

# DIGITAL CLAMP METER

PCE-CM 6



- » **display range: 6000 counts**
- » **measurement range selection: automatic and manual**
- » **min, max and hold function**
- » **2-inch LC display**
- » **integrated LED torch**
- » **automatic power-off**

The digital clamp meter is a multifunctional meter for the precise measurement of alternating and direct voltage as well as alternating current that can be measured without direct contact to the line. The digital clamp meter is suitable for measuring resistance, temperature, diodes, continuity, frequencies and capacitance and is particularly useful for diagnosing electrical and electronic components.

For maximum measurement accuracy, the digital clamp meter supports True RMS for non-sinusoidal waveforms and a Low Impedance (LoZ) function to reduce interference. The non-contact voltage test enables reliable detection of voltages in cables and sockets.

The 2-inch LC display ensures clear readability, even under poor lighting conditions and an integrated LED torch makes it easier to work in dark environments. The device also offers automatic and manual measurement range selection, allowing it to be flexibly adapted to different measuring situations. Other functions include overload protection, data hold, min, max and an automatic power-off after 15 minutes to conserve battery life. The power-off can also be deactivated for longer measurements.

Compact and easy to use, the digital clamp meter is ideal for electrical installations, maintenance work and use in automation technology. It enables safe and efficient measurements, often without direct intervention in the circuit.

Specification

| Direct voltage DC       |                          |
|-------------------------|--------------------------|
| Measurement range up to | 0,1 ... 600 mV           |
| Resolution              | 0,1 mV                   |
| Accuracy                | ±(0.5 % of Rd +5 digits) |
| Overload                | 1000 V                   |

| Direct voltage DC       |                          |
|-------------------------|--------------------------|
| Measurement range up to | 600 mV ... 6 V           |
| Resolution              | 0,001 V                  |
| Accuracy                | ±(0.5 % of Rd +5 digits) |

| Direct voltage DC       |                          |
|-------------------------|--------------------------|
| Measurement range up to | 6 ... 60 V               |
| Resolution              | 0,01 V                   |
| Accuracy                | ±(0.5 % of Rd +5 digits) |

| Direct voltage DC       |                          |
|-------------------------|--------------------------|
| Measurement range up to | 60 ... 600 V             |
| Resolution              | 0,1 V                    |
| Accuracy                | ±(0.5 % of Rd +5 digits) |

| Direct voltage DC       |                          |
|-------------------------|--------------------------|
| Measurement range up to | 600 ... 1000 V           |
| Resolution              | 1 V                      |
| Accuracy                | ±(0.8 % of Rd +5 digits) |

| Capacity                |                          |
|-------------------------|--------------------------|
| Measurement range up to | 1 ... 10 nF              |
| Resolution              | 0,001 nF                 |
| Accuracy                | ±(4.0 % of Rd +5 digits) |

| Capacity                |                          |
|-------------------------|--------------------------|
| Measurement range up to | 10 ... 100 nF            |
| Resolution              | 0,001 nF                 |
| Accuracy                | ±(4.0 % of Rd +5 digits) |

| Capacity                |                          |
|-------------------------|--------------------------|
| Measurement range up to | 100 ... 1000 nF          |
| Resolution              | 0,01 nF                  |
| Accuracy                | ±(4.0 % of Rd +5 digits) |

| Capacity                |                          |
|-------------------------|--------------------------|
| Measurement range up to | 1000 nF ... 10 µF        |
| Resolution              | 0,1 nF                   |
| Accuracy                | ±(4.0 % of Rd +5 digits) |

| Capacity |  |
|----------|--|
|----------|--|

| General technical data                 |                                                                                         |
|----------------------------------------|-----------------------------------------------------------------------------------------|
| Measuring functions                    | MIN, MAX, HOLD                                                                          |
| Display type                           | LCD                                                                                     |
| Display size                           | 2 Inch                                                                                  |
| Standard(s)                            | IEC61010-1, IEC 61010-2-032, IEC 61010-2-033                                            |
| Maximum cable diameter                 | 35 mm                                                                                   |
| Automatic power-off                    | 15 min                                                                                  |
| Automatic power-off can be deactivated | Yes                                                                                     |
| Safety standard                        | CAT III 1000V, CAT IV 600 V                                                             |
| max. input impedance                   | 10 M Ω                                                                                  |
| Measurement range selection            | Automatic, Manual                                                                       |
| Diode test                             | Test current: approx. 1.5 mA<br>Test voltage: approx. 1 V<br>Overload protection: 250 V |
| Display range                          | 6000 counts                                                                             |
| Protection class (device)              | IP20                                                                                    |
| (Rechargeable) battery                 | 3 x 1,5 V AAA battery , Alkali-manganese                                                |
| Capacity                               | 1200 mAh                                                                                |
| Operating conditions                   | 0 ... 40 °C , 0 ... 80 % RH                                                             |
| Storage conditions                     | -10 ... 60 °C , 0 ... 70 % RH                                                           |
| Dimensions ( L x W x H )               | 240 x 85 x 45 mm                                                                        |
| Weight                                 | 327 g                                                                                   |

|                         |                               |
|-------------------------|-------------------------------|
| Measurement range up to | 10 ... 100 $\mu$ F            |
| Resolution              | 0,001 $\mu$ F                 |
| Accuracy                | $\pm(4.0\%$ of Rd +5 digits)  |
| <b>Capacity</b>         |                               |
| Measurement range up to | 100 ... 1000 $\mu$ F          |
| Resolution              | 0,01 $\mu$ F                  |
| Accuracy                | $\pm(4.0\%$ of Rd +5 digits)  |
| <b>Capacity</b>         |                               |
| Measurement range up to | 1000 $\mu$ F ... 10 mF        |
| Resolution              | 0,1 $\mu$ F                   |
| Accuracy                | $\pm(4.0\%$ of Rd +5 digits)  |
| <b>Capacity</b>         |                               |
| Measurement range up to | 10 ... 100 mF                 |
| Resolution              | 0,001 mF                      |
| Accuracy                | $\pm(5.0\%$ of Rd +10 digits) |
| <b>AC voltage</b>       |                               |
| Measurement range up to | 0,1 ... 600 mV                |
| Resolution              | 0,1 mV                        |
| Accuracy                | $\pm(0.8\%$ of Rd +5 digits)  |
| Overload                | 750 V                         |
| Frequency range         | 40 ... 1000 Hz                |
| <b>AC voltage</b>       |                               |
| Measurement range up to | 600 mV ... 6 V                |
| Resolution              | 0,1 mV                        |
| Accuracy                | $\pm(0.8\%$ of Rd +5 digits)  |
| Frequency range         | 40 ... 1000 Hz                |
| <b>AC voltage</b>       |                               |
| Measurement range up to | 6 ... 60 V                    |
| Resolution              | 0,001 V                       |
| Accuracy                | $\pm(0.8\%$ of Rd +5 digits)  |
| Frequency range         | 40 ... 1000 Hz                |
| <b>AC voltage</b>       |                               |
| Measurement range up to | 60 ... 600 V                  |
| Resolution              | 0,01 V                        |
| Accuracy                | $\pm(0.8\%$ of Rd +5 digits)  |
| Frequency range         | 40 ... 1000 Hz                |
| <b>AC voltage</b>       |                               |
| Measurement range up to | 600 ... 750 V                 |
| Resolution              | 0,1 V                         |

|                               |                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------|
| Accuracy                      | ±(1.0 % of Rd +5 digits)                                                                      |
| Frequency range               | 40 ... 1000 Hz                                                                                |
| <b>Alternating current AC</b> |                                                                                               |
| Measurement range up to       | 0,1 ... 60 A                                                                                  |
| Resolution                    | 0,01 A                                                                                        |
| Accuracy                      | ±(2,5 % of Rd +8 digits) / VFD: ±(5.0 % of Rd +10 digits) / INRUSH: ±(5.0 % of Rd +10 digits) |
| Frequency range               | 40 ... 400 Hz                                                                                 |
| <b>Alternating current AC</b> |                                                                                               |
| Measurement range up to       | 60 ... 600 A                                                                                  |
| Resolution                    | 0,1 A                                                                                         |
| Accuracy                      | ±(2,5 % of Rd +8 digits) / VFD: ±(5.0 % of Rd +10 digits) / INRUSH: ±(5.0 % of Rd +10 digits) |
| Frequency range               | 40 ... 400 Hz                                                                                 |
| <b>Alternating current AC</b> |                                                                                               |
| Measurement range up to       | 600 ... 1000 A                                                                                |
| Resolution                    | 1 A                                                                                           |
| Accuracy                      | ±(2,5 % of Rd +8 digits) / VFD: ±(5.0 % of Rd +10 digits) / INRUSH: ±(5.0 % of Rd +10 digits) |
| Frequency range               | 40 ... 60 Hz                                                                                  |
| <b>Resistance</b>             |                                                                                               |
| Measurement range up to       | 0,1 ... 600 Ω                                                                                 |
| Resolution                    | 1 Ω                                                                                           |
| Accuracy                      | ±(1.0 % of Rd +5 digits)                                                                      |
| <b>Resistance</b>             |                                                                                               |
| Measurement range up to       | 600 Ω ... 6 kΩ                                                                                |
| Resolution                    | 1 Ω                                                                                           |
| Accuracy                      | ±(1.0 % of Rd +5 digits)                                                                      |
| <b>Resistance</b>             |                                                                                               |
| Measurement range up to       | 6 ... 60 kΩ                                                                                   |
| Resolution                    | 0,001 kΩ                                                                                      |
| Accuracy                      | ±(1.0 % of Rd +5 digits)                                                                      |
| <b>Resistance</b>             |                                                                                               |
| Measurement range up to       | 60 ... 600 kΩ                                                                                 |
| Resolution                    | 0,01 kΩ                                                                                       |
| Accuracy                      | ±(1.0 % of Rd +5 digits)                                                                      |
| <b>Resistance</b>             |                                                                                               |
| Measurement range up to       | 600 kΩ ... 6 MΩ                                                                               |
| Resolution                    | 0,1 kΩ                                                                                        |
| Accuracy                      | ±(1.0 % of Rd +5 digits)                                                                      |
| <b>Resistance</b>             |                                                                                               |

|                         |                                                |
|-------------------------|------------------------------------------------|
| Measurement range up to | 6 ... 60 M $\Omega$                            |
| Resolution              | 0,001 M $\Omega$                               |
| Accuracy                | $\pm(1.0\%$ of Rd +5 digits)                   |
| <b>Frequency</b>        |                                                |
| Measurement range up to | 0 ... 10 Hz                                    |
| Resolution              | 0,001 Hz                                       |
| Accuracy                | $\pm(1.0\%$ of Rd +3 digits)                   |
| <b>Frequency</b>        |                                                |
| Measurement range up to | 10 ... 100 Hz                                  |
| Resolution              | 0,001 Hz                                       |
| Accuracy                | $\pm(1.0\%$ of Rd +3 digits)                   |
| <b>Frequency</b>        |                                                |
| Measurement range up to | 100 ... 1000 Hz                                |
| Resolution              | 0,01 Hz                                        |
| Accuracy                | $\pm(1.0\%$ of Rd +3 digits)                   |
| <b>Frequency</b>        |                                                |
| Measurement range up to | 1000 Hz ... 10 kHz                             |
| Resolution              | 0,1 Hz                                         |
| Accuracy                | $\pm(1.0\%$ of Rd +3 digits)                   |
| <b>Frequency</b>        |                                                |
| Measurement range up to | 10 ... 100 kHz                                 |
| Resolution              | 0,001 kHz                                      |
| Accuracy                | $\pm(1.0\%$ of Rd +3 digits)                   |
| <b>Frequency</b>        |                                                |
| Measurement range up to | 100 ... 1000 kHz                               |
| Resolution              | 0,01 kHz                                       |
| Accuracy                | $\pm(1.0\%$ v.Mw. +3 Digits)                   |
| <b>Frequency</b>        |                                                |
| Measurement range up to | 1000 kHz ... 10 MHz                            |
| Resolution              | 0,1 kHz                                        |
| Accuracy                | $\pm(3.0\%$ v.Mw. +3 Digits)                   |
| <b>Temperature</b>      |                                                |
| Measurement range up to | -20 ... 0 °C                                   |
| Resolution              | 0,1 °C                                         |
| Accuracy                | $\pm 3\text{ }^{\circ}\text{C}$                |
| <b>Temperature</b>      |                                                |
| Measurement range up to | 0 ... 400 °C                                   |
| Resolution              | 0,1 °C                                         |
| Accuracy                | $\pm 1.0\%$ or $\pm 2\text{ }^{\circ}\text{C}$ |

**Temperature**

Measurement range up to 400 ... 1000 °C

Resolution 0,1 °C

Accuracy  $\pm 2.0$  %

**Temperature**

Measurement range up to -4 ... +32 °F

Resolution 1 °F

Accuracy  $\pm 6$  °F

**Temperature**

Measurement range up to 32 ... 752 °F

Resolution 1 °F

Accuracy  $\pm 1.0$  % or  $\pm 4$  °F

**Temperature**

Measurement range up to 752 ... 1832 °F

Resolution 1 °F

Accuracy  $\pm 2.0$  %