



## Humidity-Temperature Meteorological Probe

# MP101A

- High accuracy over the full range of humidity and temperature
- Temperature operating range:  $-40..+60^{\circ}\text{C}$  ( $-40..+140^{\circ}\text{F}$ )
- 0..100 %RH humidity measuring range
- Durable, stable sensors with low maintenance requirements
- Advanced humidity sensor with exceptional resistance to contaminants
- Special compensation permits up to 330ft (100m) cable length
- Low power consumption, no warm-up time
- Linear voltage outputs
- Available with a natural or a motor aspirated shield



**rotronic**  
instrument corp

Specifications

Humidity Sensor .....	ROTRONIC HYGROMER C94
Temperature Sensor .....	Pt100 RTD
Humidity Measuring Range .....	0..100 %RH
Temperature Measuring Range (operating) .....	-40 to 60°C
Temperature Limits (storage) .....	-50 to 70°C
Humidity Output Signal (linear) .....	0..1.0 VDC = 0..100%RH
Temperature Output Signal (linear) .....	Standard: -0.4..0.6 VDC = -40..+60°C Optional: 0.0..1.0 VDC = -40..+60°C Optional: 0.0..1.0 VDC = -30..+70°C
Minimum Load per Output .....	1000Ω
Accuracy, Humidity @ 20°C .....	±1.0%RH (*)
(factory)	
Accuracy, Temperature @20°C .....	±0.2°C
Repeatability .....	±0.3%RH and ±0.1°C
Humidity Sensor Stability .....	better than 1 %RH over a year
Response Time (without filter) .....	10 seconds (%RH and temperature)
Setting Time .....	250 m s
Calibration Potentiometers .....	35, 80%RH and RH min. (**)
	Tmin and Tmax
Supply Voltage .....	4.8 to 30.0 VDC
Current Consumption .....	<10 mA
Connector .....	MP101A-C4: 4-pin CANNON MP101A-C5: 5-pin CANNON MP101A-T7:-pin TUCHEL
Cable Length .....	MP101A-C: 6.5ft (2m) MP101A-T: connector is on the probe (***)
Sensor Protection .....	Standard: foam filter MF25MP Optional: wire mesh filter D25
Weight .....	70..700g (0.15..1.50 lb)

(\*) When calibrated against highest quality reference standards. Both factory calibration and field calibration with ROTRONIC standards result in ±1.5%RH accuracy or better.

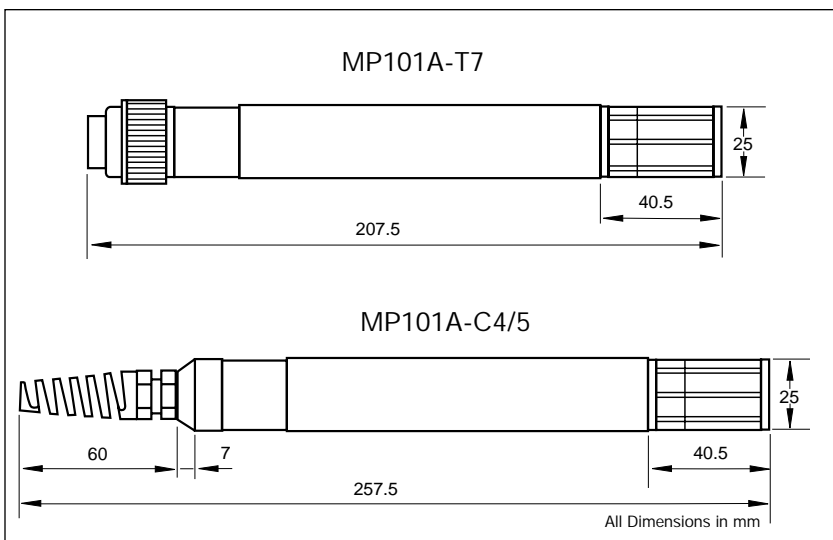
(\*\*) The RH min potentiometer can be used to calibrate at any value between 0 and 10%RH.

(\*\*\*) The matching connector (ET-234) is supplied with the probe.

Accessories (order separately)

Natural Aspiration Shield ..... SMP-41002

Outline Drawing



General Information

The MP101A is a combined humidity and temperature probe designed primarily for outdoor applications. Operation from a DC voltage and low power consumption make the MP101A particularly suitable for operation at remote locations. Energizing of the probe is required for only 0.25 seconds during each measurement. The linear output signals are consistent with the requirements of most data acquisition systems.

Use of the HYGROMER C94 humidity sensor results in exceptional resistance to contaminants. Advanced filter technology provides further protection. The MP101A can be used over long periods of time without any maintenance or recalibration.

The MP101A is available in two basic configurations:

- MP101A-C4/5 with 2 meters hard wired cable terminated by a connector (4 or 5-pin).
- MP101A-T7 with a 7-pin connector directly on the probe.

The probe MP101A-C4 is supplied with a 4-pin CANNON connector and is fully interchangeable with the previous probes of the MP100 series. When the application requires a total length of cable in excess of 6.5ft (2meters), either the probe MP101A-C5 or the probe MP101A-T7 should be used. Both probes feature a compensation that eliminates potential errors resulting from cable resistance for lengths up to 330ft (100meters).