

PC33 & 52

Relative Humidity and Temperature Transmitter Analog



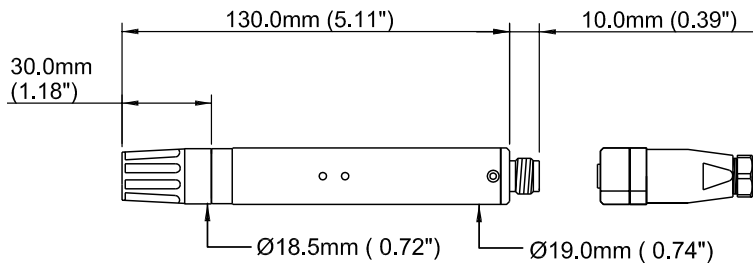
The PC series offers a comprehensive range of relative humidity transmitters for accurate, stable and repeatable measurements. Available with analog output signals, the PC series can be installed in a wide variety of applications.

Highlights

- Low cost PC33 with analog output is designed for HVAC applications
- PC52 with analog output is designed for accurate measurement in controlled environments

Technical Specifications	
Performance	
Measurement range (RH)	0–100% RH
Measurement range (T)	-20 to +80°C / -4 to +176°F
Accuracy at 23°C (73°F) Humidity	PC52: $\pm 2\%$ RH (10–90 % RH) PC33: $\pm 3\%$ RH (30–80% RH)
Accuracy at 23°C (73°F) Temperature	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
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 +85°C / -22 to +185°F -40 to +85°C / -40 to +185°F
Mechanical specification	
Ingress protection	IP65
Housing material	Moulded polymer housing or stainless steel
Dimensions	L=130, $\phi 19\text{mm}$ / L=5.11", $\phi 0.74$ "
Weight	30g / 1.06oz without cable (moulded polymer housing version)
Electrical connections	M12

Dimensions



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.	Control Kit HKC
Connector, screws	A000030
Connector with 2m / 6.5' cable	A000031
Connector with 5m / 16' cable	A000032
Slotted protection cap, black (standard)	A000002
PVDF filter	A000014
PVDF/Foil filter with protection cap, black	A000015/44
Wire mesh filter with protection cap, black	A000021
Stainless steel sintered filter 5/10/20µm	A000025/26/27
Foil filter 2µm with black protection cap	A000040
Aluminum mounting flange	A000110
Stainless steel fitting	A000100
Moulded polymer housing mounting flange	A000150
Weather cap, wall ø90.0mm / 3.54", ø19mm / 0.74" probe	A000120
Weather cap, wall ø120.0mm / 4.72", ø19mm / 0.74" probe	A000125

Electrical Connections

Voltage output		
Cable	Connector	
White	Pin 1	Power Supply V +
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 -

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

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

Body configuration	
Moulded 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 configuration	
No T output RH only	X
-20 to +80°C / -4 to +176°F temp range	T1
0 to +50°C / 32 to 122°F temp range	T3
Other output scaling available on request	TX

Example: PC33 4 XX T3 A

Relative humidity and temperature probe PC33, Moulded 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_97178_V1_UK_1009