



DIGITAL MILLIOHM METER



INSTRUCTION MANUAL

INDEX	PAGE
1. INTRODUCTION.....	1
2. SAFETY NOTES.....	2
3. FEATURES.....	3
4. SPECIFICATIONS.....	4
5. GENERAL.....	5
6. INSTRUMENT LAYOUT.....	6-7
7. MEASUREMENT.....	8-12
8. MAINTENANCE.....	13
9. FUSE REPLACEMENT.....	14

1. INTRODUCTION

NOTE

This meter has been designed and tested According to CE Safety Requirements for Electronic Measuring Apparatus, IEC / EN 61010-1 and other safety standards. Follow all warnings to ensure safe operation.

WARNING

READ "SAFETY NOTES" (NEXT PAGE) BEFORE USING THE METER.

- CAT IV - Is for measurements performed at the source of the low voltage installation.
- CAT III - Is for measurements performed in the building installation.
Is for measurement performed on circuits
- CAT II - directly connected to the low voltage installation.

2. SAFETY NOTES

- Read the following safety information carefully
Before attempting to operate or service the meter.
- Use the meter only as specified in this manual.
Otherwise, the protection provided by the meter may be impaired.
- Rated environmental conditions :
 - (1) Indoor Use.
 - (2) Installation Category III.
 - (3) Pollution Degree 2.
 - (4) Altitude up to 2000 meters.
 - (5) Relative humidity 80% max.
 - (6) Ambient temperature 0~40°C.
- Observe the International Electrical Symbols listed below :



Meter is protected throughout by double insulation or reinforced insulation.



Warning ! Risk of electric shock.



Caution ! Refer to this manual before using the meter.

3. FEATURES

- Protection class: IP65 (Lid closed)
- 4-Wire method for $m\Omega$ measurement.
- Measures down to $100\mu\Omega$ ($0.1m\Omega$).
- Maximum resolution of $100\mu\Omega$.
- 4 Lines \times 20 Characters large LCD.
- 200 measurement results can be saved in the memory and recalled on the display.
- Auto power off.
- Data hold function.
- MAX / MIN function.
- Power source: 1.5V "C" battery \times 8
- Long battery life and stable power.
- Low battery indication.
- Safety Standard :
EN 61010-1 CAT III 300V
EN 61326-1

4. SPECIFICATIONS

Measuring ranges (mΩ)	0~200.0mΩ in steps of 100uΩ 0~2000mΩ in steps of 1mΩ 0~20.00Ω in steps of 10mΩ 0~200.0Ω in steps of 100mΩ 0~2000Ω in steps of 1Ω
Accuracy	±0.8% of reading ±4 digits over the operating temperature range, 0°C ~ 40°C, with the supplied test leads
Test current	100mA: 200.0mΩ / 2000mΩ 10mA: 20.00Ω / 200.0Ω 1mA: 2000Ω
Protection fuse	200mA/600V × 1
Operating temperature	0°C ~ 40°C
Operating humidity	80% Maximum
Dimensions	250(L) × 190(W) × 126(D)mm
Weight (battery included)	Approx. 2035g
Power source	1.5V "C" battery × 8
Safety standard	EN 61010-1 CAT III 300V EN 61326-1
Accessories	Instruction manual Test leads Shoulder belt Batteries

5. GENERAL

- **Protection fuse:**

200mA/600V × 1

- **Low Battery Indication :**

"LoBAT " message appears on the right lower part of the display when the battery voltage drops below accurate operating level.

- **Accessories :**

Instruction manual

Test leads

Shoulder belt

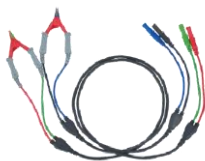
Batteries



Test leads

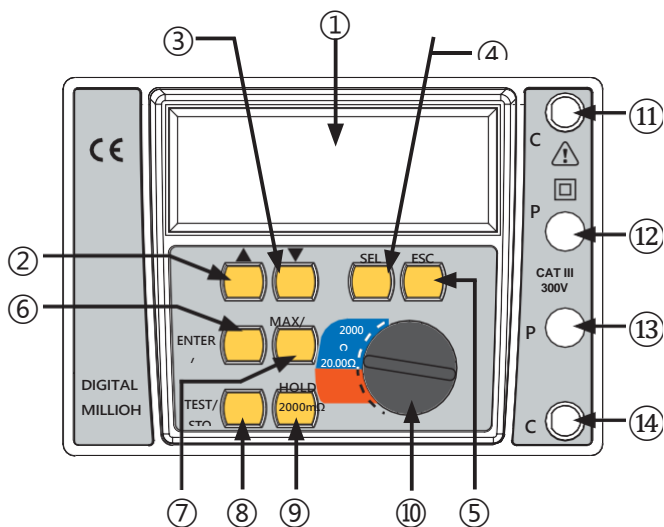


Shoulder Belt



Test leads (optional)

6. INSTRUMENT LAYOUT



• Test Leads

① LCD: 4 Lines x 20 Characters large LCD

② ▲ Button

③ ▼ Button

④ SEL Button

For 3 different functions:

(1) Date / Time ADJ

(2) Record display

(3) Record clear

⑤ ESC Button

⑥ ENTER / SAVE Button

⑦ MAX / MIN Button

⑧ TEST / STOP Button

⑨ HOLD Button

⑩ Function rotary switch

⑪ C2 Terminal

⑫ P2 Terminal

⑬ P1 Terminal

⑭ C1 Terminal

7. MEASUREMENT

1. Power On :

Rotate the function switch to keep it from staying in the "OFF" position.



The system will be auto off when it has no operation after 3 minutes.

2. Before testing, you must make sure that the resistance under test does not have any voltage. When the voltage exceeds 5 volts or the probe is connected to a power supply of more than 5 volts, a warning message will be displayed.



3. Select scale range :

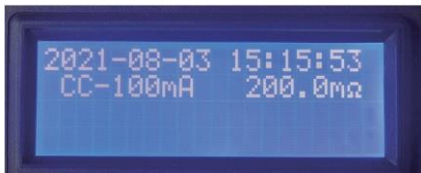
There are 5 scale range "200.0m Ω ", "2000m Ω ", "20.00 Ω ", "200.0 Ω " and "2000 Ω " could be selected by rotating the function switch.

2000 Ω scale uses the 1mA to test.

200.0 Ω & 20.00 Ω scales use the 10mA to test.

2000m Ω & 200.0m Ω scales use the 100mA to test.

The screen will display date, time, test current and maximum resistance.



4. The measurement function

Press "TEST/STOP" button to measure the resistance value.



Press "MAX/MIN" button to get the max value or min value in the measurement process.

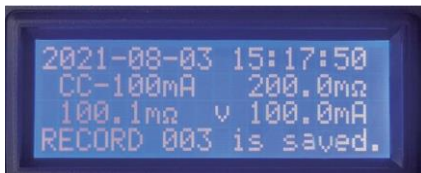
Press "HOLD" button to keep the value of resistance.

Press "TEST/STOP" button to stop the measurement.

5. Record saving function

When the measurement is finished, press "SAVE/ENTER" button to save the result of measurement. At the same time, the last line will display the number of record.

The memory can record up to 200 records.



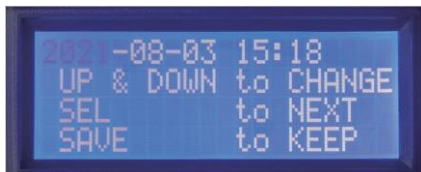
6. Minor function

Press "ESC/SEL" button and hold over 1 second to enter the minor function.



Use the "UP" and "DOWN" button to move the function selection cursor, and press "SAVE/ENTER" to enter the minor function, and press "ESC/SEL" button to return back to the main page.

- Date / Time ADJ

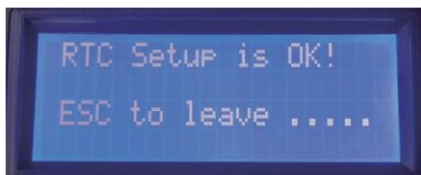


Press "ESC/SEL" button to leave the Date/Time ADJ.

Press "UP" or "DOWN" button to set the correct number.

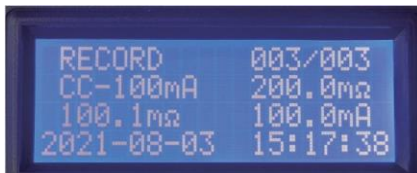
Press "TEST/STOP" button to switch to the next unit of date or time, and go on the required adjustment.

After all adjustments are completed, press "SAVE/ENTER" button to confirm and save the date and time.



Press "ESC/SEL" button to return back to the minor function menu.

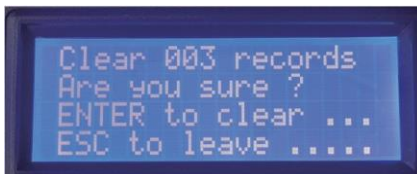
- RECORD DISPLAY



Press "UP" or "DOWN" button to reach the record that you want to look up.

Press "ESC/SEL" button to return back to the minor function menu.

- RECORD CLEAR



Press "SAVE/ENTER" button to clear all records in the memory.

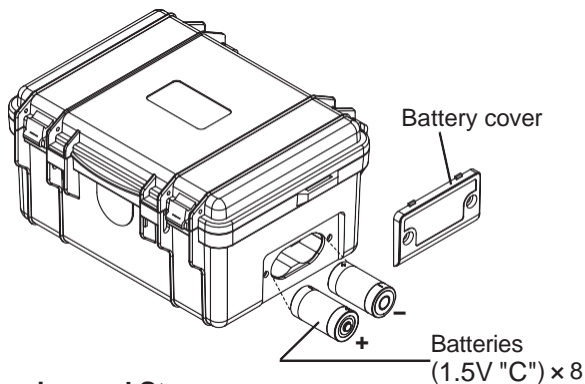
Press "ESC/SEL" button to return back to the minor function menu.

8. MAINTENANCE

Battery replacement :

When "LoBAT " message appears on the right lower part of the display, change new batteries as follows :

- (1) Disconnect the test leads from the instrument and turn off the power.
- (2) Unscrew the battery cover and replace with new batteries(1.5V "C" battery \times 8).
- (3) Re-install the battery cover.



Cleaning and Storage :



WARNING

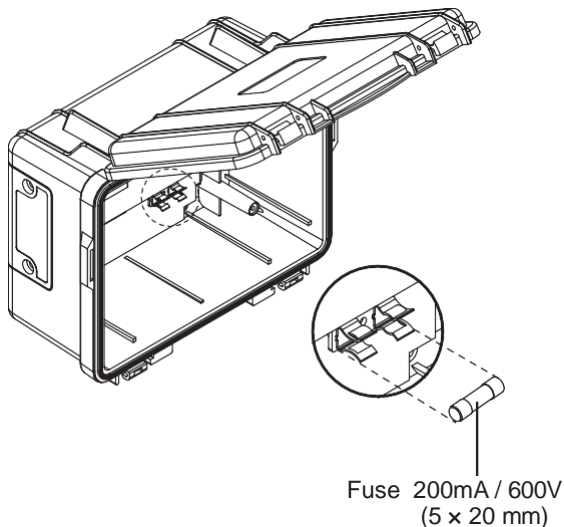
To avoid electrical shock or damage to the meter, do not get water inside the case.

Periodically wipe the case with a damp cloth and detergent. Do not use abrasives or solvents.

If the meter is not used for over 60 days, remove the batteries for storage.

9. FUSE REPLACEMENT

Open the meter case, replace with a new fuse which has the same specification 200mA/600V, 5×20mm.



Due to our policy of constant improvement and development, we reserve the right to change specifications without notice.

14 Contact

If you have any questions, suggestions or technical problems, please do not hesitate to contact us. You will find the relevant contact information at the end of this user manual.

15 Disposal

For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.

If you have any questions, please contact PCE Instruments.



PCE Instruments contact information

Germany

PCE Deutschland GmbH
Im Langel 26
D-59872 Meschede
Deutschland
Tel.: +49 (0) 2903 976 99 0
Fax: +49 (0) 2903 976 99 29
info@pce-instruments.com
www.pce-instruments.com/deutsch

United Kingdom

PCE Instruments UK Ltd
Unit 11 Southpoint Business Park
Ensign Way, Southampton
Hampshire
United Kingdom, SO31 4RF
Tel: +44 (0) 2380 98703 0
Fax: +44 (0) 2380 98703 9
info@pce-instruments.co.uk
www.pce-instruments.com/english

The Netherlands

PCE Brookhuis B.V.
Institutenweg 15
7521 PH Enschede
Nederland
Telefoon: +31 (0)53 737 01 92
info@pcebenelux.nl
www.pce-instruments.com/dutch

France

PCE Instruments France EURL
23, rue de Strasbourg
67250 Soultz-Sous-Forêts
France
Téléphone: +33 (0) 972 3537 17
Numéro de fax: +33 (0) 972 3537 18
info@pce-france.fr
www.pce-instruments.com/french

Italy

PCE Italia s.r.l.
Via Pesciatina 878 / B-Interno 6
55010 Loc. Gragnano
Capannori (Lucca)
Italia
Telefono: +39 0583 975 114
Fax: +39 0583 974 824
info@pce-italia.it
www.pce-instruments.com/italiano

United States of America

PCE Americas Inc.
1201 Jupiter Park Drive, Suite 8
Jupiter / Palm Beach
33458 FL
USA
Tel: +1 (561) 320-9162
Fax: +1 (561) 320-9176
info@pce-americas.com
www.pce-instruments.com/us

Spain

PCE Ibérica S.L.
Calle Mayor, 53
02500 Tobarra (Albacete)
España
Tel. : +34 967 543 548
Fax: +34 967 543 542
info@pce-iberica.es
www.pce-instruments.com/espanol

Turkey

PCE Teknik Cihazları Ltd.Şti.
Halkalı Merkez Mah.
Pehlivan Sok. No.6/C
34303 Küçükçekmece - İstanbul
Türkiye
Tel: 0212 471 11 47
Faks: 0212 705 53 93
info@pce-cihazlari.com.tr
www.pce-instruments.com/turkish

Denmark

PCE Instruments Denmark ApS
Birk Centerpark 40
7400 Herning
Denmark