PC33 & 52

Probes

Analog Relative Humidity and Temperature Probe

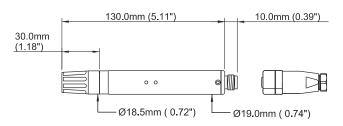


The PC33 & 52 series offers a comprehensive range of relative humidity probes for accurate, stable and repeatable measurements. Available with analog output signals, the PC series can be installed in a wide variety of applications.

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

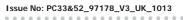
Performance

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 Specificati	ons				
Operating temperature Probe, Housing Storage	-30 to +85°C (-22 to +185°F) -40 to +85°C (-40 to +185°F)				
Mechanical Specifica	tions				
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 $2\mu m$ with protection cap black	A000040
19mm (0.75") Oleophobic foil filter 0.7 μ m 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)	нкс

*Non standard cable length available upon request





Electrical Connections

v	oltage 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 D} + {Feature B} + {Feature

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

PC33

4 XX

Order example: PC52 + 4 + XX + T3 + CA + F02 Relative humidity and temperature probe with 2 pt calibration PC52, 0 to 5 V

 P to +122°F), no
 output, molded polymer body, temperature range 0 to +50°C (+32 to +122°F), no cable, 19mm (0.75″) slotted protection cap

 T3
 CA
 F02

 PC52
 4
 XX
 T3
 CA
 F02

 Base Model {Feature A}
 Feature A
 Feature A
 Feature A

se Model {Feature A}	Base Model {Feature A}	Base Model {Feature A}	Base Model {Feature A}	Base Model (Feature A)
lative humidity and temperature probe PC33	Relative humidity and temperature probe PC52	Relative humidity and temperature probe PC52	Relative humidity and temperature probe PC52	Relative humidity and temperature probe PC52
gnal Output {Feature B}	Signal Output {Feature B}	Signal Output {Feature B}	Signal Output {Feature B}	Signal Output {Feature B}
20 mA 2	4–20 mA 2			
o 10 V 3	0 to 10 V 3	0 to 10 V 3	0 to 10 V 3	0 to 10 V 3
o 5 V 4	0 to 5 V 4	0 to 5 V 4	0 to 5 V 4	0 to 5 V 4
o 1 V 5	0 to 1 V 5	0 to 1 V 5	0 to 1 V 5	0 to 1 V 5
dy {Feature C}				
sinless steel SX	Body {Feature C}			
Ided polymer XX	Stainless steel SX Molded polymer XX			
mperature {Feature D}	Temperature {Feature D}	Temperature {Feature D}	Temperature {Feature D}	Temperature {Feature D}
T output RH only X	No T output RH only	No T output RH only X	No T output RH only X	No T output RH only X
) to +80°C (-4 to +176°F) T1	-20 to +80°C (-4 to +176°F)	-20 to +80°C (-4 to +176°F) T1	-20 to +80°C (-4 to +176°F) T1	-20 to +80°C (-4 to +176°F) T1
o +50°C (+32 to +122°F) T3	0 to +50°C (+32 to +122°F)	0 to +50°C (+32 to +122°F) T3	0 to +50°C (+32 to +122°F) T3	0 to +50°C (+32 to +122°F) T3
ner output scaling available on request TX	Other output scaling available on request	Other output scaling available on request TX	Other output scaling available on request TX	Other output scaling available on request TX
ble {Feature E}	Outly (Franking F)	Only (Franking F)	Ochla (Eaching E)	Ochla (Festure F)
cable CA	Cable {Feature E}			
mm (0.75") Connector, no cable, with screw terminals CB	No cable	No cable CA 19mm (0.75") Connector, no cable, with screw terminals CB		
mm (0.75") Connector with 2m (6.5') cable CC	19mm (0.75") Connector with 2m (6.5') cable			
mm (0.75") Connector with 5m (16') cable CD	19mm (0.75") Connector with 2m (0.5) cable			
ter (Feature F)	Filter (Feature F)	Filter (Feature F)	Filter (Feature F)	Filter (Feature F)
mm (0.75") slotted protection cap black F02	19mm (0.75") slotted protection cap black	19mm (0.75") slotted protection cap black F02	19mm (0.75") slotted protection cap black F02	19mm (0.75") slotted protection cap black F02
mm (0.75") PVDF filter with protection cap black F15	19mm (0.75") PVDF filter with protection cap black	19mm (0.75") PVDF filter with protection cap black F15	19mm (0.75") PVDF filter with protection cap black F15	19mm (0.75") PVDF filter with protection cap black F15
mm (0.75") Mesh filter with protection cap, black F21	19mm (0.75") Mesh filter with protection cap, black	19mm (0.75") Mesh filter with protection cap, black F21	19mm (0.75") Mesh filter with protection cap, black F21	19mm (0.75") Mesh filter with protection cap, black F21
mm (0.75") Arrow SS sintered filter 5µm F25	19mm (0.75") Arrow SS sintered filter 5µm	19mm (0.75") Arrow SS sintered filter 5µm F25	19mm (0.75") Arrow SS sintered filter 5µm F25	19mm (0.75") Arrow SS sintered filter 5µm F25
mm (0.75") Arrow SS sintered filter 10µm F26	19mm (0.75") Arrow SS sintered filter 10µm	19mm (0.75") Arrow SS sintered filter 10µm F26	19mm (0.75") Arrow SS sintered filter 10µm F26	19mm (0.75") Arrow SS sintered filter 10µm F26
mm (0.75") Arrow SS sintered filter 20µm F27	19mm (0.75") Arrow SS sintered filter 20µm	19mm (0.75") Arrow SS sintered filter 20µm F27	19mm (0.75") Arrow SS sintered filter 20µm F27	19mm (0.75") Arrow SS sintered filter 20µm F27
nm (0.75") Foil filter 2µm with protection cap black F40	19mm (0.75") Foil filter $2\mu m$ with protection cap black	19mm (0.75") Foil filter 2µm with protection cap black F40	19mm (0.75") Foil filter $2\mu m$ with protection cap black F40	19mm (0.75") Foil filter 2µm with protection cap black F40
nm (0.75") Oleophobic foil filter 0.7µm with F42	19mm (0.75") Oleophobic foil filter 0.7µm with protection cap black			
			10mm (0.75") Foil filter 1 Fum w/protection cap black E44	19mm (0.75") Foil filter 1.5µm w/protection cap black F44

