

OMNIPOINT 20

Multifunctional Hand-Held

To measure various climate and processes values with a hand-held, user-friendly instrument requires extraordinary measurement technology. The hand-held meters of the OMNIPOINT 20 series meet these multiple demands.

The selection of the appropriate sensing probe and accordingly the configuration of the hand-held meter allow for displaying the following values with the highest accuracy:

- relative humidity (RH),
- temperature (T),
- dew point temperature (Td),
- absolute humidity (dv),
- mixing ratio (r),
- air velocity (v),
- water activity (aw)
- water content in oil (x)

The robust housing of the OMNIPOINT 20 allows usage in harsh industrial environments. The readability of the large illuminated display is excellent. The easy to understand menu and the practical thumbwheel navigation offer outstanding comfort.

An optional carrying case can accommodate the display unit, up to 5 sensing probes as well as accessories such as cables and calibration kits.



Typical Applications

- HVAC control
- industry and process control
- clean room control
- water activity and moisture content in oil
- humidity measurement in walls and floors

Features

- measurands: RH, T, Td, dv, r, v, aw, x
- large, illuminated display
- HOLD / MIN / MAX / AVG readout
- real time clock
- SI/US units selectable
- recalibration by user

Technical Data

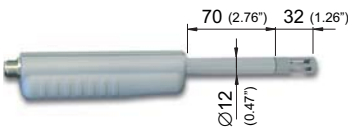
General

Resolution	- humidity / temperature probe (HA040201, HA040202, HA040203): humidity measurement: 0.1% RH; g/m ³ ; Td [°C, °F]; g/Kg; gr/lb temperature measurement: 0.1°C; 0.1°F - passive temperature probe (HA040101, HA040102, HA040104): 0.1°C; 0.1°F - air velocity probe (HA040401, HA040402, HA040403): air velocity measurement: 0.01m/s; 1ft/min temperature measurement: 0.01°C; 0.01°F - moisture in oil measurement (HA040204, HA040206): moisture measurement: aw: 0.001 [] or 0.01...1ppm (depending on measuring range) temperature measurement: 0.1°C; 0.1°F		
Supply voltage	4x 1.5V AA alkali-manganese battery		
Battery lifetime	with PT100 probe:	300h	
	with RH/T or aw/x probe:	200h	
	with v probe:	40h	
Working temperature range	handheld and grip of sensing probe: 0...50°C (32...122°F)		
CE compatibility according	EN50081-2	EN50082-2	EN55011
	EN61000-4-2	EN61000-4-3	
Housing / protection class	ABS / IP40		
Dimensions (HxWxD)	145 x 85 x 37 mm (5.7 x 3.3 x 1.5")		
Weight	ca. 400g (1lbs)		
Display	LC display, 90 x 50 mm (3.5 x 2"), illuminated		



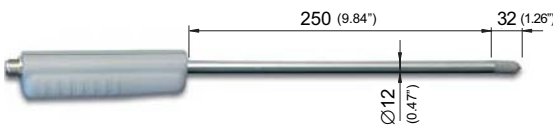
Humidity / Temperature Probes:

RH/T HVAC probe



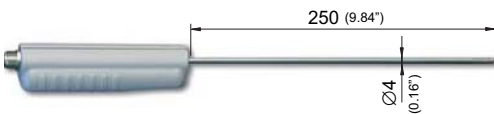
Application: humidity and temperature measurement in HVAC applications
 Working range: 0...100% RH / -20...70°C (-4...158°F)
 Accuracy: ±2% RH (0...90% RH), ±3% RH (90...100% RH)
 ±0.2°C / ±0.36°F (20°C / 68°F),
 ±0.5°C / ±0.9°F (-20 resp. 70°C / -4 resp. 158°F)
 Response time τ_{90} : ≤ 7 sec.
 Measurand: channel 1: T [°C/°F]
 channel 2: RH [%], dv [g/m³], Td [°C/°F], r [g/kg, gr/lb]
 Order code: **HA040201**

RH/T high temperature probe



Application: humidity and temperature measurement in industrial process applications
 Working range: 0...100% RH / -40...180°C (-40...356°F)¹⁾
 Accuracy: ±2% RH (0...90% RH), ±3% RH (90...100% RH)
 ±0.2°C / ±0.36°F (20°C / 68°F),
 ±0.5°C / ±0.9°F (-40°C / -40°F), ±0.6°C / ±1.1°F (180°C / 356°F)
 Response time τ_{90} : ≤ 30 sec.
 Measurand: channel 1: T [°C/°F]
 channel 2: rF [%], dv [g/m³], Td [°C/°F], r [g/kg, gr/lb]
 Temperature dependence: RH: ±0.03% RH/°C (% RH/°F)
 Order code: **HA040202**

RH/T miniature probe



Application: humidity and temperature measurement in small places, humidity measurement in boreholes
 Working range: 0...100% RH / -40...100°C (-40...212°F)
 Accuracy: ±2% RH (0...90% RH), ±3% RH (90...100% RH)
 ±0.2°C / ±0.36°F (20°C / 68°F),
 ±0.7°C / ±1.26°F (-40 resp. 100°C / -40 resp. 212°F)
 Response time τ_{90} : ≤ 15 sec.
 Measurand: channel 1: T [°C/°F]
 channel 2: RH [%], dv [g/m³], Td [°C/°F], r [g/kg, gr/lb]
 Temperature dependence: RH: ±0.03% RH/°C (% RH/°F)
 Order code: **HA040203**

Temperature Probes:

PT100 cut-in probe



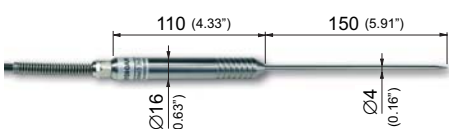
Application: temperature measurement in solid, liquid and powdery media
 Working range: -40...400°C (-40...752°F)¹⁾
 Accuracy: PT100 class B, basic device: ±0.5°C (±0.9°F)
 Response time τ_{90} : 10 sec.
 Cable length: 1m (3.28ft)
 Order code: **HA040101**

PT100 immersion probe



Application: temperature measurement in gaseous, liquid and powdery media
 Working range: -40...400°C (-40...752°F)¹⁾
 Accuracy: PT100 class A, basic device: ±0.5°C (±0.9°F)
 Response time τ_{90} : 10 sec.
 Cable length: 1m (3.28ft)
 Order code: **HA040102**

PT100 cut-in food probe

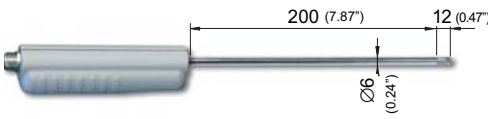


Application: temperature measurement in solid, liquid and powdery food
 Working range: -40...400°C (-40...752°F)¹⁾
 Accuracy: PT100 class A, basic device: ±0.5°C (±0.9°F)
 Response time τ_{90} : 10 sec.
 Cable length: 1m (3.28ft)
 Order code: **HA040104**

¹⁾Attend to working temperature range of grip of sensing probe!

Air Velocity Probes:

Air velocity probe Ø6mm (0.24")



Application: air velocity measurement in small places and for high accuracy requirements

Working range: 0...2m/s (0...400ft/min) / -20...70°C (-4...158°F)
 0...20m/s (0...4000ft/min) / -20...70°C (-4...158°F)

Accuracy: ±(0.04m/s / 8ft/min + 1% of m. v.) / ±0.7°C (±1.26°F)
 (0...50°C / 32...122°F) ± 0.7°C (±1.26°F)

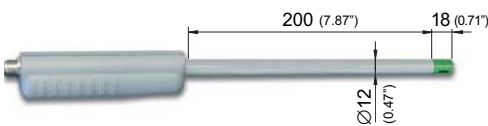
Response time τ_{90} : ≤ 1.5 sec.

Measurand: channel 1: v [m/s, ft/min] / channel 2: T [°C/°F]

Temperature dependence: v: typ. ±0.1% of m.v./°C (±0.03% of m.v./°F)

Order code: **HA040401** / **HA040402**

Air velocity probe Ø12mm (0.47")



Application: air velocity measurement in HVAC applications

Working range: 0...20m/s (0...4000ft/min) / 0...50°C (32...122°F)

Accuracy: ±(0.2m/s / 39ft/min + 3% of m. v.) / ±1°C (±1.8°F)

Response time τ_{90} : ≤ 1.5 sec.

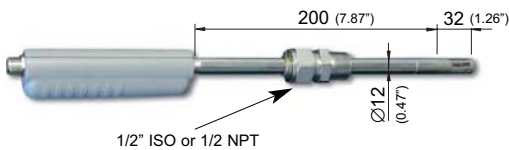
Measurand: channel 1: v [m/s, ft/min] / channel 2: T [°C/°F]

Temperature dependence: v: typ. ±0.1% of m.v./°C (±0.03% of m.v./°F)

Order code: **HA040403**

Oil Probe:

Oil probe Ø12mm (0.47")



Application: measurement of moisture in mineral und synthetic oil

Working range: 0...1 a_w / 0...20000ppm / -40...120°C (-40...248°F)

Accuracy: ±0.02a_w (0...0.9a_w), ± 0.03a_w (0.9...1a_w)
 ±0.2°C / ±0.36°F (20°C / 68°F),
 ±0.5°C / ±0.9°F (-40 resp. 120°C / -40 resp. 248°F)

Response time τ_{90} : ≤ 10 min (in still oil)

Pressure range: 0.01...10bar (0.15...145psi)

Measurand: channel 1: T [°C/°F] / channel 2: a_w [] oder x [ppm] oil specific parameters are adjustable at the basic device

Temperature dependence: a_w: ±0.0003a_w/°C (a_w/°F)

Order code: 1/2 ISO: **HA040204** / 1/2 NPT: **HA040206**

Ordering Guide

MODEL	PROBES	ACCESSORIES
basic device (OMNIPOINT 20)	RH/T HVAC probe (HA040201) RH/T high temperature probe (HA040202) RH/T miniature probe (HA040203) PT100 cut-in probe (HA040101) PT100 immersion probe (HA040102) PT100 cut-in food probe (HA040104) air velocity probe Ø6mm (0.24") - 0...2m/s (0...400ft/min) (HA040401) air velocity probe Ø6mm (0.47") - 0...20m/s (0...4000ft/min) (HA040402) air velocity probe Ø12mm (0.47") (HA040403) oil probe - 1/2 ISO (HA040204) oil probe - 1/2 NPT (HA040206)	stainless steel sintered filter (for Ø12mm RH/T probe) (HA010103) PTFE - filter (for Ø12mm RH/T probe) (HA010105) metal grid filter (for Ø12mm RH/T probe) (HA010106) carrying case (for basic device + 5 probes + accessories) (HA040902) ball valve set for oil probe (HA050101) humidity standards: 5 ampoules 5% RH, 5 textile discs (HA010405) 5 ampoules 10% RH, 5 textile discs (HA010410) 5 ampoules 35% RH, 5 textile discs (HA010435) 5 ampoules 50% RH, 5 textile discs (HA010450) 5 ampoules 80% RH, 5 textile discs (HA010480) 5 ampoules 95% RH, 5 textile discs (HA010495) calibration device for sensor probes 12mm (0.47") - horizontal mounting (HA010401) ISO standard calibration package (refer to data sheet "OEKD Calibration Laboratory")

Order Example

OMNIPOINT 20, HA040201, HA040202, HA040401, HA010401, HA040902

model: basic device OMNIPOINT 20

probes: RH/T HVAC probe, RH/T high temperature probe, air velocity probe Ø6mm (0.24") - 0...2m/s (0...400ft/min)

accessories: calibration device for sensor probes 12mm (0.47") - horizontal mounting, carrying case