

PC33 & 52

Analog Relative Humidity and Temperature Probe



The PC series offers a comprehensive range of relative humidity probes 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

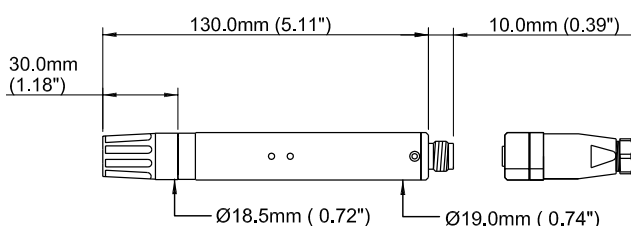
Technical Specifications

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: <±2% RH (10–90% RH) PC33: <±3% RH (30–80% RH)
Accuracy at 23°C (73°F) Temperature	PC52: ±0.2°C (±0.36°F) PC33: ±0.3°C (±0.54°F)
Stability – RH Sensor	±1% RH/year
Response time – RH Sensor	<10 sec typical (for 90% of the step change)
Electrical output/input	
Output signal	4–20 mA, 0–1, 0–5, 0–10 V
Supply voltage	14–30 V DC, 5–30 V DC (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 (NEMA 4 level)
Housing material	Molded polymer or stainless steel (ordering option)
Dimensions	L=130mm, Ø19mm (L=5.11", Ø0.74")
Weight	30g (1.06oz) without cable (molded polymer version)
Electrical connections	M12

Accessories and Spare Parts

19mm (0.75") slotted protection cap black	A000002
19mm (0.75") PVDF filter	A000014
19mm (0.75") PVDF filter with protection cap black	A000015
19mm (0.75") Mesh filter with protection cap, black	A000021
19mm (0.75") Arrow SS sintered filter 5µm / 10µm / 20µm	A000025/26/27
19mm (0.75") Connector, no cable, with screw terminals	A000030
19mm (0.75") Connector with cable (customer spec length)	A00030XM
19mm (0.75") Connector with 2m (6.5') cable	A000031
19mm (0.75") Connector with 5m (16') cable	A000032
19mm (0.75") Foil filter 2µm with protection cap black	A000040
Oleophobic foil filter 0.7µm with protection cap black	A000042
19mm (0.75") Foil filter 1.5µm w/protection cap black	A000044
3/4" NPT SS adj. fitting for SS probes	A000100
Al mounting flange for Ø19.0mm (Ø0.75") SS probe	A000110
Ø90.0mm (Ø3.54") Wall mount weather protection cap	A000120
Ø120.0mm (Ø4.72") Wall mount weather protection cap	A000125
Mini flange for Ø19.0mm (Ø0.75") molded polymer probe	A000150
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	HKC

Dimensions



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 -

Ordering Example

PC33-BASE-4-XX-T3-A-02

Relative humidity and temperature probe PC33, 0-5 V output, molded polymer body, temperature range 0 to +50°C, no cable, 19mm slotted protection cap

Order Codes

PC33 - Analog Relative Humidity and Temperature Probe - with 1pt calibration		
Feature	Item	Description
Base Model	PC33-BASE	Base unit
Sig Output	PC33-2	4-20 mA
	PC33-3	0-10 V
	PC33-4	0-5 V
	PC33-5	0-1 V
Body	PC33-SX	Stainless steel
	PC33-XX	Molded polymer
Temp	PC33-TX	Other output scaling available on request
	PC33-T1	-20 to +80°C (-4 to +176°F)
	PC33-T3	0 to +50°C (+32 to +122°F)
	PC33-X	No T output RH only
Cable	PC33-A	No cable
	PC33-B	19mm (0.75") Connector, no cable, with screw terminals
	PC33-C	19mm (0.75") Connector with 2m (6.5') cable
	PC33-D	19mm (0.75") Connector with 5m (16') cable
Filter	PC33-02	19mm (0.75") slotted protection cap black
	PC33-15	19mm (0.75") PVDF filter with protection cap black
	PC33-21	19mm (0.75") Mesh filter with protection cap, black
	PC33-25	19mm (0.75") Arrow SS sintered filter 5µm
	PC33-26	19mm (0.75") Arrow SS sintered filter 10µm
	PC33-27	19mm (0.75") Arrow SS sintered filter 20µm
	PC33-40	19mm (0.75") Foil filter 2µm with protection cap black
	PC33-42	Oleophobic foil filter 0.7µm with protection cap black
PC33-44	19mm (0.75") Foil filter 1.5µm w/protection cap black	

PC52 - Analog Relative Humidity and Temperature Probe - with 2pt calibration		
Feature	Item	Description
Base Model	PC52-BASE	Base unit
Sig Output	PC52-2	4-20 mA
	PC52-3	0-10 V
	PC52-4	0-5 V
	PC52-5	0-1 V
Body	PC52-SX	Stainless steel
	PC52-XX	Molded polymer
Temp	PC52-TX	Other output scaling available on request
	PC52-T1	-20 to +80°C (-4 to +176°F)
	PC52-T3	0 to +50°C (+32 to +122°F)
	PC52-X	No T output RH only
Cable	PC52-A	No cable
	PC52-B	19mm (0.75") Connector, no cable, with screw terminals
	PC52-C	19mm (0.75") Connector with 2m (6.5') cable
	PC52-D	19mm (0.75") Connector with 5m (16') cable
Filter	PC52-02	19mm (0.75") slotted protection cap black
	PC52-15	19mm (0.75") PVDF filter with protection cap black
	PC52-21	19mm (0.75") Mesh filter with protection cap, black
	PC52-25	19mm (0.75") Arrow SS sintered filter 5µm
	PC52-26	19mm (0.75") Arrow SS sintered filter 10µm
	PC52-27	19mm (0.75") Arrow SS sintered filter 20µm
	PC52-40	19mm (0.75") Foil filter 2µm with protection cap black
	PC52-42	Oleophobic foil filter 0.7µm with protection cap black
PC52-44	19mm (0.75") Foil filter 1.5µm w/protection cap black	