

# PC33, 52, 62 & 62V

## Relative Humidity and Temperature Transmitter, Analog or Digital



The PC series offers a comprehensive range of relative humidity transmitters for accurate, stable and repeatable measurements. Available with analog or digital output signals, the PC series can be installed in a wide variety of applications.

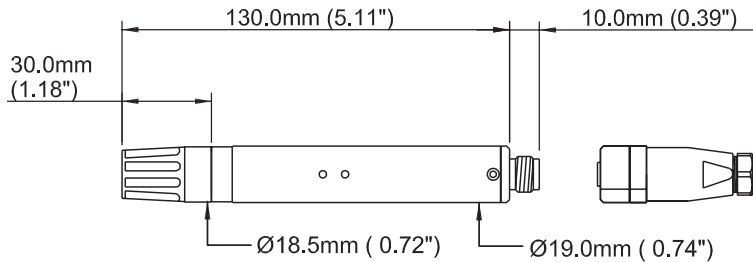
### Highlights

- Low cost PC33 with analog output is designed for HVAC applications
- PC52 with analog output is designed for accurate measurement in controlled environments
- PC62 is designed for high accurate measurements in precision manufacturing applications
- Digital or analog output possible on the PC62
- PC62 available with calculated absolute humidity, dew point or wet bulb temperature output
- Output range on the PC62 is free scalable

### Technical Specifications

Performance	
Measurement range (RH)	0–100% RH
Measurement range (T)	0 to +100°C / 32 to 212°F -20 to +80°C / -4 to +176°F 0 to +50°C / 32 to 122°F
RH Accuracy at 23°C / 73°F	PC52: <math>\pm 2\%</math> RH (10–90% RH) PC33: <math>\pm 3\%</math> RH (30–80% RH)
Temperature Accuracy	PC52: $\pm 0.2^\circ\text{C}$ (-10 to +50°C) $\pm 0.36^\circ\text{F}$ (14 to 122°F) PC33: $\pm 0.3^\circ\text{C}$ (5 to +40°C) $\pm 0.54^\circ\text{F}$ (41 to 104°F)
Stability – RH Sensor	$\pm 1\%$ RH/year
Response time – RH Sensor	<10 sec typical (for 90% of the step change)
Electrical output/input	
Output signal	4–20 mA signal, 0–1, 0–5, 0–10 VDC PC52: RS232, RS485
Supply voltage	14–30 VDC, 5–30 VDC (0–1 V & mA output)
Operating conditions	
Operating humidity Probe, Housing, Storage	5-95% RH
Operating temperature Probe, Housing Storage	-30 to +70°C / -22 to +158°F -40 to +75°C / -40 to +167°F
Mechanical specification	
Ingress protection	IP65
Housing material	Molded polymer housing or stainless steel
Dimensions	L=130, $\phi 19\text{mm}$ / L=5.11", $\phi 0.74$ "
Weight	30g / 1.06oz without cable (molded polymer housing version)
Electrical connections	M12

### Dimensions



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## Accessories and spare parts

You can check your hygrometer with the control kit HKC which is based on the principle of non-saturated salt solutions. Refer to technical data sheet CONTROL KIT.	<b>Control Kit HKC</b>
Connector, screws	<b>A000030</b>
Connector with 2m / 6.5' cable	<b>A000031</b>
Connector with 5m / 16' cable	<b>A000032</b>
Slotted protection cap, black (standard)	<b>A000002</b>
PVDF filter	<b>A000014</b>
PVDF/Foil filter with protection cap, black	<b>A000015/44</b>
Wire mesh filter with protection cap, black	<b>A000021</b>
Stainless steel sintered filter 5/10/20µm	<b>A000025/26/27</b>
Foil filter 2µm with black protection cap	<b>A000040</b>
Aluminum mounting flange/stainless steel flange	<b>A000110/100</b>
Molded polymer housing mounting flange	<b>A000150</b>
Weather cap, wall ø90.0mm / 3.54", for ø19mm / 0.74" probe	<b>A000120</b>
Weather cap, wall ø120.0mm / 4.72", for ø19mm / 0.74" probe	<b>A000125</b>

## Electrical Connections

Voltage output		
Cable	Connector	Power Supply V+
White	Pin 1	Supply VDC +
Green	Pin 4	Output RH
Yellow	Pin 2	Output temperature
Brown	Pin 3	Common ground

4-20 mA output 2-wire		
Cable	Connector	
White	Pin 1	Output RH +
Brown	Pin 3	Output RH -
Green	Pin 4	Output temperature +
Yellow	Pin 2	Output temperature -

Cable	Connector	RS232	RS485
White	Pin 1	Power supply V+	Supply VDC
Green	Pin 4	TX	TX/RX+
Yellow	Pin 2	RX	RX/TX-
Brown	Pin 3	Ground	Ground

## Order codes

Relative humidity and temperature probe **PC33 4 XX T3 A**

Accuracy and version configuration	
3% accuracy, 1 calibration point (50%)	PC33
2% accuracy, 2 calibration points (20%, 85%)	PC52
2% accuracy, digital probe with RS232 or RS485 output	PC62
2% accuracy, digital probe with volt output	PC62V

Output configuration	
4-20 mA (not available for digital probe)	2
0-10 V	3
0-5 V	4
0-1 V	5
RS232 (only available with digital probes)	0
RS485 (only available with digital probes)	1

Body configuration	
Molded polymer housing	XX
Stainless steel	SX

Cable length	
No cable	A
Screw connector, no cable	B
2m / 6.5' cable including screw connector	C
5m / 16' cable including screw connector	D

Temperature output range and configuration	
No T output RH only	X
0 to +100°C / 32 to 212°F temp range	T0
-20 to +80°C / -4 to +176°F temp range	T1
0 to +50°C / 32 to 122°F temp range	T3
PC62 with digital output in °C	TC
PC62 with digital output in °F	TF
PC62V with calculated dew-point temperature & temperature output. Range (Td) -40 to +60°C / -40 to +140°F (only available with temperature range T1)	TD
PC62V with calculated absolute humidity and temperature output. Range Abs from 0 - 200g/m <sup>3</sup> / 87.4gr/ft <sup>3</sup> (only available with temperature range T1)	TA
PC62V with calculated wet bulb temperature and temperature volt output. Range (Tw) -40 to +60°C / 40 to +140°F	TW

**Example: PC33 4 XX T3 A**

Relative humidity and temperature probe PC33, Molded polymer housing, 0-5 V output, RH signal, 0 to 50°C / 32 to 122°F temperature range. No cable.

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version. Ref: PC33&52\_0908