

## DCM1500S

### Solar clamp meter



- 2000 V DC
- TRMS 1500 V AC
- 1500 A AC/DC
- Smart Hold
- Auto ranging
- MIN/MAX Hold
- Inrush Current
- Megger Link app compatible
- CAT IV 600V / CAT III 1000V
- Data logger
- PV test leads with MC4PV plugs

#### DESCRIPTION

Measuring up to 2000 V DC and 1500 V AC (using the PVHV Leads), as well as 1500A AC or DC, the DCM1500S is ideal for use in the installation, maintenance, monitoring and testing of photovoltaic systems as well standard AC or DC electrical equipment.

The meter is supplied with both standard 4mm leads as well as the new PVHV1 (4mm) and PVHV2 (MC4PV) HV lead sets. It has a large clear backlit display and an automatic torch in the jaw to assist use in poorly lit areas.

Using the free Megger Link App, the measurement value can be remotely monitored on a smart device using the built-in Bluetooth®. This will give a live trend graph and offer the ability to sample and log the values for later analysis.

The smart data-hold expands the standard hold function by giving the operator an audible warning if the "held" reading increases by 50 counts or above. Min/Max hold provides the ability to measure the maximum and minimum values over a period of time, with each value selectable in turn.

Other features include a High Frequency Rejection Filter, inrush current measurement, internal data logging, a non-contact volt seek mode and manual DC Amp zeroing.

In addition to voltage and current measurement the DCM1500S has the ability to measure Resistance, Diode, Capacitance, temperature and Frequency.

The DCM1500S is safety rated to IEC 61010-1 and IEC/EN61010-2-033 CAT IV 600V, and CAT III 1000V

#### APPLICATION

The DCM1500S is designed to be used on electrical systems and equipment, including Solar/Photovoltaic installations where, there is a need to measure current, volts, resistance and frequency. It is therefore intended for use while installing, maintaining, fault-finding or monitoring those systems.

The tactile barrier below the jaws of the instrument ensures a safe working distance for the operator's hand when measuring current on live uninsulated conductors, although additional personal protection must still be used.

The Smart Hold allows increases in measurements to be monitored with an audible tone.

The Max/Min and In-rush modes enable maximum load currents from equipment to be identified such as start-up currents to motors and heaters.

The DC current measurement can also be used in applications including battery monitoring, automotive, charging and load circuits, electric vehicle servicing, lift maintenance, UPS commissioning, servicing and maintenance, electro-plating plants and welding equipment servicing as well as domestic power generation from solar panels and wind-turbines.

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#### ADDITIONAL FEATURES

- 6,000 counts digital display
- Large white LED backlit display
- True RMS reading on ACA/ACV
- AC/DC  $\mu$ A Range
- Resistance, Diode, Capacitance & Frequency measurement
- °C/°F temperature function
- Inrush current
- DCA ZERO
- Torch light on trigger push
- Data Logging up to 1000 records
- Manual save mode
- Auto Power off
- DC mV Range

#### DC mV

| Range    | OL Reading | Resolution | Accuracy           |
|----------|------------|------------|--------------------|
| 600.0 mV | 660.0 mV   | 0.1 mV     | $\pm (0.7\% + 5D)$ |

#### DC Voltage

| Range   | OL Reading | Resolution | Accuracy           |
|---------|------------|------------|--------------------|
| 600.0 V | 660.0 V    | 0.1 V      | $\pm (0.7\% + 2D)$ |
| 1000 V  | 1100 V     | 1 V        |                    |

#### AC Voltage

| Range   | OL Reading | Resolution | Accuracy           |
|---------|------------|------------|--------------------|
| 600.0 V | 660.0 V    | 0.1 V      | $\pm (1.0\% + 5D)$ |
| 1000 V  | 1100 V     | 1 V        |                    |

#### PV DC Voltage (using PVHV1 or PVHV2 lead set)

| Range   | OL Reading | Resolution | Accuracy           |
|---------|------------|------------|--------------------|
| 600.0 V | 660.0 V    | 0.1 V      | $\pm (2.0\% + 5D)$ |
| 2000 V  | 2200 V     | 1 V        |                    |

#### PV AC Voltage (using PVHV1 or PVHV2 lead set)

| Range   | OL Reading | Resolution | Accuracy           |
|---------|------------|------------|--------------------|
| 600.0 V | 660.0 V    | 0.1 V      | $\pm (2.0\% + 5D)$ |
| 1500 V  | 1600 V     | 1 V        |                    |

#### AC/DC $\mu$ A

| Range         | OL Reading    | Resolution  | Accuracy           |
|---------------|---------------|-------------|--------------------|
| 400.0 $\mu$ A | 440.0 $\mu$ A | 0.1 $\mu$ A | $\pm (1.0\% + 3D)$ |
| 4000 $\mu$ A  | 4400 $\mu$ A  | 1 $\mu$ A   |                    |

#### AC/DC Current

| Range   | OL Reading | Resolution | Accuracy           |
|---------|------------|------------|--------------------|
| 60.00 A | 66.00 A    | 0.01 A     | $\pm (2.0\% + 5D)$ |
| 600.0 A | 660.0 A    | 0.1 A      |                    |
| 1500 A  | 1550 A     | 1 A        |                    |

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#### Frequency

| Range      | OL Reading | Resolution | Accuracy           |
|------------|------------|------------|--------------------|
| 100.00 Hz  | 100.00 Hz  | 0.01 Hz    | $\pm (0.3\% + 3D)$ |
| 1000.0 Hz  | 1000.0 Hz  | 0.1 Hz     |                    |
| 10.000 kHz | 10.000 kHz | 0.001 kHz  |                    |

#### Resistance

| Range            | OL Reading       | Resolution       | Accuracy           |
|------------------|------------------|------------------|--------------------|
| 600.0 $\Omega$   | 660.0 $\Omega$   | 0.1 $\Omega$     | $\pm (0.9\% + 5D)$ |
| 6.000 k $\Omega$ | 6.600 k $\Omega$ | 0.001 k $\Omega$ | $\pm (0.9\% + 2D)$ |
| 60.00 k $\Omega$ | 66.00 k $\Omega$ | 0.01 k $\Omega$  |                    |
| 600.0 k $\Omega$ | 660.0 k $\Omega$ | 0.1 k $\Omega$   |                    |

#### Continuity

Built-in buzzer sounds when measured resistance is less than 20 $\Omega$  and the sound is off when measured resistance is more than 200  $\Omega$ , between 20  $\Omega$  to 200  $\Omega$  the buzzer may be either on or off.

#### Diode

| Range   | OL Reading | Resolution | Accuracy           |
|---------|------------|------------|--------------------|
| 1.500 V | 1.550 V    | 0.001 V    | $\pm (0.9\% + 2D)$ |

#### Capacitance

| Range         | OL Reading    | Resolution  | Accuracy           |
|---------------|---------------|-------------|--------------------|
| 100.0 $\mu$ F | 110.0 $\mu$ F | 0.1 $\mu$ F | $\pm (1.9\% + 2D)$ |
| 1000 $\mu$ F  | 1100 $\mu$ F  | 1 $\mu$ F   |                    |

#### VoltSeek

**Voltage Range of High Sensitivity :** 80 V ~ 1000 V (At the top edge of the jaw)

**Voltage Range of Low Sensitivity :** 160 V ~ 1000 V (At the top edge of the jaw)

#### Temperature

| Range                                   | OL Reading         | Resolution       | Accuracy          |
|---|--------------------|------------------|-------------------|
| -40.0 $^{\circ}$ C – 400.0 $^{\circ}$ C | 440.0 $^{\circ}$ C | 0.1 $^{\circ}$ C | $\pm (1\% + 20D)$ |
| -40.0 $^{\circ}$ F – 752.0 $^{\circ}$ F | 824.0 $^{\circ}$ F | 0.1 $^{\circ}$ F | $\pm (1\% + 36D)$ |

The accuracy does not include the accuracy of the thermocouple probe.

Accuracy specification assumes surrounding temperature stable to  $\pm 1$   $^{\circ}$ C.

For surrounding temperature changes of  $\pm 2$   $^{\circ}$ C rated accuracy applies after 2 hours.

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### ORDERING INFORMATION

| Item (qty)   | Part No:        |
|--|-----------------|
| <b>DCM1500S</b>                                    | <b>1013-357</b> |
| <b>Included Accessories</b>                        |                 |
| DCM 4mm Lead Set (Inc. Probes and Crocodile Clips) | 1013-358        |
| TP-90 Thermocouple Probe                           | 1013-364        |
| PVHV1 Lead (4mm Plugs)                             | 1013-362        |
| PVHV2 Lead (MC4PV Plugs)                           | 1013-363        |
| Hard Carry Case                                    |                 |

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#### DCM1500S\_DS\_us\_V02

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