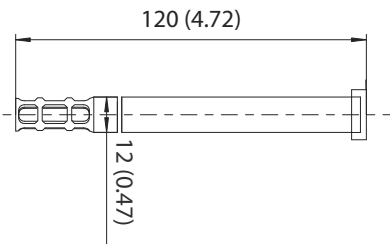
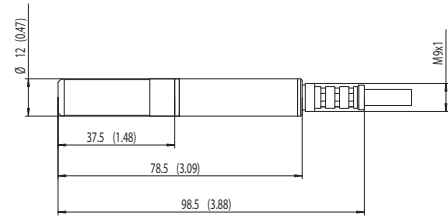




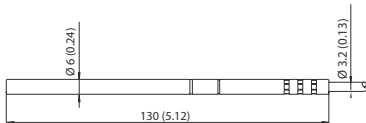
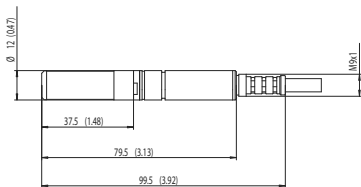
**PTU301 for wall-mounting**



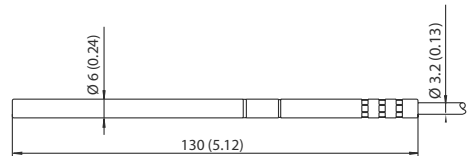
**PTU303 for outdoor use**



**PTU307/30T warmed probe for demanding meteorological installations**



**PTU30T for temperature only measurement**



# Technical Data

## Performance

### Barometric pressure

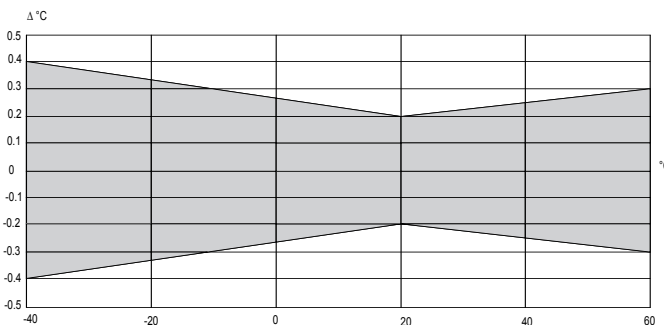
Pressure range	500 ... 1100 hPa, 50 ... 1100 hPa	
	500 ... 1100 hPa	50 ... 1100 hPa
Accuracy	<b>Class A</b>	<b>Class B</b>
Linearity	±0.05 hPa	±0.10 hPa
Hysteresis*	±0.03 hPa	±0.03 hPa
Repeatability*	±0.03 hPa	±0.03 hPa
Calibration uncertainty**	±0.07 hPa	±0.15 hPa
Accuracy at +20 °C***	±0.10 hPa	±0.20 hPa
Temperature dependence****	±0.1 hPa	±0.1 hPa
Total accuracy (-40 ... +60 °C/-40 ... +140 °F)	±0.15 hPa	±0.25 hPa
Long-term stability/year	±0.1 hPa	±0.1 hPa
Response time (100 % response)	2 s	1 s
Pressure units	hPa, mbar, kPa, Pa, inHg, mmH2O, mmHg, torr, psia	hPa, mbar, kPa, Pa, inHg, mmH2O, mmHg, torr, psia

- \* Defined as ±2 standard deviation limits of endpoint non-linearity, hysteresis error or repeatability error and calibration.
- \*\* Defined as ±2 standard deviation limits of accuracy of the working standard including traceability to NIST.
- \*\*\* Defined as the root sum of the squares (RSS) of endpoint non-linearity, hysteresis error, repeatability error and calibration uncertainty at room temperature.
- \*\*\*\* Defined as ±2 standard deviation limits of temperature dependence over the operating temperature range.

### Temperature

Measurement range, all probes	-40 ... +60 °C (-40 ... +140 °F)
Accuracy at +20 °C (+68 °F)	± 0.2 °C (± 0.4 °F)
Temperature units	°C, °F

### Accuracy over temperature range



Temperature sensor PT100 RTD 1/3 Class B IEC 751

### Relative humidity

Measurement range	0 ... 100 % RH
Accuracy (including non-linearity, hysteresis, and repeatability) at +15 ... +25 °C	±1 %RH (0 ... 90 %RH) ±1.7 %RH (90 ... 100 %RH)
at -20 ... +40 °C	±(1.0 + 0.008 x reading) %RH
at -40 ... +60 °C	±(1.5 + 0.015 x reading) %RH

Factory calibration uncertainty (+20 °C)

(Defined as ±2 standard deviation limits. Small variations possible, see also calibration certificate.) ± 0.6 % RH (0 ... 40 %RH)  
± 1.0 % RH (40 ... 97 %RH)

### Sensor

for typical applications Vaisala HUMICAP® 180 or 180R\*  
for applications with chemical purge/warmed probe Vaisala HUMICAP® 180C or 180RC\*  
Response time (90 %) at +20 °C (+68 °F) in still air  
with grid filter 8 s / 17 s\*  
with grid + steel netting filter 20 s / 50 s\*  
with sintered filter 40 s / 60 s\*  
\*with HUMICAP® 180R or 180RC sensor

## Inputs and outputs

Operating voltage	10 ... 35 VDC, 24 VAC
with optional power supply module	100 ... 240 VAC, 50/60 Hz
Power consumption at +20 °C (U <sub>in</sub> 24 VDC)	
RS-232	max. 28 mA
U <sub>out</sub> 3 x 0 ... 1 V/0 ... 5 V/0 ... 10 V	max. 33 mA
I <sub>out</sub> 3 x 0 ... 20 mA	max. 63 mA
display and backlight	+20 mA
during chemical purge	max. +110 mA
during probe heating	+120 mA
Settling time at power-up (one sensor)	
class A	4 s
class B	3 s
External loads	
current outputs	R <sub>L</sub> < 500 ohm
0 ... 1 V output	R <sub>L</sub> > 2 kohm
0 ... 5 V and 0 ... 10 V outputs	R <sub>L</sub> > 10 kohm
Recommended wire size	0.5 mm <sup>2</sup> (AWG 20) stranded wires
Digital outputs	RS-232, RS-485 (optional)
Service connection	RS-232, USB
Relay outputs (optional)	0.5 A, 250 VAC
Ethernet interface (optional)	
Supported standards	10/100Base-T
Connector	RJ45
Protocols	Telnet
Software support	Vaisala MI70 link
WLAN interface (optional)	
Supported standards	802.11b
Antenna connector type	RP-SMA
Protocols	Telnet
Security	WEP 64/128, WPA
Software support	Vaisala MI70 link
Authentication / Encryption (WLAN)	
Open / no encryption	
Open / WEP	
WPA Pre shared key / TKIP	
WPA Pre shared key / CCMP (a.k.a. WPA2)	
Optional data logger with real-time clock	
Logged parameters	max. three with trend/min/max values
Logging interval	10 sec (fixed)
Max. logging period	4 years 5 months
Logged points	13.7 million points per parameter
Battery lifetime	min. 5 years

