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Datasheet Omniport 40

Multifunctional Hand-Held Meter



www.epluse.com

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 longterm 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 sensors. 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
- 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 user can easily setup the Omniport 40 using an PC, a USB-C cable and the free PCS10 Product Configuration Software. The setup includes for example the oil library and the data collecting settings. The USB-C interface is also used to download log .csv files without a software.



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



Omniport 40 with hand-held probe AVP301H

Features

M12 probe connection

- Large selection of manual and process sensors
- Automatic detection of different probes
- Connection of up to 2 sensors, 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



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 sensors, 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.

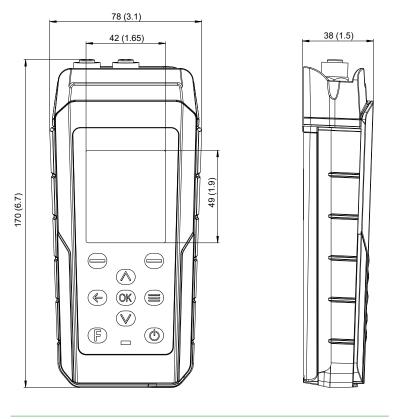
Accessories

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 <u>www.epluse.com</u>.

Dimensions

Values in mm (inch)

Omniport 40



Technical Data

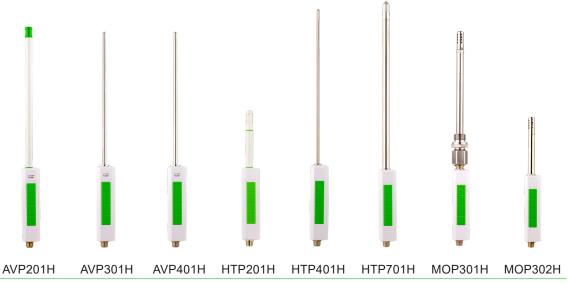
Hand-Held Meter

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 sensors.
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
Sensor 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 Operation Storage	-5+50 °C (+23+122 °F), 085 %RH non-condensing -25+65 °C (-12+149 °F) (without rechargeable battery)
Enclosure Material Protection rating	ABS (acrylonitrile butadiene styrene) TPE side protection (thermoplastic elastomers) Polyester front panel 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	CE K
Configuration software	PCS10 Product Configuration Software and USB-C connection cable Free download from <u>www.epluse.com/pcs10</u>

Hand-Held Probes

The hand-held probes are optimized for portable on-spot measurement. They combine the E+E outstanding measuring performance with low power requirements for long battery lifetime.

The hand-held probe fits ergonomically and is connected to the hand-held meter via the cable HA010813.



Hand-held probes

AVP201H - Air Velocity and Temperature Hand-Held Probe for HVAC Applications AVP301H - Air Velocity and Temperature Hand-Held Probe up to 20 m/s (4 000 ft/min) AVP401H - Air Velocity and Temperature Hand-Held Probe up to 2 m/s (400 ft/min) HTP201H - Humidity and Temperature Hand-Held Probe for HVAC Applications HTP401H - Humidity and Temperature Hand-Held Probe up to 100 °C (212 ° F) HTP701H - Humidity and Temperature Hand-Held Probe up to 180 °C (356 °F) MOP301H - Moisture-In-Oil Immersion Hand-Held Probe up to 120 °C (248 °F) MOP302H - Short Moisture-In-Oil Hand-Held Probe up to 120 °C (248 °F)

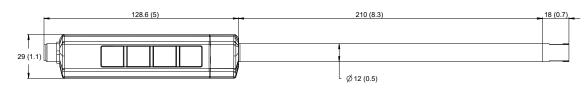
All hand-held probes are supplied with a test report in accordance with DIN EN 10204-2.2. For dimensions and technical data of the hand-held probes, see the following pages.

AVP201H

Air Velocity and Temperature Hand-Held Probe for HVAC Applications

Dimensions

Values in mm (inch)



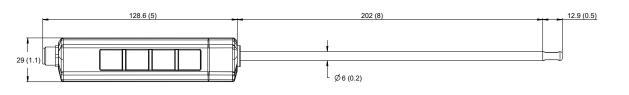
Measuring range	0.420 m/s (804000 ft/min) 0+50 °C (+32+122 °F)
v accuracy	±(0.2 m/s (40 ft/min) + 3 % of mv) mv = measured value
Т ассигасу	±1 °C (±1.8 °F) (0+50 °C (+32+122 °F))
v response time τ_{90}	≤1.5 s
Temperature range (Probe handle) Operation Storage	0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F)
Probe handle Enclosure material Side protection material Protection rating	ABS (AcryInitril-Butadien-Styrol) TPU (Thermoplastisches Polyurethan) IP40
Probe Material	PC (Polycarbonate)
Electromagnetic compatibility	EN 61326-1:2013 EN 61326-2-3:2013
Conformity	CE KA

AVP301H

Air Velocity and Temperature Hand-Held Probe up to 20 m/s (4000 ft/min)

Dimensions

Values in mm (inch)



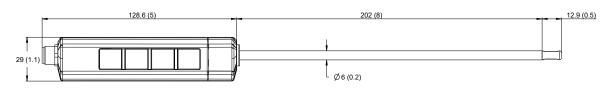
Measuring range	0.420 m/s (804 000 ft/min) -20+70 °C (-4+158 °F)
v accuracy @ 20 °C (68 °F) and 1013 hPa (14.7 psi), 45 %RH	±(0.2 m/s (40 ft/min) + 2 % of mv) mv = measured value
Т ассигасу	±0.7 °C (±1.26 °F), v > 0.5 m/s, 0+50 °C (+32+122 °F)
v response time τ_{90}	≤1.5 s
Temperature range (Probe handle) Operation Storage	0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F)
Probe handle Enclosure material Side protection material Protection rating	ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40
Probe Material	Stainless steel 1.4404
Electromagnetic compatibility	EN 61326-1:2013 EN 61326-2-3:2013
Conformity	CE RA

AVP401H

Air Velocity and Temperature Hand-Held Probe up to 2 m/s (400 ft/min)

Dimensions

Values in mm (inch)



Technische Daten

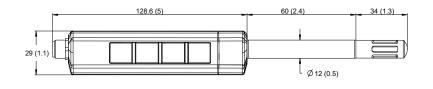
Measuring range	0.122 m/s (24400 ft/min) -20+70 °C (-4+158 °F)	
v accuracy @ 20 °C (68 °F) and 1013 hPa (14.7 psi), 45 %RH	± (0.04 m/s (8 ft/min) + 1 % of mv) mv = measured value	
Т ассигасу	±1.2 °C (±2.16 °F), v = 0.20.5 m/s, 0+50 °C (+32+122 °F)	
v response time τ_{90}	≤1.5 s	
Temperature range (Probe handle) Operation Storage	0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F)	
Probe handle Enclosure material Side protection material Protection rating	ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40	
Probe Material	Stainless steel 1.4404	
Electromagnetic compatibility	EN 61326-1:2013 EN 61326-2-3:2013	
Conformity	CE KA	

HTP201H

Humidity and Temperature Hand-Held Probe for HVAC Applications

Dimensions

Values in mm (inch)



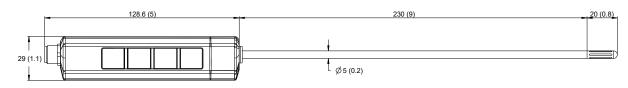
Measuring range	0100 %RH -20+70 °C (-4+158 °F)
RH accuracy 090 %RH @ 20 °C (68 °F) 90100 %RH	±2 %RH ±3 %RH
T accuracy @ 20 °C (68 °F) -20+70 °C (-4+158 °F) max.	±0.2 °C (±0.36 °F) ±0.5 °C (±0.9 °F)
RH response time $\tau_{_{90}}$	≤7 s
RH temperature dependency, typ. Probe Electronics	±0.03 %RH/°C (±0.0054 %RH/°F) ±0.05 %RH/°C (±0.09 %RH/°F)
T dependency, typ. Electronics	±0.005 °C/°C (±0.005 °F/°F)
Temperature range (Probe handle) Operation Storage	0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F)
Probe handle Enclosure material Side protection material Protection rating	ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40
Probe Material	PC (Polycarbonate)
Electromagnetic compatibility	EN 61326-1:2013 EN 61326-2-3:2013
Conformity	CE R

HTP401H

Humidity and Temperature Hand-Held Probe up to 100 °C (212 °F)

Dimensions

Values in mm (inch)



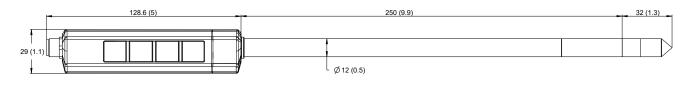
Measuring range 0100 %RH -40+100 °C (-40+212 °F) RH accuracy @ 20 °C (68 °F) 090 %RH 90100 %RH ±2 %RH ±3 %RH T accuracy @ 20 °C (68 °F) -40+100 °C max. ±0.2 °C (±0.36 °F) ±0.6 °C (±1.08 °F) RH response time T ₉₀ ≤15 s RH temperature dependency, typ. Probe Electronics ±0.3 %RH/°C (±0.0054 %RH/°F) ±0.05 %RH/°C (±0.09 %RH/°F) T dependency, typ. Electronics ±0.05 °C/°C (±0.005 °F/°F) T meperature range (Probe handle) Operation Storage 0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F) Probe handle Enclosure material Side protection material Protection rating ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40 Probe Material Stainless steel 1.4301, 1.4305 EN 61326-2-3:2013		
@ 20 °C (68 °F) 90100 %RH ±3 %RH T accuracy @ 20 °C (68 °F) -40+100 °C max. ±0.2 °C (±0.36 °F) ±0.6 °C (±1.08 °F) RH response time T ₉₀ ≤15 s RH temperature dependency, typ. Probe Electronics ±0.03 %RH/°C (±0.0054 %RH/°F) ±0.05 %RH/°C (±0.09 %RH/°F) T dependency, typ. Electronics ±0.005 °C/°C (±0.005 °F/°F) Temperature range (Probe handle) Operation Storage 0+50 °C (±32+122 °F) -20+60 °C (-4+140 °F) Probe handle Enclosure material Side protection material Protection rating ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40 Probe Material Stainless steel 1.4301, 1.4305	Measuring range	
-40+100 °C max. ±0.6 °C (±1.08 °F) RH response time T ₉₀ ≤15 s RH temperature dependency, typ. Probe Electronics ±0.03 %RH/°C (±0.0054 %RH/°F) ±0.05 %RH/°C (±0.09 %RH/°F) T dependency, typ. Electronics ±0.005 °C/°C (±0.005 °F/°F) Temperature range (Probe handle) Operation Storage 0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F) Probe handle Enclosure material Side protection material Protection rating ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40	-	
RH temperature dependency, typ. Probe Electronics ±0.03 %RH/°C (±0.0054 %RH/°F) ±0.05 %RH/°C (±0.09 %RH/°F) T dependency, typ. Electronics ±0.005 °C/°C (±0.005 °F/°F) Temperature range (Probe handle) Operation Storage 0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F) Probe handle Enclosure material Side protection material Protection rating ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40 Probe Material Stainless steel 1.4301, 1.4305		
Electronics ±0.05 %RH/°C (±0.09 %RH/°F) T dependency, typ. Electronics ±0.005 °C/°C (±0.005 °F/°F) ±0.005 °C (+32+122 °F) Temperature range (Probe handle) Operation Storage 0+50 °C (+32+122 °F) Probe handle Enclosure material Side protection material Protection rating ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40 Probe Material Stainless steel 1.4301, 1.4305	RH response time $\tau_{_{90}}$	≤15 s
Temperature range (Probe handle) Operation Storage 0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F) Probe handle Enclosure material Side protection material Protection rating ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40 Probe Material Stainless steel 1.4301, 1.4305		
Storage -20+60 °C (-4+140 °F) Probe handle Enclosure material Side protection material Protection rating ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40 Probe Material Stainless steel 1.4301, 1.4305	T dependency, typ. Electronics	±0.005 °C/°C (±0.005 °F/°F)
Side protection material Protection rating TPU (Thermoplastic polyurethane) IP40 Probe Material Stainless steel 1.4301, 1.4305		
	Side protection material	TPU (Thermoplastic polyurethane)
Electromagnetic compatibility EN 61326-1:2013 EN 61326-2-3:2013	Probe Material	Stainless steel 1.4301, 1.4305
	Electromagnetic compatibility	EN 61326-1:2013 EN 61326-2-3:2013
Conformity CE LK	Conformity	CE RA

HTP701H

Humidity and Temperature Hand-Held Probe up to 180 °C (356 °F)

Dimensions

Values in mm (inch)



Measuring range	0100 %RH -40+180 °C (-40+356 °F)
RH accuracy 090 %RH @ 20 °C (68 °F) 90100 %RH.	±2 %RH ±3 %RH
T accuracy @ 20 °C (68 °F) -40+180 °C (-40+356 °F) max.	±0.2 °C (±0.36 °F) ±0.6 °C (±1.08 °F)
RH response time $\tau_{_{90}}$	≤30 s
RH temperature dependency, typ. Probe Electronics	±0.03 %RH/°C (±0.0054 %RH/°F) ±0.05 %RH/°C (±0.09 %RH/°F)
T dependency, typ. Electronics	±0.005 °C/°C (±0.005 °F/°F)
Temperature range (Probe handle) Operation Storage	0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F)
Probe handle Enclosure material Side protection material Protection rating	ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40
Probe Material	Stainless steel 1.4404
Electromagnetic compatibility	EN 61326-1:2013 EN 61326-2-3:2013
Conformity	CE

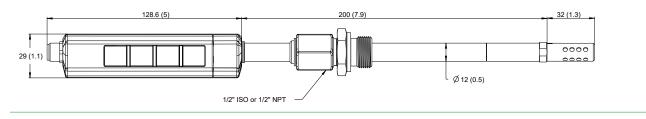
MOP301H

Moisture-in-oil immersion hand-held probe up to 120 °C (248 °F)

(with G 1/2" ISO or 1/2 NPT-slide fitting)

Dimensions

Values in mm (inch)

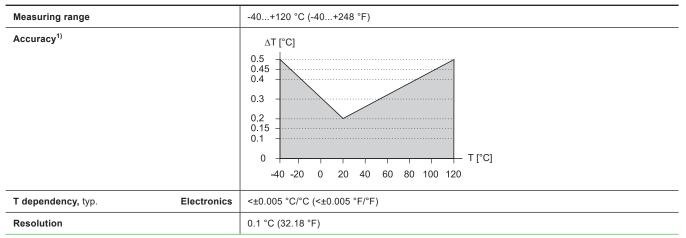


Water activity (aw) / water content (x)

Measuring range	max.	01 aw 0100 000 ppm; actual range depends on the oil type, for non-mineral transformer oil, specific solubility parameters are needed (ppm output is valid in the range 0+100 °C (+32+212 °F))
Accuracy ¹⁾ (without hysteresis) @ 20 °C (68 °F)	(00.9 aw) (0.91 aw)	±0.02 aw ±0.03 aw
Aw temperature dependency, typ.	Probe Electronics	<±0.0003 [-]/°C (<±0.00017 [-]/°F) <±0.0005 [-]/°C (<±0.00028 [-]/°F)
Response time τ_{90} , typ. @ 20 °C (68 °F) in still oil		10 min.
Resolution		0.001 aw

Traceable to international standards, administrated by NIST, PTB, BEV... The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

Temperature (T)



1) Traceable to international standards, administrated by NIST, PTB, BEV,...

The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

MOP301H

Moisture-in-oil immersion hand-held probe up to 120 °C (248 °F)

(with G 1/2" ISO or 1/2 NPT-slide fitting)

General

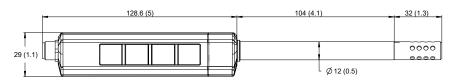
Temperature range (P	robe handle) Operation Storage	0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F)
Pressure rating		0.0120 bar (0.15290 psi)
Probe handle	Enclosure Material Side protection material Protection rating	ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40
Probe	Material	Stainless steel 1.4404

MOP302H

Short moisture-in-oil hand-held probe up to 120 °C (248 °F)

Dimensions

Values in mm (inch)



Water activity (aw) / water content (x)

Measuring range	max.	01 aw 0100 000 ppm; actual range depends on the oil type, for non-mineral transformer oil, specific solubility parameters are needed (ppm output is valid in the range 0100 °C (32212 °F))
Accuracy ¹⁾ (without hysteresis) @ 20 °C (68 °F)	(00.9 aw) (0.91 aw)	±0.02 aw ±0.03 aw
Aw temperature dependency, typ.	Probe Electronics	<±0.0003 [-]/°C (<±0.00017 [-]/°F) <±0.0005 [-]/°C (<±0.00028 [-]/°F)
Response time τ ₉₀ , typ. @ 20 °C (68 °F) in still oil		10 min.
Resolution		0.001 aw

1) Traceable to international standards, administrated by NIST, PTB, BEV... The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

Temperature (T)

Measuring range	-40+120 °C (-40+248 °F)
Accuracy ¹⁾	$\begin{array}{c} \Delta T \ [^{\circ}C] \\ 0.5 \\ 0.4 \\ 0.3 \\ 0.2 \\ 0.15 \\ 0.1 \\ 0 \\ -40 \ -20 0 20 40 60 80 100 120 \end{array}$
T dependency, typ. Electronics	<±0.005 °C/°C (<±0.005 °F/°F)
Resolution	0.1 °C (32.18 °F)

Traceable to international standards, administrated by NIST, PTB, BEV,... The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation).

The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

Temperature range	e (Probe handle) Operation Storage	0+50 °C (+32+122 °F) -20+60 °C (-4+140 °F)
Probe handle	Enclosure Material Side protection material Protection rating	ABS (Acrylonitrile butadiene styrene) TPU (Thermoplastic polyurethane) IP40
Probe	Material	Stainless steel 1.4404

Process Probes

The Omniport 40 compatible process probes open up a wide range of industrial applications beyond the scope of the hand-held probes. Depending on their type and measurand, the process probes can be used for portable on-spot measurement or can be installed in the process. The process probes can be connected to the Omniport 40 with the cable HA040908.



Process probes

EE671 - Air Velocity Probe: <u>www.epluse.com/ee671</u>.

EE680 - Air Velocity and Temperature Probe for Laminar Flow: <u>www.epluse.com/ee680</u>.

EE872 - Modular Probe for CO₂, Humidity, Temperature and Ambient Pressure: <u>www.epluse.com/ee872</u>.

TDS401H - Dew Point Sensor down to -60 °C (-76 °F): refer to the Omniport 40 Manual www.eplus.com/omniport40.

EE072 - Humidity and Temperature Probe: <u>www.epluse.com/ee072</u>.

HTP501 - Humidity and Temperature Probe up to 120 °C (248 °F): <u>www.epluse.com/htp501</u>.

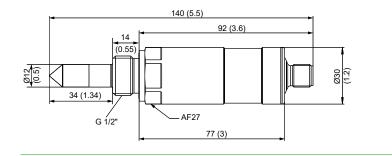
MOP301 - Digital Moisture in Oil Probe up to 120 °C (248 °F): www.epluse.com/mop301.

EE074 - Temperature Probe: <u>www.epluse.com/ee074</u>.

TDS401H - Dew Point Sensor down to -60°C (-76 °F)

Dimensions

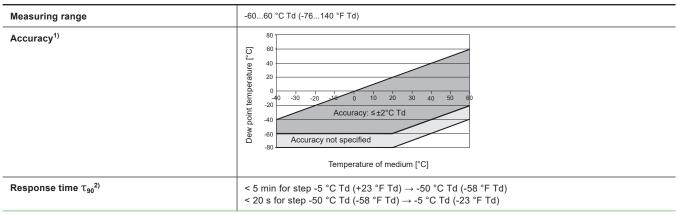
Values in mm (inch)



TDS401H

Dew Point Sensor down to -60 °C (-76 °F)

Dew Point Temperature (Td)



1) Traceable to international standards, administrated by NIST, PTB, BEV,...

The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

2) For the response time after each power-on of the sensor, see Omniport 40 User Manual, chapter TDS401H.

Volume Concentration (Wv)

Measuring range @ 1013 mbar (14.7 psi)	20200 000 ppm
Accuracy @ 20 °C (68 °F) and 1013 mbar (14.7 psi)	±(5 ppm + 9 % from measured value)

Power supply class III (II) USA & Canada: Class 2 supply necessary	18 - 28 V DC	
Current consumption @ 24 V DC	<20 mA + load current during normal measurement 100 mA + load current during auto-calibration	
Electrical connection	M12x1, 4 poles, stainless steel 1.4404, Connection cable for Omniport 40 and process probe (HA040908) required	
Filter	Stainless steel sintered	
Pressure working range	080 bar (01160 psi)	
Humidity working range	0100 %RH	
Temperature working range	-40+70 °C (-40+158 °F)	
Storage conditions	-40+60 °C (-40+140 °F) 095 %RH, non-condensing	
Enclosure Material Protection rating	Stainless steel 1.4404 (AISI 316L) IP65/NEMA 4X	
Electromagnetic compatibility	EN 61326-1 EN 61326-2-3 Industrial environment FCC Part15 Class B ICES-003 Class B	
Conformity		
Configuration and adjustment	PCS10 Product Configuration Software (free download from www.epluse.com/pcs10) and Modbus configuration adapter (HA011018) or via Omniport 40	
Inspection certificate	According to DIN EN 10204-3.1	

Ordering Guide

Position 1 - Omniport 40

Feature	Description	Co	ode
reature	Description	Hand-held probe	Process probe
Туре	Hand-held meter without probe	OMNIPORT40-T30	

Position 2 - Probes

Humidity / Temperature	Humidity and temperature hand-held probe for HVAC applications	HTP201H	
	Humidity and temperature hand-held probe up to 100 °C (212 °F)	HTP401H	
	Humidity and temperature hand-held probe up to 180 °C (356 °F)	HTP701H	
	Humidity and temperature probe		EE072- ¹⁾
	Humidity and temperature probe up to 120 °C (248 °F)		HTP501- ¹⁾
Temperature	Temperature probe		EE074- ¹⁾
Air Velocity	Air velocity and temperature hand-held probe for HVAC applications	AVP201H	
	Air velocity and temperature hand-held probe up to 20 m/s (4000 ft/min)	AVP301H	
	Air velocity and temperature hand-held probe up to 2 m/s (400 ft/min)	AVP401H	
	Air velocity probe		EE671- ¹⁾
	Air velocity and temperature probe for laminar flow		EE680- ¹⁾
Dew point temperature	Dew point sensor down to -60°C (-76 °F)		TDS401H-PA1
CO ₂	Modular probe for CO ₂ , humidity, temperature and ambient pressure	EE872- ¹⁾	
Moisture-in-oil	Moisture-in-oil immersion hand-held probe up to 120 °C (248 °F) G 1/2" ISO slide fitting MOP301H-T10PA23		
	Moisture-in-oil immersion hand-held probe up to 120 °C (248 °F) 1/2" NPT slide fitting	MOP301H-T10PA25	
	Short moisture-in-oil hand-held probe up to 120 °C (248 °F)	MOP302H-T7	
	Digital moisture in oil probe up to 120 °C (248°F)		MOP301- ¹⁾

1) For the order code refer to the corresponding datasheets.

Position 3 - Cable

Connection cable for hand-held probe (unshielded)	2 m (6.6 ft)	HA010813	
Connection cable for process probe	1 m (3.28 ft)		HA040908

Position 4 - Carrying Case

Carrying Case For Omniport 40, hand-held probes, process probes and accessories	HA040909
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Order Example

Hand-Held Probe

Feature	Code	Description	
Position 1	OMNIPORT40-T30	Hand-held meter Omniport 40 without probe	
Position 2	HTP201H AVP401H	Humidity and temperature hand-held probe for HVAC applications Air velocity and temperature hand-held probe up to 2 m/s (400 ft/min)	
Position 3	HA010813	Connection cable for hand-held probe, unshielded, 2 m (6.6 ft)	
Position 4	HA040909	Carrying Case for Omniport 40, hand-held probes, process probes and accessories	

Accessories

For further information please refer to the <u>Accessories</u> datasheet.

Description	Code
Carrying Case for Omniport 40, Hand-held probes, process probes and accessories	HA040909
Membrane filter (for Ø12 mm (0.47") RH/T probes), Polycarbonate Body Metal grid filter (for Ø12 mm (0.47") RH/T probes), Polycarbonate Body Stainless steel sintered filter (for Ø12 mm (0.47") RH/T probes)	HA010101 HA010106 HA010117
Connection cable for hand-held probe, unshielded, 2 m (6.6 ft)	HA010813
Connection cable for Omniport 40 and process probe 1 m (3.28 ft)	HA040908
Humidity standards / Calibration device	Refer to data sheet Humidity Calibration Kit
Configuration software	PCS10 Product Configuration Software Free download from <u>www.epluse.com/pcs10</u>
Ball valve G 1/2" ISO	HA050101 ¹⁾
Ball valve 1/2" NPT	HA050104 ¹⁾

1) Suitable for MOP301H - Moisture-in-oil immersion hand-held probe up to 120 °C (248 °F)

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