

PC33 & 52

Analog Relative Humidity and Temperature Probe

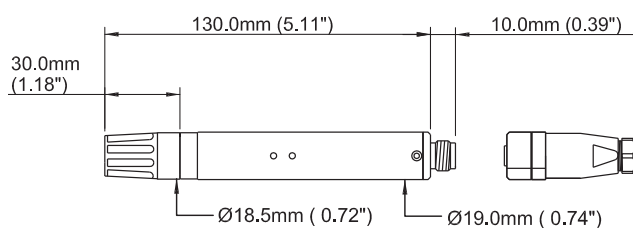


The PC33 & 52 series offers a comprehensive range of relative humidity probes for accurate, stable and repeatable measurements. Available with analog output signals, the PC series can be installed in a wide variety of applications.

Highlights

- Low cost PC33 with analog output is designed for HVAC applications
- PC52 with analog output is designed for accurate measurement in controlled environments
- Analog zero and span adjustment

Dimensions



Technical Specifications

Performance	
Measurement range (RH)	0–100% RH
Measurement range (T)	-20 to +80°C (-4 to +176°F)
Accuracy @ 23°C (73°F) humidity	PC52: <±2% RH (10–90% RH) PC33: <±3% RH (30–80% RH)
Accuracy @ 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 Specifications	
Output signal options	4–20 mA, 0 to 1, 0 to 5, 0 to 10 V
Supply voltage	14 to 30 V DC (for 0 to 5 / 0 to 10 V output) 5 to 30 V DC (0 to 1 V & mA output)
Operating Specifications	
Operating temperature	
Probe, Housing	-30 to +85°C (-22 to +185°F)
Storage	-40 to +85°C (-40 to +185°F)
Mechanical Specifications	
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: X = meters of cable)	A000030-XM
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
19mm (0.75") 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
Non-saturated salt solution kit (refer to technical datasheet)	HKC

*Non standard cable length available upon request

Electrical Connections

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

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

Ordering Codes

To construct the order code, select the relevant feature from the tables below, starting with the base model, which is {Feature A} and then add on options to create a string: {Feature A} + {Feature B} + {Feature C} + {Feature D} + {Feature E} + {Feature F}

Order example: PC33 + 4 + XX + T3 + CA + F02

Relative humidity and temperature probe with 1 pt calibration PC33, 0 to 5 V output, molded polymer body, temperature range 0 to +50°C (+32 to +122°F), no cable, 19mm (0.75") slotted protection cap

Order example: PC52 + 4 + XX + T3 + CA + F02

Relative humidity and temperature probe with 2 pt calibration PC52, 0 to 5 V output, molded polymer body, temperature range 0 to +50°C (+32 to +122°F), no cable, 19mm (0.75") slotted protection cap

PC33	4	XX	T3	CA	F02
Base Model {Feature A}					
Relative humidity and temperature probe PC33					
Signal Output {Feature B}					
4-20 mA 2					
0 to 10 V 3					
0 to 5 V 4					
0 to 1 V 5					
Body {Feature C}					
Stainless steel SX					
Molded polymer XX					
Temperature {Feature D}					
No T output RH only X					
-20 to +80°C (-4 to +176°F) T1					
0 to +50°C (+32 to +122°F) T3					
Other output scaling available on request TX					
Cable {Feature E}					
No cable CA					
19mm (0.75") Connector, no cable, with screw terminals CB					
19mm (0.75") Connector with 2m (6.5') cable CC					
19mm (0.75") Connector with 5m (16') cable CD					
Filter {Feature F}					
19mm (0.75") slotted protection cap black F02					
19mm (0.75") PVDF filter with protection cap black F15					
19mm (0.75") Mesh filter with protection cap, black F21					
19mm (0.75") Arrow SS sintered filter 5µm F25					
19mm (0.75") Arrow SS sintered filter 10µm F26					
19mm (0.75") Arrow SS sintered filter 20µm F27					
19mm (0.75") Foil filter 2µm with protection cap black F40					
19mm (0.75") Oleophobic foil filter 0.7µm with protection cap black F42					
19mm (0.75") Foil filter 1.5µm w/protection cap black F44					

PC52	4	XX	T3	CA	F02
Base Model {Feature A}					
Relative humidity and temperature probe PC52					
Signal Output {Feature B}					
4-20 mA 2					
0 to 10 V 3					
0 to 5 V 4					
0 to 1 V 5					
Body {Feature C}					
Stainless steel SX					
Molded polymer XX					
Temperature {Feature D}					
No T output RH only X					
-20 to +80°C (-4 to +176°F) T1					
0 to +50°C (+32 to +122°F) T3					
Other output scaling available on request TX					
Cable {Feature E}					
No cable CA					
19mm (0.75") Connector, no cable, with screw terminals CB					
19mm (0.75") Connector with 2m (6.5') cable CC					
19mm (0.75") Connector with 5m (16') cable CD					
Filter {Feature F}					
19mm (0.75") slotted protection cap black F02					
19mm (0.75") PVDF filter with protection cap black F15					
19mm (0.75") Mesh filter with protection cap, black F21					
19mm (0.75") Arrow SS sintered filter 5µm F25					
19mm (0.75") Arrow SS sintered filter 10µm F26					
19mm (0.75") Arrow SS sintered filter 20µm F27					
19mm (0.75") Foil filter 2µm with protection cap black F40					
19mm (0.75") Oleophobic foil filter 0.7µm with protection cap black F42					
19mm (0.75") Foil filter 1.5µm w/protection cap black F44					