

Omniport 40

Multifunctional Hand-Held Meter

The Omniport 40 is a multifunctional hand-held measuring device which accommodates E+E hand-held probes and process probes for various measurands such as temperature, humidity, moisture in oil, volume flow, dew point and CO₂. It is ideal for portable on-spot measurement, as well as for process monitoring and predictive maintenance.

Two M12 connections enable the simultaneous measurement of different probes.

Outstanding Measurement Performance

The Omniport 40 compatible hand-held probes and process probes offer the well proven E+E accuracy, outstanding long-term stability, and resistance to environment influences. The probes can also be adjusted directly via the Omniport 40.

With properly calibrated probes, the Omniport 40 is appropriate as reference device for the check and calibration of field probes. For such purpose, the hand-held probes as well as the process probes can be supplied with an optional, traceable accredited calibration certificate.

Data Management Modes

The hand-held meter automatically recognizes the connected probes, and immediately displays the measured data. The device features various operation modes.

- In the on-spot measurement mode, the measured data is shown on the dot-matrix display; no data is stored
- In data logging mode, up to 1 million data sets are stored in the hand-held memory
- As data collector, the device gathers data from predefined measurement locations for off-line monitoring and predictive maintenance.

Robust and Easy to Use

With IP67 protection rating in combination with IK04 shock and impact resistance, the Omniport 40 is suitable for demanding, harsh industrial environment. The push buttons allow for the Omniport 40 to be operated even while wearing gloves. The measured values are indicated on the display in different modes depending on the applications.

The keypad and the self-explanatory symbols support intuitive operation, while the favourites function provides quick access to frequently used features. The user interface is available in 5 languages.

User Configurable

The Omniport 40 can be easily configured using a PC, a standard USB-C cable and the free PCS10 product configuration software. The configuration includes for example, the oil library and the settings for data collection.

The USB-C interface is also used to download log files in .csv format without the need to install any special software.



HA040909 Carrying case for Omniport 40, hand-held probes, process probes and accessories



Omniport 40 with hand-held probe AVP301H

M12 probe connection

- Large selection of hand-held and process probes
- Automatic detection of different probes
- Connection of up to 2 probes, remote for
- Process probes up to 1 m
- Hand-held probes up to 2 m

Functions

- On-spot measurement
- Data logging
- Data collecting
- Oil library
- Alarm with upper / lower thresholds and optional hysteresis
- Favourites function
- Hold function
- Relative function

User interface

- Dot-matrix / plain text display (backlit)
- Visible area 42 x 50 mm (1.65 x 1.97")
- Selection of display layouts:
 - Large-digit single values
 - Multi-line
 - Statistical values (min. / avg. / max.)
 - Diagram view
- Status bar
- Languages (selectable)



Bracket

- Built-in foldable stand
- Magnet

Power supply

- 4x AA rechargeable NiMH batteries (supplied)
- USB-C interface

Enclosure

- Protection rating IP67
- Shock and impact resistant





Features

On Spot Measurement

Various display layouts include actual measured data and a freeze of these, the deviation from a reference level or the min/max/avg values. The user configurable graph provides a quick overview of the measurement history.

Data Logging

In data logging mode, the Omniport 40 stores the measured data together with the time stamp in a .csv file. The file can be downloaded to a PC without any additional software. The data logger settings include the logging interval and the selection of the variables to be recorded. The data recording is started and stopped manually with push buttons of the hand-held meter.

Data Collecting

The data collecting mode is ideal for off-line monitoring and predictive maintenance. In this mode, the Omniport 40 stores data from different measuring locations along a predefined route. The route can be defined on the PC and uploaded to the hand-held meter. The actual value can be measured at the different locations with hand-held probes or with fix installed process probes. The collected data can be downloaded to the PC with the free PCS10 Product Configuration Software.

Moisture-in-Oil Measurement and Oil Library

With moisture in oil hand-held probes or process probes, the Omniport 40 measures water activity, water content and temperature in transformer, lubrication and hydraulic oils. For correct measurement of the water content (ppm) and fast change between several oils, the Omniport 40 supports an oil library. The oil library can be easily created and maintained by adding and removing oil parameters on the PC and upload it to the hand-held meter with the PCS10 Product Configuration Software.

Alarm Function

The threshold values and hysteresis for alarm purposes can be set via the push buttons. Alarms are indicated acoustically and optically.

Power Supply

The NiMH rechargeable batteries included in the scope of supply can be charged via the USB-C cable. Additionally, the Omniport 40 can be operated with 4 AA batteries or permanent power supply. The display parameters such as backlight on/off, backlight intensity and sleep mode can be set for increasing battery life.

Accessories

The carrying case is used to safely transport and store the hand-held meter, probes and accessories. This prevents mechanical damage or contamination of the probes and ensures the optimum performance of the Omniport in the long term. The E+E humidity calibration kit is a simple method of calibrating humidity measuring devices and can be stored directly in the carrying case. For more information, see the E+E humidity calibration kit datasheet at www.epluse.com.

Accredited Traceable Calibration Certificate





Internationally recognised certificates for the calibration of measuring instruments from accredited laboratories document the traceability of the measurements to the International System of Units (SI). The E+E Elektronik calibration laboratory offers two levels of traceable calibrations.

- As a Designated Institute (DI) of the Republic of Austria, the E+E calibration laboratory maintains Austria's national measurement standards for humidity, dew point temperature, air velocity and CO₂. This authorises the E+E calibration laboratory to issue calibration certificates at the level of a National Metrological Institute (NMI).
- The E+E calibration laboratory is accredited by Akkreditierung Austria in accordance with DIN EN ISO/IEC 17025 with the identification number 0608. This allows the laboratory to issue ISO 17025 certificates for the measurands humidity, temperature, dew point temperature, air velocity, flow, pressure and CO₂.

Visit www.eplusecal.com for detailed information on calibration and to enquire a certificate of accredited traceable calibration for the AVPxxxH, HTPxxxH, and MOPxxxH hand-held probes from the Designated Institute.

ISO 9001 Calibration Certificate

An ISO 9001 calibration certificate documents the comparative measurement of a device against high quality reference equipment (factory level standard). The comparison is performed in accordance with internal procedures that comply with ISO 9001 and provides information on the specimen's measuring accuracy. The reference equipment is traceable to national standards, however, the calibration process is not accredited. Therefore, an ISO 9001 calibration is neither traceable nor internationally comparable.

Visit www.epluse.com/iso9001cal for detailed information on calibration for the HTPxxxH and MOPxxxH hand-held probes and to enquire an ISO 9001 calibration certificate.

Further information on the available certificates for the process probes can be found in the respective data sheets.





Hand-Held Meter

Power supply	4x AA rechargeable NiMH batteries (included in the scope of supply)
Optional power supply	External 5 V DC via USB C (Power supply unit or PC-USB connection)
Power consumption, typ.	10 mA (excluding probes)
Battery runtime, typ.	>100 h continuous operation (fully charged, backlight switched off, hand-held probe). The battery runtime depends on the number and type of connected probes.
Automatic switch-off	Configurable. Automatically deactivated when an external power supply is connected
Connections	2x 5-pin M12 connection
PC connection	USB-C
Internal memory	Up to 1 million measuring points. A time and date stamp is assigned to each measuring point.
Type of logging	Automatic with manual start / stop
Logging interval	1, 5, 10, 15, 30 s / 1, 2, 5, 10, 15, 20, 30 min / 1 hour
Probe query	2 measurements/s
Real-time clock	Max. deviation 1 min / month at 25 °C (77 °F)
Display	140 x 160 dot-matrix LCD with backlight / visible area 42 x 50 mm (1.65 x 1.97") Choice of display layouts: - Large-digit single values - Multi-line - Statistical information (min. / avg. / max.) - Diagram view
User interface	Selectable in the menu (de, en, it, fr, es)
Dimensions	170 x 78 x 38 mm (6.69 x 3.07 x 1.50")
Weight	Approx. 370 g (approx. 13.05 oz)
Operating and storage conditions	-5...+50 °C (+23...+122 °F), 0...85 %RH non-condensing
Operation Storage	-25...+65 °C (-12...+149 °F) (without rechargeable battery)
Enclosure Material	ABS (acrylonitrile butadiene styrene) TPE side protection (thermoplastic elastomers) Polyester front panel
Protection rating	IP67 (except for the probe connection)
Impact test	IK04 according to EN 60068-2-75
Drop test, 1m @ ±25 °C (3.28 ft @ ±45 °F)	EN 61010-1
Electromagnetic compatibility	EN IEC 61326-1:2021
Conformity	 
Configuration software	PCS10 Product Configuration Software and USB-C connection cable Free download from www.epluse.com/pcs10