

HIOKI

DIGITAL MULTIMETER DT4200 Series



NEW

DT4261



Excludes DT4281 and DT4282

DT 4200 SERIES

MADE IN JAPAN



Newly released "DT4261" for wireless communication and DC high voltage measurement!

NEW DT4261

Bluetooth® wireless technology support for recording and managing measurement data

Now joined by the DT4261!



Bluetooth® communication with Z3210 attached to DT4261 Bluetooth®

Install the Wireless Adapter Z3210 to the DT4261 to enable Bluetooth® communications.

With the Z3210, you can transfer data directly to an Excel® file or pair the instrument with GENNECT Cross.



Attach to enable Bluetooth® wireless technology



Transport to the Excel® file



Transport to GENNECT Cross

Z3210
For more details



Manage measurement data using GENNECT Cross

Pair the DT4261 built in with Bluetooth® wireless technology with the free GENNECT Cross mobile app to further data management, processing and report exporting on your mobile device.

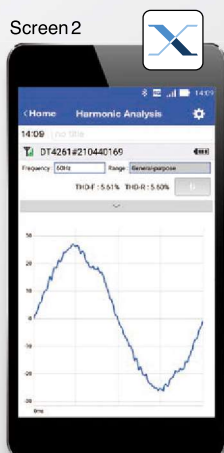
GENNECT
Cross
For more details



Transfer data to a tablet wirelessly



Take a picture of the test location and map measured values on it



View and verify waveforms on your mobile device like on an oscilloscope



Troubleshoot with simple harmonic analysis in the field



Mail



Cloud



- Save data and create reports right on the App
- Share data via cloud services or E-mail

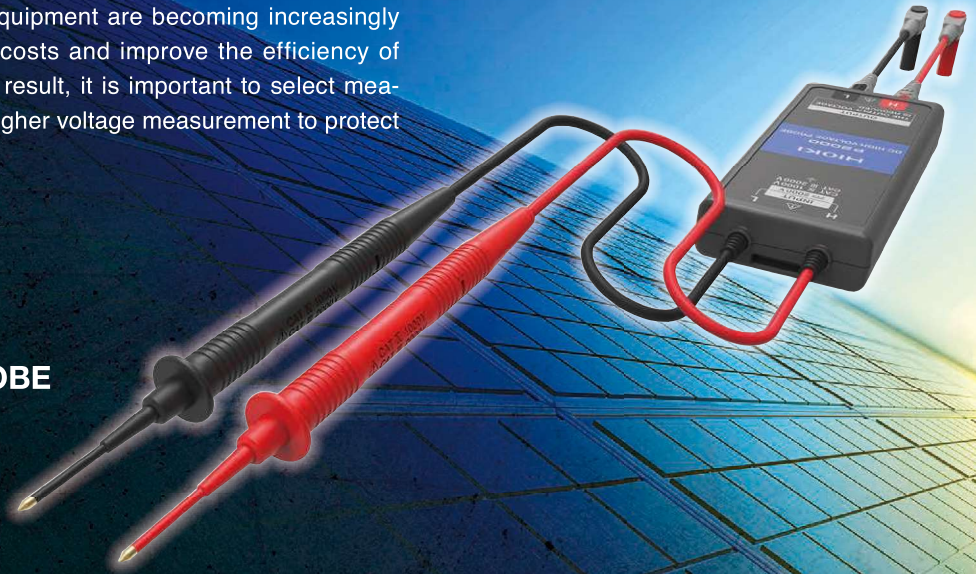
Measurement up to CAT III 2000 V with the DC High Voltage Probe P2000 in Combination with DT4261

Safe Inspection of Solar Installations with High Voltage

Photovoltaic power generation equipment are becoming increasingly high-voltage in order to reduce costs and improve the efficiency of power generation systems. As a result, it is important to select measuring instruments that support higher voltage measurement to protect the safety of inspection workers.

NEW

DC HIGH VOLTAGE PROBE P2000 *Sold separately



Safe testers that protect workers from dangerous accidents

Built-in voltage input terminal protection fuse to prevent internal short circuits



The DT4255's voltage input terminals incorporate a protective fuse so that contamination of the instrument's internal components with iron powder or other particulate matter will not result in an internal short-circuit. The fuse can be replaced easily on site.

Terminal shutter to prevent accidental insertion



The DT4281, DT4282 and DT4261 use terminal shutters to keep probes from being inserted into the wrong inlets. The shutters block whichever terminal is not being used based on the selected measurement function.

Equipped with a protection circuit to prevent accidents from incorrect voltage input



Resistance range measurement circuit



Input-based switching of the measurement circuit

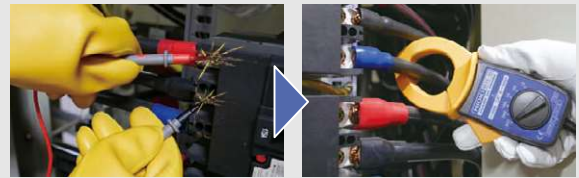
Over-input warning function



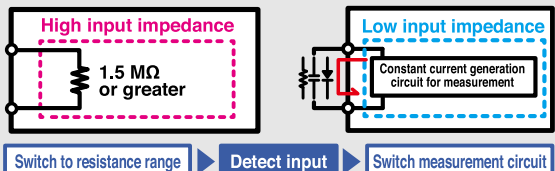
To prevent an accident, a warning function immediately notifies the operator if the DMM receives excessively high input.

*Red screen available on high-end models and DT4261, DT4223, DT4224 only.

Current measurement by AC clamp sensors to prevent accidents



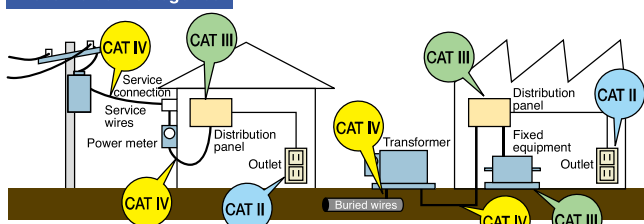
The DT4281, DT4261, DT4253, DT4255 and DT4256 eliminate the root cause of such accidents by providing clamp-on sensor-based current measurement functionality instead of using conventional probes.



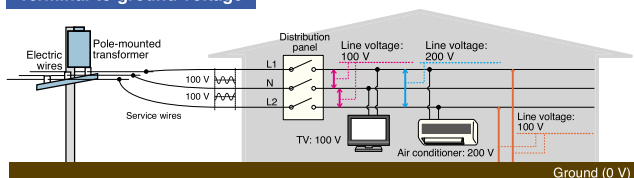
The DT4223 and DT4224 are equipped with a protection circuit that prevents electrical accidents that occur when voltage is input in the resistance range. The measurement circuit is switched after the instrument detects resistance, continuity, capacitance, or diode input. Even if you mistakenly input voltage with the instrument set to the resistance range, the high input impedance will limit the current flowing to the instrument to 1.5 mA or less to prevent potential hazards.



Measurement categories



Terminal-to-ground voltage



Safe measurement requires use of an instrument that suits the measurement location.

To ensure operators' ability to use measuring instruments safely, IEC 61010 classifies the locations in which instruments are used into a series of safety-based measurement categories (ranging from CAT II to CAT IV). Using an instrument that does not satisfy the required safety level can lead to an electrical accident.

CAT IV 600 V Terminal-to-ground voltage
Measurement category
suited to the location of use

High-end models	CAT III 1000 V / CAT IV 600 V
New Standard Model	CAT III 1000 V / CAT IV 600 V
Standard models	CAT III 1000 V / CAT IV 600 V
Pocket models	CAT III 600 V / CAT IV 300 V



Designed and manufactured in Japan to ensure high quality and guaranteed with a 3-year warranty for peace of mind

3 year
Warranty

All development, design, and manufacturing processes for almost all Hioki digital multimeters are carried out at our Head Office in Nagano Prefecture. Some of the industry's most advanced technological capabilities enable us to deliver products of the highest possible quality.



High-end models

Featuring high accuracy, extensive additional functionality, and a broad range of measurement parameters

DC V typical accuracy: $\pm 0.025\%$ rdg. ± 2 dgt.

Measurement categories: CAT III (1000 V), CAT IV (600 V)



For electrical work in the field
DT4281

Designed for maximum safety in the field when measuring current with clamp-on sensors.

DC voltage	60.000 mV to 1000.0 V
AC voltage	60.000 mV to 1000.0 V
DC + AC voltage	6.000 V to 1000.0 V
DC current	600.00 μ A to 600.00 mA
AC current	600.00 μ A to 600.00 mA
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function



For laboratory and research use
DT4282

Designed for use in laboratories and R&D applications where you wish to measure a wide variety of parameters.

DC voltage	60.000 mV to 1000.0 V
AC voltage	60.000 mV to 1000.0 V
DC + AC voltage	6.000 V to 1000.0 V
DC current	600.00 μ A to 10.000 A
AC current	600.00 μ A to 10.000 A
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

● Supported measurement parameter ● Supported measurement parameter (with model-specific variations) ● Unsupported measurement parameter
*The range figures given indicate the instrument's measurement ranges (not the range of measurable values).



New standard model

Supports wireless communication to increase work efficiency.
High voltage measurement up to CAT III 2000 V by connecting a dedicated probe.

DC V typical accuracy: $\pm 0.15\%$ rdg. ± 2 dgt.
Measurement categories: CAT III (1000 V), CAT IV (600 V)

Safe Inspection of Solar Installations with High Voltage

NEW

DC HIGH VOLTAGE PROBE P2000



By connecting the optional DC High Voltage Probe P2000, high voltage measurement up to CAT III 2000 V is now possible.

NEW



Multi-functional, on-site maintenance, mega solar DT4261

Go wireless with the Z3210!
For trouble analysis in the field.

Easily go wireless and manage your data digitally

WIRELESS ADAPTER Z3210



Wireless communication is supported in combination with the wireless adapter Z3210 (sold separately). In addition to working with the free "GENNECT Cross" application, the Excel® direct input function can also be used.

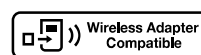
Why is CAT III 2000 V capability necessary?

According to the standards for Photovoltaic (PV) module safety qualification (IEC 61730-1), PV modules are treated as the overvoltage category III, and a measuring instrument in the measurement category III is required. Using instruments that can accommodate the appropriate measurement category serves to protect workers and equipment from serious accidents such as electric shock and burnout. Currently, adoption of 1500 V solar installation is growing, but instruments that can accommodate even higher voltages will be necessary in the future as larger and even more efficient systems enter into use.

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	6.000 V to 1000 V
DC current	600.0 mA to 10.00 A
AC current	600.0 mA to 10.00 A
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

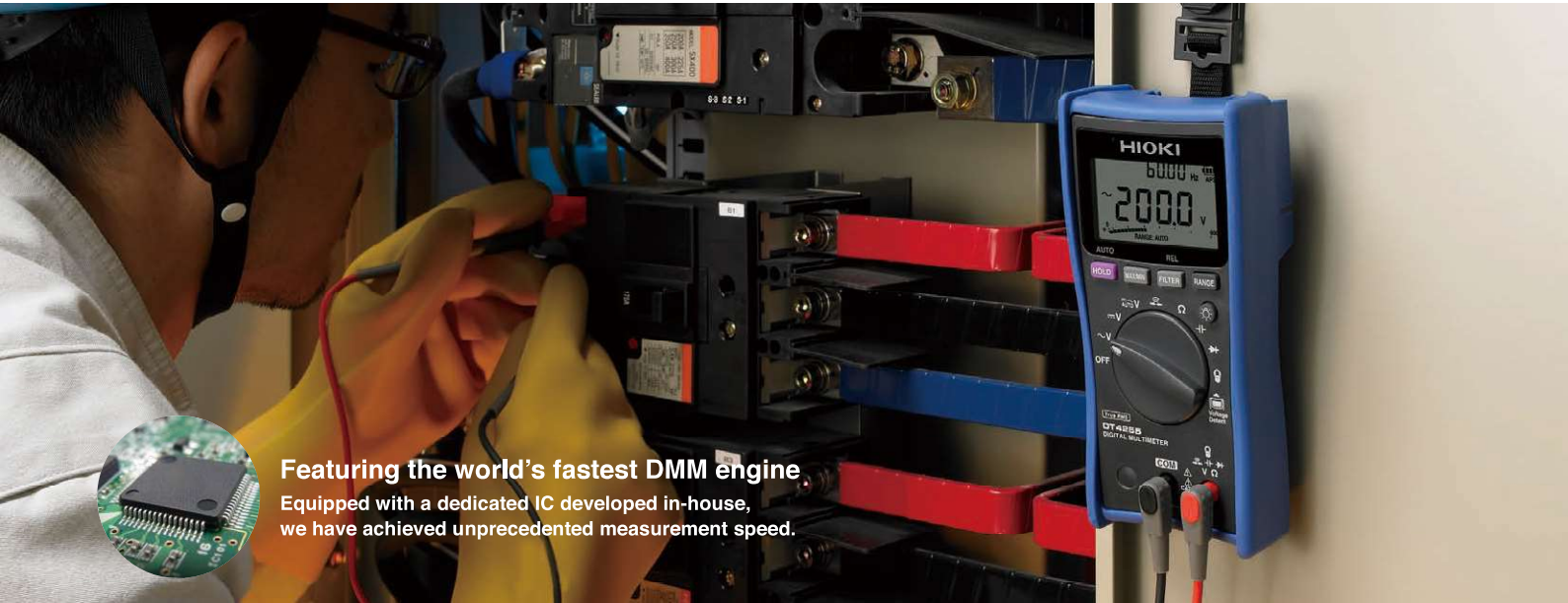
NEW **DT4261-90**
(Z3210 set product)

The DT4261-90, a set of DT4261 and Z3210, is also available. It is more economical than purchasing the DT4261 and Z3210 separately, and allows you to build a wireless communication environment with one purchase.



● Supported measurement parameter ● Unsupported measurement parameter

*The range figures given indicate the instrument's measurement ranges. Not the range of measurable values. Please see page 16 for details.



Featuring the world's fastest DMM engine
Equipped with a dedicated IC developed in-house,
we have achieved unprecedented measurement speed.

Standard models

Introducing a line of field-optimized instruments that
can be chosen based on the application at hand

DC V typical accuracy: $\pm 0.3\%$ rdg. ± 3 dgt.
Measurement categories: CAT III (1000 V), CAT IV (600 V)



**For laboratory and
research use**
DT4252

For laboratories and R&D
applications where you
wish to measure a wide
variety of parameters.



**For instrumentation
4-20 mA**
DT4253

Measure
instrumentation, air-
conditioning equipment,
and gas-burning
devices.



**For electrical work
in the field**
DT4255

Designed for
maximum safety with
voltage measurement
terminals that are
protected by a fuse.



**Multifunction
model**
DT4256

Delivers maximum
functionality for use
in a wide range of
settings.

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	6.000 A to 10.00 A
AC current	6.000 A to 10.00 A
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	60.00 μ A to 60.00 mA
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	60.00 mA to 10.00 A
AC current	600.0 mA to 10.00 A
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

● Supported measurement parameter ● Supported measurement parameter (with model-specific variations) ● Unsupported measurement parameter
The range figures given indicate the instrument's measurement ranges (not the range of measurable values).

*Your instrument can be used to measure voltages in excess of 1000 V DC if and only if both of the following conditions are satisfied:
1. The circuit under measurement is isolated from the commercial power grid. 2. The circuit under measurement is isolated from ground.



Featuring the world's fastest DMM engine
Equipped with a dedicated IC developed in-house,
we have achieved unprecedented measurement speed.

Pocket models

Featuring a compact body for ergonomic hold
and a reliable, safe design

DC V typical accuracy: $\pm 0.5\%$ rdg. ± 5 dgt.
Measurement categories: CAT III (600 V), CAT IV (300 V)



**For electrical
work in the field**

DT4221

Delivering maximum field safety
for workers whose principal use
is voltage measurement.



**For multiple
applications**

DT4222

For laboratories and R&D
applications to measure a wide
variety of parameters.



**For electrical
work in the field**

DT4223

Delivering maximum field safety
for workers whose principal use
is voltage measurement.



**For multiple
applications**

DT4224

For laboratories and R&D
applications to measure a wide
variety of parameters.

Circuit breaker
false trip
prevention built-in

DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function












DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

● Supported measurement parameter ● Supported measurement parameter (with model-specific variations) ● Unsupported measurement parameter

*The range figures given indicate the instrument's measurement ranges (not the range of measurable values).

DT4200 Series Basic Comparison

Model category	High-end models		New standard models	Standard models				Pocket models			
Measurement type	Electrical work	General use	General use/ mega Solar	General use	Air conditioning/ instrumentation	Electrical work	General use	Electrical work	General use	Electrical work	General use
Model	DT4281	DT4282	DT4261 /DT4261-90* ¹	DT4252	DT4253	DT4255	DT4256	DT4221	DT4222	DT4223	DT4224
Appearance											
Basic Characteristics											
True RMS	✓		✓	✓				✓			
DC V basic accuracy	±0.025% rdg. ±2 dgt.		±0.15% rdg. ±2 dgt.	±0.3% rdg. ±5 dgt.		±0.3% rdg. ±3 dgt.		±0.5% rdg. ±5 dgt.			
Measurement items (Typical ranges are indicated; may not reflect maximum or minimum measurable signal)											
DC voltage	60 mV to 1000 V		600 mV to 1000 V, 2000V* ²	600 mV to 1000 V				600 mV to 600 V			
AC voltage	60 mV to 1000 V		6 V to 1000 V	6 V to 600 V				6 V to 600 V			
DC V + AC V	6 V to 1000 V		6 V to 1000 V	n/a				n/a			
DC A current	600 μA to 600 mA	600 μA to 10 A	600 mA to 10 A	6 A to 10 A	60 μA to 60 mA	n/a	60 mA to 10 A	n/a			
AC A current	600 μA to 600 mA	600 μA to 10 A	600 mA to 10 A	6 A to 10 A	n/a		600 mA to 10 A	n/a			
AC clamp	10 A to 1000 A	n/a	10 A to 1000 A	n/a	10 A to 1000 A			n/a			
Resistance	60 Ω to 600 MΩ		600 Ω to 60 MΩ	600 Ω to 60 MΩ				n/a	600 Ω to 60 MΩ		
Temperature	-40°C to 800°C		n/a	n/a	-40°C to 400°C		n/a	n/a			
Capacitance	1 nF to 100 mF		1 μF to 10 mF	1 μF to 10 mF				n/a	1 μF to 10 mF	n/a	1 μF to 10 mF
Frequency	99 Hz to 500 kHz		99 Hz to 99 kHz	99 Hz to 99 kHz				99 Hz to 9.9 kHz			
Continuity check	✓		✓	✓				✓			
Diode check	✓		✓	✓				n/a	✓	n/a	✓
Conductance	n/a	✓	n/a	n/a				n/a			
Voltage detection	n/a		n/a	n/a		✓		✓	n/a	✓	n/a
Additional Functions											
AUTO AC/DC V	n/a		✓	n/a	✓			✓	n/a	✓	n/a
Peak measurement	DC/AC		DC/AC	n/a				n/a			
Low-pass filter	Analog filter Cut-off: 630 Hz		Digital filter Pass-band: 100/500 Hz	Digital filter Pass-band: 100/500 Hz				Digital filter Pass-band: 100/500 Hz			
Display update setting	✓		n/a	n/a				n/a			
Hold display value	AUTO/MANUAL		AUTO/MANUAL	AUTO/MANUAL				MANUAL	AUTO/MANUAL		
Max/Min value display	✓ (Excluding average value display)		✓	✓				n/a			
Relative display	✓		n/a	✓				✓			
Decibel conversion	✓		n/a	n/a				n/a			
Percentage conversion display	✓		n/a	n/a	✓	n/a	✓	n/a			
DC voltage polarity check	✓		✓	n/a		✓		n/a			
Data storage											
Capacity	Max 400 data		n/a	n/a				n/a			
USB communication* ³	✓		✓	✓				n/a			
Bluetooth® communication* ⁴	n/a		✓	n/a				n/a			
Operating time											
Continuous operating time	Approx. 100 hours* ⁵		Approx. 130 hours* ⁶	Approx. 130 hours				Approx. 40 hours	Approx. 35 hours		
Power supply	Alkaline (LR6) battery x4/ Manganese(R6P) battery x4		Alkaline (LR6) battery x3	Alkaline (LR03) battery x4				Alkaline (LR03) battery x1			
Display											
Back light	✓		✓	✓				✓			
Dual display	✓		✓	✓				n/a			
Bar graph display	n/a		✓	✓				✓			
Safety											
Safety standard categories	CAT III 1000 V, CAT IV 600 V		CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V				CAT III 600 V, CAT IV 300 V			
Mis-insertion prevention shutters	✓		✓	n/a				n/a			
Circuit breaker false trip prevention	n/a		n/a	n/a				n/a	✓		

*1. Z3210 set product *2. 2000 V is supported only when using the optional DC HIGH VOLTAGE PROBE P2000

*3. Requires optional DT4900-01 Communication Package *4. Requires optional Z3210 wireless adapter *5. When using four AA alkaline batteries *6. When Z3210 is not installed

Glossary

Auto AC/DCV : Automatically detects and measures AC and DC voltage. **I Peak measurement** : After starting PEAK value measurement, check maximum and minimum instantaneous voltage and current values. **I Low-pass filter** : Cuts high frequency content to provide stable numerical values for measurement. **I Display update setting** : Reduces the display value update rate to stabilize measurements. **I Hold display value** : Manual: press the button to freeze the display. Auto: the display freezes automatically when the measurement value is stable. **I Max/Min value display** : Pressing the MAX/MIN button displays the maximum and minimum displayed measurement values. **I Relative display** : Pressing the REL button displays subsequent measurements as values relative to that displayed when the button was pressed. **I Decibel conversion** : Displays AC voltage measurements converted to decibel values (dbm/dbv) **I Percentage conversion display** : Displays 4 to 20 mA (or 0 to 20 mA) signals converted to 0 to 100% values. For the DT4253, only 4 to 20 mA.