°F
Battery	2 x 1.5V AAA / 800 Hours Battery Life
Material / Housing	ABS

Included Accessories

• Battery • Instruction Manual • Test Report

FOOD SAFETY INFRA RED THERMOMETER +

CONTACT TYPE THERMOMETER

IR-97 Food Safety Infrared non-contact thermometer for surface scans with a probe thermometer for internal temperature readings. An integrated countdown timer with alarm monitors line checks as well as cooking and cooling intervals. It combines non-contact infrared thermometer with RTD probe, it can measure the surface and inside temperature of object, professionally used in food preparation/presentation measurements. At the sametime, it has timer and temperature range indicate light, this functions can fit for HACCP (Hazard Analys is and Critical Control Point), make sure the food stuffs are safe.

The Food Safety infrared non-contact thermometer for surface scans with a probe for internal temperature readings. An integrated countdown timer with alarm monitors line checks as well as cooking and cooling intervals.

Features
Built in fold-out probe for measuring internal food temperature.
Probe temperature range -40 to 200°C
Countdown timer to monitor cooking, cooling and HACCP exposure points
Backlit display for clear readings in poorly lit area
Max temperature display for quick response

CE EMC
EN: 61326
EN: 60825-1

SPECIFICATIONS (Check the CEM web for detailed specifications)

Temperature Range	Infrared	-40 to 280°C (-40 – 536°F)	
	Probe	-40 to 200°C (-40 – 392°F)	
Accuracy	Infrared	Below -40 – 4°C (-40 to 39.2°F)	±2°C (3.6°F)
		4 – 65°C (39.2 – 150°F)	±1°C (1.8°F)
		Above 65°C (150°F)	±1.5%
	Probe:	Below-5°C (23°F)	±1°C (1.8°F)
		-5 – 65°C (23 – 150°F)	±1°C (1.8°F)
		Above 65°C (150°F)	±1%
Resolution:	0.1		
Repeatability Accuracy	<1°C Measurement		
Response Time	<500 Measure		
D:S 8:1			
Waterproof Level	IP65		

• IR-97

Included Accessories

• Battery • Instruction Manual • Test Report

PROFESSIONAL T-RMS INDUSTRIAL MULTIMETER

• DT-9989

Advanced diagnostic and logging functionality for maximizing productivity

The DT-9989 / DT-9987 / DT-9979 represents the next generation of high performance industrial logging multimeters, having higher accuracies and greater troubleshooting convenience than ever before. With the ability to log data and review it graphically on large colored display, you can solve problems faster and help minimize downtime, while working at several locations.

The DT-9989 incorporates a built in 10MHz DSO that is the rugged solution for industrial troubleshooting and installation applications. It's a truly integrated test tool, with oscilloscope, multimeter and "paperless" recorder in one affordable, easy-to-use instrument. Find answers to problems in machinery, instrumentation, control and power systems quickly and easily.

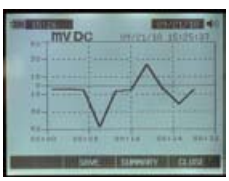
Features
Large 50,000 Counts, 320 x 240 TFT Color Display **(Not in DT-9979)**
Large Full Graphics Backlit 50,000 Counts LCD Display **(DT-9979 only)**
Multiple sets of measurement information can simultaneously be displayed
On-Board Trend Capture functions, able to review the logged data in graphic mode without the use of PC Interface
Continuous records of multiple processes or data
Low Pass Filter precisely measure the electronic signal-to-noise equipment voltage and frequency **(Not in DT-9979)**
Allows to name the saved measurements and recall the on-the-spot measured data by users
Real Time Clock – for automatic time stamping of saved readings
Relative mode eliminates the test line impedance existed in low resistance or capacitance measurement.
Peak Capture function, records transient signal as fast as 250uS **(Not in DT-9979)**
Easy to save user's favorite measurement settings
Rechargeable Battery and Battery Charger

• DT-9979

• DT-9987

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031



Trend capture function

Fast response time

Real-time data recording

Multifunction selectable

SPECIFICATIONS

(Check the CEM web for detailed specifications)

PRODUCT FEATURES	DT-9989	DT-9987	DT-9979
True RMS Measurements	AC, AC + DC	AC, AC+DC	AC + DC
Bandwidth (Voltage / Current)	100kHz / 100kHz	100kHz / 100kHz	50Hz - 100kHz
Digital Display Counts (default / Selectable)	50,000 / 5,000	50,000 / 5,000	50,000 / 5,000
Display	320 x 240 pixels, Color LCD	320 x 240 pixels, Color LCD	Full Graphics type LCD
Logging Function with Trend Capture	•	•	•
Records Events and Trends	•	•	•
Internal Memory	200 Hours Continuous Recording	200Hours Continuous Recording	200 Hours Continuous Recording
Saves Measurements	10,000 Data	10,000 Data	10,000 Data
Bluetooth PC Communication interface for easy data transfer and accuracy calibration	•	•	•
4-20mA process loop measurements with % reading		•	
dB Measurements	•	•	
Low Input Impedance Function (LoZ)	50Ω	50Ω	50Ω
10MHz Digital Storage Oscilloscope	•		
Motor Winding and Low ohm Measurement Range	•	•	•
Low Pass Filter	•	•	
Field Upgradeable / Expandable Meter	•	•	•
Navigation Keys	•	•	•
F1-F4 Soft Keys / User Function Menus	•	•	•
Multilingual Interface	•	•	•
Saves Preferred Measurement Setups	•	•	•
Current Measurement: 20 A (30 Seconds Momentary; 10 A Continuous)	•	•	•
Peak Capture (Records Transients as fast as 250 µs)	•	•	
Continuity Measurement	•	•	•
Li-ion Re-chargeable Batteries	•	•	•
Min/Max/Average with Time Stamp (records signal fluctuations)	•	•	•
Diode & Continuity Check	•	•	•
MeterboxiMM and Cloud Service	•	•	•
IP Rating 67	•	•	•

Functions	Maximum	Maximum Resolution	DT-9989	DT-9987	DT-9979
Voltage DC	1000V	0.001mV	±(0.025% + 5digits)	±(0.025% + 5digits)	±(0.025% + 5digits)
Voltage AC	1000V	0.001mV	±(0.3% + 25digits)	±(0.3% + 25digits)	±(0.3% + 25digits)
Current DC	10A	0.01uA	±(0.1% + 20digits)	±(0.1% + 20digits)	±(0.1% + 20digits)
Current AC	10A	0.01uA	±(0.6% + 25digits)	±(0.6% + 25digits)	±(0.6% + 25digits)
Temperature	-50°C~+1000°C	0.1°C	±(1.0% reading + 2.5°C)	±(1.0% reading + 2.5°C)	±(1.0% reading + 2.5°C)
Resistance	50MΩ	0.001Ω	±(0.05% + 10digits)	±(0.05% + 10digits)	±(0.05% + 10digits)
Capacitance	10mF	0.001nF	±(2.0% + 40digits)	±(2.0% + 40digits)	±(2.0% + 40digits)
Frequency	10MHz	0.001Hz	±(0.01% + 10digits)	±(0.01% + 10digits)	±(0.01% + 10digits)
Duty Cycle	0.1 to 99.9%	0.01%	±(1.2% + 2digits)	±(1.2% + 2digits)	±(1.2% + 2digits)
4-20mA	-25 to 125%	0.01%	-	±50 Digits	-

Included Accessories

Test Leads • Carrying Case • Li-ion Rechargeable Batteries • K type Thermocouple Probe • AC Adaptor
Software • Oscilloscope Probes (Only in DT-9989) • Test Report

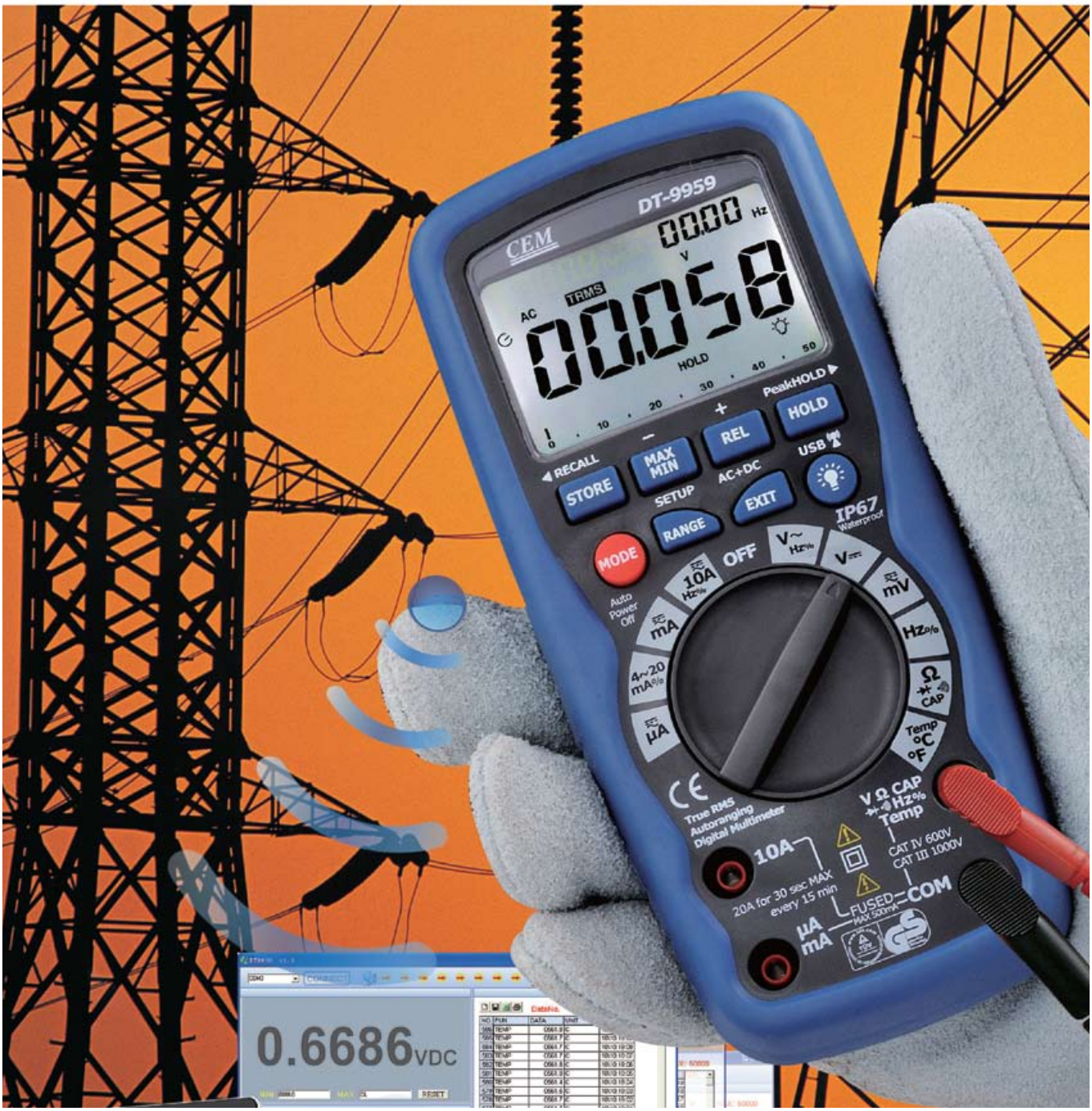
PROFESSIONAL TRUE RMS INDUSTRIAL

DIGITAL MULTIMETER

These are new professional multimeters with triple LCD Backlit Displays. They provide very safe measurements with double moulded plastic housing and have ingress protection 67 to make it water proof. The high performance with data logging capabilities and more display options makes it a very versatile instrument. They all confirm to EN61010-1 CAT IV 600V / CAT-III 1000V. The meters being T-RMS can be used at all sites for accurate measurements. They have high resolution 50,000 and 40,000 counts display combined with analogue bargraph, with basic accuracy of 0.03% and 0.06% makes it usable at very wide areas of application. The backlit LCD makes is usable even in dark environments.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031



Product Features	DT-9959	DT-9939	DT-9929
True RMS Measurements	AC, AC+DC	AC, AC+DC	AC, AC+DC
Bandwidth (Voltage / Current)	100kHz	1kHz	1kHz
Digital Display Counts	50,000	40,000	40,000
Triple LCD display with bargraph & Backlit	•	•	•
Logging Function	•	•	•
Internal Memory	9999 Data	9999 Data	9999 Data
4-20mA process loop measurements with % reading	•	•	•
Current measurement: 20 A (30 seconds momentary; 10 A continuous)	•	•	•
Continuity measurement	•	•	•
Min/Max/Data Hold	•	•	•
Peak Capture	•	•	•
Diode & Continuity Check	•	•	•
Wide Capacitance Range	•	•	•
Auto Power Off	•	•	•
USB Wireless PC Interface	•	•	
Bluetooth MeterboxiMM and Cloud Service	•		
IP Rating 67	•	•	•
1000V Input Protection on all range	•	•	•

• DT-9959

• DT-9939

• DT-9929

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-9959	DT-9939	DT-9929
Voltage DC	1000V	0.001mV	±(0.025% + 3digits)	±(0.06% + 4digits)	±(0.06% + 4digits)
Voltage AC	1000V	0.001mV	±(0.5% + 30digits)	±(1.0% + 30digits)	±(1.0% + 30digits)
Current DC	10A	0.01uA	±(0.1% + 5digits)	±(1.0% + 3digits)	±(1.0% + 3digits)
Current AC	10A	0.01uA	±(0.6% + 30digits)	±(1.0% + 3digits)	±(1.5% + 30digits)
Temperature	-50°C~+1350°C	0.1°C	±(0.5% reading + 2.5°C)		
	-50°C~+1200°C	0.1°C		±(1.0% reading + 2.5°C)	±(1.0% reading + 2.5°C)
Resistance	50MΩ	0.001Ω	±(0.08% + 3digits)		
	40MΩ	0.001Ω		±(0.3% + 4digits)	±(0.3% + 9digits)
Capacitance	50mF	0.001nF	±(1.5% + 5digits)		
	40mF	0.001nF		±(3.5% + 10digits)	±(3.5% + 10digits)
Frequency	100MHz	0.001Hz	±(0.02% + 3digits)	±(0.1% + 1digits)	±(0.1% + 1digits)
Duty Cycle	0.1 to 99.9%	0.01%	±(1.2% + 2digits)	±(1.2% + 2digits)	±(1.2% + 2digits)
4-20mA	-25 to 125%	0.01%	±50 Digits	±50 Digits	±50 Digits

Included Accessories

• Test Leads • K type Temperature Probe • Battery • Carrying Case • Instruction manual • Test Report • USB Dongle & Software (DT-9939 only)

HEAVY DUTY T-RMS INDUSTRIAL
DIGITAL MULTIMETER
WITH COLOR TFT DISPLAY

This is a heavy duty T-RMS Multimeter with TFT Color LCD Display, providing easy usage in dark area. The IP-67 makes the instrument dust and water proof and hence can be used in all kind of environments. The fast A/D converting sampling rate, high accuracy, built-in data logging, Trend capture and measurements with time stamp features makes the instrument versatile, reliable and the best tool for all industrial troubleshooting and maintenance work. This can be connected to iMM software on smartphone and cloud service can be used to keep data safe for future reference, thus helping field engineers to find and solve problems on production lines.

• DT-989

Features
Confirms to EN61010-1 CAT IV 600V, CAT III 1000V
1000V DC/AC RMS Protection on all ranges
10A/1000V and 0.8A/1000V Fuses makes the instrument completely safe in all environments
Large 50,000 Counts 320 x 240 TFT Color LCD Display
On-Board Trend Capture functions, able to review the logged data in graphic mode without the use of PC Interface
Continuous records of multiple processes or data
Blue tooth interface for PC Communication
10kHz Bandwidth
AC, AC+DC Voltage T-RMS Measurements
Records Events and Trends and saves the measurements
Real Time Clock – for automatic time stamping of saved readings
Peak Capture function, records transient signal as fast as 250uS
Min/Max/Average recording with time stamp
4-20mA process loop measurements with % reading
Battery condition indication
Li-ion Rechargeable battery with battery charger

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Fast response time

High Resolution & Accuracy

Trend capture function


Help menu

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-9989
Voltage DC	1000V	0.01mV	±(0.05% + 5digits)
Voltage AC	1000V	0.01mV	±(0.5% + 5digits)
Current DC	10A	0.01uA	±(0.1% + 20digits)
Current AC	10A	0.01uA	±(0.6% + 25digits)
Temperature	-200°C~+1350°C	0.1°C	±(1.0% reading + 3°C)
Resistance	50MΩ	0.01Ω	±(0.20% + 5digits)
Capacitance	10mF	0.001nF	±(1.0% + 8digits)
Frequency	10MHz	0.001Hz	±(0.01% + 5digits)
Duty Cycle	0.1 to 99.9%	0.01%	±(1.2% + 2digits)
4-20mA	-25 to 125%	0.01%	±50 Digits

Included Accessories:

- Carrying Case • Testing Leads
- Li-ion Battery with charger
- Type K temperature probe
- Instruction Manual • Test Report

RUGGED DESIGN VERSATILE T-RMS AUTO-RANGING

DIGITAL MULTIMETER

These meters have the features needed to trouble shoot most electrical, electro-mechanical and heating and ventilation problems. They are simple to use and have significant features, more measurement functions, confirms to the latest safety standards, and a much larger display that's easier to view. They confirm to EN61010-1 CAT IV 600V, CAT III 1000V.1000V input protection on all ranges, 10A/1000V & 0.5A/1000V fuses protection on current ranges. The Dust and Waterproof IP67 makes it a tough instrument to be used in the most abusive environments.

Product Features	DT-9967T	DT-9927T
True RMS Measurements	AC Voltage & AC Current	AC Voltage & AC Current
Bandwidth (Voltage/ Current)	400Hz	1kHz
Digital Display Counts	6,600	6,000
Backlit LCD Display with Bargraph	•	•
Dual Display	•	•
8kV Surge Protection	•	•
IEC/EN 61010-1:2001 CAT IV 600V / CAT III 1000V	•	•
Current measurement: 20 A (30 Seconds Momentary; 10 A Continuous)	•	•
Min/Max/Data Hold	•	•
Relative Meausrement	•	•
Diode & Continuity Check	•	•
Wide Capacitance Range	•	•
Auto Power Off	•	•
Auto Power Off Disable Function	•	•
IP Rating 67	•	•
Overload Protection on all Range	•	•

• DT-9967T

• DT-9927T

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-9967T	DT-9927T
Voltage DC	1000V	0.1mV	±(1% + 3digits)	±(0.09% + 2digits)
Voltage AC	1000V	0.1mV	±(1.2% + 3digits)	±(1.0% + 3digits)
Current DC	10A	0.1uA	±(1.2% + 3digits)	±(1.0% + 3digits)
Current AC	10A	0.1uA	±(1.5% + 5digits)	±(1.5% + 3digits)
Temperature	-20°C~+760°C	1°C	±(3% reading +5°C)	
	-45°C~+750°C	1°C		±(3.0% reading + 5°C)
Resistance	60MΩ	0.1Ω	±(1% + 2digits)	±(0.3% + 4digits)
Capacitance	60mF	1pF	±(3.0% + 5digits)	
	1000uF	0.01nF		±(3.5% + 4digits)
Frequency	10MHz	0.001Hz	±(1% + 3digits)	
	40MHz	0.001Hz		±(0.1% + 1digits)
Duty Cycle	0.1 to 99.9%	0.10%	±(1.2% + 2digits)	±(1.2% + 2digits)

Included Accessories

Carrying Case • Instruction Manual • Battery • Testing Leads • Temperature Probe • Test Report

PROFESSIONAL

DIGITAL MULTIMETER

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

The DT-9660 series of Multimeters are compact, easy-to-use tools that deliver, safe, reliable measurements. These are completely protected against wrong connections and confirm to EN-61010-1, CAT-IV 600V and CAT-III 1000V. The IP-67 protection makes the instrument dust proof and water proof, hence they can by used in any environment. These meters have 10A/1000V & 0.5A/1000V Fuse protection on current range. Your job requires that you have a rugged, reliable and accurate digital multimeter. The DT-9960 series offers everything you need.

Product Features	DT-9961	DT-9962	DT-9962T
True RMS Measurements			AC Voltage & AC Current
Bandwidth (Voltage/ Current)	400Hz	400Hz	400Hz
Digital Display Counts	4,000	4,000	4,000
Backlit LCD Display	•	•	•
Analogue Bargraph	•	•	•
Non Contact Voltage Detector	•	•	•
IEC/EN 61010-1:2001 CAT IV 600V / CAT III 1000V	•	•	•
Current measurement: 20 A (30 seconds momentary; 10 A continuous)	•	•	•
Data Hold	•	•	•
Min/Max Record	•	•	•
Relative Meausrement	•	•	•
Diode & Continuity Check	•	•	•
Wide Capacitance Range	•	•	•
Auto Power Off	•	•	•
IP Rating 67	•	•	•
Overload Protection on All Range	•	•	•

• DT-9961

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-9961	DT-9962	DT-9962T
Voltage DC	1000V	0.1mV	±(0.8% + 2digits)	±(0.8% + 2digits)	±(1.2% + 2digits)
Voltage AC	1000V	0.1mV	±(1.0% + 3digits)	±(1.0% + 3digits)	±(1.5% + 8digits)
Current DC	10A	0.1uA	±(1.2% + 3digits)	±(1.2% + 5digits)	±(1.2% + 5digits)
Current AC	10A	0.1uA	±(1.5% + 5digits)	±(1.2% + 5digits)	±(1.5% + 5digits)
Temperature	-20°C~+760°C	1°C	±(3% reading +5°C)	±(3.0% reading + 5°C)	±(3.0% reading + 5°C)
Resistance	40MΩ	0.1Ω	±(0.8% + 5digits)	±(0.8% + 2digits)	±(1.2% + 2digits)
Capacitance	40mF	10pF		±(3.0% + 5digits)	±(3.0% + 5digits)
	100uF	10pF	±(3.0% + 5digits)		
Frequency	10MHz	0.001Hz		±(1% + 3digits)	
	10MHz	1Hz			±(1% + 3digits)
	5MHz	0.001Hz	±(1% + 3digits)		
Duty Cycle	0.1 to 99.9%	0.10%	±(1.2% + 2digits)	±(1.2% + 2digits)	±(1.2% + 2digits)

Included Accessories

• Carrying Case • Instruction Manual • Battery • Testing Leads • Temperature Probe • Test Report

• DT-9962T

Digital LCR Multimeter

DT-9931 is a professional multimeter used to measure elements of LCR. Meter is equipped with non-contact voltage detector NCV, and a number of powerful measurement functions. It is both water and dust proof. The unit is enclosed in a rugged and waterproof housing IP 67 (with rubber elements), which is characterized by high resistance to mechanical damage. It confirms to EN-61010-1 CAT-IV 600V, CAT-III 1000V

- 6000 Counts high resolution backlit LCD Display with analogue bargraph
- Non Contact AC Voltage Detector (NCV)
- Stores 2000 Readings
- Records Max/Min Values
- Relative Measurement
- Measures AC/DC Voltage and AC/DC Current
- Measures Frequency and Duty Cycle
- Measurement of resistance to 60 MΩ
- Measurement of inductance to 6 H
- Measuring up to 40 mF
- Measurement of frequency up to 10 MHz
- Temperature (°C, °F)
- Acoustic continuity tester – Beeper
- Tester of semiconductor diodes
- Automatic or manual measurement range selection
- Function - HOLD and Auto Power Off

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-9931

Safety conformance

– EN 61010-1 CAT IV 600 V, CAT III 1000 V
– 1000 V input protection on all ranges
– 10 A/1000 V i 0.8 A/1000 V fuses protection on current ranges

SPECIFICATIONS (Check the CEM web for detailed specifications)

Function	Max. Range	Min. Resolution	Accuracy
Voltage DC	1000 V	0,1mV	± 0,1%
Voltage AC	1000 V	1 mV	± 0,8%
Current DC	600 mA	0,1 µA	± 0,8%
Current AC	600 mA	0,1 µA	± 1,0%
Resistance	60 MΩ	0,1Ω	± 0,5%
Capacitance	40 mF	10 pF	± 5,0%
Frequency Electronic	10 MHz	0,001 Hz	± 0,5%
Inductance	6,0 H	0,1 uH	± 3,0%
Temperature	1200°C	0,1°C	±1,0%
Duty Cycle	99,9%	0,01%	±1,2%
Diode and Continuity			

Included Accessories

• Test Leads • 9 V battery • Type K temperature probe • carrying case.

PALM-SIZE COMPACT

DIGITAL MULTIMETER

CEM DT-910 Series palm-size compact multimeters measures the world in just your palm. These are compact, easy to use tools. These, palm-sized digital multimeters, deliver safe, reliable measurements time after time. They are made to fit the way you work! The compact size meters are designed to fit in your palm of your hand and go with you no matter where your job takes you.

These have crisp LCD display with backlit, making it easier to work in dark environment. Everything you need to measure is available in these meters. They confirm to EN 61010-1, CAT-III 600V. The double molded housing gives complete protection and the meter has full overload protection.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

- Large easy to read digital backlit display
- Thermocouple Type 'K' function for surface and air temperature measurements up to 1400°F (760°C) **(DT914/DT-916 only)**
- Measure AC and DC Voltage to 600V
- DC Current function to 10A
- AC/DC Current function to 10A **(Models DT-914/DT-916)**
- Resistance Test with Continuity and Diode functions
- Convenient mini size with tilt stand
- 9V and 1.5V Battery test under load **(DT-912 only)**
- Frequency and Duty Cycle measurements **(DT-916 only)**
- Capacitance measurement up to 100µF **(DT-916 only)**
- Data Hold locks reading in the display
- Best for Troubleshooting electronic and electrical equipment

Product Features	DT-912	DT-914	DT-916
Bandwidth (Voltage/ Current)	400Hz	400Hz	400Hz
Digital Display Counts	1,999	1,999	4,000
Backlit LCD Display	•	•	•
IEC/EN 61010-1:2001 CAT III 1000V	•	•	•
Current Measurement: 10 A AC/DC	10A DC	•	•
Data Hold	•	•	•
Max Hold	•	•	
Relative Meausrement			•
Diode & Continuity Check	•	•	•
Capacitance Range			•
Battery Test for 9V/1.5V	•		
Auto Power Off	•	•	•
Overload Protection on all Range	•	•	•

• DT-916

• DT-912

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-912	DT-914	DT-916
Voltage DC	600V	0.1mV	±(0.5% + 2digits)	±(0.5% + 2digits)	±(0.5% + 2digits)
Voltage AC	600V	0.1mV	±(1.2% + 10digits)	±(1.2% + 3digits)	±(1.2% + 3digits)
Current DC	10A	1uA	±(1.0% + 2digits)		
	10A	0.1uA		±(1.0% + 3digits)	±(1.0% + 3digits)
Current AC	10A	0.1uA		±(1.5% + 5digits)	±(1.5% + 5digits)
Temperature	-50°C~+1000°C	1°C		±(3.0% reading + 5°C)	
	-20°C~+760°C	1°C			±(3.0% reading + 5°C)
Resistance	40MΩ	0.1Ω			±(1.0% + 2digits)
	20MΩ	0.1Ω		±(1.0% + 2digits)	
	2000KΩ	0.1Ω	±(0.8% + 5digits)		
Capacitance	100uF	10pF			±(3.0% + 5digits)
Frequency	10MHz	0.001Hz			±(1.2% + 3digits)
Duty Cycle	0.1 to 99.9%	0.10%			±(1.2% + 2digits)

Included Accessories

- Carrying Case • Instruction Manual
- Battery • Testing Leads
- Temperature Probe • Test Report

POCKET TYPE

DIGITAL MULTIMETER DT-113

Card type Digital Multimeter, fits in pocket, provides all the facilities required for a technician "on the go". This 3999 Counts Multimeter provides 10 functions at an unbeatable price. The meter also has Relative Measurement, Data Hold, Auto power off and Auto Power off disable functions.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Product Features

- Compact Pocket size DMM • Built in probes • Auto Power off & Disable function • Relative Measurement
- Diode & Continuity Test • Confirms to EN:61010-1, CAT III 300V

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-113
Voltage DC	500V	0.1mV	±(0.7% + 3digits)
Voltage AC	500V	0.1mV	±(1% + 10digits)
Current DC	400mA	1uA	±(2.0% + 5digits)
Current AC	400mA	1uA	±(2.5% + 10digits)
Resistance	40MΩ	0.1Ω	±(2.0% + 5digits)
Capacitance	200uF	10pF	±(3.0% + 15digits)
Frequency	10MHz	0.001Hz	±(2.0% + 5digits)
Duty Cycle	0.1 to 99.9%	0.10%	±(2.0% + 5digits)

Included Accessories

- Instruction Manual • Battery

• DT-113

PEN TYPE SMART

DIGITAL MULTIMETER DT-3260

This is an ideal tool for trouble shooting, electrical equipment as well as circuit faults. It confirms to EN:61010-1, CAT-III 600V. The meter automatically selects AC/DC Voltage and also auto selects Capacitance, Resistance, Continuity and diode test.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Product Features

- 6000 Counts LCD Display • Compact Pen size DMM • Built in probes • Auto Power off & Disable • Data Hold/Max/Min Record
- Auto Detects AC & DC Voltage • Auto Detects Capacitance, Resistance, Continuity and diode test • Wide Capacitance Range
- Diode & Continuity Test • Confirms to EN:61010-1, CAT III 600V

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-3260
Voltage DC	600V	0.1mV	±(1.2% + 5digits)
Voltage AC	600V	0.1mV	±(1.5% + 3digits)
Current DC	600mA	10uA	±(1.5% + 5digits)
Current AC	600mA	10uA	±(2.0% + 5digits)
Resistance	60MΩ	0.1Ω	±(1.0% + 2digits)
Capacitance	10mF	1pF	±(3.0% + 5digits)

Included Accessories

- Instruction Manual • Battery

• DT-3260

CURRENT AND
Voltage Datalogger

The DT-175/176 is a datalogger for measuring and recording True RMS current and voltage. The readings are saved in the logger and simply read out by your PC with USB interface. The LCD can show real time readings, MAX, MIN and sign of alarm.

Features
Large capacity for storing 60,000 data points
ACA current clamp sensor (CP-09)
Voltage sensor can measure the floating voltage to meet CAT III 600V
LCD to show some logging information easily
Freely selectable measurement cycle from 1sec. to 24h
Download collected data through PC's USB interface
Alarm display if user-defined maximum/minimum values are exceeded
Analysis software used to view graph for logging data

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Product Features	DT-175CVS	DT-175CV1	DT-176CV2
Input Channel	Dual	Single	Dual
T-RMS Measurement	•	•	•
Data Memory	100,000	100,000	200,000
MAX/MIN, Peak Mode	MAX/MIN	•	•
Time & Date Stamp	•	•	•
Wave Store		•	•
Auto Power Off	•	•	•
USB Interface	•	•	•
Manual & Automatic Mode	•	•	•

• DT-175CV1

SPECIFICATIONS (Check the CEM web for detailed specifications)

Function	Range	Accuracy
AC Current (True RMS)	200A	±2%
AC Voltage (True RMS)	600V	±1.5%
Measuring Rate	1 sec. to 24h	100,000
Analysis Software	Windows 7/8/98/2000/XP	
size (H x W x D)	114mm x 63mm x 34mm	

Included Accessories

• 3.6V Lithium battery and • CD software • USB Cable
• Current Clamp for 200A • Voltage Probes

PROFESSIONAL HEAVY DUTY AC, DC/AC T-RMS AUTO-RANGING
CLAMP METERS

Be Ready For Anything !!

The DT-3380 Series of Digital Clamp meters offers all the specifications required by any field engineer working on-site at incoming power site. These are very elegantly designed, perfectly fit into hand and can be used to access tight places for testing. The large backlit LCD with high display count of 50,000 provides precise and accurate readings with details till the last digit. The bright backlit and bright flashlight in the clamp, makes it easier to use in dark areas.

These clamp meters confirm to CAT-III 1000V, CAT-IV 600V and are TUV & GS Approved. They confirm to EMC & LVD, EN:61326, EN:61010-1, EN:61010-02-031

The dual input thermometer with K type inputs for temperature, with differential temperature function, makes it all the more useful for all field use.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Features
True RMS measurements for accurate AC Voltage and Current Measurements
Dual Type K Thermocouple Input with Differential Temperature Function (T1, T2, T1-T2)
Built-In Non-Contact Voltage Detector
Flash Light in the Clamp Jaw to access dark and tight areas
Data Hold Plus Peak Hold of Current Surges During Motor Startup
50,000 Count Multimeter Functions for AC/DC Voltage, Resistance, Capacitance, and Frequency for High Resolution Over Wider Ranges
Measures Motor Capacitors to 5,000µF
49 mm (1.9") Jaw Opening for Conductors up to 500MCM
Rugged Double Molded Housing
Autoranging with Manual Override
AC/DC µA Multimeter Function for HVAC Flame Rod Current Measurements
DC Current Function Ideal for Automotive, Heavy Equipment and Marine Applications **(Available in DT-3381 only)**
Max/Min Record Functions and Relative Measurement functions.
Low Battery Indicator and Auto Power Off
Diode and Continuity Check Facility

• DT-3381

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	DT-3380	DT-3381
Voltage DC	600V	0.01mV	±(0.1% ± 4digits)	±(0.1% ± 4digits)
Voltage AC	600V	0.01mV	±(1.0% ± 30digits)	±(1.0% ± 30digits)
Current DC	1000A	0.01A	-	±(2.5% ± 5digits)
Current AC	1000A	0.01A	±(2.5% ± 5digits)	±(2.5% ± 5digits)
DC uA Current	500.00uA / 5000.0uA	0.01uA	±(1.0% ± 6digits)	±(1.0% ± 6digits)
AC uA Current	500.00uA / 5000.0uA	0.01uA	±(1.5% ± 30digits)	±(1.5% ± 30digits)
Resistance	50MΩ	0.01Ω	±(1.0% ± 5digits)	±(1.0% ± 5digits)
Temperature	-100°C / 1000°C	0.1°C	±(1.0% ± 2.5°C)	±(1.0% ± 2.5°C)
Capacitance	5mF	0.01nF	±(3.5% ± 10digits)	±(3.5% ± 10digits)
Frequency	10MHz	0.001Hz	±(0.3% ± 2digits)	±(0.3% ± 2digits)

Included Accessories

- Testing Leads • Soft Carrying Case
- Instruction Manual • Temperature Probe
- Battery

PROFESSIONAL HEAVY DUTY AC, DC/AC T-RMS AUTO-RANGING CLAMP METERS

Work With The Best!

Our new DT-3370 Series Heavy Duty Digital Clamp meters offer all the features you need to fit the way you work. It provides a full range of state of-the-art features to meet even the most demanding job requirements. The body and jaw perfectly fits in your hand and into tight areas of work. Meter controls are positioned so that current measurements can be done with one hand.

All the three clamp meters have features such as a large, backlit display, true-RMS standards, CAT-IV safety ratings and a durably constructed housing. They have increased reading capability of 1000A and 1000V AC and DC.

These clamp meters confirm to CAT-III 1000V, CAT-IV 600V and are TUV & GS Approved. They also confirm to EMC & LVD, EN:61326, EN:61010-1, EN:61010-02-031

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Features
True RMS Measurements for Accurate AC Voltage and Current Measurements
Built-In Non-Contact Voltage Detector
Data Hold **(all models)** and Peak Hold **(DT-3370B, DT-3371B only)** of Current Surges During Motor Startup
Measures Motor Capacitors to 10,000µF
42 mm (2.0") Jaw Opening for Conductors up to 500MCM
Rugged Double Molded Housing
Autoranging with Manual Override
Auto Power Off, Low Battery Indication
41/61 Segment Analogue Bar-Graph
Max/Min Record Functions **(DT-3372B only)** and Relative Measurement functions.
Diode and Continuity Check Facility
Double display for more information while measuring

• DT-3371B

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	DT-3370B	DT-3371B	DT-3372B
Voltage DC	600V	0.1mV	±(0.8% ± 2digits)	±(0.8% ± 2digits)	
	1000V	0.1mV			±(1.0% ± 3digits)
Voltage AC (T-RMS)	600V	0.1mV	±(1.5% ± 5digits)	±(1.5% ± 5digits)	
	1000V	0.1mV			±(1.5% ± 5digits)
Current DC	1000A	100mA		±(2.8% ± 8digits)	±(2.5% ± 8digits)
Current AC (T-RMS)	1000A	100mA	±(2.8% ± 8digits)	±(2.8% ± 8digits)	±(2.5% ± 8digits)
Resistance	40MΩ	0.1Ω	±(1.0% ± 4digits)	±(1.0% ± 4digits)	
	60MΩ	0.1Ω			±(1.0% ± 4digits)
Temperature	-50°C / 760°C	1°C	±(3.0% ± 5digits)	±(3.0% ± 5digits)	±(3.0% ± 5digits)
Capacitance	4mF	1pF	±(3.0% ± 5digits)	±(3.0% ± 5digits)	±(3.0% ± 5digits)
Frequency	10MHz	0.001Hz	±(1.0% ± 3digits)	±(1.0% ± 5digits)	±(1.0% ± 5digits)

Included Accessories

- Testing Leads • Soft Carrying Case
- Instruction Manual • Temperature Probe
- Battery

• DT-3370B

INDUSTRIAL USE RUGGED AC & DC/AC T-RMS

CLAMP METERS

Confidently take reliable readings with the DT-3390/ DT-3391/DT-3395 Series of clamp meters. The Extra Wide Jaw easily clamps around large conductors, typically found in high current applications. The rugged design CAT-IV 600V, CAT-III 1000V ratings add an extra element of protection when taking high-powered measurements. The measurement of Capacitance, Temperature **(not available in DT-3390)**, Resistance and Frequency makes these the most versatile tool for utilities, electrical contractors and industrial service technicians.

• DT-3390

• DT-3395

• DT-3391

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Features
Large Backlit Display of 3999 Counts and 5999 Counts **(DT-3395 only)**
T-RMS measurements **(For DT-3391 & DT-3395)** for AC Voltage and AC Current
Built-In Non-Contact Voltage Detector
Electronic Overload Protection
Analogue Bargraph **(DT-3395 only)**
Continuity & Diode Test
Auto Power Off & Data Hold
Low Battery Indication
MAX/MIN Record function **(DT-3395 only)**
Capacitance Measurement of up to 100uF **(DT-3390/DT-3391)** and 4000uF **(DT-3395)**
52mm Clamp Jaw Opening for Conductors up to 600MCM

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	DT-3390	DT-3391	DT-3395
Voltage DC	600V	0.1mV	±(0.8% ± 2digits)	±(0.8% ± 2digits)	±(1.0% ± 3digits)
Voltage AC	600V	0.001V	±(1.5% ± 8digits)	±(1.5% ± 8digits)	±(1.0% ± 4digits)
Current DC	1000A	0.01A			±(2.0% ± 8digits)
Current AC	1000A	0.01A	±(2.2% ± 12digits)	±(2.2% ± 12digits)	±(2.2% ± 12digits)
Resistance	40MΩ	0.10Ω	±(1.0% ± 4digits)	±(1.0% ± 4digits)	
	60MΩ	0.1Ω			±(1.0% ± 5digits)
Temperature	-20°C / 1000°C	0.1°C		±(3.0% ± 5°C)	±(2.0% ± 3°C)
Capacitance	100uF	0.01nF	±(3.0% ± 5digits)	±(3.0% ± 5digits)	
	4000uF	0.01nF			±(2.5% ± 5digits)
Frequency	10MHz	0.001Hz	±(1.2% ± 3digits)	±(1.2% ± 3digits)	±(1.2% ± 3digits)

Included Accessories

• Carrying Case • Testing Leads • Instruction Manual • Temperature Probe (DT-3391/DT-3395 only) • Battery

PROFESSIONAL AC, DC/AC T-RMS AUTO-RANGING

CLAMP METERS

• DT-355

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Our new family of true-RMS clamp meters provides a range of state of-the-art features to meet even the most demanding job requirements. All the meters have improved base features such as a large, backlit display, true-RMS standard, CAT IV safety rating and a durably constructed body. These have small bodies and jaw design for perfectly fitting in hand and in tight areas. The Backlit Display helps in working in dark areas

Features
High Resolution 6000 Counts Backlit LCD Display
True RMS Measurements for Accurate AC Voltage and Current Measurements
Built-In Non-Contact Voltage Detector
Data Hold Plus Max/Min Record of Current helps diagnosing irregular load conditions
6,000 Count Multimeter Functions for AC/DC Voltage, Resistance, Capacitance, and Frequency for High Resolution Over Wider Ranges
Measures Motor Capacitors to 4,000µF
40 mm (1.57") Jaw Opening for Conductors up to 350MCM
Rugged Double Molded Housing
Autoranging with Manual Override
DC Current Function Ideal for Automotive, Heavy Equipment and Marine Applications **(Available in DT-356 only)**
Low Battery Indicator and Auto Power Off
Diode and Continuity Check Facility

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	DT-355	DT-3381
Voltage DC	600V	0.1mV	±(0.8% ± 2digits)	±(0.8% ± 2digits)
Voltage AC	600V	0.001V	±(1.8% ± 8digits)	±(1.8% ± 8digits)
Current DC	1000A	0.1A		±(2.8% ± 5digits)
Current AC	1000A	0.1A	±(2.8% ± 8digits)	±(2.8% ± 8digits)
Resistance	60MΩ	0.1Ω	±(1.0% ± 4digits)	±(1.0% ± 4digits)
Temperature	-20°C / 760°C	0.1°C	±(3.0% ± 5°C)	±(3.0% ± 5°C)
Capacitance	4000uF	0.01nF	±(3.0% ± 5digits)	±(3.0% ± 5digits)
Frequency	10MHz	0.01Hz	±(1.5% ± 2digits)	±(1.5% ± 2digits)

Included Accessories

• Carrying Case • Testing Leads • Instruction Manual • Temperature Probe • Battery

• DT-356

COMPACT AC, AC/DC T-RMS

CLAMP METERS

The new CEM DT-380 series come with all the rugged, reliable and accurate features you can trust, in a small, ergonomic design. The innovative body design offers a more compact tool to meet your needs. With features of AC current measurements upto 400 A (380, 381, 383) and 200A (382), a large 30 mm jaw opening and CAT III 600 V safety rating, you get an easy-to-use tool that handles your everyday electrical maintenance needs.

• DT-380/381/832/383

CE

EMC & LVD
EN: 61326
EN: 61010-1EN: 61010-02-031

Features

- Crisp Backlit LCD Display
- Various Counts ranging from 2000 Counts **(380)**, 2400 Counts **(382)** and 4000 Counts **(381, 383)** LCD Display
- Built-in Flash Light to access dark and tight areas
- Built-In Non Contact Voltage Detector
- Data Hold Function to Freeze Displayed Data
- Relative Measurement (382, 383)
- Auto Power Off to save battery life
- Low Battery Indication
- 30mm Jaw Size
- Diode & Continuity Check Functions

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	DT-380	DT-381	DT-382	DT-383
Voltage DC	600V	0.1mV	±(1.5% ± 2digits)	±(1.5% ± 2digits)	±(1.0% ± 2digits)	±(1.0% ± 2digits)
Voltage AC	600V	0.1mV	±(1.5% ± 8digits)	±(1.5% ± 2digits)	±(1.5% ± 8digits)	±(1.5% ± 8digits)
Current DC	200A	0.01A			±(2.5% ± 5digits)	
	400A					±(2.5% ± 5digits)
Current AC	200A	0.01A			±(2.5% ± 5digits)	
	400A		±(2.5% ± 5digits)	±(3% ± 5digits)		±(2.5% ± 5digits)
Resistance	20MΩ	0.1Ω	±(1.0% ± 4digits)			
	24MΩ				±(1.0% ± 4digits)	
	40MΩ			±(1.0% ± 4digits)		±(1.0% ± 4digits)
Temperature	-50°C / 760°C	1°C	±(3.0% ± 5°C)	±(3.0% ± 5°C)	±(3.0% ± 5°C)	±(3.0% ± 5°C)
Capacitance	100uF	0.01nF		±(3.0% ± 5digits)		±(3.0% ± 5digits)
Frequency	10kHz	0.01Hz		±(1.5% ± 2digits)		±(1.5% ± 2digits)

Included Accessories

• Carrying Case • Testing Leads • Instruction Manual • Temperature Probe • Battery

AC LEAKAGE CURRENT CLAMP WITH HIGH CURRENT MEASUREMENT UP TO 1000A

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Identifying deterioration of installation and other causes of "nuisance tripping" in live circuits is not always a straightforward matter. Problem of access and isolation may make the inspection costly. Then, let's look at CEM Leakage Clamp Meter designed to take the stress out of inspecting live installations.

Now, thanks to unique AC Leakage Clamp Meters developed by CEM, we can make not only a precise measurement of the earth leakage current in a circuit, but also an instant assessment of the cause of that leakage without shutting down the installation.

At the first glance, the CEM Leakage Clamp meters appear to be conventional clamp ammeters. However, the special construction of the clamp shielding, allows us to measure tiny out- of-balance currents between any conductors enclosed within the transformer jaws

• DT-356

Features

- Measure earth leakage currents on single or three phase systems
- Identify the causes of leakage to earth
- Assess the deterioration of insulation in a live circuit without carrying out an insulation test
- Trace faults while avoiding insulation shutdown time and possible damage to sensitive loads.
- Measures the AC Current like the conventional clamp Meters ranging up to 1000A
- Large Transformer Jaw of 68 mm dia
- Frequency Filter switch to eliminate the effect of the harmonics
- T-RMS measurement enables an accurate measurement for distorted waveforms
- Peak Hold and Data Hold Functions
- Confirms to IEC61010-1 CAT III 600V

SPECIFICATIONS (Check the CEM web for detailed specifications)

AC Current

		Accuracy	
Range	Resolution	50/60 Hz	Wide (40-1KHz)
200mA	100uA	±1.5% ± 6dgts	±3.0% ± 6dgts
2A	1mA	±2.0% ± 6dgts	±4.0% ± 6dgts
20A	10mA	±2.0% ± 6dgts	±4.0% ± 6dgts
200A1	100mA	±2.0% ± 6dgts	±3.0% ± 6dgts
1000A1	100mA	±3.0% ± 6dgts	±7.0% ± 6dgts

AC / DC Voltage

		Frequency Bandwidth		
Range	Resolution	50/60Hz	40-1KHz	Overload protection
600V	0.1V	±1.5% ± 2dgts	±2.0% ± 4dgts	AC / DC 600V

Resistance

Range	Resolution	Accuracy	Beeping	OL Protection
0.4-400Ω	0.1Ω	±1.5% ± 4dgts	<38.0Ω	AC / DC 600V

Included Accessories

• Carrying Case • Testing Leads
• Instruction Manual • Battery

AC LEAKAGE CURRENT

CLAMP METERS DT-9810

Ideally designed for non-invasive checks of insulation condition, the DT-9810 allows you to perform tests without powering down the installation or disconnecting equipment - saving you time, without compromising on quality or safety.

The unique jaw design of the DT-9810 eliminates the influence of adjacent current conductors, and minimizes the effects of external magnetic fields, even at low currents. This allows you to perform accurate and reliable tests in today's crowded electrical environments. The tough and high quality clamp design of the DT-9810 guarantees high stability for long-term repeatability.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-9810

Features
Shielded Transformer Jaw Opens to 30mm
100uA High Resolution
Least Effected by external Magnetic Field, Providing wide measuring range from very small to large currents.
Designed to safety Standards of IEC 610101-2-032, Over Voltage CAT III 300V and Pollution Degree 2.
Data Hold function Freezes Displayed Data
Dynamic Backlit 1999 Counts, 3-1/2 Digits LCD Display
Auto Power Off Saves Battery Life

SPECIFICATIONS (Check the CEM web for detailed specifications)

Function	Range	Resolution	Accuracy
AC Current (60Hz)	200mA	100µA	±(5.0% of reading + 8digits)
	2A	1mA	±(5.0% of reading + 10digits)
	200A	100mA	±(2.5% of reading + 10digits)

Included Accessories

• Carrying Case • Instruction Manual • Battery

AC/DC LEAKAGE CURRENT

DT-339 CLAMP METERS

Ideally designed for non-invasive checks of insulation condition, the DT-339 allows you to perform tests without powering down the installation or disconnecting equipment - saving you time, without compromising on quality or safety.

The unique jaw design of the DT-339 eliminates the influence of adjacent current conductors, and minimizes the effects of external magnetic fields, even at low currents. This allows you to perform accurate and reliable tests in today's crowded electrical environments. The tough and high quality clamp design of the DT-339 guarantees high stability for long-term repeatability.

Features
Small Jaw Size of up to 0.7"
1mA Resolution for both AC and DC Current
T-RMS Measurements for Distorted Waveforms
Temperature Measurement using K type Thermocouple
Provides wide measurement range from small to large currents
Confirms to IEC 61010-2-032, CAT III 600V and Pollution Degree 2.
5000 Counts Large Backlit LCD Display
Data Hold, Relative Measurement functions
Auto Power Off saving battery Life

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	Accuracy
AC Current (T-RMS)	80A	1mA	±(2.8% ± 25digits)
DC Current	80A	1mA	±(2.8% ± 30digits)
AC Voltage (T-RMS)	600V	0.1mV	±(1.0% ± 15digits)
DC Voltage	600V	0.1mV	±(0.8% ± 5digits)
Resistance	50MΩ	0.1Ω	±(1.0% ± 4digits)
Capacitance	500uF	1pF	±(3.0% ± 5digits)
Frequency	10MHz	0.001Hz	±(1.2% ± 3digits)
Temperature	-20°C~+760°C	0.1°C	±(2.0% ± 3°C)

Included Accessories:

• Carrying Case • Testing Leads • Instruction Manual • Temperature Probes • Battery

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-339

DC/ AC T-RMS 1500A

CLAMP METERS & CLAMP ON POWER METER

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

DT-3350 Series of Clamp On Meter is a T-RMS 1500A AC/DC and can perform Power Measurements as well. It provides a very safe environment for high power measurements with double injection housing design. T-RMS AC/DC Voltage and Current measurements makes it usable at all available loads. The combination of a 40,000 Counts Multimeter with these meters helps to measure right up to the last details. The Large Backlit LCD Display makes the instrument usable in dark environments. The meters confirm to EN 61010-1 CAT IV 600V / CAT III 1000V

Features:

- AC/DC Power Measurements **(DT-3352 only)**
- Large Backlit LCD Display
- Built-In Non-Contact Voltage Detector
- Data Hold Plus Inrush measurement of Current Surges During Motor Startup
- 40,000 Count Multimeter Functions for AC/DC Voltage, Resistance, Capacitance, and Frequency for High Resolution Over Wider Ranges
- Measures Motor Capacitors to 40,000µF
- 55 mm (2.16") Jaw Opening for Conductors up to 600MCM
- Rugged Double Molded Housing
- Autoranging with Manual Override
- Max/Min Record Functions and Relative Measurement functions.
- Low Battery Indicator and Auto Power Off
- Diode and Continuity Check Facility

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	DT-3351	DT-3352
AC Current (T-RMS)	1500A	10mA	±(2.8% ± 30digits)	±(2.5% ± 30digits)
DC Current	1500A	10mA	±(2.0% ± 30digits)	±(2.0% ± 30digits)
AC Voltage (T-RMS)	750V	10uV	±(0.8% ± 40digits)	±(0.8% ± 9digits)
DC Voltage	1000V	10uV	±(0.1% ± 5digits)	±(0.1% ± 9digits)
Resistance	40MΩ	10mΩ	±(0.5% ± 9digits)	±(0.5% ± 9digits)
Capacitance	40mF	0.1nF	±(3.5% ± 10digits)	±(3.5% ± 10digits)
Frequency	10MHz	0.001Hz	±(0.3% ± 2digits)	±(0.3% ± 2digits)
Temperature	-20°C~+760°C	0.1°C	±(1.0% ± 2.5°C)	±(1.0% ± 2.5°C)
AC kW / kVA	900kW	0.1kW		±(3% ± 10digits)
DC kW / kVA	900kW	0.1kW		±(2.8% ± 10digits)

Included Accessories:

• Carrying Case • Testing Leads • Instruction Manual • Temperature Probes • Battery

• DT-3351 • DT-3352

DIGITAL HIGH VOLTAGE

INSULATION TESTER

The DT-6605 insulation resistance tester offers insulation testing up to 5kV, making it ideal for testing a wide range of high voltage equipment including switchgear, motors, generators and cables. These can conduct the entire range of test voltages with a best in class, 1-year warranty, confirmation to EN:61010-1 and CAT IV 600V safety rating.

These are perfect tools for preventative or predictive maintenance programs designed to identify potential equipment failures before they occur.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Product Features
Test Voltages of 500V, 1000V, 2500V, and 5000V
Measure Insulation Resistance to 60GΩ
Large 6000 count display with bar-graph and backlight
Polarization Index measurement (PI)
Dielectric Absorption Ratio measurement (DAR)
AC/DC Voltage measurement from 0 to 600V with Max/Min, Peak and Relative functions
1 to 15 minute timer function for IR measurements
Resistance measurement
Auto-ranging
Indication of output voltage and discharge voltage
Auto-discharge function and voltage output warning function
Auto Power off and battery check
Complete with test leads, 8 x C batteries, AC adaptor, and heavy duty carrying case

• DT-6605

SPECIFICATIONS (Check the CEM web for detailed specifications)

Insulationresistance Measurement				
Rated voltage	500V	1000V	2500V	5000V
Measuring range (Auto-ranging)	0.005~6.000MΩ	0.005~6.000MΩ	0.05~60.00MΩ	0.05~60.00MΩ
	6.01~60.00MΩ	6.01~60.00MΩ	60.1~600.0MΩ	60.1~600.0MΩ
	60.1~600.0MΩ	60.1~600.0MΩ	0.61~6.00GΩ	0.61~6.00GΩ
	0.61~6.00GΩ	0.61~6.00GΩ	6.1~60.0GΩ	6.1~60.0GΩ
Open circuit voltage	DC 500V +20%,-0%	DC 1000V +20%,-0%	DC 2500V +20%,-0%	DC 5000V +20%,-0%
Rated current	1~1.2mA (at 0.5MΩ load)	1~1.2mA (at 1MΩ load)	1~1.2mA (at 2.5 MΩ load)	1~1.2mA (at 5MΩ load, Recommended use of the Power Adaptor)
Short-Circuit Current	Approx.1mA			
Accuracy	±2.5%reading + 15digits (at 0.005~600.0MΩ); ±3%reading + 15digits (at 0.61~6.00GΩ); ±4%reading + 15digits (at 6.1~60.0GΩ);			
Voltage Monitor Range	5~600VDC (resolution 1V); Accuracy: ±1.5%reading + 5digits			
	Note:This monitor is used to check whether electric charge stored in the equipment under test is discharged or not. Measured voltage value displayed on the LCD is a reference value. Please be noted that the indicated value, when external AC or DC Voltage is applied to the instrument is not the correct value , is display ">30V".			

Included Accessories:
Test Leads • Instruction Manual • 8 X C type Batteries • Heavy Duty Carrying Case • Test Report

DIGITAL

INSULATION RESISTANCE TESTER

Truly portable insulation resistance testers

When you need a low cost solution to general-purpose insulation testing look no further than the DT-5505 insulation tester range. The DT-5505 Insulation Tester is compact, rugged, reliable and easy to use.

The multiple test voltages makes it ideal for many troubleshooting, commissioning and preventive maintenance applications.

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Product Features:
Double molded housing for added durability
Dual display of Insulation Resistance and Test Voltage
Backlit super large display
3-3/4 Digits 3999 Counts Large LCD
125, 250V, 500V, and 1000V test voltages
Insulation Resistance to 4000MΩ
Auto power off
Lo Ω function for testing connections
AC/DC Voltage Measurement
Continuity Check facility
Lock Power On Function for hands-free operation
Data Hold to freeze displayed reading

- DT-5505

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-5505
Voltage DC	1000V	1V	±(0.8% + 3digits)
Voltage AC	750V	1V	±(1.2% + 10digits)
Lo Resistance	400Ω	0.01Ω	±(1.2% + 3digits)
Continuity	35Ω	0.01Ω	

Terminal Voltage	Range	Resolution	Accuracy	Test Current	Short Circuit Current
125V (0%~+10%)	0.125~4.000 MΩ	0.001MΩ	+(2% + 10)	1mA @load 125kΩ	≤1mA
	4.001~40.00 MΩ	0.01MΩ	+(2% + 10)		
	40.01~400.0 MΩ	0.1MΩ	+(4% + 5)		
	400.1~4000 MΩ	1MΩ	+(5% + 5)		
250V (0%~+10%)	0.250~4.000 MΩ	0.001MΩ	+(2% + 10)	1mA @load 250kΩ	≤1mA
	4.001~40.00 MΩ	0.01MΩ	+(2% + 10)		
	40.01~400.0 MΩ	0.1MΩ	+(3% + 5)		
	400.1~4000 MΩ	1MΩ	+(4% + 5)		
500V (0%~+10%)	0.500~4.000 MΩ	0.001MΩ	+(2% + 10)	1mA @load 500kΩ	≤1mA
	4.001~40.00 MΩ	0.01MΩ	+(2% + 10)		
	40.01~400.0 MΩ	0.1MΩ	+(2% + 5)		
	400.1~4000 MΩ	1MΩ	+(4% + 5)		
1000V (0%~+10%)	1.000~4.000 MΩ	0.001MΩ	+(3% + 10)	1mA @load 1MΩ	≤1mA
	4.001~40.00 MΩ	0.01MΩ	+(2% + 10)		
	40.01~400.0 MΩ	0.1MΩ	+(2% + 5)		
	400.1~4000 MΩ	1MΩ	+(4% + 5)		

Included Accessories

- Test Leads
- Instruction Manual
- Batteries
- Heavy Duty Carrying Case
- Test Report

DIGITAL INSULATION RESISTANCE TESTER / MULTIMETER WITH WIRELESS PC INTERFACE

• DT-9985

The DT-9985 / DT-9985RF Insulation Resistance Multimeters combine a digital insulation tester with a full-featured True RMS digital multimeter in a single compact, handheld unit, which provides maximum versatility for both troubleshooting and preventive maintenance.

Whether you work on motors, generators, cables, or switchgear, these Insulation Multimeters are ideally suited to help you with your tasks. This is also ideal for telecom applications

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Product Features:

- Wireless USB interface transmits measurement data to a PC **(Only in DT-9985RF)**
- Records 9999 Data
- Backlit super large triple display
- 40,000 Counts Large LCD
- T-RMS Multimeter
- AC, AC+DC, DC Measurements of Voltage & Current
- 1kHz bandwidth for AC Voltage & AC Current measurements
- 125V, 250V, 500V, and 1000V test voltages
- Insulation Resistance from 0.001MΩ to 4000MΩ
- Auto discharge of capacitive voltage
- Lock 'Power On' Function for hands-free operation
- Data Hold and Auto Power Off
- Min/Max and Relative mode
- Waterproof (IP67) rugged double-molded design
- Confirms to IEC61010-1 2nd Edition (2001) to Category IV 600V and Category III 1000V

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Maximum Resolution	DT-9985 / DT-9985F
Voltage DC	1000V	0.01mV	±(0.06% + 4digits)
Voltage AC	1000V	0.1mV	±(1.0% + 5digits)
Current DC	10A	0.01uA	±(1.0% + 3digits)
Current AC	10A	0.1uA	±(1.5% + 7digits)
Temperature	-50°C~+1000°C	0.1°C	±(1% reading +2.5°C)
Resistance	40MΩ	0.0Ω	±(0.3% + 4digits)
Capacitance	40mF	1pF	±(3.5% + 10digits)
Frequency	100MHz	0.001Hz	±(0.1% + 1digits)
Duty Cycle	0.1 to 99.9%	0.01%	±(1.2% + 2digits)

Test Voltage	Accuracy	Insulation Resistance	Resolution	Accuracy
125V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 10digits)
250V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 10digits)
500V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 5digits)
1000V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 5digits)

Included Accessories

- Wireless PC Interface dongle **(for DT-9985RF only)**
- Software **(for DT-9985RF only)**
- Heavy Duty Test Leads
- Instruction Manual
- Type K bead wire temperature probe with adapter
- Batteries
- Carrying Case
- Test Report

MULTI-FUNCTION
INSTALLATION TESTER

The DT-6650 has been designed and built to incorporate all the normal tests associated with multifunction testers, including the very latest advancements in "No Trip Technology" when carrying out "Loop Testing" on RCD protected circuits, producing Fast & Accurate results together with "Auto Testing & Ramp Testing of RCDs." Plus "Earth Resistance Ground Spike Testing" (optional spike kit). This is then linked with Advanced Features that makes it an Outstanding Multifunctional Tester, which is still Simple & Easy to Use.

Product Features:
3.5" TFT Full Color LCD Display (320x240 pixels)
Help Screen, detailing Coloured Wiring Diagrams & Connections
Internal Data Record Files held on removable SD Card
Date & Time recording of all Test Results
Future Proof, by Downloading of System Upgrades
Alpha Numerical Key Pad displayed, for keying all aspects of Data including: Client, Site & Circuit Details
Bluetooth Compatible
IP 65 Dust and Waterproof
TV output (PAL or NTSC) for Client Presentation Plus Many More Features
Fast & Accurate, Non-Trip Loop Test
Pass / Fail indication for RCD Tests
Internal Memory
Safe Earth Volt touch pad detects raised earth
Remote switch probe for ease of use
Easy, Reliable & Accurate Compensations of Test Leads & Mains Lead
Electronic Lockout to prevent incorrect connections
Intelligent Help
Fast High Current Loop Test
Continuity Test
3 Year Warranty*

• DT-6650

RCD Testing (BSEN 61557-6)
RCD Rating (L_N) 10mA, 30mA, 100mA, 300mA, 500mA and 1A

Test current	Accuracy
x1/2	±(1% of reading + 1 digit)
x1	±(1% of reading + 1 digit)
x2	±(1% of reading + 1 digit)
X5	±(1% of reading + 1 digit)

Measurement Range (Voltage) / AC-DC	Resolution (V)	Accuracy
80 – 500	1	±(2% of reading + 2digits)

Test Voltage	Accuracy	Insulation Resistance	Resolution	Accuracy
125V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 10digits)
250V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 10digits)
500V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 5digits)
1000V	±0% ~ 10%	4000MΩ	0.001MΩ	±(2.0% + 5digits)

SPECIFICATIONS (Check the CEM web for detailed specifications)

LOOP Resistance		
L- PE (Hi-Amp)		
Range (Ω)	Resolution (Ω)	Accuracy
0.23 –999	0.01	±(4% of reading + 4 digits)
L- PE (No Trip)		
Range (Ω)	Resolution (Ω)	Accuracy
0.23 –999	0.01	±(5% of reading + 6 digits)
LINE Resistance (L-N)		
Range (Ω)	Resolution (Ω)	Accuracy
0.23 –999	0.01	±(4% of reading+ 4 digits)

LOW Resistance

Range	Resolution	Accuracy	Max. open Circuit Voltage	Overload Protection
0.000~2.000Ω	0.001Ω	±(1.5% + 30digits)	5.0V	250Vrms
2.00~20.00Ω	0.01Ω	±(1.5% + 3digits)		
20.0 ~200.0Ω	0.1Ω			
200 ~2000Ω	1Ω	±(1.5% + 5digits)		

Included Accessories:

- Rechargable Batteries & mains Charger • Rigid Hard Carrying Case with Steel locking clips
- Complete with full set of test leads, probes • Crocodile clips • Instruction manual
- Software

DIGITAL EARTH

RESISTANCE TESTER

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Electronic Digital Earth Resistance Tester is direct replacement of the conventional hand generator type tester. It is designed for measurement of the resistance of earthing used in the electrical equipment as well as for measurement of ground resistivity. It can be used for measurements of the other low regular and liquid resistances. It can also be used for measurement of voltage AC, voltage DC and resistance.

This instrument has wide application for testing earthing installation in power-based industries, telecommunication networks and electrical traction systems etc.

Product Features
Extra Large LCD Display
Earth Resistance and Battery conditions can be Displayed Together.
Earth Voltage Measurement
Meets IEC:61010-1, CAT-III 1000V
Test Hold Function for Hands free Operation
Automatic Zero Adjustment
DC Voltage, AC Voltage and Low Resistance Measurements

SPECIFICATIONS (Check the CEM web for detailed specifications)

Parameters	Range	Resolution	Accuracy
Earth Resistance	20Ω	0.01Ω	± (2% + 10d)
	200Ω	0.1Ω	± (2% + 3d)
	2000Ω	1Ω	± (2% + 3d)
Earth Voltage	200V	0.1V	± (3% + 3d)
Resistance	200kΩ	0.1kΩ	± (1% + 2d)
Dc Voltage	1000V	1V	± (0.8% + 3d)
Ac Voltage	750V	1V	± (1.2% + 10d)

• DT-5300B

Included Accessories

Spikes • Cables • Testing Leads • Carrying Case • Instruction Manual • Battery

LOOP / PSC TESTER

DT-5301 industrial Loop / PSC tester is a top-of-the-line Loop / PSC tester that is designed to test loop impedance and AC fault current with great accuracy. It's custom microprocessor controlled circuit ensures highest reliability at all time. DT-5301 also equips with 3 status LEDs to give warnings for wiring problems.

This meter comes in double molded plastic housing and is CAT III 600V rated. This device is compact and portable. It comes with batteries pre-installed. A heavy duty carrying case is included to protect the device when working in the field.

Product Featrues:
3 LEDs for checking the wire status
Visual indication of reversed phase and neutral wiring at socket
Over heat and over load protection prolongs the life of the meter
Low battery indication
Variable test time and test current to optimize test result
Direct reading of the PSC (Prospective Short Circuit Current) on the meter
Low loop resistance measurement
Auto lock-out if test resistor overheats
Large LCD display with back light

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-5301

SPECIFICATIONS (Check the CEM web for detailed specifications)

Loop Resistance Test			
Range	Resolution	Test times	Full scale accuracy
20Ω	0.01Ω	25A/20ms	± 2% of F.S ± 5d
200Ω	0.1Ω	2.3A/40ms	± 2% of F.S ± 5%
2000Ω	1Ω	15mA/280ms	± 2% of F.S ± 5d

PSC TEST			
Range	Resolution	Test times	Full scale accuracy
200A	0.1A	2.3A/40ms	± 2% of F.S ± 5d
2KA	1A	25A/20ms	± 2% of F.S ± 5d
20KA	10A	25A/20ms	± 2% of F.S ± 5d

AC VOLTAGE	
Range	Full scale accuracy
50~250V	± 2% of F.S ± 5d

Included Accessories

Cables • Testing Leads • Carrying Case • Instruction Manual • Battery

PHASE ROTATION
INDICATOR DT-901

Just Do Not Need To Guess Any Further for Phase / Motor Rotation Measurements

The DT-901 is effective for measuring phase rotation in all areas where three-phase supplies are used to feed motors, drives and electrical systems. The DT-901 is a rotary field indicator and can provide clear indication of the 3 phase via an LCD display and the phase rotation direction to determine correct connections. It allows rapid determination of phase sequence and has a voltage (up to 690 V) and frequency range suitable for commercial and industrial applications (15 to 400Hz). Test probes supplied with the instrument have a variable clamping range for safe contact, especially in industrial sockets.

Product Features
Voltage Range: 40V to 690V
Frequency Range: 15 to 400Hz
Nominal Test Current (per Phase): 1mA
Current Pickup: 1mA
Confirms to IEC61010/EN61010, CAT III 600V
Protection Level: IP40

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-901

PHASE ROTATION
INDICATOR DT-902

The unique DT-902 provides rotary field and motor rotation indication with the benefits of contact-less detection. Purposely made for commercial and industrial environments, the DT-902 provides rapid indication of 3 phase rotation using test leads supplied or can be used to determine motor rotation on synchronous and asynchronous 3 phase motors. The contact-less detection is ideal for use on motors where the shaft is not visible

Ideal for Testing:

1. Rotary Field Direction
2. Non Contact Rotary field indication
3. Determines the motor connection
4. Magnetic Field direction

Test probes supplied with the instrument have a variable clamping range for safe contact, especially in industrial sockets.

Product Features
Voltage Range: 1V to 400V
Frequency Range: 2 to 400Hz
Test Current (Per Phase): <3.5mA
Confirms to IEC61010/EN61010, CAT III 600V
Protection Level: IP40

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-902

SOCKET POLARITY TESTER DT-905A

Tester

Ergonomic, easy-to-use socket tester is designed to make electrical work easier, can be used to test the power socket standards for level indicators ideal for first level indication for testing standard mains sockets.

- Clear LED indication of wiring status
- Modern Ergonomic Design
- Compact and Durable
- Simple to use, just plug in the socket for auto-test.
- Indicates whether earth is missing, live earth is reverse, live neutral reverse and missing neutral.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-905A

SOCKET POLARITY TESTER and EARTH LEAKAGE / RCD (ELCB) TESTER DT-906A

This is a professional socket tester with modern, ergonomic and durable design, to test safety of installed mains socket. It conducts the following functions:

- Checks socket polarity
- Indicates high earth voltage presence
- Works as a RCD (ELCB) Tester

It checks 30mA RCD (ELCB). A unique soft-touch button tests that an RCD (ELCB) in the circuit trips within 300mS when a nominal 20mA earth fault current is applied; another button, the earth volts touchpad, detects raised earth voltages above 50V AC, thus indicating potentially dangerous installations.

Three different bicolor LEDs and a buzzer provides a quick check to combination of signals which indicate correct working, missing earth, live / neutral reversal, missing neutral, live faults.

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-906A

DIGITAL RCD (ELCB)
TESTER DT-904

The DT-904 is the Basic test Equipment an Electrician cannot do without. DT-904 is a Dual Function Test Instrument utilized to Verify electrical Wiring Connections and the Functioning of Earth leakage / Residual current detectors devices by forcing the ELCB/RCD to trip.

This verifies that the protection device opens the mains power supply circuit when a current higher than a certain amplitude circulate into the ground/earth wire.This ensures the Electrical installation meet safety and regulation requirements.

- 2000mS readout for testing latest delay action breakers
- Fully programmed operation
- Accurate digital read out of tripping time
- Two LED lamps give quick check for correct wiring
- Operates from mains supply. No need for batteries
- Compact, lightweight and simple to operate
- Zero cross circuitry permits testing at 0°and 180°portion of sine wave. At these two tests minimum (best) and maximum (worst) trip times will be displayed
- Data hold function to freeze the digital trip time display allows for easy readout and eliminates the possibility of reading error
- Confirms to EN61010-1, CAT-III 600V

• DT-904

SPECIFICATIONS (Check the CEM web for detailed specifications)

Measuring Ranges	
Trip Current Settings	5mA 10mA 30mA 100mA 300mA 500mA
Test current	
No Trip Test	50% of circuit breaker trip current selected
Trip Test	100% of circuit breaker trip current selected
Fast Trip Test	250mA regardless of circuit breaker trip current selected
Fault Trip Time	2000ms (40ms for Fast Trip)
Operational Voltage	220V, 230V, 240V AC ±10% 50/60Hz
Accuracy	
Test Current	±3% at 220V 230V 240V AC
Test Current Duration (limiter incorporated)	2000mS ±5% for Trip and NO Trip Tests 40ms ±5% for Fast Trip Test
Trip Time (Measurement Accuracy)	±2% reading ±3 digit

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Included Accessories

• Instruction Manual • Test Report

DIGITAL RCD

TESTER DT-9054

The digital RCD tester is used to test and measure the function parameters of residual current devices (RCDs) in 230V power grids. Both the trigger time and the tripping current can be detected as the safety-related parameters of RCD switches.

- Mains voltage indicator
- PE/L indicator
- Fault voltage indicator (contact voltage)
- Circuit breaker test with a defined error current (10 - 650 mA), tripping time, triggered at negative/positive half-wave, normal/delayed (selective, trigger test time up to 30 s), ramp test
- Striking optical results by changing the color of the display backlight
- Also for testing safety switches
- Confirms to EN 61010-1, CAT-III 600V.

SPECIFICATIONS

Power Supply	:	4 x 1.5-V alkaline battery (AA/LR6)
Testable C/B Switch	:	normal/delayed, AC/A
Power Grid	:	230 V (-10%/ + 6%), single phase, TT/TN, 50/60 Hz
Warning Function	:	grid 400 V, error voltage (contact voltage) >50 V
Test Currents	:	10-30-100-300-500-650 mA
Test Current Accuracy	:	±(10% + 2 digits)
Test Time	:	0 - 300 ms
Test Time Accuracy	:	±(5%+3 digits)
Ramp Test	:	delta 0.4 to 1.1 with the set error current, accuracy : ± 10%
Display Scope	:	3 digits with backlight
Protection Class	:	IP 40
Safety	:	IEC61010 CAT III (600 V), double insulated, IP40
Dimensions (W x H x D)	:	71 x 210 x 51 mm
Weight	:	340g (including battery)

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-9054

Included Accessories

• Instruction Manual • Test Report

EARTH AND CONTINUITY

TESTER DT-9052

The earth tester enables you to perform the following operations:
- Checks the resistance of the earth socket in the range of 0 – 2000Ω
- Locates the position of the live pin (right or left), checks the earth connection.
- Checks for 230V (or an abnormal voltage)
- Checks continuity (earth conductor, main and local equipotential connections)

These test points are required by standard NF C 15-100 and assist in delivering a compliant installation.
To facilitate testing, the tester can be used directly on 2P+E 10/16 A sockets.
In addition, the two-color backlighting will alert you instantaneously to the condition of your installation.

Blue: OK, Red: fault (earth>100Ω, incorrect voltage, etc.)
Confirms to IEC 61010-1 EN 612557-4
Installation Category III
Class II IP-40, IK06

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• DT-9052

NON-CONTACT AC VOLTAGE DETECTOR

CEM VOLTAGE DETECTOR, AC-8

It is very easy to use – just touch the tip to a terminal strip, outlet or cord. When the tip glows red and unit beeps, you are sure there is voltage on the line.

- Suitable for power outlets, wire insulation testing and simple detection of voltage in cords
- Flashing red LED light indication with buzzer sound
- Performs self check each time the detector is switched ON
- Works in the range of 100V to 1000V AC
- Built-in Flash light to access dark area
- Auto Power Off
- Rugged Double Molded Housing
- Confirms to EN: 61010-1, CAT III 1000V

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• AC-8

CEM VOLTAGE DETECTOR, AC-8S

This CEM Voltage Detector is very easy to use – just touch the tip to a terminal strip, outlet or cord. This has Dual Voltage range. When the tip glows red and unit beeps, you are sure there is voltage on the line.

- Suitable for power outlets, wire insulation testing and simple detection of voltage in cords
- Flashing red LED light indication with buzzer sound
- Performs self check each time the detector is switched ON
- Dual Sensitivity
- Works in the range of 100V to 1000V AC
- Can work from 24V to 1000V AC
- Built-in Flash light to access dark area
- Auto Power Off
- Rugged Double Molded Housing
- Confirms to EN: 61010-1, CAT III 1000V

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• AC-8S

CEM VOLTAGE DETECTOR, AC-10

This CEM Voltage Detector is very easy to use – just touch the tip to a terminal strip, outlet or cord. When the tip glows red and unit beeps, you are sure there is voltage on the line. The tip glow green when you are close to the AC Voltage.

- Suitable for power outlets, wire insulation testing and simple detection of voltage in cords
- Flashing red LED light indication with buzzer sound
- Performs self check each time the detector is switched ON
- Works in the range of 100V to 1000V AC
- Green light means, you're close to the AC Voltage
- Built-in Flash light to access dark area
- Auto Power Off
- Rugged Double Molded Housing
- Confirms to EN: 61010-1, CAT III 1000V

• AC-10

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

NON CONTACT VOLTAGE DETECTOR + INFRA RED THERMOMETER AC-8T

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

2 in 1 Infrared Thermometer with Non-contact AC Voltage Detector, provides easy and safe measurement. Checks all types of AC, electronic and heating systems. Not only can you see the presence of AC voltage, you can also see how hot the outlet is

- IR temperature reading on LCD display
- Non-contact Detection of AC Voltage from 100VAC to 1000VAC
- Pocket size with Rugged, double molded case
- Non Contact Voltage self-test function

IR Thermometer	
IR Temp. Range	-35 to 230°C / -31 to 446°F
Response Time	Less than 1s
Basic Accuracy	±2% of reading or ±2°C / ±4°F
D:S Ratio	1:1
Resolution	0.1 °C / °F
Emissivity	Fixed at 0.95
Non Contact Voltage Detector	
Standard	CAT 1000V
Operating Range	100-1000VAC
	200-1000VAC (European standard)
Size (H*W*D)	158mm*21mm*25mm
Weight	34g

• AC-8T

Included Accessories
- Battery
- Instruction Manual
- Test Report

ELECTRICAL TESTER DT-370

This tester lets you check voltage, continuity and current with one compact tool. Can be used to measure AC/DC Voltage, Resistance, Temperature, Capacitance, Frequency, Continuity and Diode Test. Open-Jaw current technology lets you check current up to 200 A, without breaking the circuit. It has a 4000 Counts Large Backlit LCD Display. It also has Data Hold and Relative Test Facility. The Jaw Opening is 30mm.

SPECIFICATIONS (Check the CEM web for detailed specifications)

Functions	Maximum	Max. Resolution	DT-370
AC Current	200A	100mA	±(3% ± 5digits)
AC Voltage	600V	1mV	±(0.8% ± 9digits)
DC Voltage	600V	1mV	±(1.5% ± 2digits)
Resistance	40MΩ	0.1Ω	±(1% ± 4digits)
Capacitance	100uF	0.1nF	±(3% ± 5digits)
Frequency	10MHz	0.01Hz	±(1% ± 2digits)
Temperature	-20°C~+760°C	0.1°C	±(3.0% ± 5°C)

• DT-370

Included Accessories:
- Instruction Manual • Battery • Testing Leads • Temperature Probe
- Carrying Case • Test Report

CABLE/PIPE & CABLE SHORT FAULT

LOCATOR

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

• LA-1012

This is a professional general-purpose cable locator. It is ideal for tracing cables in walls and underground, locating fuses, breakers on final circuits and locating interruptions and short-circuits in cables and electrical floor heating systems. It can also be used for tracing metallic water and heating pipes. The unit is supplied as a complete kit comprising of a transmitter and receiver in a hard carrying case. The receiver also incorporates a torch function for working in dimly lit locations.

Features
For all applications (live or dead cables) without additional instruments
Set includes a Transmitter and a Receiver
Proven digitally coded sender signal guarantees clear signal identification
Transmitter with LCD-display for transmitting level, transmitting code and external voltage
Receiver with backlight LCD-display for level of receiving signal, code of receiving signal and live voltage indication
Automatic or manual adjustment of receiving signal sensitivity
Acoustical receiving signal detection
Auto Power Off
Additional torch function for working in dark environment
Additional transmitters are available for extension to distinguish between several signals
Confirms to EN 61010-1, CAT III 300V

SPECIFICATIONS (Check the CEM web for detailed specifications)

For Transmitter	
Voltage Transmitter Range	12V, 50V, 120V, 230V, 400V
Frequency Range	0 … 60Hz
Output Signal	125kHz
Voltage	Upto 400V AC/DC
For Received	
Tracing Depth Cable Location	0 - 2.5m wall / underground cables
Main Voltage Detection	0 - 0.4m

Included Accessories

- Battery
- Instruction Manual
- Crocodile clips
- Test Leads
- Hard Carrying Case

COATING THICKNESS TESTER

This compact & handy Professional Gauge is designed for non-destructive, fast and highly accurate/precise coating thickness measurement. The principal applications lie in the field of corrosion protection. Ideal for manufacturer, offices & specialist advisers, paint shops & electroplaters, chemical, automobile, shipbuilding and aircraft industries including light & heavy engineering.

DT-156 gauge are suitable for laboratory, workshop & outdoor use. It works either on magnetic induction principle and on eddy current principle, depending on the mode used. DT-156 uses only 1 probe for both ferrous & non-ferrous metal substrates. Mode can be selected manually or automatically.

Stores 400 data values and displays 5 statistics (AVG, MAX, MIN, S.DEV and Number of reading in work mode). It comes with software, CD and USB cable for transferring collected data to computer for later analysis or data printing

Features
Non-magnetic coatings (e.g. paint, zinc) on steel
Insulating coatings (e.g. paint, anodizing coatings) on non-ferrous metals
Non-ferrous metals coatings on insulating substrates
Easy MENU driven operation system
Statistics Display : AVG, MAX, MIN, S.DEV and Number of readings in work mode
Two Measuring mode : CONTINUOUS and SINGLE mode
Two Working modes: DIRECT and GROUP
One Point Calibration, two point calibration and basic easy calibration
High and Low Alarm Settings
USB PC Interface

SPECIFICATIONS (Check the CEM web for detailed specifications)

Sensor Probe	Ferrous	Non-Ferrous
Working Principle	Magnetic induction	Eddy current principle
Measuring Range	0~1250um	0~1250um
	0~49.21 mils	0~49.21mils
Guaranteed Tolerance (of Reading)	0~850 um (+/- 3%+1um)	0~850 um (+/- 3%+1.5um)
	850um~1250 um (+/- 5%)	850um~1250um (+/- 5%)
	0~33.46 mils (+/- 3%+0.039 mils)	0~33.46 mils (+/- 3%+0.059 mils)
	33.46um~49.21 mils (+/- 5%)	33.46um~49.21 mils (+/- 5%)
Precision	0~50um (0.1um)	0~50um (0.1um)
	50um~850um (1um)	50um~850um (1um)
	850um~1250um (0.01mm)	850um~1250um (0.01mm)
	0~1.968 mils (0.001mils)	0~1.968mils (0.001mils)
	1.968 mils~33.46mils (0.01mils)	1.968 mils~33.46mils (0.01mils)
	33.46 mils~49.21mils (0.1mils)	33.46 mils~49.21 mils (0.1mils)
Minimum Curvature Radius	1.5mm	3mm
Diameter of Minimum Area	7mm	5mm
Basic Critical Thickness	0.5mm	0.3mm
Working Temperature	0°~40°C (32°~104°F)	
Working Relative Humidity	20%~90% RH	

CE

EMC & LVD
EN: 61326

Included Accessories

- Batteries • USB Cable & Software • Calibration Iron and Aluminum plates
- Precision Standard foils • Carrying Case • Test Report

• DT-156

COATING THICKNESS
TESTER

This compact & handy Professional Gauge is designed for non-destructive, fast and highly accurate/precise coating thickness measurement. The principal applications lie in the field of corrosion protection. Ideal for manufacturer, offices & specialist advisers, paint shops & electroplaters, chemical, automobile, shipbuilding and aircraft industries including light & heavy engineering.

DT-157 gauge are suitable for laboratory, workshop & outdoor use. It works either on magnetic induction principle and on eddy current principle, depending the mode used. DT-157 uses only 1 probe for both ferrous & non-ferrous metal substrates. Mode can be selected manually or automatically.
Stores 2500 memory values and displays 5 statistics (AVG, MAX, MIN, S.DEV and Number of reading in work mode). It comes with Bluetooth interface for transferring collected data to computer for later analysis or data printing.

Features
Non-magnetic coatings (e.g. paint, zinc) on steel
Insulating coatings (e.g. paint, anodizing coatings) on non-ferrous metals
Non-ferrous metals coatings on insulating substrates
Easy MENU driven operation system
Statistics Display : AVG, MAX, MIN, S.DEV and Number of readings in work mode
Two Measuring Mode : CONTINUOUS and SINGLE mode
Two Working Modes: DIRECT and GROUP
One Point Calibration, two point calibration and basic easy calibration
High and Low Alarm Settings
Bluetooth Interface
Meterbox iCTT app can be used for cloud storage

CE

EMC & LVD
EN: 61326

• DT-157

SPECIFICATIONS (Check the CEM web for detailed specifications)

Sensor Probe	Ferrous	Non-Ferrous
Working Principle	Magnetic Induction	Eddy Current Principle
Measuring Range	0~2000μm	0~2000μm
	0~78.7mils	0~78.7mils
Guaranteed Tolerance (of Reading)	0 ~ 1000 um (±2% ±2um)	0~1000 um (±2% ±2um)
	1000~ 2000 um (±3.5%)	1000~ 2000 um (±3.5%)
	0~39.3 mils (±2%±0.08 mils)	0~39.3mils (±2% ±0.08 mils)
	39.3~78.7mils (±3.5%)	39.3~78.7mils (±3.5%)
Precision	0~100um (0.1um)	0~100um (0.1um)
	100um~1000um (1um)	100um~1000um (1um)
	1000um~2000um (0.01mm)	1000um~2000um (0.01mm)
	0~10mils (0.01 mils)	0~10mils (0.01 mils)
	10~78.7mils (0.1 mils)	10~78.7mils (0.1 mils)
Minimum Curvature Radius	1.5mm	3mm
Diameter of Minimum Area	7mm	5mm
Minimum Measurable Thickness	0.5mm	0.3mm
Overload Display	---	
Working Temperature	0°C~40°C (32°F~104°F)	
Working Relative Humidity	20%~90% RH	

Included Accessories

- Batteries • Calibration Iron and Aluminum Plates
- Precision Standard foils • Carrying Case • Test Report

ELECTRICAL
TESTER DT-9121/9030

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61234
EN: 61234-3 (9121/9030)

Rugged High Quality Electrical Testers to provide fast, accurate, safe test results

All electricians need a two-pole tester. Experienced professionals know that they can—and should–trust their job, their reputation and even their personal safety to these electrical testers. Built with state-of-the art measurement and safety technology, these testers offer everything you expect from us, and a little bit more.

Features
Rugged, high-quality construction is built to last. This includes a heavy-duty molded case, a thick cord, sturdy battery case, and well fitting & durable probe attachment.
Fast test results, with large, easy-to-use buttons, bright backlights, and clear audible and physical indicators designed for any work situation.
Ergonomic design feels good in your hand, is easy to use (even with gloves on) and quick, secure probe docking.
Compliant with IEC EN 61326, EN: 61010-1, EN: 61243, CAT III 1000V, IP-67 Protection
Test compliant with TUV and GS
1999 Counts LCD Display with analog bar graph **(DT-9030 only)**
Auto detection of AC/DC Voltage
Polarity Detection
Single Pole Phase Test **(DT-9121 only)**
Rotary Field Indication (Phase Rotation)
Built-in Flash light to access dark areas
Self Test Function
Voltage Range: 12, 24, 36, 50, 120, 230, 400, 690 V AC/DC
AC Frequency Range for Measuring voltage: 0 – 60Hz **(DT-9121)** 50/60Hz **(DT-9030)**
Low Input Impedance
LED Indication for voltage **(DT-9121 only)**

• DT-9030

• DT-9121

LASER

DISTANCE METERS

Professional-grade distance measuring tools that is fast, easy to use, and fits in your pocket

The CEM Laser Distance Meters bring you the most advanced measuring technology. Unlike ultrasonic distance meters with laser pointers, these meters use a precision narrow laser beam that can avoid the common errors caused by extraneous objects near measurement targets.

The CEM laser distance meters use the most advanced distance-measuring technology. These meters are fast, accurate, durable, and easy to use—just point and shoot. (Its just that simple)

Their simple design and easy one-button operation means you spend less time measuring while increasing the reliability of the answers that you need.

SPECIFICATIONS (Check the CEM web for detailed specifications)

	LDM-35	LDM-100	LDM-65
Reduction of estimation errors, saving both time and money	•	•	•
The most advanced laser technology for distance measurement	•	•	•
Instant measurement with one-button operation	•	•	•
Easy targeting with bright laser	•	•	•
Quick calculation of area (square footage) and volume	•	•	•
Easy addition and subtraction of measurements	•	•	•
Minimum / Maximum Function	•	•	•
Improved battery life from automatic shut-off feature	•	•	•
Pythagoras calculation for determining distance indirectly from two other measurements	•	•	•
Pouch	•	•	•
Improved Visibility with Backlit Screen	•	•	•
Instantly Measure Up to	35m	50m	65m
Audible Indication	•	•	•
Storage of the last twenty measurements for quick recall of distance	•	•	•
Continuous Measurement	•	•	•
Measuring Accuracy	Typically ±1.5mm	Typically ±1.5mm	Typically ±1.5mm
Smallest Unit Displayed	1mm	1mm	1mm
Measuring Units	m, in, ft	m, in, ft	m, in, ft
Laser Class	Class II 635nm, <1mW	Class II 635nm, <1mW	Class II 635nm, <1mW
Strong environmental protection with IP54 (water spray and dust proof) sealing	•	•	•
Keyboard Type	Super Soft Touch	Soft Touch	Soft Touch
Operating Temperature	0°C to 40°C	0°C to 40°C	0°C to 40°C
Storage Temperature	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C
Battery Life	up to 4000 Measurements	up to 4000 Measurements	up to 5000 Measurements
Battery	type AAA 2 X 1.5V	type AAA 2 X 1.5V	type AAA 2 X 1.5V
Auto Laser Shut Off	•	•	•

Included Accessories:

- Carrying Case
- Instruction Manual
- Battery
- Test Report

CE

EMC
EN: 61326
EN: 60825-1

• LDM-35

• LDM-100

LASER

DISTANCE METERS

• iLDM-150

Professional-grade distance measuring tools that is fast, easy to use, you can take pictures of distance measured and store it on Cloud Service

The CEM Laser Distance Meters bring you the most advanced measuring technology. Unlike ultrasonic distance meters with laser pointers, these meters use a precision narrow laser beam that can avoid the common errors caused by extraneous objects near measurement targets. Not only can you make measurements using this instrument, you can also take pictures of the distance measured, mark the length or area or volume measured, store the pictures on cloud service and email the data where ever and when ever required.

This is designed to give special users a high accuracy, single user distance measuring and estimating tool to measure remote and difficult reaching places. The compact and hand held design for indoor application; shortcut keys for addition, subtraction, Pythagoras, area and volume calculations make measuring fast and very reliable. The last 20 measurements are also stored.

Meterbox iLDM software and cloud server support to transfer the measured data to the customers' smartphone for edit and storage.

Features
Area & Volume Calculations
Indirect measuring using Pythagoras
Indirect measurement using tilt sensor
Angle measurement using tilt sensor (±65°)
Addition & Subtraction
Continuous Measurement
Min/Max Distance Tracking
Timer (Self-Triggering)
Continuous Laser Sighting
Stake Out Function
Display illumination and multi-line display
Multifunctional end-piece
Tripod Thread
Beep Indication
Bluetooth with Apple iPod / iPhone support
Bluetooth with SPP Support
Meterbox iLDM & Cloud Service

SPECIFICATIONS

(Check the CEM web for detailed specifications)

Measuring Range	0.05 to 70m
Measuring Accuracy	Typically ±1.5mm
Measuring Units	m, in, ft
Laser Class	Class II 635nm, <1mW
Smallest Unit Displayed	1mm
Tilt Sensor Measuring Range	(±65°)
Range of Bluetooth	10m
Dust and Splash Proof	IP-54
Memory	20 Readings
Keyboard Type	Super Soft Touch
Operating Temperature	0°C to 40°C
Storage Temperature	-10°C to 60°C
Battery Life	up to 8000 Measurements
Battery	Type AAA 2 X 1.5V
Auto Laser Switch-Off	After 30 Secs
Auto Power Off	After 3 mins

CE

EMC
EN: 61326
EN: 60825-1

Bluetooth

Included Accessories

- Carrying Case
- Instruction Manual
- Battery
- Test Report

ULTRASONIC

DISTANCE METERS

• DM-1

DM-01 Ultrasonic Distance Meter with laser Target Pointer. The device has 5 memory units. Those data will be stored even if the unit is powered off.

Features
Measures in imperial/metric scales
Start point selection
Data store/recall
Computes areas and volumes
5 groups of value in memory
Sum of lengths
Auto/manual shut-off
LCD backlight
Beeps for wrong reading finding and reading confirmation
Laser pointer

SPECIFICATIONS (Check the CEM web for detailed specifications)

Measuring Range	0.5 ~ 16m (1.64 ~ 52.48 feet)
Accuracy	+/-0.4 within 6m (20 feet) and +/-0.8 above 6m
Conditions	0 ~ 40°C, 45% ~ 90%RH
Power Supply	9V battery
Auto Shut-off	120 seconds
Size (H x W x D)	154mm x 61mm x 46mm
Weight	190g

Included Accessories:

• Carrying Case • Instruction Manual • 9V battery

CE

EMC
EN: 61326

VIDEO BORESCOPE

This device captures and displays video of objects in the hard to reach tight space. This device is ideal for inspectors to visually evaluate and observe objects through a small opening. The video or image of the object is displayed on the LCD screen for easy observation.

There is also a built-in TV-out port, which allows the video/ image to be sent to your NTSC or PAL TV instantaneously. This device is compact and portable. It comes with a carrying case to protect your device when working in the field. You can also feed the TV-out signal to a VCR (NOT included) for recording.

These Video Bore-scopes have Color TFT LCD, supporting photo/ video, time/date display and multi-languages. Video and images can also be transferred to your PC via the SD Card or USB cable (included), Waterproof (IP67) flexible gooseneck retains configured shape. Battery is charged through USB-cable.

• BS-150

SPECIFICATIONS (Check the CEM web for detailed specifications)

	BS-150	BS-100
LCD Screen Type	3.2" Color TFT	3.0" Color TFT
Pixels	320 X 240	960 X 240
Max number of frames	30 FPS/S	
Picture Format	JPG	
Camera Video Format	3GP	
Gooseneck Length	1m	
Camera Diameter	17mm	
Viewing Distance	15 to 25 cm	5 to 15cm
Viewing Direction	Viewing Angle 0 to 180	68°
SD Card Support	Max 8GB	
Flash Memory	65MB	
Working Voltage	Li Battery 3.7V/1800mA	
TV-OUT	PAL/NTSC System	
Language	English, Spanish, German, French	
Size	240 x 160 x 100 mm	
Weight	580g	

3.5" Color TFT LCD

Flexible gooseneck imager head with waterproof and Easily perform visual imspection in hard to reach areas

Camera and Video function

Allows user to view image and videio on LCD monitor

High visibility and 10 degree adjustable LED lighting

Rechargeable battery with USB cable Support SD memory card expansion

Menu with multinational Language

Included Accessories

- Li Battery
- Power Adaptor
- USB Cable
- Mirror
- Hook
- Magnet,
- Instruction Manual
- Hard Carrying Case

Optional Accessories

- 4.5mm Dia Imager
- 5.5mm Dia Imager
- 9mm Dia Imager
- 17mm Dia Imager
- Length of Gooseneck can be increased as per requirement but will have to be pre-ordered with the instrument.

CE EMC
EN: 61326

VIDEO BORESCOPE

This instrument adopts high-definition video borescope 2.4" TFT LCD, Resolution: 480W x 234H, applying H.264 video codec technology makes images clear and exquisite, and equipped with curved waterproof meter long goose-shaped tube, it will be easy to detect the object that cannot be touched and can't be reviewed by eye, meanwhile, the AV out put signal can be displayed on NTSC/PAL TV throught an automatic switch signal format.

Features
Support real-time live view
Highlighted with LED to support the operation in the dark
Standby function to support the charge
Support rotating the image 180° from top to bottom
2.4" Colour TFT LCD

Included Accessories

- Li Battery
- Power Adaptor
- USB Cable
- Mirror
- Hook
- Magnet,
- Instruction Manual
- Hard Carrying Case

Optional Accessories

- 4.5mm Dia Imager
- 5.5mm Dia Imager
- 9mm Dia Imager
- 17mm Dia Imager
- Length of Gooseneck can be increased as per requirement but will have to be pre-ordered with the instrument.

SPECIFICATIONS

(Check the CEM web for detailed specifications)

Sensor Size	1/4 inch CMOS
Sensor Pixel	300,000
Maximum Resolution	640 x 480
Maximum Frame Rate	30FPS/S
Gooseneck Length	1m (39")
Camera Diameter	17mm (0.66")
Display Resolution	480 (W) x 234 (H)
LCD Screen Type	2.4" TFT
Viewing Distance	5cm to 15cm
Viewing Angle	68°
Battery	4 x AA
Size	240 x 160 x 100mm
Weight	584g

3.5" Color TFT LCD


Flexible gooseneck imager head with waterproof and Easily perform visual imspection in hard to reach areas


Camera and Video function


Allows user to view image and videio on LCD monitor


High visibility and 10 degree adjustable LED lighting


Rechargeable battery with USB cable Support SD memory card expansion

Menu with multinational Language

CE EMC
EN: 61326

TEMPERATURE & HUMIDITY

DATA LOGGER DT-171/171T

A very convenient instrument to record the temperature and humidity values (DT-171) and to record high temperature, using a K type thermocouple (DT-171T), effectively and conveniently for long periods. The readings are saved in the logger and simply read out by your PC with USB interface.

Features
Records 32000 Data Points (16000 each for temperature & Humidity, DT-171 only)
Freely selectable measuring cycle from 2 Sec to 24 Hours
High Battery Life
Displays all status information through two LED's
Download collected data through USB PC Interface
Temperature Measurement in both Celsius and Fahrenheit Scales
Alarm Display if user-defined maximum / minimum values are exceed
Analysis software used to view graph for logging data
Software compatible to WINDOWS 7, 8, 98, 2000, XP, VISTA 7

SPECIFICATIONS (Check the CEM web for detailed specifications)

	DT-171	DT-171T
Temperature Range	-40 to 70°C	
Temperature Accuracy	±1°C	
Humidity Range	0 to 100% RH	
Humidity Accuracy	± 2%RH	
Temperature (K type thermocouple)		-200 to 1370°C
Temperature Accuracy (for K type thermocouple)		±1°C

Included Accessories

- Instruction Manual • Li Battery
- Software • USB Cable
- Wall Holder • K type temperature probe (DT-171T only)

• DT-171 / 171T

TEMPERATURE & HUMIDITY

DATA LOGGER WITH DISPLAY DT-172

The CEM DT-172 is a smart data logger with internal sensors for both humidity and temperature. All values are shown in the display, that is present, max, min and time. The logger is perfect for many different applications like office environment or temperature controlled transportation or clean rooms. The loggings are stamped with time and date and the large memory enables logging of 16,000 data sets.

In the software alarms limits can be programmed and the loggings are easily transferred and printed as graph or list.

The CEM DT-172 is delivered ready to use with battery, wall mount, software, USB cable and manual.

• DT-172

Features
Records 32000 Data Points
Freely selectable measuring cycle from 2 Sec to 24 Hours
High Battery Life
Displays all status information through two LED's
Download collected data through USB PC Interface
Temperature Measurement in both Celsius and Fahrenheit Scales
Alarm Display if user-defined maximum / minimum values are exceed
Analysis software used to view graph for logging data
Software compatible to WINDOWS 7, 8, 98, 2000, XP, VISTA 7

SPECIFICATIONS

(Check the CEM web for detailed specifications)

Temperature Range	-40 to 70°C
Temperature Accuracy	±1°C
Humidity Range	0 to 100% RH
Humidity Accuracy	± 2%RH

Included Accessories

- Instruction Manual
- Li Battery
- Software
- USB Cable
- Wall Holder
- Instrument Lock

TEMPERATURE, HUMIDITY AND AIR PRESSURE

DATA LOGGER DT-174B

This Weather Data-logger is designed for measuring temperature, humidity and air pressure in our living environment and helps you to do the work better. It is applied to monitor the temperature, humidity and air pressure of greenhouse, warehouse, aircraft cabins, museums, etc.

• DT-174B

Features
Alarm setup and indication
Recording and low battery indication
Manual and automatic start mode
USB port for data transfer and power supply
Status indication via Red/Yellow LED and Green LED
Sea level equivalent calculations for air pressure

Included Accessories

- Instruction Manual
- Battery
- Software

SPECIFICATIONS (Check the CEM web for detailed specifications)

Resolution	0.1%RH/0.1°C/0.1hPa
Data Memory	10000
Sampling Rate	1 minute to 18 hours
Data Output	USB data traffic
Recording Indication	Green LED flash
Memory Full Indication	Yellow LED flash
Analysis Software	2000 / XP / Vista / Windows 7 & 8
Power Supply	One 3.6V battery
Humidity & Temperature	
Temperature Range	-40° ~70°C/-40° ~ 158°F
Humidity Range	0~100%RH
Accuracy	
Temperature	40 to 70°C ± 2°C
	0 to 40°C ± 1°C
	-40 to 0°C ± 2°C
Humidity	0 to 20 and 80 to 100% ± 5%
	20 to 40 and 60 to 80% ± 3.5%
	40 to 60% ±3.5%
Air Pressure	
Measurement Range	700~1100hPa
Accuracy	50 to 70°C ± 4.0hPa
	0 to 50°C ± 2.5hPa
	-40 to 0°C ± 4.0hPa

SOUND LEVEL

DATA LOGGER DT-173

This sound meter datalogger has a built in USB port which connects to a Windows PC for uploading the recorded data. This is an ideal instrument for noise measuring in factories, schools, business and traffic areas.

This meter confirms to IEC61672-1 Class 2 standards. The device operates on a 3.6V Lithium battery. This device is very accurate (+/- 1.4dB) and durable. This kit includes software that can be used to view and graph the downloaded data.

Compatible with Windows XP, Vista, Windows 7 / 8, 32 & 64 Bit

• DT-173

Included Accessories

- Instruction Manual
- Battery
- Software

SPECIFICATIONS

(Check the CEM web for detailed specifications)

Standard	IEC61672-1 Class 2
Accuracy	+/- 1.4dB
Frequency	31.5Hz to 8kHz
Dynamic Range	50dB
Level Range	Auto 30dB to 130dB
Weighing	A/C
Time Weighting	Fast (125ms) Slow (1s)
Sampling Points	129920 points for dBA or dBC
Sampling Rate	1 second to 24 hour
Data output	USB

CARBON MONO OXIDE

DATA LOGGER DT-179

This Carbon Mono Oxide datalogger has a built in USB port which connects to a Windows PC for uploading the recorded data. This is an ideal instrument for noise measuring CO in factories, schools, business and traffic areas.

The device operates on a 3.6V Lithium battery. This device is very accurate and durable. This kit includes software that can be used to view and graph the downloaded data

Compatible with Windows XP, Vista, Windows 7 / 8, 32 & 64 Bit

Features
Alarm setup and indication
Recording and low battery indication
Manual and automatic start mode
USB port for data traffic and power supply
Status indication via red/yellow LED and green LED
Analysis software: Microsoft's Windows 98/2000/xp/Vista/7

• DT-179

SPECIFICATIONS

(Check the CEM web for detailed specifications)

Memory	32,000 readings
Measuring Rate	2sec. to 24hrs
Measurement Range	0 to 1,000PPM
Measurement Resolution	1PPM
Accuracy	+/-5% or 10PPM
Warm up Period	less than 2 seconds
Sensor type	stabilized electrochemical gas specific (CO)
Typical Sensor Life	three years (approx)
Size (H x W x D)	145 x 35 x 30mm
Weight	49g

Included Accessories

• Instruction Manual • Li Battery • Software • USB Cable

LIGHT METER

DATA LOGGER DT-185

The DT-185 photometric/solar/light meter data logger is small and portable but very useful tool for measuring and recording light intensity . It has Automatic measurement mode. The luminosity of the instrument sensing components are in line with the International Commission on Illumination light adaptation curve. It has USB interface to transfer data and power supply, and has Manual and Automatic start recording mode

Features
Alarm value settings, and LED indicator
Record LED indication and Low power LED indicator
Manually and Automatically starts recording mode
USB interface to transfer data and power supply, LED indicates the status information
Analysis Software support windows 98 / 2000 / XP / Vista / 7

SPECIFICATIONS (Check the CEM web for detailed specifications)

Memory	32000 stored data
Programmable Sampling Rate	2sec. ~ 24h
Measurement Range	0 to 40 kLux / 0 to 37kFc.
Resolution	0.1Lux/0.1Fc.
Accuracy of	± 5%
Warm-up time of less than 2 seconds	

Included Accessories

- Instruction Manual
- Li Battery
- Software

• DT-185

ANEMOMETER

DATA LOGGER DT-186

The DT-186 wind speed data logger used for measuring wind speed, with automatic shutdown and maximum / average measurement mode

Features
Alarm value settings, and LED indicator
Record LED indication and low power LED indicator
Manually and Automatically start recording mode
USB interface to transfer data and power supply LED indicates the status information
Analysis Software support windows 98 / 2000 / XP / Vista / 7 / 8

SPECIFICATIONS (Check the CEM web for detailed specifications)

Memory	32000 stored data
Programmable Sampling Rate	2sec. ~ 24h
Measurement Range	0.40 ~ 30.0m / s
Resolution	0.1m / s,
Accuracy of	± 3.5% ± 0.2m / s,
Warm-up time of less than 2 seconds	

Included Accessories

• Instruction Manual • Li Battery • Software • USB Cable

• DT-186

VIBRATION

DATA LOGGER DT-178A

This is a brand new 3-axis vibration data-logger. This device records shocks and vibration on all three axis (X, Y, Z). The data is stored in the built-in 4 Mb flash memory ready for uploading to a computer later. This device uses the USB interface to ensure compatibility with your Windows PC.

The DT-178A is engineered to record acceleration data of vibration. It records with time, 3-axis vibrations with peaks to provide a history of shock and vibration conditions. It also records the time when free-fall happens. It measures and computes real-time spectral data using FFT (Fast Fourier Transform) from 0 to 60 Hz.

This device is compact and portable. It comes with Windows compatible software and battery.

Features
Records 3-axis shock
Comes with built-in accelerometers
Measures dynamic and static acceleration
Comes with free-fall detection mode
Designed to handle real time operation and FFT
Includes user settable trigger level
Comes with high speed USB 2.0 interface

SPECIFICATIONS (Check the CEM web for detailed specifications)

Acceleration Sensor	MEMS semiconductor
Acceleration Sensor Sampling Rate	200 Hz
Acceleration Range	+/- 18G
Acceleration Resolution	+/- 0.00625G
Acceleration Accuracy	+/- 0.5G
Non-Linearity	+/- 1%
Bandwidth	about 0 ~ 60 Hz
Trigger Range	0 to 18G (XYZ magnitude)
Sampling Rate	1 second to 24 hours
Memory	4Mbit flash, (85764 total samples or 28588 samples per X, Y, Z axis)
Battery	3.6V Lithium battery (NOT included)
Size	130mm x 30mm x 25mm
Weight	about 20g
Software Compatibility	Windows 2000, Windows XP, Vista, Vista-64bit, Windows 7, Windows 7-64bit

Included Accessories

• Instruction Manual • Li Battery • Software • USB Cable

• DT-178A

MINI ENVIRONMENT METERS

DIGITAL ANEMOMETER DT-82

This measures Air Velocity in various units. The special features of the model includes – Auto Power Off, Auto Backlit LCD Display, MAX/ AVG recording facility, clear annunciator display to show various units being measured.

SPECIFICATIONS (Check the CEM web for detailed specifications)

Function	Range	Accuracy
m/s (meter per second)	0.40-25.00	±3.5% ± 0.2m/s
ft/min (feet per minute)	80-2980	±3.5% ± 40 ft/min
Km/h (kilometers per hour)	1.4-54.0	±3.5% ± 0.8 Km/h
MPH (miles per hour)	0.9-33.0	±3.5% ± 0.4 MPH
Knots (nautical miles per hour)	0.8-29.0	±3.5% ± 0.4 Knots

CE EMC EN: 61326

Included Accessories

• Battery • Instruction Manual

• DT-82

DIGITAL SOUND LEVEL METER DT-85A

This Sound Level Meter has been designed to meet the measurement requirements of safety Engineers, Health, Industrial safety offices and sound quality control in various environments.

• DT-85A

Features
Ranges from 40dB to 130dB at frequencies between 31.5Hz and 8 KHz.
Display with 0.1dB steps on a 4-digits LCD.
With one equivalent weighted sound pressure level A
Auto Power Off
Auto Backlit

Included Accessories

• Battery • Instruction Manual

CE EMC EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

Frequency Range	31.5Hz~8KHz
Measuring Level Range	40~130dB
Frequency Weighting	A
Microphone	1/2 inch Electric condenser microphone
Display Up Data	0.5 sec.
Time Weighting	FAST (125mS)
Accuracy	+ 3.5dB @1kHz, 94dB (under reference conditions)
Alarm Function	"OVER" is show when input is out of range (>130dB)
Auto Power OFF	Meter automatically shuts down after approx. 15 minutes of inactivity.
Power Supply	One 9V battery, 006P or IEC 6F22 or NEDA 1604.

DIGITAL TEMPERATURE & HUMIDITY METER DT-83

This instrument measures Humidity and Air Temperature. The features include – Auto Power Off, Auto Backlit LCD, MAX/MIN record function.

Features
High Resolution of 0.1%RH and 0.1°C
MAX / MIN Record Function
Microprocessor Based Design
Dual Display of Temperature & Humidity
Auto Power Off, Disable Sleep Mode

CE EMC
EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

1.5" LCD display screen	
Humidity	0-100%RH
Accuracy	±3.5%RH (20%-80%); ± 5%RH (0-20% & 80-100%)
Temperature	-20~60°C (-4~140°F)
Accuracy	±1°C (0~40°C); ± 2°C (-20~0°C & 40~60°C)
Response Time	< 15s
Sensor type	Humidity precise capacitive sensor / thermistor
Absolute Humidity	0-500g / m^3,0-218.5gr / ft^3
Powered by 1 x 9V/6F22 Battery (included)	
Battery life span	48 hours

Included Accessories
- Battery • Instruction Manual

DIGITAL LUX METER DT-86

This instrument measures Light Intensity. The features include – Auto Power Off, Auto Backlit LCD, MAX HOLD.

Features
Easy to use, pock size and light weight
3-1/2 digits LCD display with LUX, fc, LOBAT, MAX indication
Accurately displays light level in terms of Foot Candles (Fc) or Lux over wide range.
Measures from 0 to 40000 Lux/ Fc in four ranges with resolution 0.1Lux/Fc .
Auto ranging
Max Hold
Light sensitive backlight LCD
Auto power off

CE EMC
EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

Measuring Range (Lux)	0.1Lux to 40,000Lux
Measuring Range (Fc)	0.01Fc to 40,000Fc
Resolution	0.1Lux/0.01Fc
Accuracy	+ 5% rdg+ 10dgts
Measuring Rate	1.5 times/second
Power Source	Alkaline battery
Voltage	9V
Dimensions	127 * 53 * 33mm

Included Accessories
- Battery • Instruction Manual

PROFESSIONAL

DIGITAL THERMOMETER

CE EMC EN: 61326

The CEM DT-8891 Series of Digital Thermometers are precise Laboratory grade (0.15% + 1°C) rugged hand held tool. They are ideal Thermometers for HVAC and Central Heating Engineers. These thermometers work with K type temperature probes and Model DT-8891E can be used with infrared temperature adaptor IR-82 to measure IR temperature as well. The DT-8891A thermometer is a dual input K type Thermometer in which the differential temperature can be measured as well. The DT-8891E is a four input K type Thermometer and IR-82 can also be used along with it to measure in the non-contact thermometer mode. In addition DT-8891E has a built in data logger and a USB PC Interface facility as well.

Features	DT-8891A	DT-8891E
User Selectable °C/°F scales	•	•
0.1°C/0.1°F/0.1°K resolutions	•	•
Dual type K input	•	•
Quadruple type K input		•
IR Temperature		•
Max/Min/Avg Hold and Data Hold	•	•
Differential Temperature	•	•
Scan Function (T1, T2, T3 ….)	•	•
LCD Display with Backlit	•	•
Wide Variety of interchangeable Probes	•	•
Auto Power Off	•	•
USB interface, USB to UART Bridge Controller		•
Data Logger		18000 Per Channel

• DT-8891A

• DT-8891E

SPECIFICATIONS (Check the CEM web for detailed specifications)

General Specifications			DT-8891A	DT-8891E
Operating Temperature		0°C to + 50°C (4°F to + 122°F) Non Condensing	•	•
Storage Temperature		-10°C to + 50°C (14°F to + 122°F)	•	•
Temperature Range				
K type thermocouples		-200°C to 1372°C (-328°F to 2501°F)	•	•
IR Temperature		-30°C to 550°C (-22°F to 1022°F)		•
Temperature accuracy				
T1, T2 ,T3, T4 Above –100°C (-148°F)		±[0.15% rgd + 1°C (1.8°F)]	T1, T2	•
T1, T2,T3, T4 Below –100°C (-148°F)		±[0.5% rgd + 2°C (3.6°F)]		•
T1-T2, T3-T4		±[0.5% rgd + 1°C (1.8°F)]		•
IR	IR Above -10°C (14°F)	±[2.0% rgd + 2°C (3.6°F)]		•
	IR Below -10°C (14°F)	±5°C (9.0°F)		•
T1-IR	IR Above -10°C (14°F)	±[2.0% rgd + 3°C (5.4°F)]		•
T2-IR	IR Below -10°C (14°F)	±6°C (11°F)		•
IR-T3	IR Above -10°C (14°F)	±[2.0% rgd + 3°C (5.4°F)]		•
IR-T4	IR Below -10°C (14°F)	±6°C (11°F)		•
Display Resolution		±0.1°C/°F/K <1000, 1°C / °F/K > 1000	•	•

Included Accessories

- Battery
- Type K temperature Probe (up to 280°C)
- IR Temperature Probe (DT-8891E only)
- USB Cable (DT-8891E Only)
- Software (DT-8891E Only)
- Carrying Case
- Instruction Manual
- Test Certificate

DIGITAL THERMOMETER DT-610B/612

CE EMC
EN: 61326

The CEM DT-610B/DT-612 Digital Thermometers are portable hand held and compact meters designed to use an external K type thermocouple as a temperature sensor. Temperature indication follows N.I.S.T and I.E.C. 584 temperature/voltage tables for K type thermocouples. They have user selectable °C/°F/k scales and resolution of 0.1/1 °C/°F/k.

Features
3-1/2 Digits Backlit LCD Display
9V Battery Operated
User Selectable °C / °F / K scales
Type K input Thermometers
DT-612 has dual input
DT-610B has single input
Differential Temperature T1-T2 can be measured **(DT-612 only)**
Electronic Offset function allows compensation of thermocouple errors to maximise overall accuracy.
Auto Power Off Mode
Max Hold and Data Hold

• DT-610B

• DT-612

SPECIFICATIONS (Check the CEM web for detailed specifications)

Temperature Scale	Celsius or Fahrenheit or Kelvin user-selectable
Measurement Range	-50°C to 1300°C, (-58°F to 2000°F)
Resolution	1°C or 1°F,0.1°C or 0.1°F
Accuracy:	±(0.5% rdg+1°C) -50°C to 1000°C
	±(0.8% rdg+1°C) 1000°C to 1300°C
	±(0.5% rdg+2°F) -58°Fto 2000°F

Included Accessories

- Carrying Case • Type K Temperature Probe
- Instruction Manual • Battery • Test Certificate

• DT-1370

DIGITAL THERMOMETER DT-1370

This pocket type Fast Response Digital Thermometer is used to measure temperature in the range of -50 to 200°C. This hand held instrument has user-selectable scale, Data Hold, Auto Power Off and Over-range indication facility.

This also has Hi- Lo Alarm Setting facility. It also performs MAX/MIN record function

1. Temperature Range: -50°C to + 200°C (-58°F to + 392°F)
2. Accuracy : ± 2°C (± 4°F)
3. Resolution : 0.1

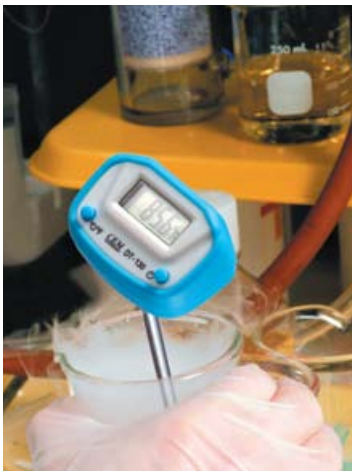
CE EMC
EN: 61326

DIGITAL STEM TYPE

THERMOMETER DT-130

This is a Pocket type, Fast Response, Stem Thermometer that can measure temperature up to 250°C. This devise has user selectable scale, Auto Power Off and Over-range indication facility.

Temperature Range	:	-40° to + 482°F (-40° to + 250°C)
Resolution	:	0.1°
Accuracy	:	±1.5% 2° full scale
Sampling Time	:	2.0 seconds
Battery	:	LR44 (1.5V)



• DT-130

PRECISION GRADE DIGITAL TEMPERATURE

HUMIDITY METER DT-8892

This device measures Humidity, Air Temperature, Dew Point Temperature and Wet Bulb Temperature. Advanced features include Data Hold, Auto Power Off, and MAX/MIN reading.

• DT-8892

Included Accessories

• Battery • Carrying Case • Instruction Manual • Test Report

Display	Dual Backlit LCD
Response Time	<15 seconds (90% of final value in moving air)
Sensor Type	Humidity: Precision capacitance sensor Temperature: Thermistor
Absolute Humidity	0 to 500g/m^3, 0 to 218.5gr/ft^3 (calculated from RH and Air temperature measurements)
Wet Bulb	32 to 176°F (0 to 80°C) (calculated from RH and Air temperature measurements)
Dew Point	-22 to 212°F (-30 to 100°C) (calculated from RH and Air temperature measurements)
Temperature	-22 to 212°F (-30 to 100°C)
Humidity	0 to 100%RH
Operating Conditions	32 to 122°F (0 to 50°C); < 80% RH non-condensing
Storage Conditions	-40 to 185°F (-40 to 85°C); <99% RH non-condensing
Power Supply	9 Volt battery
Battery Life	Approx. 48 hours
Dimensions / Weight	300 x 75 x 50 (mm); 400g

SPECIFICATIONS (Check the CEM web for detailed specifications)

Function	Range and Resolution	Accuracy
Humidity	0.0 to 100.0%RH	±2%RH (40% to 60%) ±3%RH (20 to 40% and 60 to 80%) ±4%RH (0 to 20% and 80 to 100%)
Temperature	-4.0 to 140.0°F (-20.0 to 60.0°C)	±1.8°F (±1°C)
	-22.0 to – 3.9°F and 140.1 to 212.0°F (-30.0 to -19.9°C and 60.1 to 100.0°C)	±2.7°F (±1.5°C)

DIGITAL THERMO-
HYGRO METER DT-321S

CEM DT-321S is a fast response Temperature and Relative Humidity meter with high accuracy and also displays Dew point and Wet Bulb Temerature also.

Features
Mini size
Fast Response Time
High Accuracy
High Performance
Max Hold and Data Hold Function
Dual Display & Backlight
Dew-point & Wet Bulb Temperature

SPECIFICATIONS (range; accuracy)

Humidity	0 - 100%RH; ±2%RH
Temperature	-30 to 100°C, -22 to 199°F; ± 0.5°C/0.9°F
Dew-point Temp	-30 to 100°C, -22 to 199°F; ± 0.5°C/0.9°F
Wet-Bulb Temp	0 to 80°C, 32 to 176°F; ± 0.5°C/0.9°F
Size(HxWxD)	255mm x 45mm x 34mm
Weight	200g

Included Accessories

• Battery • Carrying Case • Instruction Manual • Test Report

CE EMC
EN: 61326

• DT-321S

DIGITAL THERMO-
HYGRO METERS DT-322

This is a desktop temperature/air humidity meter for interior use. All current data displayed in large and well-arranged LCD display. It displays Time - Temperature - Air Humidity and also displays MIN/MAX measured values.

Features
Environment Comfort Display: COMFORT, WET, DRY
Time/Temperature / Humidity display
°C / °F Temperature units the way self-locking switch function
Highest / Lowest Temperature and Humidity memory function
Calendar shows the whole point time keeping, daily alarm functions, 12/24 hour clock

SPECIFICATIONS (Check the CEM web for detailed specifications)

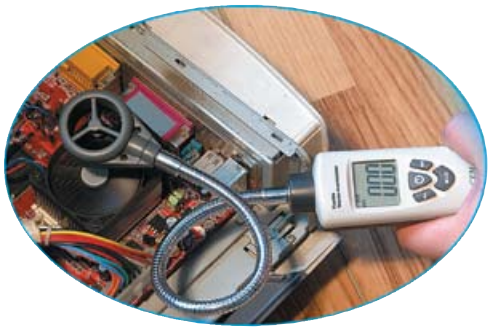
Temperature Range	0~50°C / 32 ~ 120°F
Temperature Accuracy	±1.0°C / 1.8°F
Temperature Resolution	0.1°C / 0.1°F
Humidity Range	10%RH ~ 90%RH
Humidity Accuracy	±5% (40%RH~80%RH), other±8%

CE EMC
EN: 61326

• DT-322

DIGITAL ANEMOMETER DT-318

• DT-318



Features
High Sensitive and Accurate
Easy-to-use Design
3 1/2 digits LCD Display
K Type sensor for Temperature Measurements
Low Power Consumption
Data Hold and MAX Hold function
Low Battery Indication
Complete with gift box with carry case, Battery
Dimensions/Wt.: 163X 45 X 34mm
Weight: 669g

This CEM Flexible Thermo-Anemometer features a 16" Gooseneck Detector allowing you to take air velocity and temperature measurements in hard to reach areas.

CE EMC EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

Units	Range	Resolution	Threshold	Basic Accuracy (%rdg + digits)
m/s	1.00m/s - 30.0m/s	0.1	1.0	±3%
Knots	1.2 - 58.0 Knots	0.1	1.2	±3%
Ft/min	196-5900	1	196	±3%
Km/hr	2.2km/h - 108.0km/h	0.1	2.2	±3%
Temp C	-10 to 60°C	0.1°	-	±0.8%
Temp F	14.0 to 140.0°F	0.1°	-	±1.5%

DIGITAL THERM-ANEMOMETER CMM CFM AIR FLOW WIND VELOCITY SPEED HVAC METER DT-3893

Features
Displays Air Flow (CFM/CMM), or Air Velocity plus Temperature & Max/Min/Avg value
Easy to set Area dimensions (cm^2) stored in the meter's internal memory for the next power on
Resolution of 0.01m/sec
20 points average for Air Flow
Super Large LCD Backlit Display
3% velocity accuracy via low friction 2.83"D (72mm) ball bearing vane wheel on 3.9ft (120cm) cable
Low battery indication and Auto Power Off
Confirms to CE, EMC, EN : 61326
Dimensions/Wt. : 163 X 45 X 34mm
Weight : 669g

This CFM/CMM Thermo Anemometer measures Air Velocity, Air Flow (volume) and Temperature. The large, easy-to-read backlit LCD includes primary and secondary displays plus numerous status indicators. The meter is shipped fully tested and calibrated and with proper use will provide years of reliable service.

SPECIFICATIONS (Check the CEM web for detailed specifications)

Air Velocity	Range	Accuracy
m/s(meter per second)	0.40~30.00	±3% ± 0.20m/s
ft/min(feet per minute)	80~5900	±3% ± 40ft/min
km/h(kilometers per hour)	1.4~108.0	±3% ± 0.8km/h
MPH(miles per hour)	0.9~67.0	±3% ± 0.4MPH
Knots(nautical miles per hour)	0.8~58.0	±3% ± 0.4knots
Air Temperature	14-140°F (-10-60°C)	±4.0°F (2.0°C)
Air Flow	**Range**	**Area**
CFM	0-999900	0-999.9 ft^2
CMM	0-999900	0-999.9 m^2

• DT-3893

CE EMC EN: 61326

Included Accessories

• Battery • Carrying Case • Instruction Manual • Test Report

DIGITAL HOT WIRE
ANEMOMETER

Although this ANEMOMETER is a complex and delicate instrument, its durable structure will allow many years of use if proper operating techniques are developed. This is to be used for HVAC Applications and Air Ducts. The telescopic probe is ideal for measuring in HAVAC, Ducts and other small vents.

Features
Thermal anemometer, available for very low air velocity measurement.
Slim probe, ideal for grills & diffusers
Combination of hot wire and standard thermistor, deliver rapid and precise measurements
Records maximum/minimum readings with recall & data hold
Microprocessor circuit assures maximum possible accuracy, provides special functions and features
Super large LCD display with backlight, reading the air velocity & temp. at the same time
Data Hold
Power supply by 3.7V Rechargeable Battery.
The portable anemometer provides fast, accurate readings, with digital readability
Multi-functions for air flow measurement: m/s, km/h, ft/min, MPH, Knots & build in temperature °C / °F
Thermistor sensor for Temperature measurement, Fast Response Time.
Probe length for shortest 0.32m, 1.15m for the longest elongation. Cable Length is 1.75m
Applications: Environmental testing, Air conveyors, Flow hoods, Clean rooms, Air velocity, Air balancing, Fans/motors / blowers, Furnace velocity, Refrigerated case and Paint spray booths

SPECIFICATIONS (Check the CEM web for detailed specifications)

Air Velocity	Range	Resolution	Accuracy
m/s	0.10-25.00	0.01m/s	±5% ± 0.10m/s
ft/min	20-4925	1 ft/min	± 5% ± 1ft/min
km/hr	0.3-90.0	0.1 km/hr	± 5% ± 0.1km/h
MPH	0.2-55.8	0.1 MPH	± 5% ± 0.1mph
Knots	0.2-48.5	0.1 Knots	± 5% ± 0.4 knots
Air Temperature	32-122°F (0 to 50°C)	0.1°C/0.1°F	± 4°F (±2°C)

Included Accessories

• Battery • Carrying Case • Instruction Manual • Test Report

CE EMC
EN: 61326

• DT-3880

DIGITAL THERMO ANEMOMETER

WITH BUILT IN INFRA RED THERMOMETER

Thermo-Anemometer with built-in Infra Red Thermometer and external probe for measuring wind velocity (cable 1.2 m), it also measures the airflow in CMM and CFM. The inbuilt IR Thermometer measures surface temperature up to 500°C.

Features
Infra Red Temperature range from -50 to 500°C
30:1 Distance to spot ratio
Laser Pointer
Simultaneous display of Air Flow, Air Velocity plus Ambient Temperature
Easy to set Area dimension (m^2) are saved in the meters' internal memory
Resolution of 0.01m/sec
20 Points of average Air Flow
Min/Max, Data Hold Function
Super Large 9999 Counts Backlit LCD Display
Confirms to CE, EMC, EN: 61326

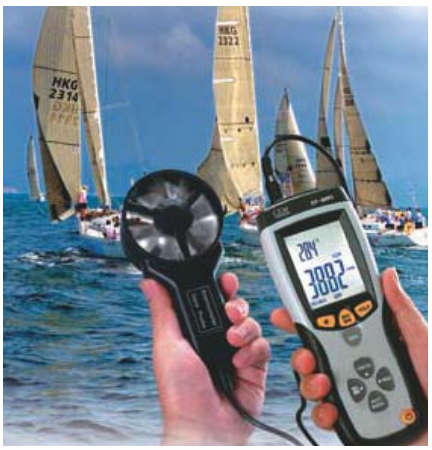
SPECIFICATIONS (Check the CEM web for detailed specifications)

Air Velocity	Range	Accuracy
m/s	0.40-30.00	±3% ± 0.20m/s
ft/min	80-5900	± 3% ± 40ft/min
km/hr	1.4-108.0	± 3% ± 0.8km/h
MPH	0.9-67.0	± 3% ± 0.4mph
Knots	0.8-58.0	± 3% ± 0.4 knots
Air Temperature	14-140°F (-50 to 60°C)	± 4°F (±2°C)
Infrared Temperature	-58 to 4°F (-50 to -20°C)	± 9F (5.0°C)
	-4 to 932°F (-20 to 500°C)	±2% reading
Air flow	**Range**	**Area**
CFM	0 - 999900	0 - 999.9 ft^2
CMM	0 - 999900	0 - 999.9m^2

• DT-8894

Included Accessories

• Battery • Carrying Case
• Instruction Manual • Test Report



CE EMC EN: 61326

PITOT TUBE ANEMOMETER + DIFFERENTIAL MANOMETER

Features
Simultaneous display of Pressure, Air Velocity or Air Flow plus Temperature
±0.7252psi range
5 selectable units of pressure measurement
Large Backlit LCD Display
Easy to Calculate the area of a rectangular or circular duct
Max/Min/Avg. recording and Relative time stamp
Data Hold and Auto power off functions
Large LCD display with backlight
Zero function for offset correction or measurement
Store/Recall up to 99 readings in each mode
USB port, includes software
Confirms to CE, EMC, EN: 61326

Pilot Tube measures Air Velocity/Airflow

In difficult-to-reach or tight locations where a vane anemometer won't fit

• DT-8920

SPECIFICATIONS (Check the CEM web for detailed specifications)

Manometer			
Accuracy	±0.3% FSO (25°C)		
Repeatability	±0.2% (Max.+/-0.5%FSO)		
Linearity / Hysteresis	±0.29% FSO		
Pressure Range	5000Pa		
Maximum Pressure	10psi		
Response Time	0.5 Seconds Typical		
Over Range Indicator	Err.1		
Unde Range Indicator	Err.2		
Units and Resolution	Units	Range	Resolution
	PSI	0.7252	0.0001
	Mbar	50.00	0.01
	in H_20	20.07	0.01
	mm H_20	509.8	0.1
	Pa	5000	1
Air Velocity			
Air Velocity	Range	Resolution	Accuracy
m/s (meter per second)	1.00-80.00	0.01	±2.5% of reading at 10.00m/s
ft/min (feet per minute)	200-15733	1	Accuracy is function of velocity and duct size
km/h (kilometers per hour)	3.6-288.0	0.1	
MPH (miles per hour)	2.24-178.66	0.01	
Knots (nautical miles per hour)	2.0-154.6	0.1	
Air Flow			
Air Flow	Range	Resolution	
CFM	0-99.999ft^3/min	0.0001 to 100	
CMM	0-99.999m^3/min	0.001 to 100	
Temperature	Range	Resolution	Accuracy
°C	0 to 50.0°C	0.1	±1.0°C
°F	32.0 to 122.0°F	0.1	±2.0°F

CE EMC EN: 61326

Included Accessories

- Software
- USB Interface Cable
- Battery
- Pitot tube
- Connection Hose
- Hard Carrying Case
- Instruction Manual
- Test Certificate

DIFFERENTIAL PRESSURE MANOMETER + AIR FLOW / VELOCITY METER

The device measures Gauge/Differential Pressure, Air Velocity, Air Flow and Temperature. Additional features include Data Hold. Auto Power Off disabled and an USB for capturing reading to a PC using optional software.

Features
Larger Dual LCD Display with Backlight.
Relative Time Clock on MAX /MIN/ AVG Provides a time Reference for Measurement.
Pressure Measurement Provides Zero Adjust and DIF Function.
Displays Pressure, Air Velocity or Air Flow plus Temperature Simultaneously.
Easy to set Area Dimension (up to 8 point).
USB interface, USB to UART Bridge Controller.
Low Battery Indication, and Auto Power Off Mode (Sleep mode) Increases Battery Life.
Data Hold

SPECIFICATIONS (Check the CEM web for detailed specifications)

Manometer			
Accuracy	± 0.3% FSO (25 °C)		
Repeatability	± 0.2% (Max.+ / -0.5% FSO)		
Linearity/Hysteresis	± 0.29% FSO		
Pressure Range	± 2 psi		
Maximum Pressure	10psi		
Response Time	0.5 Seconds typical		
Over range Indicator	Err.1 (DIF Err.3)		
Under range Indicator	Err.2 (DIF Err.4)		
Units and Resolution	Units	Range	Resolution
	psi	2.000	0.001
	mbar	137.8	0.1
	Kpa	13.78	0.01
	inHg	4.072	0.001
	mmHg	103.4	0.1
Air Velocity			
Air Velocity	Range	Resolution	Accuracy
m/s (meter per second)	0.40-30.00	0.01	± 3% ± 0.20 m/s
ft/min (feet per minute)	80-5900	1	± 3% ± 40 ft/min
km/h (kilometers per hour)	1.4-108.0	0.1	± 3% ± 0.8 km/h
MPH (miles per hour)	0.9-67.0	0.1	± 3% ± 0.4 MPH
Knots (nautical miles per hour)	0.8-58.0	0.1	± 3% ± 0.4 knots
Air Flow			
Air Flow	Range	Resolution	Area
CFM	0-999, 900ft³/min	0.001 to 100	0.000-999.9ft²
CMM	0-999, 900m³/min	0.001 to 100	0.000-999.9m²
Temperature			
Scale	Range	Resolution	Accuracy
°C	0 to 50.0°C	0.1	± 1.0°C
°F	32.0 to 122.0°F	0.1	± 2.0°F

- DT-8897

CE EMC EN: 61326

Included Accessories

- USB PC Interface cable
- Software
- Vane Probe
- Pitot Tube
- Instruction Manual
- Hard Carrying Case
- Test Report

DIFFERENTIAL PRESSURE MANOMETER

11 selectable units

Low Range/High Resolution Gauge or Differential Pressure

Features

Three models to choose from:

DT-8890 (± 5psi range)

DT-8890A (± 2psi range)

DT-8890B (± 0.5psi range)

11 selectable units of measurement

Max/Min/Avg recording and Relative with time stamp

Data Hold and Auto power off functions

Large Back light LCD display

Zero function for offset correction or measurement

Built-in USB (software and cable included)

USB port includes software

Confirms to CE, EMC, EN: 61326

• DT-8890B

• DT-8890A

• DT-8890

CE EMC
EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

	DT-8890		DT-8890A		DT-8890B	
Accuracy	± 0.3% FSO		± 0.3% FSO		± 2% FSO	
Repeatability	± 0.2% (Max.± -0.5% FSO)		± 0.2% (Max.± -0.5% FSO)		± 2% (Max. ± -0.5% FSO)	
Linearity/Hysteresis	± 0.29% FSO		± 0.29% FSO		± 2% FSO	
Pressure Range	± 5PSI (±138.3 inH2O)		± 2PSI (±55.40 inH2O)		± 0.5PSI (±13.83 inH2O)	
	Range	Resolution	Range	Resolution	Range	Resolution
inH2O	138.3	0.1	55.40	0.01	13.85	0.01
psi	5	0.001	2	0.001	0.5	0.001
mbar	344.7	0.1	137.8	0.1	34.47	0.01
kPa	34.47	0.01	13.79	0.01	3.447	0.001
inHg	10.18	0.01	4.072	0.001	1.018	0.001
mmHg	258.5	0.1	103.4	0.1	25.86	0.01
ozin2	80	0.01	32	0.01	8.00	0.001
ftH2O	11.53	0.01	4.612	0.001	1.145	0.001
cmH2O	351.5	0.1	140	0.1	2.59	0.01
kgcm2	0.351	0.001	0.140	0.001	0.035	0.001
bar	0.344	0.001	0.137	0.001	0.034	0.001

Included Accessories

• USB PC Interface cable • Software • Vane Probe • Pitot Tube • Instruction Manual • Hard Carrying Case • Test Report

DIGITAL
MOISTURE METER DT-125

Used to measure the moisture level in sawn timber (also cardboard, paper) and hardened materials (plaster, concrete and mortar). It displays the moisture level in the material straight away.

CE EMC EN: 61326

• DT-125

• DT-125H

Features
Measures moisture content in wood and construction material
Auto Power Off
Battery Check Function
Replaceable Pins
Auto Power On
Confirms to CE, EMC, EN: 61326

SPECIFICATIONS (Check the CEM web for detailed specifications)

Measuring principle	Electrical resistance
Electrode Length	8 mm
Electrodes	Integrated, replaceable
Measuring Range	Wood : 6 – 44 %
	Material : 0.2 – 2.0 %
Display Accuracy	Wood : ±1 %
	Material : ±0.05 %
Auto Power OFF	After approx. 15 minutes
Battery	3 × Cr 2032, replaceable
Housing Material	Impact-proof plastic housing
Ambient Temperature	0 - 40°C
Ambient Relative Humidity	0 – 85 %RH
Dimensions	139 × 47 × 25 mm
Weight	approximately 100g

Included Accessories

• Battery • Instruction Manual • Test Report

DIGITAL
DT-125H MOISTURE METER

Large Dual Graphical LCD

Displays moisture in wood and other building materials plus Air Temperature and Relative Humidity

SPECIFICATIONS (Check the CEM web for detailed specifications)

Wood Moisture Range	0 to 75%
Other Building Materials	0.1 to 24%
Temperature	-40 to 158°F (-40 to 70°C)
Relative Humidity	0 to 100%RH
Measurement principle	Electrical resistance
Electrode Length	0.3" (8mm)
Electrode pins	Integrated, replaceable
Auto Power Off	After approx. 3 minutes
Operating Temperature	32 to 104°F (0 to 40°C)
Operating Humidity	85% Relative Humidity maximum
Power Supply	Three CR-2032 button cells

Included Accessories

• Battery • Instruction Manual • Test Report

Features
Unique Digital LCD readout with analog bargraph and numerical displays
Simultaneous digital readout of moisture content plus ambient temperature or humidity with analog bar-graph display of moisture, Max moisture values, and programmable wet/dry indication
Use on wood, paper, wall board, sheet rock, cardboard, plaster, concrete, and mortar
Memory contains 3 wood groups and 4 building material groups with calibrations for approximately 150 species of wood and 19 building material types
Index Mode with programmable high and low values can be used to quickly locate moisture with comparative measurement
Replaceable threaded measurement electrode pins
Impact proof housing
Auto power off conserves battery energy
Battery operated for on-the-go measurements
Built-in battery check and measurement verification test
Confirms to CE, EMC, EN: 61326

PINLESS

MOISTURE METER DT-128M

Non-invasive measurement

Monitor moisture in wood and other building materials with virtually no surface damage

Features
Relative Pin-less moisture reading for non-invasive measurement from 0.0 to 100.0% with 0.1 resolution
Multifunction backlit triple LCD display
Pin-less measurement depth from 0.78" (20mm) to 1.6" (40mm) below the surface
High frequency sensing technology
Automatic Data Hold
Two adjustable alarm levels with audible beeper and visual (flashing "RISK" or "WET") indicators
Automatic calibration (in dry air) when meter is powered on
Low battery indication
Auto Power off
Dimensions: 9.25 x 2.5 x 1.1" (235 x 63 x 28mm)
Weight: 7.7oz (218g)

SPECIFICATIONS
(Check the CEM web for detailed specifications)

Construction Material	Display (Unit)	MoistureStatus
Gypsum	<30	DRY
	30-60	RISK
	>60	WET
Cement	<25	DRY
	25-50	RISK
	>50	WET
Wood	<50	DRY
	50-80	RISK
	>80	WET

Included Accessories

• Battery • Carrying Case • Instruction Manual • Test Report

• DT-128M

POCKET

DT-120 MOISTURE METER

CE EMC EN: 61326

• DT-120

Accessories

• 4xLR44 button batteries • Gift Box & Carrying Case

Features
Dual Backlit LCD digital display of Moisture and Temperature
Readings with Integral Electrode Pins
User selectable Wood Moisture, Building Material Moisture, °C, °F
Auto Power Off

SPECIFICATIONS (Check the CEM web for detailed specifications)

Electrode Length	8mm
Measuring Rnage	Wood : 6 - 44%
	Building Material : 0.2 - 2.0%
	Ambient Temerature : 0 to 50° (32 to 122°F)
Accuracy	Wood : ± 2%
	Material : ± 0.2%
Ambient Temperature	±1°C / ±1.8°F
Auto Power OFF	After approx. 3minutes
Ambient Temperature	0 - 40°C
Ambient Relative Humidity	0 -85% RH
Size (HxWxD)	96mm x 40mm x 20mm
Weight	83g

DIGITAL

SOUND LEVEL METER

This Sound Level Meter is designed for noise project, quality control, illness prevention and all kinds of environmental sounds measurement It is used for the sound measurement at factory, school, office, traffic access and household etc. This unit confirms to the IEC61672-1 CLASS2 for Sound Level Meters

SPECIFICATIONS (Check the CEM web for detailed specifications)

Accuracy	±1.4dB
Frequency range	31.5HZ - 8KHZ
Dynamic range	50dB
Level ranges	(01) : 30dB-80dB
	(02) : 50dB-100dB
	(03) : 80dB-130dB
	(04) : 30dB-130dB (AUTO)
Frequency weighing A/C	
Time weighing	FAST (125ms), SLOW (1s)
Microphone	1/2 inch electric condenser
Display	4 digits Backlit LCD display with a resolution of 0.1dB
Display Update 2 times / sec	
Max Hold / Min Hold / Data Hold	
Alarm function	
Analog Bar-graph Fast display of analog (20 times / sec)	
Data Record 50 Sets	
Date: Year, month, day	
Time: Hour, minute, second	
Power supply	One 9V battery, 006P or NEDA 1604 or IEC 6F22
Power Life	At least 30 hours
Operation temperature &Humidity	0°C - 40°C, 10%RH - 90%RH
Storage temperature &Humidity	-10°C ~ +60°C, 10%RH ~ 75%RH
Dimension	210mm x 55mm x 32 mm
Weight	230g

Included Accessories

• Battery • Instruction Manual • Test Report

Features

- MAX & MIN Measurements
- Over Range display
- Under Range display
- A & C Weighting
- FAST & SLOW response

CE EMC
EN: 61326

• DT-815

DIGITAL
SOUND LEVEL METER

This unit confirms to the IEC651 type 2, ANSI S1.4 type 2 for Sound Level Meters. This Sound Level Meter has been designed to meet the measurement requirements of safety Engineers, Health, Industrial safety offices and sound quality control in various environments.

• DT-805L

SPECIFICATIONS
(Check the CEM web for detailed specifications)

Level Range	Low = 30 ~ 100dB
	High = 60 ~ 130dB
Accuracy	±1.4dB (ref 94dB @ 1kHz)
Frequency Range	31.5Hz to 8kHz
Frequency Weighting	A, C
Time Weighting	Fast, Slow
Battery Type	9V Battery NEDA 1604, IEC 6F22, JIS 006P
Operation Temp	0°C~40°C(<80%R.H.)
Storage Temp	-10°C~60°C (<70%R.H.)

Features

- Ranges from 30dB to 130dB at frequencies between 31.5Hz and 8 KHz.
- Display with 0.1dB steps on a 4-digits LCD
- With two equivalent weighted sound pressure levels, A and C
- Accuracy 2dB

Included Accessories
• Battery • Carrying Case • Instruction Manual • Test Report

DIGITAL
DT-8851 / DT-8852 SOUND LEVEL METER

SPECIFICATIONS
(Check the CEM web for detailed specifications)

Standard Applied	IEC61672 -1 CLASS2
Accuracy	±1.4dB
Frequency Range	31.5HZ ~ 8KHZ
Dynamic Range	50dB
Memory	32700
Level Ranges	LO :30dB~80dB
	Med : 50dB~100dB
	Hi : 80dB~130dB
	Auto : 30dB~130dB
Frequency Weighting	A/C
Time Weighting	FAST (125ms), SLOW (1s)
Microphone	1/2 inch electric condenser microphone
Display	4 digits LCD display with a resolution of 0.1dB
Display Update	2 times/sec.
MAX / MIN / DATA HOLD	
Alarm function	"OVER"is when input is more than upper limit of range.
"UNDER"is when input is less than lower limitof range.	
Analog Output	AC/DC outputs from earphone outlet AC=1Vrms ,DC=10mV/dB
Data Output	USB data traffic
Auto Power Off	Meter automatically shuts down after approx. 15 minutes of inactivity.
Power Supply	One 9V battery, 006P or NEDA1604 or IEC 6F22.
Power life	About 30hours
Operation Temperature and Humidity	0°C~40°C,10%RH~90%RH
Storage Temperature and Temperature	-10°C ~+60°C%10%RH~75%RH
Dimension	278 (L) x 76 (W) x 50(H) mm
Weight	350g

• DT-8851 / DT-8852

These Meters are designed for noise project; quality control; illness prevention and cure and all kinds of environmental sounds measurement. It is applied to the sounds measurement at factory; school; office; traffic access and household, etc.

Features

- This unit confirms to the IEC61672-1 CLASS2 for Sound Level Meters.
- MAX & MIN measurements
- Over range display
- Under range display
- A & C Weighting
- FAST & SLOW response
- USB PC Interface
- Analog AC/DC outputs for connection to frequency analyzer or X-Y shaft recorder
- Data Logging up to 32700 Data Points **(DT-8852 Only)**
- Alarm Function **(DT-8852 Only)**

Included Accessories
- Instruction manual • Battery • Screwdriver
- Earphone plug • Windscreen • Software
- USB cable • Power Adaptor

CE EMC
EN: 61326

SOUND LEVEL

CALIBRATOR SC-05

Features
Simple Hand Held Instrument
Battery Operated
Provides two sound outputs of 114dB and 95dB
Confirms to IEC 942 CLASS 2

SPECIFICATIONS

(Check the CEM web for detailed specifications)

Output Sound Pressure Levels	114dB and 94dB
Output Frequency	1000HZ ±4%
Reference Conditions	Temperature 23°C (73°F), 1013 mbar, 65% RH
Accuracy	±0.5dB
Power	One 9V battery, 006P or IEC 6F22 or NEDA 1604,
Low Battery Check	Calibrator will cut sound pressure output if battery Voltage Falls Below Acceptable Range.
The Instrument Complies With	IEC 942 CLASS 2
Dimensions	120 (L) x 51 (W) x 43 (H) mm
Weight	Approx. 130g

• SC-05

DIGITAL

LED LIGHT METER DT-3809

DT-3809 measures light from visible luminaries equipped with white light LED, fluorescent, metal halide, high-pressure sodium and incandescent sources.

• DT-3809

Included Accessories

• Instruction Manual • Test Report
• Battery • Carrying Case

Features
3999 Counts Large Backlit LCD Display
Low Battery Indication
Sampling Rate: 2.5 times per second
Spectral Response close to CIE luminous spectral efficiency
Cosine Angular Corrected
Confirms to JIS C1609: 1993 and CNS 5519 General A class specifications
Measuring Light source: LED white light and all visible light
User Selectable Lux / Foot Candle scales
Data Hold
Max/Min/Avg Hold
Auto Power Off and Disable function
Auto-Ranging

SPECIFICATIONS (Check the CEM web for detailed specifications)

Sensor	Silicon Photodiode with filter
Range	40, 400, 4,000, 40,000, 400,000 Lux & 40, 400, 4000, 40,000 FC
Accuracy	± 3% (Calibrated to standard incandescent lamp 2586°K and corrected LED day white light spectrum)
Power Supply	9V Battery

DIGITAL LIGHT METER WITH PC INTERFACE DT-3808

DT-3808 is designed for logging and measuring Light intensity for projects, quality control, health control and measuring Light intensity for various kind of environments like factory, school, office, transportation line, school and so on.

Features
Measurement range: 0Lux~400kLux / 0FC~40kFC,
High Precision Repeatable Measurement
For non-standard light sources, automatic modification of parameters
Short time between date fall and raise
User Selectable LUX / FC unit and testing range option function
Auto Power Off
Max / Min / Data Hold Function
Large Backlit LCD display for convenient reading
USB interface can connect with personal computer
4 measurement Ranges
Records more than 87000 data

• DT-3808

SPECIFICATIONS (Check the CEM web for detailed specifications)

Display	4 digits Backlit LCD
Measurement range	0 LUX ~ 400K LUX, 0 FC~40KFc
Resolution	0.1 Lux / 0.1 FC
Overload Display	LCD displays "OL"
Spectral Response	CIE Appropriate light (CIE eyes respond curve)
Spectral Precision	CIE Vλ function 11% ≤ 6%
Cosine Respond	12'≤ 2%
Accuracy	±3% rdg ± 0.5%f.s. (< 10,000 Lux),
	±4% rdg ± 10d.(>10,000 Lux)
Sampling rate	1 time/second (Count as digits display)
Sampling rate can be set	
Light Probe	A silicon light diode and a spectral respond filter
Power	3 pieces 1.5 V batteries
Length of light probe	about 150cm
Dimension of light probe	115L x 60W x 20H (mm)

Included Accessories

- Battery
- Instruction Manual
- USB Cable
- Software
- Carrying Case

CE EMC
EN: 61326

SOLAR POWER METER

Solar power meter is a device used to measure solar power (sunlight) intensity. When the sun shines recklessly, just take the DT-1307 and aim it's opening to the sun, and you will see how powerful the sun is. If you want your skin white, you surely cannot do without it! Measurement: Expressed by w/m^2 or BTU/(ft^2*h).

This meter is in compliance with safety standard EN 61010-1 related to electronic measuring instruments.

Features
Sunlight measurement up to 1999w/m^2 or 634BTU / (ft^2*h)
Data HOLD funtction to Hold measurement values I High accuracy and rapid response
Unit and sign display for easy reading
Measuring unit selection between w/m^2 and BTU / (ft^2*h)
Manual scale selection
Direct reading with no adjustments needed
Maximum and minimum values Record Function
Low battery indication

• DT-1307

SPECIFICATIONS (Check the CEM web for detailed specifications)

Display	3-1/2 digits LCD with maximum reading 1999
Sampling time	Approx. 025 second
Resolution	1W/m^2 1 BTU / (ft^2*h)
Accuracy	typically within ±10W/m^2 [±3BTU / (ft^2*h)] or ± 5%, whichever is greater in sunlight,
Additional temperature induced error	±0.38W/ m^2/°C
Accuracy	< ±3/year
Over - input	Display shows 'OL'
Range	1999W/m^2, 634BTU / (ft^2*h)
Size	160 (L)*63 (W)*28 (H)
Weight	(including battery) About 250g

CE EMC
EN: 61326

Included Accessories

• Instruction Manual • Test Report • Battery • Carrying Case

DIGITAL PROFESSIONAL

LUX METER

• DT-8808

DT-8808 is a precision instrument used to measure illuminance (lux, foot-candle) in the field. It meets CIE photopic spectral response. It is fully cosine corrected for the angular incidence of light. The illuminance meter is compact, tough and easy to handle owing to its construction. The light sensitive component used in the meter is a very stable, long-life silicon photo diode and spectral response filter.

Features
Light-measuring levels starting form 0.01lux~0.1klux / 0.01fc~0.01kfc
High Accuracy and Rapid Response
Data-Hold function for holding measured Values
Unit and sign display for easy reading
Automatic zeroing
Meter corrected for spectral relative efficiency
Correction factor need not be manually calculated for non-standard light sources
Short Rise and Fall Times
Peak-hold function for tracing the peak signal of light pulse with least duration 10μs and record
Capable of selecting measuring mode in lux or fc scale alternatively
Auto power off 30 minutes
Maximum and minimum measurements
Relative Reading & Reset function
Easy to Read 4000 Counts Large Backlit LCD display with analogue Bargraph

SPECIFICATIONS (Check the CEM web for detailed specifications)

Display	3-3/4 digit Backlit LCD with high speed 41 Segment Bargraph
Measuring Range	40.00 lux, 400.0 lux, 4000 lux, 40.00 Klux and
	400.0 Klux / 40.00 fc, 400.0 fc, 4000 fc, 40.00 Kfc.
Over-Range	LCD will show "OL" symbol.
Spectral Response	CIE Photopic. (CIE human eye response curve)
Spectral Accuracy	CIE / λ function f1'≤6%
Cosine Response	f2' ≤2%
Accuracy	±5% rdg±10d. (<10,000Lux); ±10% rdg±10d. (>10,000 Lux)
Repeatability	±3%
Sampling Rate	1.5 times / sec of analog bar-graph indication 1.5 times / sec of digital display
Photo Detector	One silicon photo diode and spectral response filter
Operating Temperature & Humidity	0°C to 40°C (32°F to 104°F) & 0% to 80% RH.
Storage Temperature & Humidity	-10°C to 50°C (14°F to 140°F) & 0% to 70% RH.
Power Source	1 piece 9V battery
Photo detector Lead Length	150cm (approx.)
Photo detector Dimensions	115L × 60W × 20H (mm)
Meter Dimensions	203L × 75W × 50H
Weight	280g.

Included Accessories

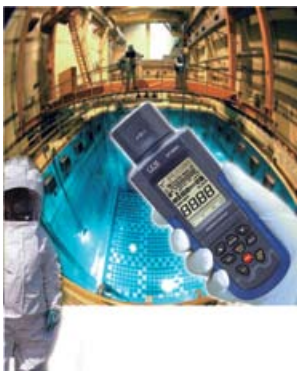
• Instruction Manual • Test Report • Battery • Carrying Case

RADIATION SCANNER / METER

The radiation detector DT-9501 was developed to detect α-, β-, γ- and x- radiation. The radiation meter DT-9501 provides many features including a large, high-resolution Backlit LCD backlit display with annunciators. The radiation detector DT-9501 has an internal data storage for up to 2000 data sets, which are saved either manually or automatically. Furthermore the radiation detector DT-9501 is equipped with a Bluetooth interface to transfer the measured data in real-time to a computer. With the software, that is included with the product, the data can then be further processed and reviewed. The radiation detector DT-9501 stands out with its high accuracy and practical design. The radiation detector can be applied in the pharmaceutical industry, laboratories, power plants, quarries, the emergency services, metal industries, petroleum reservoirs, environmental protection etc.

Features

- α-, β-, γ- and x- radiation
- High measuring accuracy
- Internal data storage for 2000 values
- Large LCD display
- Bluetooth interface
- Software for data processing
- Low Power Consumption
- Data Evaluation on PC



CE EMC EN: 61326

Bluetooth

• DT-9501

SPECIFICATIONS (Check the CEM web for detailed specifications)

Types of radiation
α-, β-, γ- and x- radiation
Measurement ranges
Radiation dose rate: 0.1 .... 1000 µSv/h
Impulse dose rate: 0 ... 30,000 cpm, 0 ... 5000 cps
Radiation dose accumulation: 0.001 µSv.. 9.999 Sv
Impulse dose accumulation: 0 ... 9,999
Sensitivity
108 pulses or 1000 cpm/mR/hr in Cobalt-60 in radiant environment with electricity of 1 µSv/h
Alpha radiation: above 4 MeV
Beta radiation: above 0.2 MeV
X-radiation: above 0.02 MeV
Accuracy
< 10 % (less than 500 µSv/h)
< 20 % (less than 600 µSv/h)
Selective Radiation
Combination of α-, β-, γ- and x- radiation
Sensor
Halogen balancing sensor
Output Port
Bluetooth
Average Process Time
Manual or automatic, adjustable, between 2 ... 12 seconds
Display
Digital LCD display, with bargraph display
Alarm Function
Acoustic alarm for manually selected value
Average radiation value for normal environment
Less than 0 ... 0.2 µSv/h
Internal data storage
Automatic, 2000 values
Software
Data transfer with real-time speed, 2000 measurement values and recording
Operation temperature
0 ... +50°C
Power Supply
3.6 V High Level energy Li-batteries
Dimensions
200 x 70 x 45 mm
Weight
206 g

Included Accessories

• Instruction Manual • Software • Carrying Case • Test Report

ALCOHOL TESTER

Simple to test, rapid response tester that are used to determine whether or not a person has any alcohol in theirbreath. The use of fuel cell sensor ensures, that the reading is impossible to beaffected by anything in the subject's breath other thanalcohol

Features
Fuel cell sensor is high accuracy and reliable
Short warm up time, fast response and recovery time
Magnificent man-machine interaction interface
Real time reading display
Two stages acousto-optic alarm for drink and drunkenness
Auto power off under lack of pressure
Refuse test and interruption indication
Five detection unit selectable
Disposable backflow blowing nozzle design, safety andhealth
High capacity rechargeable battery power
Multinational drunk driving alarm threshold selection
Red and blue backlit alarm

• DT-800A

SPECIFICATIONS (Check the CEM web for detailed specifications)

Detection range	0.000mg/L to 1.500mg/L
Resolution	0.001mg/L
Accuracy	C≤0.400: ±0.020mg/L,
	0.400≤C≤1.000:±5%, C≥1.000: ±20%
Repeatability	C≤0.400: 0.007mg/L,
	0.400≤C≤1.000:1.75%, C≥1.000: 6%
Calibration cycle	6 months
Breath flow continuity	3s (flow: >20L/min)
Size	240 x 160 x 100mm
Weight	584g

Included Accessories

• 3.7V Li Battery • Power Adaptor • Instruction Manual • Battery

MICROWAVE LEAKAGE

DETECTOR DT-2G

The CEM DT-2G microwave leakage detector quickly and easily checks your microwave and microwave leakage.

• DT-2G

APPLICATION

Quick and easy measurement commonly used in the production of microwave equipment, use of personnel for microwave leakage. Widely used in various places of microwave radiation leakage test, especially for the home as one of essential goods. Measurable mobile phones, cordless phones, microwave ovens, radio and television transmission towers, radar and mobile communications base stations, various physiotherapy and various other microwave radiation spectrum analyzer.

Features
Alarm sounds and red LED light flashes when microwave leakage is detected.
Large clear backlit LCD display for easy reading.
Microwave leakage detection 0 to 0.99mW/cm^2.
Alarm level at 5.0mW/cm^2.
Leakage volume displayed in mW/cm^2 with 0.01 resolution.
Measures 160 x 160 x 42mm.
Weight 150g.

Included Accessories

• Instruction Manual • Test Report • Battery • Carrying Case

ELECTRO-MAGNETIC FIELD

(EMF/FLUX) METER DT-3G

• DT-3G

An electromagnetic wave simply means the wave motion of the electromagnetic field (EMF). The change in electric fields produces magnetic fields, and the change in magnetic fields can also generate electric fields. The fluctuation of correlation between each other is known as "electromagnetic waves" , which is a form of energy similar to light and heat that can be transmitted either by radiation in the air or by an electric conductor.

APPLICATION

- This meter is applied to measuring electro magnetic fields of extremely low frequency (ELF) of 30 to 300Hz
- It is capable of measuring the electromagnetic field radiation intensity that are produced from electric transmission equipment, power line, micro wave oven, airconditioner, refrigerator, computer monitor, video/audio device and so forth

Features
Switch between the display of micro-Tesla and mini-Gauss is available.
Data hold (HOLD), maximum (MAX) hold function.
Auto range display (20, 200, 2000).
Auto power off.
Low battery and Overload Indication

SPECIFICATIONS

(Check the CEM web for detailed specifications)

Range	200/2000 mG , 20/200 uT
Resolution	0.1/1 mG or 0.01/0.1 uT.
Frequency Response	30Hz to 300Hz
Sensor	Single Axis
Accuracy	±(2.5%+6dgt) at 50Hz/60Hz.

Included Accessories

- Instruction Manual
- Test Report
- Battery
- Carrying Case

COMBUSTIBLE GAS LEAKAGE
DETECTOR

The Combustible Gas Leak Detector has a long, slim gooseneck probe to find leaks in tight areas. It's adjustable alarm, easy one-hand operation and impact resistance storage case add up to value and convenience

Features
Higher Sensitivity
Adjustable tick rate to locate leaks quickly and easily
Visual leak detection by LED indicators
Precision sensor detects even the smallest leaks
Fast response of less than two seconds to 40% LEL
Includes earphone Jack
16" gooseneck

• GD-3300

SPECIFICATIONS (Check the CEM web for detailed specifications)

Sensitivity	50 ppm methane
Sensor Type	Low power semiconductor
Warm Up Time	Approx.60 seconds
Response Time	Less than 2sec. (up to 40% LEL)
Duty Cycle	Continuous
Probe Length	16"
Power Supply	3"C" cell batteries
Battery Life	8 hours continuous use, typical
Alarm	Visible & Audible at 10% LEL for Methane. Can be calibrated for other concentrations or gases.

GASES DETECTED:

Natural Gas, Propane, Butane, Methane, Acetone, Alcohol, Ammonia, Steam, Carbon Monoxide (not to quantify), Gasoline, Jet Fuel, Hydrogen Sulfide, Smoke, Industrial Solvents, Lacquer, Thinner, Naphtha

Included Accessories

- Carrying Case
- Battery
- Instruction Manual

REFRIGERANT GAS LEAKAGE
DETECTOR

The Refrigerant Leak Detector detects all CFC refrigerants such as R-22, R-124, R-11 and R-12. The ultra-sensitive long life sensor detects the more current, difficult-to-detect HFC refrigerants such as R-134a, R-404A, and new R-22 replacements, R-410A and R-407C. The Refrigerant Leak Detector's long, slim gooseneck probe design is easy to use in close areas and for extending into hard-to-reach areas. It's adjustable alarm, easy one-hand operation and impact resistance storage case add up to value and convenience

• DT-3303

Features
high sensitivity to detect.100 ppm of R- 134a / R- 22
Adjustable tick rate to locate leaks quickly and easily
Visual leak detection by LED indicators
Precision sensor detects even the smallest leaks
Includes earphone Jack
16" gooseneck

SPECIFICATIONS (Check the CEM web for detailed specifications)

Sensitivity to detect	100 ppm Of R- 134a/ R- 22
Sensor Type	Low power semiconductor
Warm Up Time	Approx.1 minute
Response Time	Less than 2 seconds (up to 40% LEL)
Alarm	Visible & Audible at 10% LEL for all chloro-fluo-carbons (CFC).
Power Supply	3"C" cell batteries
Battery Life	8 hours continuous use, typical
Duty Cycle	Continuous
Probe Length	16"ncentrations or gases

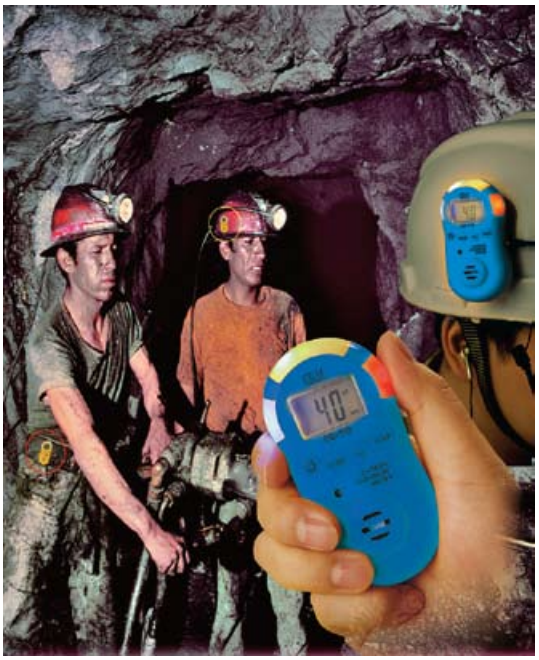
Included Accessories

• Carrying Case • Battery • Instruction Manual

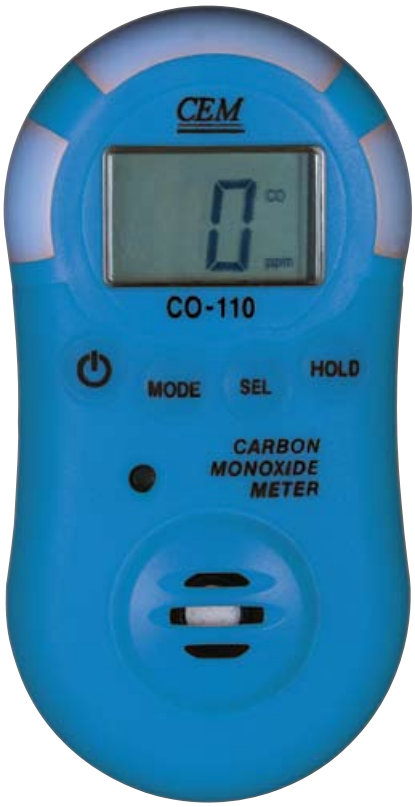
CE EMC
EN: 61326

CARBON MONO-OXIDE METER

CO-110 Carbon Monoxide Meter detects the presence of carbon monoxide (CO) and measures concentrations between 1-1000 parts per million (PPM). The Meter indicates the presence of CO by a reading on the LCD and a beeper tone. The beeper functions much like clicking of a Geiger counter: Above 200 PPM, the beeper sounds continuously with the concentration of CO. From 35 PPM to 200 PPM, the beeper sounds discontinuously with the concentration of CO.



Features
Digital LCD Display
Auto/manual zero
Memory for 10 complete data sets
Record mode
Red & Blue LED light audible alarm
High Accuracy, quick response
Pocket size and easy to use
Fast sampling
Max Hold / Data Hold
Above 200 PPM, the beeper sounds continuously



• CO-110

SPECIFICATIONS (Check the CEM web for detailed specifications)

Measurement Range	0 to 1000PPM
Measurement Resolution	1PPM
Accuracy	±5% or ±10PPM
Warm up period	Less than 2 seconds
Battery	9V, NEDA 1604A or equivalent
Sensor type	Stabilized electrochemical Gas-specific (CO)

Included Accessories

- Battery
- Carrying Case
- Instruction Manual

CE EMC
EN: 61326

CARBON MONO-OXIDE METER

• CO-180

The Carbon Monoxide Meter detects the presence of carbon monoxide (CO) and measures concentrations between 1-1000 parts per million (PPM).

The Meter indicates the presence of carbon monoxide in two ways:

- By a reading on the LCD in PPM.
- By a beeper tone.

Features
Backlit LCD Display
Auto Zero
High Accuracy / Quick Response
Pocket Size, Easy to use
Fast Sampling
Max Hold / Data Hold
Auto Power Off
Beeper Sound above 200PPM

SPECIFICATIONS (Check the CEM web for detailed specifications)

Operating Temperature	0°C to + 50°C
Storage Temperature	-30°C to + 60°C
Operating Humidity	0-99% Relative humidity (non-condensing)
Measurement Range	0 to 1000PPM
Measurement Resolution	1PPM
Accuracy	±5% or ± 10 PPM
Warm up Period	<2 seconds
Battery	9V, NEDA 1604A or IEC 6LR61, or equivalent.
Sensor Type	Stabilized electrochemical Gas-specific (CO)

Included Accessories

- Battery
- Carrying Case
- Instruction Manual

CARBON DI-OXIDE METER

Measures Carbon Di-Oxide (CO_2), Air Temperature and Humidity
With User Programmable visual and Audible Alarm

Features
Checks for Carbon Di-Oxide (CO_2) Concentration
Maintenance Free NDIR (Non Destructive infra-red) CO_2 sensor
Indoor Air Quality Display in ppm with Good (0 to 800ppm), Normal (800 to 1200ppm), Poor (>1200ppm) indication
Visual and Audible CO_2 warning alarm
Measuring Ranges:
CO_2: 0 to 9,999ppm
Temperature: -5 to 50°C (23 to 122°F)
Humidity: 0.1 to 90% RH
Displays Year, Month, Date and Time
Max/Min CO_2 value recall function
Data Logger to record 32000 Data Points **(DT-802D only)**
Complete with Universal AC Adaptor

• DT-802/802D

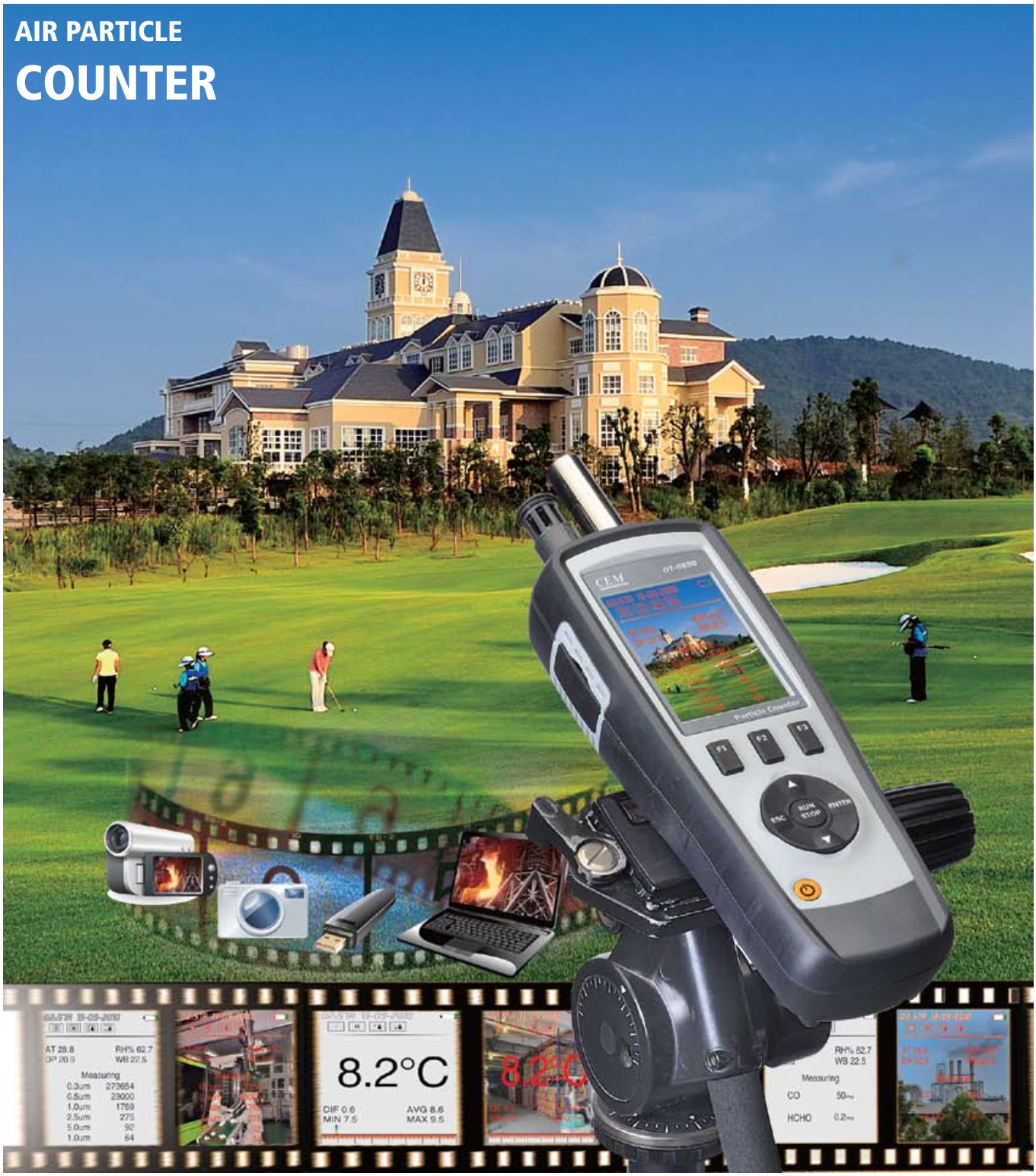
APPLICATIONS:
Monitor air quality in schools, office buildings, greenhouses, factories, hotels, hospitals, transportation lines and anywhere that high levels of carbon dioxide are generated

SPECIFICATIONS (Check the CEM web for detailed specifications)

Carbon Dioxide (CO_2)	0 to 9,999ppm
Resolution	1ppm
Temperature	23 to 122°F (-5 to 50°C)
Resolution	0.1°F/°C
Humidity	0.1 to 90%RH
Resolution	0.10%
Dimensions	4.3 x 4.1 x 2.4" (110 x 105 x 61mm)
Weight	8.1oz (230g)

CE EMC
EN: 61326

Included Accessories
- Ni-MH Battery **(DT-802D Only)**
- Instruction Manual
- Universal Adaptor



Particle Counter with unique 2.8"color TFT LCD display and built-in camera for capturing videos and photos that are stored onto internal memory or a micro SD card, for viewing on PC, providing fast, easy and accurate readings for particle counter, Air Temperature, Relative Humidity, Dew Point & Wet Bulb Temperature and , Gas Detection **(DT-9881 only)**. The DT-9880/DT-9881 can measure up to 6 channels of particle sizes Use the included software to generate reports with videos, photos, and data points. DT-9881 can also detect and measure the concentration of HCHO (Methanal) Gas and CO (Carbon Mono-Oxide) Gas

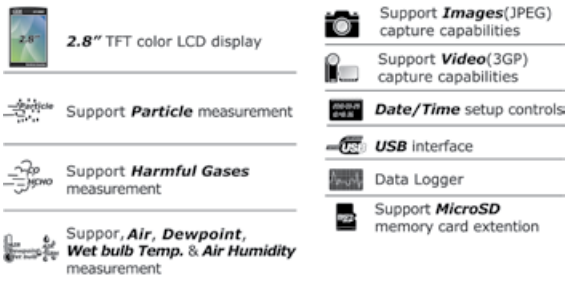
Features
Simultaneously measure and display 6 channels of particle sizes (down to 0.3 µm), Air Temperature, Humidity, Dew Point and Wet Bulb
2.8" TFT Color LCD display
Built-in 320x240-pixel camera takes videos (3GP) and photo images (JPEG) and records them in internal 74MB memory
Stores 5000 records (date, time, counts, humidity, temperature, sample volumes, and location label) and 20 minutes of video
Selectable sample time, count data, and Programmable delay
Air Temperature and Humidity, Dew Point & Wet Bulb Temperature
Gas (HCHO, CO) Detectors **(DT-9881 only)**
Max, Min, DIF, AVG record, Date/time setup controls
Auto Power Off
Language selection: English, French, German, Spanish
Tripod mount for continuous recording
Mini-USB Port Connection
Micro SD card slot in battery compartment (memory card not included; max size 8GB)

SPECIFICATIONS (Check the CEM web for detailed specifications)

Particle Counter	
Channels	0.3,0.5,1.0,2.5,5.0,10um
Flow Rate	0.1ft³ (2.83L/min)
Counting Efficiency	50% @ 0.3 µm; 100 % for particles > 0.45 µm
Coincidence Loss	5% at 2,000,000 particles per ft³
Data Storage	5000 sample records (Micro-SD card)
Count Modes	Cumulative, Differential, Concentration,
HCHO Measurement (DT-9881 only)	
Range	0.01~5.00PPM
Basic Accuracy	±5%F.S
Display Resolution	0.01ppm
CO Measurement (DT-9881 only)	
Range	10~1000PPM
Basic Accuracy	±5%F.S
Display Resolution	1ppm
Air temperature and Relative humidity measurement	
Air Temperature Range	0°C to 50°C (32°F to 122°F)
Dew-point Temperature Range	0°C to 50°C (32°F to 122°F)
Relative Humidity Range	0 to 100%RH
Air temperature Accuracy	±0.5°C (0.9°F) 10°C to 40°C
	±1.0°C (1.8°F) others
Dew-Point temp. Accuracy	±0.5°C(0.9°F) 10°C to 40°C
	±1.0°C(1.8°F) others
Relative Humidity Accuracy	±3%RH 40% to 60%
	±3.5%RH 20% to 40% and 60% to 80%
	±5%RH 0% to 20% and 80% to 100%
Operating Temperature	0°C to 50°C (32°F to122°F)
Storage Temperature	-10°C to 60°C (14°F to 140°F)
Relative Humidity	10 to 90%RH non-condensing
Power	
Battery	Rechargeable battery
Battery Life	About 4 hours continuous use
Battery Charge Time	About 2 hours with AC adapter

• DT-9880

CE EMC
EN: 61326

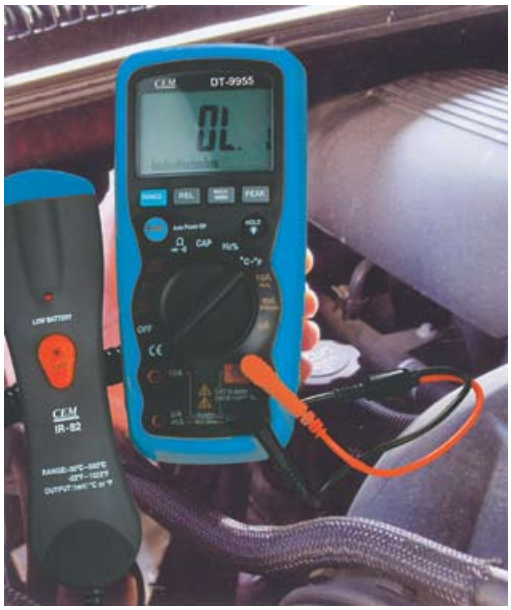


Included Accessories

• NiMH Battery • Universal Adaptor • Instruction Manual
• Tripod Stand • Carrying Case

PROFESSIONAL

AUTOMOTIVE MULTIMETER



Automotive Multimeter with Temperature, RPM, Dwell Angle, Duty Cycle and Pulse Width

This is a brand new CEM AT-9955 CE certified digital Automotive DMM. This top-of-the-line device features duty cycle measurement and dwell angle measurement for 1 - 8 cylinder engine, up to 12,000 RPM. This meter also measures temperature, resistance, capacitance, pulse width, frequency, AC/DC voltage and current, .

An IR laser thermometer is also included to allow precision measurement from distance. The IR thermal meter is ideal for measuring component temperature such as engine and transmission box while the K-type temperature probe allows the exhaust air temperature to be measured. A heavy duty carrying case is also included for the protection of the device and your convenience.

PRODUCT FEATURES:

- Large LCD display
- RPM measurement for automotive engines with 2 to 10 Cylinders using the inductive Pick-up.
- Oversized high contrast 6000 counts LCD display with backlight
- 14 Functions including DCV, ACV, DCA, ACA, Resistance, RPM, Dwell angle, Duty cycle, Frequency, Temperature (IR Temperature - switchable deg C and deg F), Capacitance, Continuity and Diode Check.
- Read pulse duty cycle and dwell angle for electronic fuel injection feedback carburetors, and ignition
- Data Hold and Relative functions
- Over-range indication
- Auto Power Off
- Fused current inputs and Overload protection on all ranges.
- Measures Milliseconds pulse width to test on-time of fuel injectors, idle air control motors, and electronic transmission controls.

SPECIFICATIONS (Check the CEM web for detailed specifications)

Function	Range	Accuracy (%rdg + digits)
DC Voltage	400mV, 4V, 40V, 400V, 1000V	± (0.5% + 2d)
AC Voltage	400mV, 4V, 40V, 400V, 700V	± (0.8% + 4d)
DC Current	400uA, 4000uA, 40mA, 400mA, 4A , 20A	± (1.2% + 2d)
AC Current	400uA, 4000uA, 40mA, 400mA, 4A , 20A	± (1.5% + 4d)
Resistance (Ω)	400, 4K, 40K, 400K, 4M , 40M	± (0.8% + 3d)
RPM(Tach)	600~4000RPM ; 600~12000RPM(x10RPM)	± (2.0% + 2d)
Dwell Angle	4, 5, 6, 8 CYL	± (2.5% + 2d)
Capacitance	40nF, 400nF, 4uF, 40uF,100uF	± (3.0% + 2d)
Frequency (Hz)	0.001Hz~9.99MHz	± (2.0% + 2d)
Duty Cycle	0.1% ~ 99.9%	± (1.5% + 2d)
Temperature	-20 deg C ~ 760 deg C / -4 deg F ~ 1400 deg F	± (3.0% + 2d)
IR temperature	-20 deg C ~ 280 deg C / -4 deg F ~ 536 deg F	± (3.0% + 2d)
Pulse Width	0.1~10mS	± (3.0% + 5d)
Diode Check	Open circuit voltage 1.5V dc typical; Test current 0.3mA typical.	
Continuity test	Threshold 30 Ω , Continuity Beeper 2.7 KHz.	

- DT-9955

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Included Accessories

- Test leads • Instruction Manual • K-type temperature Probe • IR temperature probe Inductive pick-up and 9V battery.

PROFESSIONAL

AUTOMOTIVE MULTIMETER

The AT-9950DIS is a very versatile automotive multimeter that can be used for many different diagnostics works in cars and trucks. It measures RPM for 2 stroke and 4 stroke engines. It also reads pulse duty cycle and dwell angle for electronic fuel injection feedback carburetors and ignition.

• AT- 9950DIS

SPECIFICATIONS (Check the CEM web for detailed specifications)

Function	Max. Range	Resolution	Basic Accuracy
Voltage DC	1000V	0.1mV	± (0.5% + 2d)
Voltage AC	750V	1mV	± (1.0% + 2d)
Current DC	10A	0.1uA	± (1.5% + 2d)
Current AC	10A	0.1uA	± (1.5% + 2d)
Resistance	32MΩ	0.1Ω	± (2.0% + 3d)
RPM (Tach)	12,000RPM	1RPM	± (2.0% + 5d)
Dwell Angle	2~10CYL	0.1°	± (1.2% + 2d)
Frequency	32kHz	0.1Hz	± (1.2% + 2d)
Duty Cycle	0.1%~99.9%	0.1%	± (1.2% + 2d)
Temperature	760°C / 1400°F	0.1°C/°F	± (3.0% + 3d)
Diode Test			
Continuity Check			

PRODUCT FEATURES:

- Display: 3200 Counts with Analogue Bargraph
- AC TRMS Function
- Auto-Ranging
- Overload Protection on all Ranges
- Data Hold Function
- Low Battery Indication
- Inductive Pick up

CE

EMC & LVD
EN: 61326
EN: 61010-1
EN: 61010-02-031

Included Accessories

• Test leads • Instruction Manual • K-type temperature Probe • 9V battery.

CAR CURRENT TESTER CF-01/CF-02/CF-03 & "S" Versions

This fantastic little tool plugs straight into a standard blade fuse holder, replacing the fuse in your vehicles fusebox and will measure the current drawn on that circuit, up to a maximum of 20 Amp @ 48VDC to a digital accuracy of 10mA and 2%.

This is the perfect tool to diagnose excessive or determine current draw from a particular circuit, or to find an unknown power draw on the battery. Just diagnosing one fault will almost certainly pay for the tool.

It is small enough to fit into a shirt pocket. Just one of those little gadgets you just wonder how you ever did without…

• CF-02

SPECIFICATIONS (Check the CEM web for detailed specifications)

MODEL	Fuse Type	LCD Display/ Resolution	Banana Plug	Measuring Range	Accuracy
CF-01	20A/ Max-Blade		•	20A/48VDC/AC-10sec.	± 2.0% reading
CF-01S	20A/ Mini-Blade		•	20A/48VDC/AC-10sec.	± 2.0% reading
CF-02	20A /Max-Blade	• /10mA		20A/48VDC-10sec.	± (2.0% reading + 2 digits)
CF-02S	20A/ Mini-Blade	• /10mA		20A/48VDC-10sec.	± (2.0% reading + 2 digits)
CF-03	1A/Max-Blade	• /0.1mA		200mA/48VDC-10sec.	± (1.5% reading + 2 digits)
CF-03S	1A/Mini-Blade	• /0.1mA		200mA/48VDC-10sec.	± (1.5% reading + 2 digits)

• CF-01

While Models CF-01 and CF-01S is to be used with a Digital Multimeter, all other models have a built-in digital display. All you need to do is insert the plugs in place of fuse and analyze the current consumed by the circuit.

AUTOMOTIVE CURRENT TESTER

CE
EMC
EN: 61326

Measuring adaptor for easy current detection and measurement of 30A DC on blade-type electric fuses in Automobiles. The measuring adaptor can be connected to any commercially available by a banana plug/pin plug.

SPECIFICATIONS (Check the CEM web for detailed specifications)

LCD Display Resolution	Measuring Range	Accuracy
100mA	30A/48VDC-10sec.	± (2.0% reading + 2 digits)

Current	:	30Amps max (30A/48VDC-10sec.)
Operating Temperature	:	0°C to 50°C (32°F to 122°F)
Storage Temperature	:	-20°C to 60°C (-4°F to 140°F)
Relative Humidity	:	<70% operating, <80% storage
Operating Altitude	:	7000ft (2000 meters) maximum.
Dimensions	:	86 x 37 x 28.5mm
Weight	:	68g

• CF-06

TYPE PRESSURE METER TP-05

A simple tool to measure tyre pressure of all automobiles.
White LED light helps to find the type stem easily.
Push button turns the meter ON and OFF and selects the unit of measurement
Measures type pressure from 5 to 100 PSI (pounds per square inch)
Least Count 0.1 PSI
Can measure in kPA and Bar as well.
Measures with accuracy of 1%
Comes complete with battery and instruction manual.

• TP-05

CE
EMC
EN: 61326

ENGINE TACHOMETER

The AT-5 tachometer can measure RPM of engine by bringing it close to plug cord of the engine. This tachometer has many measuring modes for various types of engines like 2 stroke (1 and 4 cylinders), 4 strokes(1, 6 and 8 cylinders). An antenna lead is supplied to use if needed.

PRODUCT FEATURES:
Measuring method count pulses
RPM display interval 0.5sec
Accuracy ±10 RPM

SPECIFICATIONS (Check the CEM web for detailed specifications)

Measurable Engine		Measurable RPM Range
Stroke	Cylinder	
2	1	100~20000
4	2	
4	3	100~13000
2	2	100~10000
4	4	
2	3	100~6500
4	6	
4	1	100~20000
4	5	100~7000
2	4	100~4800
4	8	

CE
EMC
EN: 61326

• AT-5

Included Accessories

• Antena lead and hang strap • carrying case and Instruction Manual.

AUTOMOTIVE RELAY TESTER RT-05

Testing automotive relays can literally be a bit hit and miss, good connections and continuity do not always mean a serviceable component. This new diagnostic relay tester from CEM Model RT-5 quickly and accurately tests electro-mechanical relays on most modern cars.

Four and five-pin relays can be tested — sockets are included for the three most common relay types. The suspect relay is plugged in to the tester — the 12 Volt power source from the vehicle cycles the relay ten times applying a signal to the relay coil while checking function of the internal contacts. The internal contacts are loaded to detect excessive resistance and the tester will fail the relay if one of the cycles proves unsuccessful.

It enables a quick and easy test of the car relay and is an indispensable diagnostic tool for the technician and auto electrician.

Quickly and accurately tests 3 terminal electro-mechanical relays on most modern cars.

- Suitable for various applications including: coil resistance | relay contacts | cyclic testing
- Color coded performance indicator
- Coil test voltage 9 volts
- Coil resistance 20-50 ohms
- Contact resistance threshold 200 milliohms

CE
EMC
EN: 61326

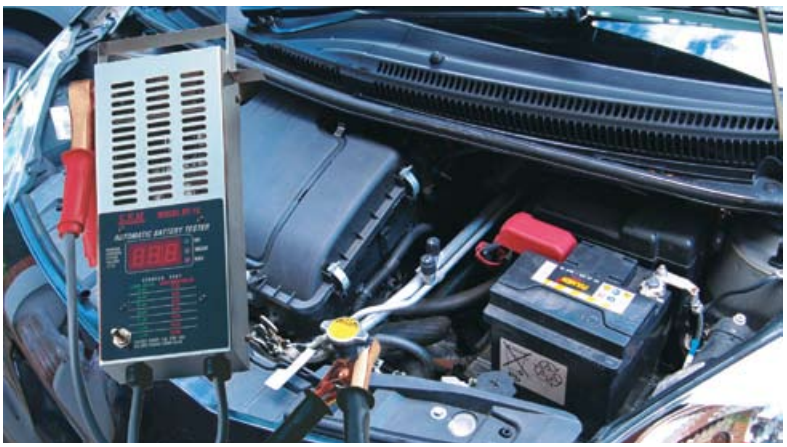
• RT-05

DIGITAL

AUTOMOTIVE BATTERY ANALYZER BT-12

This battery analyzer employs the latest electronic technology to determine if a lead-acid battery is defective or simply needs charging.

The model is an automatic, 100Amp resistive load battery analyzer that is used to check lead-acid batteries. The tester works by automatically applying a 100Amp load to a battery for a period of 10 seconds. At the end of the 10-second period, a one second beep is produced to let you know the test was completed successful and the load is automatically switched off. The battery voltage is stored and displayed along with 3 LED condition indicators. The LED indicators are of three different colors and indicate if the battery is in good (green), weak (yellow) or bad (red) condition.



• BT-12

FEATURES

This battery analyzer is microprocessor controlled for accuracy and rigorously tested for quality. It is the only hand-held digital battery load tester available in the market. This uses spark suppression circuitry to reduce the possibility of sparking during connection to the battery.

A piece of broken equipment means a loss of income for a shop as well as the technician. Electronic Specialists have taken this into consideration and have designed the model with over-voltage detection circuitry to help protect internal components and prevent possible breakdowns.

This model also includes a manual override. If you have started a load test prematurely or you encounter an emergency situation, you can cancel the load test. It can also be used as a digital voltmeter. You can use this product to check voltage ranging between +8 to +25 volts DC.

It will advise "CHG" (for charge), if the battery voltage level is below 12.4 volts and battery test is attempted.

Test load:	100 Amps ± 5% @ 13.2 VDC	Relay stuck closed test time:	1 second
Load operating voltage:	8.5 to 16.0 VDC	Load cycle time:	10 sec on/ min. 60 sec off
Voltmeter range:	8.0 to 25.0 VDC	Accuracy DC volts:	± 0.1 VDC
CCA range:	150 CCA to 1400 CCA	Display:	LED 3 digits
Load testing time:	10 seconds nominal	Operating temperature:	0 to 55°C
Bad (red LED) time:	< 9.1 VDC	Storage temperature:	- 20 to 70°C
Weak (yellow LED) indicator:	9.1 to 10.4 VDC	Weight:	3.5 lbs.
Good (green LED) indicator:	≥ 10.4 VDC	Dimensions:	11.25"H×4.25"W×2.5"D
Over voltage protection cut-off:	17.0 VDC	Jaw opening:	1.25 inches
Relay closure test delay time:	1 second		

CE

EMC
EN: 61326

NON-CONTACT CLINICAL FOREHEAD

INFRA-RED THERMOMETER

DT-8806S, DT-606

Non-Contact Forehead IR Thermometeris specially designed to take the body temperature of a person regardless of room temperature. Depending on various skin types and thickness, there may be temperature difference.

• DT-8860S

FEATURES:
Precise Non-Contact Measurements
User selectable °C or °F
Selectable Body and Surface Temp
Set Alarm value **(DT-8806S only)**
Memorization of the last 32 measurements **(DT-8806S only)**
Automatic Data Hold & Auto Power Off
Automatic selection range and Display Resolution 0.1°C (0.1°F) **(DT-8806S only)**
Backlight LCD display

Medical Standards (DT-8806S only)

CE0197,	The device is in accordance with Medical Device Directive
FCC	The device is in accordance with FCC Part15 Subpart 8:2007/ Radio Frequency Devices IC Regulation ICEC-003:2004 Interference-causing Equipment Standard-Digitial

Non-contact Body Infra red Thermometer Precision

32 to 35.9°C / 93.2 to 96.6°F	± 0.3°C / 0.5°F	According to ASTM Standard E1965-1998 (2003)
36 to 39°C / 96.8 to102.2°F	± 0.2°C / 0.4°F	
39 to 42.5°C / 102.2 to108.5°F	+ 0.3°C / 0.5°F	

TECHNICAL SPECIFICATIONS (Check the CEM web for detailed specifications)

Normal Conditions of Use	
Display Resolution	0.1°C (0.1°F)
Operating Temperature	10 to 40°C (50 to 104°F)
Storage Temperature	0 to 50°C (32 to122°F)
Humidity Rate	≤ 85% RH
Power	DC3V (2x'AA'batteries)
Measuring Range	
In Body Mode	32.0 to 42.5°C (90 to 108°F) **DT-8806S** 32.0 to 43°C (89.6 to 109.4°F) **DT-606**
In Surface Temp Mod	0 to 60°C (32 to 140°F)
Accuracy	±0.3°C (0.54°F) **DT-8806S** ±0.2°C (0.54°F) **DT-606**
Measuring Distance	5cm-15cm (2in-5.9in) 0.5cm to 2.5cm for **DT-606 only**
Automatic Stop	7sec.

CLINICAL THERMOMETER DT-137

The special-purpose clinical thermometer is use a measuring body temperature, offering safe, accurate and quick temperature readings. Select oral, rectal or auxiliary as your measurement site. No need to worry about broken glass or mercury hazards.

• DT-137

SPECIFICATIONS (Check the CEM web for detailed specifications)

Temperature unit	°C/°F
Body Temperature range	32.0°C~42.9°C/95°F~109°F
Basic accuracy	±0.1°C (0.2°F) between 35°C to 42°C (95°F to 107.6°F)
Resolution	0.1°C/0.1°F
Memory	For storing the last measured value
Operating environment	10°C~40°C (50°F~104°F) /15~95%RH
Battery	3V, CR2032
Size (H*W*D)	156mm*34mm*22mm
Weight	32g

EAR THERMOMETER DT-886

CEM DT-886 Infrared Ear Thermometer has a unique Thermoscan Feedback system that confirms the thermometer is in the correct position and then confirms an accurate temperature reading has been taken by a constant light and a beep

- °C/°F Temperature Reading
- Accurate and safe for newborns and the whole family
- Ultra soft and gentle
- Tip is warmed up for accuracy and extra comfort
- Memory recalls last 8 temperatures.

• DT-886

SPECIFICATIONS (Check the CEM web for detailed specifications)

Temperature unit	°C/°F
Body Temperature range	32.0°C~42.9°C/95°F~109°F
Basic accuracy	35.5°C~42.0°C (±0.1°C/0.2°F)
Resolution	0.1°C/0.1°F
Response time	1s
Operating environment	5°C~40°C (41°F~104°F) /15~95%RH
Battery	3V Button battery
Size (H*W*D)	155mm*50mm*33mm
Weight	68g

BLOOD PRESSURE MONITOR BP-106/96H

BP-96H/106 handcuff is suitable for wrists from 135 to 195mm circumference, the blood pressure monitor reads just itself to identify the necessary pumping pressure, if the pumping pressure set in the factory is not sufficient, the device identifies this and continues pumping.

FEATURES:

- 85 memory locations
- Low battery Indication
- The date and time are displayed and stored together with every blood pressure value

SPECIFICATIONS (Check the CEM web for detailed specifications)

Display	Digital LCD display
Measurement	Oscillometric method
Pressure Display Range	0-299mmHg
Measurement Range	Pressure: 30 to 280 mmHg
Pulse rate	40 to 199 beats/min
Accuracy	Pressure: Within ±5 mmHg
	Pulse rate: Within ±5% of reading
Power Supply	2×3V "AAA" Size Batteries
Operating Environment	10~40°C / 15%~85%RH
Storage Environment	-10~50°C / 10%~93%RH
Measurable Arm Circumference	125mm~220mm
Safety Classification	Internal power: Type B
Inflation	Automatic inflation with pumping
Air Release	Automatic rapid air release
Pressure Detection	Electrostatic capacity pressure sensor
Pulse Detection	Electrostatic capacity pressure sensor

• BP-106

• BP-96H

WHAT ARE THE VARIOUS STANDARDS WE USE FOR OUR PRODUCTS?

The standards used for designing and manufacturing our products varies product wise. These standards are used to provide the users with the highest quality product possible, to provide un-hindered usage of the equipment under various environmental conditions. We enumerate below some of the standards that we comply with for designing and manufacturing our products:

EMC

Electromagnetic compatibility (EMC) is the branch of electrical engineering concerned with the unintentional generation, propagation and reception of electromagnetic energy which may cause unwanted effects such as electromagnetic interference (EMI) or even physical damage in operational equipment. The goal of EMC is the correct operation of different equipment in a common electromagnetic environment.

EMC pursues two main classes of issue. Emission is the generation of electromagnetic energy, whether deliberate or accidental, by some source and its release into the environment. EMC studies the unwanted emissions and the counter measures, which may be taken in order to reduce unwanted emissions. The second class, susceptibility is the tendency of electrical equipment, referred to as the victim, to malfunction or break down in the presence of unwanted emissions, which are known as Radio frequency interference (RFI). Immunity is the opposite of susceptibility, being the ability of equipment to function correctly in the presence of RFI, with the discipline of "hardening" equipment being known equally as susceptibility or immunity. A third class studied is coupling, which is the mechanism by which emitted interference reaches the victim

Interference mitigation, and hence electromagnetic compatibility may be achieved by addressing any or all of these issues, i.e., quieting the sources of interference, inhibiting coupling paths and/or hardening the potential victims. In practice, many of the engineering techniques used, such as grounding and shielding, apply to all three issues.

EN 61326-1:2013

Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements

Overview

Part 1 of the BS EN series outlines the general requirements behind electromagnetic compatibility (EMC) emissions and immunity requirements for electrical measurement and test equipment.

It specifies requirements for immunity and emissions regarding EMC that are generally applicable to electrical measurement and test equipment, electrical control equipment and electrical laboratory equipment intended for professional, industrial-process, industrial-manufacturing and educational use.

The 2013 version is a technical revision of the 2006 edition which was withdrawn on 14 August 2015. After this date, the 2013 version of the standard must be used to meet the essential requirements of the EMC Directive. NB: The 2013 version is identical to IEC 61326-1, Ed. 2.0 (2012-07).

Who is the standard for?

This standard is of key importance to manufacturers selling scientific, test and measurement equipment in Europe and EMC testing and certification bodies.

What does the standard cover?

BS EN 61326-1 defines the immunity environments for different locations: Basic, Industrial, Controlled Electromagnetic (EM) and Portable Test and Measurement
Depending on the electromagnetic environments the equipment is operated in, different emission and immunity test requirements are applicable.

Instruments and equipment within the scope of this standard may often be geographically widespread and therefore operate under a wide range of environmental conditions. By limiting undesired electromagnetic emissions, users of this standard can ensures that no other equipment, installed nearby, is unduly influenced by the equipment under consideration.

Complex electric and electronic systems should require EMC planning in all phases of their design and installation, taking into consideration the electromagnetic environment, any special requirements and the severity of failures.

EN:61010-1

IEC 61010 specifies general safety requirements for the following types of electrical equipment and their accessories, wherever they are intended to be used. a) Electrical test and measurement equipment

This is equipment which by electromagnetic means tests, measures, indicates or records one or more electrical or physical quantities, also non-measuring equipment such as signal generators, measurement standards, power supplies for laboratory use, transducers, transmitters, etc.

Who is the standard for?

This is equipment which by electromagnetic means tests, measures, indicates or records one or more electrical or physical quantities, also non-measuring equipment such as signal generators, measurement standards, power supplies for laboratory use, transducers, transmitters, etc. This includes bench-top power supplies intended to aid a testing or measuring operation on another piece of equipment. Power supplies intended to power equipment are within the scope of IEC 61558 (see 1.1.2 h).

This standard also applies to test equipment integrated into manufacturing processes and intended for testing manufactured devices. Manufacturing test equipment is likely to be installed adjacent to and interconnected with industrial machinery in this application.

This is equipment, which controls one, or more output quantities to specific values, with each value determined by manual setting, by local or remote programming, or by one or more input variables.

This is equipment, which measures, indicates, monitors, inspects or analyses materials, or is used to prepare materials, and includes in vitro diagnostic (IVD) equipment.

This equipment may also be used in areas other than laboratories; examples include self-test IVD equipment to be used in the home and inspection equipment to be used to check people or material during transportation.

What does the standard cover?

The purpose of the requirements of this standard is to ensure that HAZARDS to the OPERATOR and the surrounding area are reduced to a tolerable level. Requirements for protection against particular types of HAZARD are given in Clauses 6 to 13, as follows:

a) Electric shock or burn

b) Mechanical HAZARDS

c) Spread of fire from the equipment

d) Excessive temperature

e) Effects of fluids and fluid pressure

f) Effects of radiation, including lasers sources, and sonic and ultrasonic pressure

g) Liberated gases, explosion and implosion.

This standard also specifies methods of verifying that the equipment meets the requirements of this standard, through inspection, TYPE TESTS, ROUTINE TESTS, and RISK assessment.

This standard applies to equipment designed to be safe at least under the following conditions:

a) Indoor use;

b) Altitude up to 2000 m;

c) Temperature 5°C to 40°C;

d) Maximum relative humidity 80 % for temperatures up to 31°C decreasing linearly to 50 % relative humidity at 40°C;

e) MAINS supply voltage fluctuations up to ±10 % of the nominal voltage;

f) TRANSIENT OVERVOLTAGES up to the levels of OVERVOLTAGE CATEGORY II

INGRESS PROTECTOIN

A two-digit number established by the International Electro Technical Commission, is used to provide an Ingress Protection rating to a piece of electronic equipment or to an enclosure for electronic equipment.

The protection class after EN60529 are indicated by short symbols that consist of the two code letters IP and a code numeral for the amount of the protection.

Example: IP65 (NEMA 4)

The two digits represent different forms of environmental influence:

- The first digit represents protection against ingress of solid objects.
- The second digit represents protection against ingress of liquids.

The larger the value of each digit, the greater the protection. As an example, a product rated IP54 would be better protected against environmental factors than another similar product rated as IP42.

IP TABLE:

IP..	First digit: Ingress of solid objects	Second digit: Ingress of liquids
0	No protection	No protection
1	Protected against solid objects over 50mm e.g. hands, large tools.	Protected against vertically falling drops of water or condensation.
2	Protected against solid objects over 12.5mm e.g. hands, large tools.	Protected against falling drops of water, if the case is disposed up to 15 from vertical.
3	Protected against solid objects over 2.5mm e.g. wire, small tools.	Protected against sprays of water from any direction, even if the case is disposed up to 60 from vertical.
4	Protected against solid objects over 1.0mm e.g. wires.	Protected against splash water from any direction.
5	Limited protection against dust ingress. (no harmful deposit)	Protected against low pressure water jets from any direction. Limited ingress permitted.
6	Totally protected against dust ingress.	Protected against high pressure water jets from any direction. Limited ingress permitted.
7	N/A	Protected against short periods of immersion in water.
8	N/A	Protected against long, durable periods of immersion in water.
9k	N/A	Protected against close-range high pressure, high temperature spray downs.

IEC-60068-2-29

IEC 60068-2-29 provides a standard procedure for determining the ability of a specimen to withstand specified severities of non-repetitive or repetitive shocks. The purpose of this test is to reveal mechanical weakness and/or degradation in specified performances, or accumulated damage or degradation caused by shocks. In conjunction with the relevant specification, this may be used in some cases to determine the structural integrity of specimens or as a means of quality control. This test is primarily intended for unpackaged specimens and for items in their transport case when the latter may be considered to be part of the specimen. If an item is to be tested unpackaged, it is referred to as a test specimen. However, if the item is packaged, then the item itself is referred to as a product and the item and its packaging together are referred to as a test specimen.

Who is the standard for?

This standard is for testing the equipment for shocks and vibration during transportation and use of the equipment in various zones. This test is for Environmental testing, Electrical components, Electrical equipment, Electronic equipment and components, Impact testing, Bump tests, Mechanical testing, Testing conditions, Freight transport, Land transport.

IEC-60068-2-6

This part of IEC 68 gives a method of test, which provides a standard procedure to determine the ability of components, equipment and other articles, hereinafter referred to as specimens, to withstand specified severities of sinusoidal vibration.

The purpose of this test is to determine any mechanical weakness and/or degradation in the specified performance of specimens and to use this information, in conjunction with the relevant specification, to decide the acceptability of the specimens. In some cases, the test method may also be used to demonstrate the mechanical robustness of specimens and/or to study their dynamic behavior. Categorization of components can also be made on the basis of a selection from within the severities quoted in the test.

Who is the standard for?

This test is for

1. SINE VIBRATION TEST
2. SHOCK TEST
3. FALL TEST

CE Standard

CE marking is a mandatory conformity marking for certain products sold within the European Economic Area (EEA) since 1985.[1] The CE marking is also found on products sold outside the EEA that are manufactured in, or designed to be sold in, the EEA. This makes the CE marking recognizable worldwide even to people who are not familiar with the European Economic Area. It is in that sense similar to the FCC Declaration of Conformity used on certain electronic devices sold in the United States.

The CE marking is the manufacturer's declaration that the product meets the requirements of the applicable EC directives.[2]

EN: 60825-1

BS EN 60825-1:2014 Safety of laser products. Equipment classification and requirements is applicable to the safety of laser products emitting laser radiation in the wavelength range 180 nm to 1 mm. It provides a classification scheme and engineering, labelling and information requirements.
Its primary aim is to provide a classification scheme to assist users of laser products make informed decisions regarding the risks associated with intentional and unintended exposure to laser radiation.

In addition to covering requirements for products, the use of correct marking of laser products and systems is also covered, from a protection of persons in a workplace perspective, by the Health and Safety at Work etc Act. Therefore, businesses using lasers or laser products in the workplace can comply with BS EN 60825-1 in order to show due diligence.

BS EN 60825-1:2014 contents include:

- Normative references
- Terms and definitions
- Engineering specifications
- Labelling
- Other informational requirements
- Additional requirements for specific laser products
- Classification
- Determination of the accessible emission level

FDA CERTIFICATION

This is the certification provided by the FOOD & DRUG ADMINISTRATION Authorities of USA for adhering to the guidelines provided by them for marketing products falling under their purview.

CE0197

CE 0197 is a certification of medical quality used by the European community, analogous to FDA certification in the United States.

The CE Mark, which is affixed to a product or its packaging, is considered proof that a product has met the requirements of the harmonized European standard, or directive. "CE" refers to Communauté Européen. Translated from the French, this literally means European Community. The European Commission, which administers the program, describes the CE Mark as a "passport" for goods to be sold freely within the internal European market. It is required by law if the product falls under one of the New Approach Directives.

It is not a quality mark, nor is it a mark for consumers. Intended for Member State authorities, it is the visible sign to those authorities that your product is in compliance with the New Approach Directives. All manufacturers are required to affix the CE mark to products that are governed by New Approach Directives. CE marking on a product indicates to all authorities that the product is in compliance with the essential health and safety requirements of all directives that apply to the product.

FCC

The FCC Declaration of Conformity or the FCC label or the FCC mark is a certification mark employed on electronic products manufactured or sold in the United States which certifies that the electromagnetic interference from the device is under limits approved by the Federal Communications Commission.The FCC label is found even on products sold outside the US territory, because they are either products manufactured in the US and had been exported, or they are also sold in the US. This makes the FCC label recognizable worldwide even to people to whom the name of the agency Federal Communications Commission is not familiar.

IEC 61010-031:2015

IEC 61010-031:2015 specifies safety requirements for hand-held and hand-manipulated probe assemblies of the types described below, and their related accessories. These probe assemblies are for direct electrical connection between a part and electrical test and measurement equipment. They may be fixed to the equipment or be detachable accessories for the equipment. It has the status of a group safety publication in accordance with IEC GUIDE 104. IEC 61010-031 is a stand-alone standard.

What are Measurement Categories (CAT I, CAT II, etc...)?

Electrical test & measurement tools will be assigned to 4 different designations from I - IV. These categories can be confusing; therefore, National Instruments has developed this tutorial to help customers understand what these categories mean. Tools that interact with electricity are designed for specific applications and conditions. Exceeding or deviating from application parameter can lead to inaccurate measurements or injury. With that said, let's take a closer look at the four primary measurement categories for electrical tools.

Measurement categories can be broken down into several categories: CATI, CATII, CATIII, and CAT IV.

Measurement Category I: This category is for measurements of voltages from specially protected secondary circuits. Such voltage measurements include signal levels, special equipment, limited-energy parts of equipment, circuits powered by regulated low-voltage sources, and electronics.

Measurement Category II: This category refers to local-level electrical distribution, such as that provided by a standard wall outlet or plug in loads (for example, 115 AC voltage for U.S. or 200 AC voltage for Europe). Examples of Measurement Category II are measurements performed on household appliances, portable tools, and similar modules.

Measurement Category III: This category refers to measurements on hard-wired equipment in fixed installations, distribution boards, and circuit breakers. Other examples are wiring, including cables, bus bars, junction boxes, switches, socket outlets in the fixed installation, and stationary motors with permanent connections to fixed installations.

Measurement Category IV: This category refers to origin of installation or utility level measurements on primary over-current protection devices and on ripple control units.

Measurement Categories are used to rate test instruments on their ability to resist a voltage spike, which is applied through a specific resistance. The higher the category, the more risk there that a high voltage can overload a circuit and cause electrical and physical damage. Usually, the higher the CAT (category) rating, the safer the rating.

Rated Voltage	IEC 61010-1 2nd Edition			UL 61010B-1 (UL 31111-1)		
	CAT IV	CAT III	CAT II	CAT III	CAT II	CAT I
150V	4,000V	2,500V	1,500V	2,500V	1,500V	800V
300V	6,000V	4,000V	2,500V	4,000V	2,500V	1,500V
600V	8,000V	6,000V	4,000V	6,000V	4,000V	2,500V
1,000V	12,000V	8,000V	6,000V	8,000V	6,000V	4,000V
Resistance	2 Ω	2 Ω	12 Ω	2 Ω	12 Ω	30 Ω

TUV & GS

TUV stands for (Technischer Überwachungsverein, English translation: Technical Inspection Association). But the actual name of the organization has become obscure through the ages especially since the organization has developed an international reputation. The acronym of TUV only relates well to the German name.

You will also notice the GS Mark right next to the TUV Mark on. The GS Mark indicates that it was tested and complies with the minimum requirements of the German Equipment and Product Safety Act or GPSG. The GS is an acronym for Geprüfte Sicherheit. The GS Mark stands for Safety Tested and is a licensed mark of the German government. It may only be issued by an accredited product safety testing and certification agency such as TUV.

The GS Mark symbolizes safety and quality to German consumers and manufacturers alike - much like FM or UL in the USA. Third-party testing by these types of agencies provides customers the assurance that products have undergone performance testing and meets design specifications.

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