## **Ultra Precise** Immersion **RTD Sensors**

**PM Series** 

Pt100 (100Ω @ 0°C

Temperature Range -100 to 400°C (-148 to 752°F) Depending on Cable and Accuracy

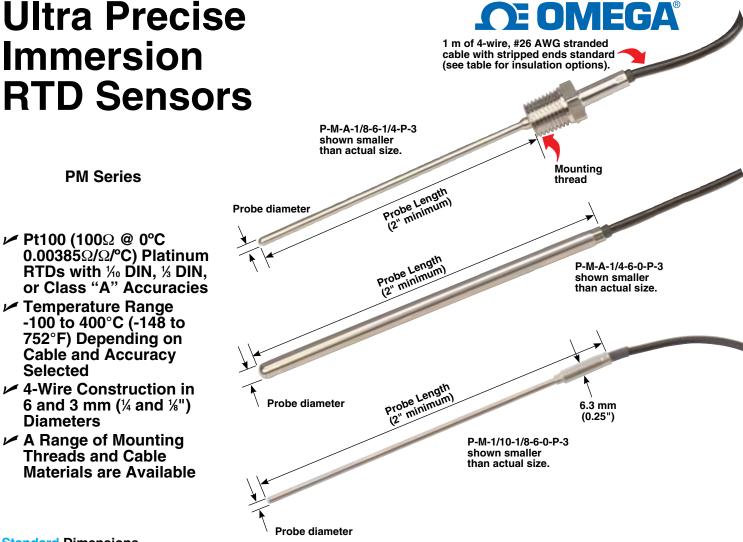
6 and 3 mm (¼ and ½")

A Range of Mounting

Threads and Cable

Selected

Diameters



#### **Standard Dimensions**

To Order					
Accuracy	Sensor Diameter	Mounting Thread	PVC Insulated Model Number 6" Probe Length	PFA Insulated Model Number 6" Probe Length	Fiberglass Insulated Model Number 6" Probe Length
	1⁄8	None	P-M-1/10-1/8-6-0-P-3	P-M-1/10-1/8-6-0-T-3	P-M-1/10-1/8-6-0-G-3
1/10 <b>DIN</b>		1% NPT	P-M-1/10-1/8-6-1/8-P-3	P-M-1/10-1/8-6-1/8-T-3	P-M-1/10-1/8-6-1/8-G-3
710 <b>DIN</b>	1/4	None	P-M-1/10-1/4-6-0-P-3	P-M-1/10-1/4-6-0-T-3	P-M-1/10-1/4-6-0-G-3
		1% NPT	P-M-1/10-1/4-6-1/8-P-3	P-M-1/10-1/4-6-1/8-T-3	P-M-1/10-1/4-6-1/8-G-3
	1⁄8	None	P-M-1/3-1/8-6-0-P-3	P-M-1/3-1/8-6-0-T-3	P-M-1/3-1/8-6-0-G-3
1/3 <b>DIN</b>		½ NPT	P-M-1/3-1/8-6-1/8-P-3	P-M-1/3-1/8-6-1/8-T-3	P-M-1/3-1/8-6-1/8-G-3
73 <b>D</b> IN	1⁄4	None	P-M-1/3-1/4-6-0-P-3	P-M-1/3-1/4-6-0-T-3	P-M-1/3-1/4-6-0-G-3
		1% NPT	P-M-1/3-1/4-6-1/8-P-3	P-M-1/3-1/4-6-1/8-T-3	P-M-1/3-1/4-6-1/8-G-3
	1⁄8	None	P-M-A-1/8-6-0-P-3	P-M-A-1/8-6-0-T-3	P-M-A-1/8-6-0-G-3
Class A		1% NPT	P-M-A-1/8-6-1/8-P-3	P-M-A-1/8-6-1/8-T-3	P-M-A-1/8-6-1/8-G-3
	1⁄4	None	P-M-A-1/4-6-0-P-3	P-M-A-1/4-6-0-T-3	P-M-A-1/4-6-0-G-3
		1% NPT	P-M-A-1/4-6-1/8-P-3	P-M-A-1/4-6-1/8-T-3	P-M-A-1/4-6-1/8-G-3

For longer sheath length, change "-6" in model to desired length in inches for additional cost when longer than 8". For Silicone Rubber insulated cable, change "-P", "-T" or "-G" to "-S" in the model number and use PFA pricing. For longer cable lengths, change "-3" to desired length in feet for additional cost for PVC, for PFA or Silicone Rubber and for fiberglass. For shielding on PVC, PFA or Fiberglass insulated cables, change "P", "T" or "G" to "PS", "TS" or "GS" for additional cost. Mounting threads also available in 1/4 NPT, 3/6 NPT and 1/2 NPT at the same price. 1/6" diameter sensors without threaded fittings and with "P", "PS", "TS", "GS" and "S" cables include a transition fitting at the end of the sheath.

Ordering Examples: P-M-1/10-1/8-6-1/4-P-3, immersion sensor with 1/4" diameter sheath 6" long with 1/4 NPT mounting thread, 1/10 DIN accuracy, 4-Wire PVC cable 3' long with stripped leads.

P-M-1/10-1/4-6-0-P-3, immerson sensor with 1/4" diameter sheath 6" long with no mounting thread, 1/10 DIN accuracy, 4-Wire PVC cable 3' long with stripped leads.

Interchangeability in °C					
Temp °C	Class A	⅓ DIN	1/10 <b>DIN</b>		
-100	0.35				
-50	0.25	0.18			
0	0.15	0.10	0.03		
100	0.35	0.27	0.08		
200	0.55	0.43			
250	0.65	0.52			
300	0.75				
350	0.85				
400	0.95				
450	1.05				

Cable Options Tem	perature Range
PVC Insulated	-29 to 100°C (-20 to 212°F)
PFA Insulation	-100 to 250°C (-148 to 482°F)
Fiberglass Insulation	-73 to 400°C (-99 to 753°F)
Silicone Insulated	-50 to 200°C (-58 to 392°F)



Omega's Ultra-Precise RTD sensors are used in a wide variety of applications where accuracy and precise temperature measurement means the difference between failure and success. Why not join the growing list of customers utilizing the best the market has to offer.

Metric	Dimensions
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To Order					
Accuracy	Sensor Diameter	Mounting Thread	PVC Insulated Model Number 150 mm Probe Length	PFA Insulated Model Number 150 mm Probe Length	Fiberglass Insulated Model Number 150 mm Probe Length
	3 mm	None	P-M-1/10-M30-150-0-P-1	P-M-1/10-M30-150-0-T-1	P-M-1/10-M30-150-0-G-1
% <b>DIN</b>	5 11111	M6x1	P-M-1/10-M30-150-M6-P-1	P-M-1/10-M30-150-M6-T-1	P-M-1/10-M30-150-M6-G-1
710 DIN	6 mm	None	P-M-1/10-M60-150-0-P-1	P-M-1/10-M60-150-0-T-1	P-M-1/10-M60-150-0-G-1
	0 11111	M8x1	P-M-1/10-M60-150-M8-P-1	P-M-1/10-M60-150-M8-T-1	P-M-1/10-M60-150-M8-G-1
	3 mm	None	P-M-1/3-M30-150-0-P-1	P-M-1/3-M30-150-0-T-1	P-M-1/3-M30-150-0-G-1
½ DIN	5 11111	M6x1	P-M-1/3-M30-150-M6-P-1	P-M-1/3-M30-150-M6-T-1	P-M-1/3-M30-150-M6-G-1
	6 mm	None	P-M-1/3-M60-150-0-P-1	P-M-1/3-M60-150-0-T-1	P-M-1/3-M60-150-0-G-1
	0 11111	M8x1	P-M-1/3-M60-150-M8-P-1	P-M-1/3-M60-150-M8-T-1	P-M-1/3-M60-150-M8-G-1
	3 mm	None	P-M-A-M30-150-0-P-1	P-M-A-M30-150-0-T-1	P-M-A-M30-150-0-G-1
	5 1111	M6x1	P-M-A-M30-150-M6-P-1	P-M-A-M30-150-M6-T-1	P-M-A-M30-150-M6-G-1
Class A	6 mm	None	P-M-A-M60-150-0-P-1	P-M-A-M60-150-0-T-1	P-M-A-M60-150-0-G-1
		M8x1	P-M-A-M60-150-M8-P-1	P-M-A-M60-150-M8-T-1	P-M-A-M60-150-M8-G-1

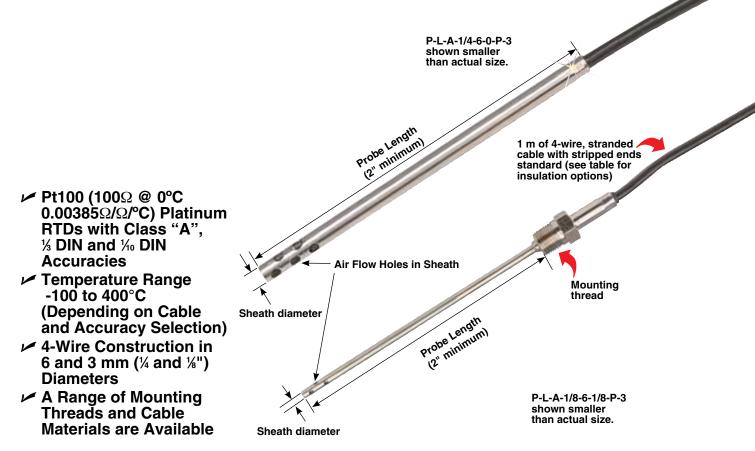
For longer sheath length, change "-150" in model number to desired length in millimeters for additional cost to the price when longer than 200 mm. For Silicone Rubber insulated cable, change "-P", "-T" or "-G" to "-S" in the model number and use PFA pricing. For longer cable lengths, change "-1" to desired length in meters for additional cost per meter for PVC, for PFA or Silicone Rubber and for fiberglass. For shielding on PVC, PFA or Fiberglass insulated cables, change "P", "T" or "G" to "PS", "TS" or "GS" for additional cost per meter to the price. Mounting threads also available in M8x1 and M10x1 at the same price (Note: M6 threads not available on 6 mm Dia probes). 3 mm diameter sensors without threaded fittings and with "P", "PS", "TS", "GS" and "S" cables include a transition fitting at the end of the sheath.

Ordering Examples: P-M-1/10-M30-100-M6-P-1, immersion sensor with 3 mm diameter sheath 120 mm long with M6x1 mounting thread, 1/10 DIN accuracy, 4-Wire PVC cable 1 meter long with stripped leads.

**P-M-1/10-M60-125-0-P-1**, immerson sensor with 6 mm diameter sheath 125 mm long with no mounting thread,  $1_{10}$  DIN accuracy, 4-Wire PVC cable 1 meter long with stripped leads.

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# Ultra Precise Air and Gas Measurement RTD Sensors



To Order					
Accuracy	Sensor Diameter	Mounting Thread	PVC Insulated Model Number 6" Probe Length	PFA Insulated Model Number 6" Probe Length	Fiberglass Insulated Model Number 6" Probe Length
	1/	None	P-L-1/10-1/8-6-0-P-3	P-L-1/10-1/8-6-0-T-3	P-L-1/10-1/8-6-0-G-3
	1⁄8	1% NPT	P-L-1/10-1/8-6-1/8-P-3	P-L-1/10-1/8-6-1/8-T-3	P-L-1/10-1/8-6-1/8-G-3
¹⁄₁₀ <b>DIN</b>	1/	None	P-L-1/10-1/4-6-0-P-3	P-L-1/10-1/4-6-0-T-3	P-L-1/10-1/4-6-0-G-3
	1⁄4	1% NPT	P-L-1/10-1/4-6-1/8-P-3	P-L-1/10-1/4-6-1/8-T-3	P-L-1/10-1/4-6-1/8-G-3
	1⁄8	None	P-L-1/3-1/8-6-0-P-3	P-L-1/3-1/8-6-0-T-3	P-L-1/3-1/8-6-0-G-3
		1% NPT	P-L-1/3-1/8-6-1/8-P-3	P-L-1/3-1/8-6-1/8-T-3	P-L-1/3-1/8-6-1/8-G-3
⅓ DIN	17	None	P-L-1/3-1/4-6-0-P-3	P-L-1/3-1/4-6-0-T-3	P-L-1/3-1/4-6-0-G-3
	1⁄4	1% NPT	P-L-1/3-1/4-6-1/8-P-3	P-L-1/3-1/4-6-1/8-T-3	P-L-1/3-1/4-6-1/8-G-3
	17	None	P-L-A-1/8-6-0-P-3	P-L-A-1/8-6-0-T-3	P-L-A-1/8-6-0-G-3
Class A	1⁄8	1/8 NPT	P-L-A-1/8-6-1/8-P-3	P-L-A-1/8-6-1/8-T-3	P-L-A-1/8-6-1/8-G-3
	1/	None	P-L-A-1/4-6-0-P-3	P-L-A-1/4-6-0-T-3	P-L-A-1/4-6-0-G-3
	1⁄4	½ NPT	P-L-A-1/4-6-1/8-P-3	P-L-A-1/4-6-1/8-T-3	P-L-A-1/4-6-1/8-G-3

### **Standard Dimensions**

For longer sheath length, change "-6" in model number to desired length in inches for additional cost per inch to price when longer than 8". For Silicone Rubber insulated cable, change "-P", "-T" or "-G" to "-S" in the model number and use PFA pricing. For longer cable lengths, change "-3" to desired length in feet for additional cost per foot for PVC, for PFA or silicone rubber and for fiberglass. For shielding on PVC, PFA or Fiberglass insulated cables, change "P", "T" or "G" to "S", "TS" or "GS" for additional cost per foot to the price. Mounting threads also available in 1/4 NPT, 3/8 NPT and 1/2 NPT at the same price. 1/8" diameter sensors without threaded fittings and with "P", "PS", "TS", "GS" and "S" cables include a transition fitting at the end of the sheath.

**Ordering Examples: P-L-1/10-1/8-6-1/4-P-3**, air sensor with <sup>1</sup>/<sub>8</sub>" diameter sheath 6" long with <sup>1</sup>/<sub>4</sub> NPT mounting thread, <sup>1</sup>/<sub>10</sub> DIN accuracy, 4-wire PVC cable 3' long with stripped leads.

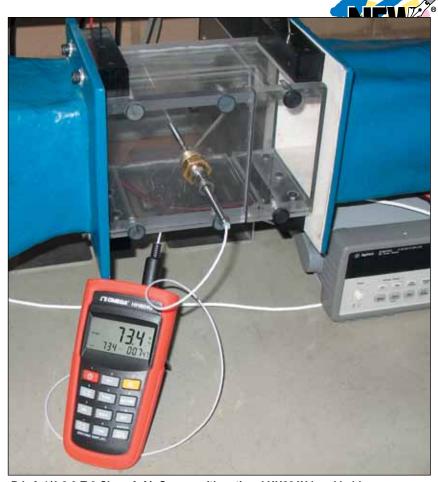
**P-L-1/10-1/4-6-0-P-3**, air sensor with <sup>1</sup>/<sub>4</sub>" diameter sheath 6" long with no mounting thread, <sup>1</sup>/<sub>10</sub> DIN accuracy, 4-wire PVC cable 3' long with stripped leads.

These sensors are designed for use in air and gas applications. Vent holes at the tip of the sensor allow the air or gas to directly pass around the RTD element providing the fastest, most accurate measurement possible.

Interchangeability in °C					
Temp °C	Class A	1/3 <b>DIN</b>	1/10 <b>DIN</b>		
-100	0.35				
-50	0.25	0.18			
0	0.15	0.10	0.03		
100	0.35	0.27	0.08		
200	0.55	0.43			
250	0.65	0.52			
300	0.75				
350	0.85				
400	0.95				
450	1.05				

Cable Options Temperature Range				
PVC Insulated	-29 to 100°C (-20 to 212°F)			
PFA PTFE Insulation	-100 to 250°C (-148 to 482°F)			
Fiberglass Insulation	-73 to 400°C (-99 to 753°F)			
Silicone Insulated	-50 to 200°C (-58 to 392°F)			

**Metric** Dimensions



P-L-A-1/4-6-0-T-3 Class A Air Sensor with optional HH804U hand held meter shown smaller than actual size. For more information on HH804U visit omega.com/hh804u

To Order					
Accuracy	Sensor Diameter	Mounting Thread	PVC Insulated Model Number 150 mm Probe Length	PFA Insulated Model Number 150 mm Probe Length	Fiberglass Insulated Model Number 150 mm Probe Length
	3 mm	None	P-L-1/10-M30-150-0-P-1	P-L-1/10-M30-150-0-T-1	P-L-1/10-M30-150-0-G-1
1/10 <b>DIN</b>		M6x1	P-L-1/10-M30-150-M6-P-1	P-L-1/10-M30-150-M6-T-1	P-L-1/10-M30-150-M6-G-1
	6 mm	None	P-L-1/10-M60-150-0-P-1	P-L-1/10-M60-150-0-T-1	P-L-1/10-M60-150-0-G-1
		M8x1	P-L-1/10-M60-150-M8-P-1	P-L-1/10-M60-150-M8-T-1	P-L-1/10-M60-150-M8-G-1
	3 mm	None	P-L-1/3-M30-150-0-P-1	P-L-1/3-M30-150-0-T-1	P-L-1/3-M30-150-0-G-1
⅓ DIN		M6x1	P-L-1/3-M30-150-M6-P-1	P-L-1/3-M30-150-M6-T-1	P-L-1/3-M30-150-M6-G-1
	6 mm	None	P-L-1/3-M60-150-0-P-1	P-L-1/3-M60-150-0-T-1	P-L-1/3-M60-150-0-G-1
		M8x1	P-L-1/3-M60-150-M8-P-1	P-L-1/3-M60-150-M8-T-1	P-L-1/3-M60-150-M8-G-1
	3 mm	None	P-L-A-M30-150-0-P-1	P-L-A-M30-150-0-T-1	P-L-A-M30-150-0-G-1
Class A		M6x1	P-L-A-M30-150-M6-P-1	P-L-A-M30-150-M6-T-1	P-L-A-M30-150-M6-G-1
	6 mm	None	P-L-A-M60-150-0-P-1	P-L-A-M60-150-0-T-1	P-L-A-M60-150-0-G-1
		M8x1	P-L-A-M60-150-M8-P-1	P-L-A-M60-150-M8-T-1	P-L-A-M60-150-M8-G-1

For longer sheath length, change "-150" in model number to desired length in millimeters for additional cost per 25 mm to the price when longer than 200 mm. For silicone rubber insulated cable, change "-P", "-T" or "-G" to "-S" in the model number and use PFA pricing. For longer cable lengths, change "-1" to desired length in meters for additional cost per meter for PVC, for PFA or silicone rubber and for fiberglass. For shielding on PVC, PFA or Fiberglass insulated cables, change "P", "T" or "G" to "PS", "TS" or "GS" for additional cost per meter to the price. Mounting threads also available in M8x1 and M10x1 at the same price (Note: M6 threads not available on 6 mm Dia probes). 3 mm diameter sensors without threaded fittings and with "P", "PS", "TS", "GS" and "S" cables include a transition fitting at the end of the sheath.

Ordering Examples: P-L-1/10-M30-150-M6-P-1, air sensor with 3 mm diameter sheath 150 mm long with M6x1 mounting thread, 1/10 DIN accuracy, 4-wire PVC cable 1 m long with stripped leads.

**P-L-1/10-M60-150-0-P-1**, air sensor with 6 mm diameter sheath 150 mm long with no mounting thread, 1/10 DIN accuracy, 4-wire PVC cable 1 m long with stripped leads.

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