PCMini52

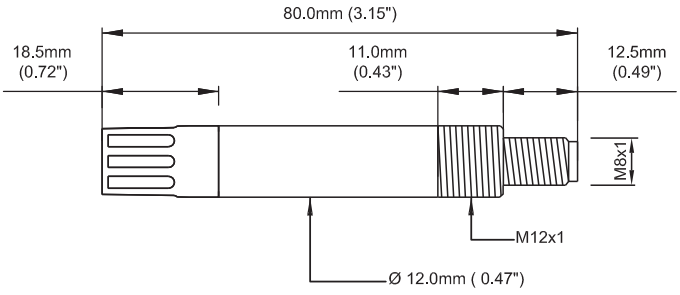
Digital Relative Humidity and Temperature Mini Probe

The micro processor control and multi-point calibration gives the PCMini52 RH probe excellent performance in terms of accuracy and linearity. The mini probe can provide two linear analog outputs for temperature and relative humidity, dew point, absolute humidity or wet bulb temperature.

Highlights

- Analog voltage outputs
- Output can be % RH, calculated absolute humidity, dew point or wet bulb temperature and temperature
- Excellent linearity, micro processor temperature compensated
- Low power consumption, fast settling time
- Small size: L = 80mm, ø12mm (L = 3.15", ø0.47")
- Stainless steel and molded polymer variants

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	<±2% RH (10–90% RH)
Accuracy @ 23°C (73°F) temperature	±0.2°C (±0.36°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	0 to 1, 0 to 5, 0 to 10 V
Supply voltage	14 to 35 V DC (for 0 to 5 / 10 V output) 4.5 to 35 V DC (for 0 to 1 V output)
Current consumption	4 mA on a typical voltage lead
CE marked	Certified
Operating Specifications	
Operating temperature	
Sensing element	-30 to +85°C (-22 to +185°F)
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 / stainless steel (options)
Dimensions	L=80mm, ø12mm (L=3.15", ø0.47")
Filter	PVDF / HDPE / mesh / sintered (options)
Weight	10g (0.35oz)
Electrical connections	4 pin, M8 connector

Accessories and Spare Parts

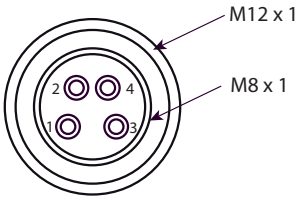
12mm (0.47") Slotted protection cap, black	**A000003**
12mm (0.47") PVDF filter	**A000017**
12mm (0.47") PVDF filter with protection cap, black	**A000018**
12mm (0.47") Mesh filter with protection cap, black	**A000022**
12mm (0.47") Flat SS sintered dust filter	**A000023**
12mm (0.47") Arrow 20µm SS sintered filter	**A000028**
13mm (0.51") HDPE protection cap	**A000046**
12mm (0.47") Connector with 2m (6.5') cable	**A000033**
12mm (0.47") Connector with 5m (16') cable	**A000036**
12mm (0.47") Connector with 10m (33') cable	**A000037**
12mm (0.47") Connector with 20m (66") cable	**A000322**
1/2" NPT SS adj fitting for SS probe	**A000101**
Aluminum mounting flange for ø12mm (ø0.47") SS probes	**A000111**
ø90mm (3.54") WM weather protection cap (in combination with A000111 for ø12mm (0.47") probes)	**A000120**
ø120mm (4.72") WM weather prot. cap (in combination with A000111 for ø12mm (0.47") probes)	**A000125**
12mm (0.47") Connector without cable (with solder terminals)	**A000321**
12mm (0.47") Connector with 20m (25.6') cable*	**A000322**
Non-saturated salt solution kit (refer to technical datasheet)	**HKC**

**Non standard cable length available upon request*

PCMini52

Electrical Connections

Mating Cable		Pin
Brown	Supply voltage V +	1
White	Output RH, dew point or absolute humidity	2
Blue	Common ground	3
Black	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} + {Feature G}

Order example: PCMINI52 + 4 + XX + H + T1 + CA + F03
PCMini52, 0 to 5 V output, molded polymer body, 0-100% RH signal, -20 to +80°C (-4 to +176°F) temperature range, no cable, 12mm (0.47") slotted protection cap black

PCMINI52	4	XX	H	T1	CA	F03

Base Model {Feature A}	
Digital relative humidity and temperature mini probe	PCMINI52

Signal Output {Feature B}	
0 to 10 V	3
0 to 5 V	4
0 to 1 V	5

Body {Feature C}	
Stainless steel	SX
Molded polymer	XX

Moisture Signal {Feature D}	
RH	H
Calculated dew-point temperature (Range (Td) -40 to +60°C (-40 to +140°F) - Only possible with Temperature Signal T1	D
Calculated absolute humidity (Abs) (Range Abs from 0-200g/m^3 - Only possible with Temperature Signal T1)	A
Calculated wetbulb temperature (Range (Tw) -40 to +60°C (-40 to +140°F) - Only possible with Temperature Signal T1)	W

Filter {Feature G}	
12mm (0.47") Slotted protection cap, black	F03
12mm (0.47") PVDF filter with protection cap, black	F18
12mm (0.47") Mesh filter with protection cap, black	F22
12mm (0.47") Flat SS sintered dust filter	F23
12mm (0.47") Arrow 20µm SS sintered filter	F28
13mm (0.51") HDPE protection cap	F46

Cable Length {Feature F}	
No cable	CA
12mm (0.47") Connector with 2m (6.5') cable*	CB
12mm (0.47") Connector with 5m (16') cable*	CC
12mm (0.47") Connector with 10m (33') cable*	CD
12mm (0.47") Connector with 20m (66') cable*	CE

**Non standard cable length available upon request*

Temperature Signal {Feature E}	
No T output (Not available with 0 to 10 V)	X
-20 to +80°C (-4 to +176°F)	T1
Other output scaling available on request	TX

Issue No: PCMini52_97176_V4_UK_0913
Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version.