Ultra Precise Immersion RTD Sensors

1 m of 4-wire, #26 AWG stranded cable with stripped ends standard (see table for insulation options).

P-M-A-1/8-6-1/4-P-3 shown smaller than actual size.

Probe diameter

Probe Length (2" minimum)

Mounting thread

Probe Length (2" minimum)

P-M-A-1/4-6-0-P-3 shown smaller than actual size.

Probe diameter

✔ **Pt100 (100Ω @ 0°C 0.00385Ω/Ω/°C) Platinum RTDs with ¹⁄₁₀ DIN, ¹⁄₃ DIN, or Class "A" Accuracies**

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

✔ **4-Wire Construction in 6 and 3 mm (¼ and ⅛") Diameters**

✔ **A Range of Mounting Threads and Cable Materials are Available**
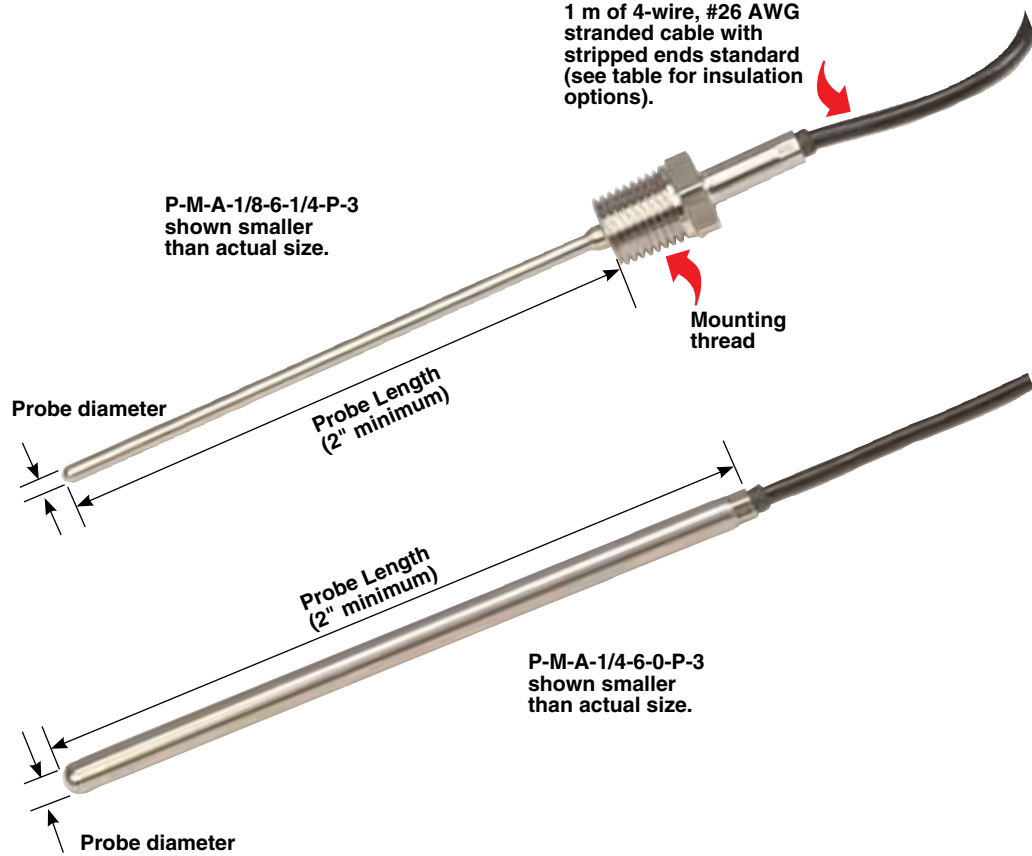
Standard Dimensions

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
¹⁄₁₀ DIN	⅛	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**
		⅛ 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**
	¼	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**
		⅛ 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**
¹⁄₃ DIN	⅛	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**
		⅛ 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**
	¼	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**
		⅛ 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**
Class A	⅛	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**
		⅛ 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**
	¼	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**
		⅛ 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 ¼ NPT, ⅜ NPT and ½ NPT at the same price. ⅛" 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 ⅛" diameter sheath 6" long with ¼ 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 ¼" 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 DIN
-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 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)

Photo by Craig Terry, courtesy of Chemical Engineering Program at Rowan University

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

To Order

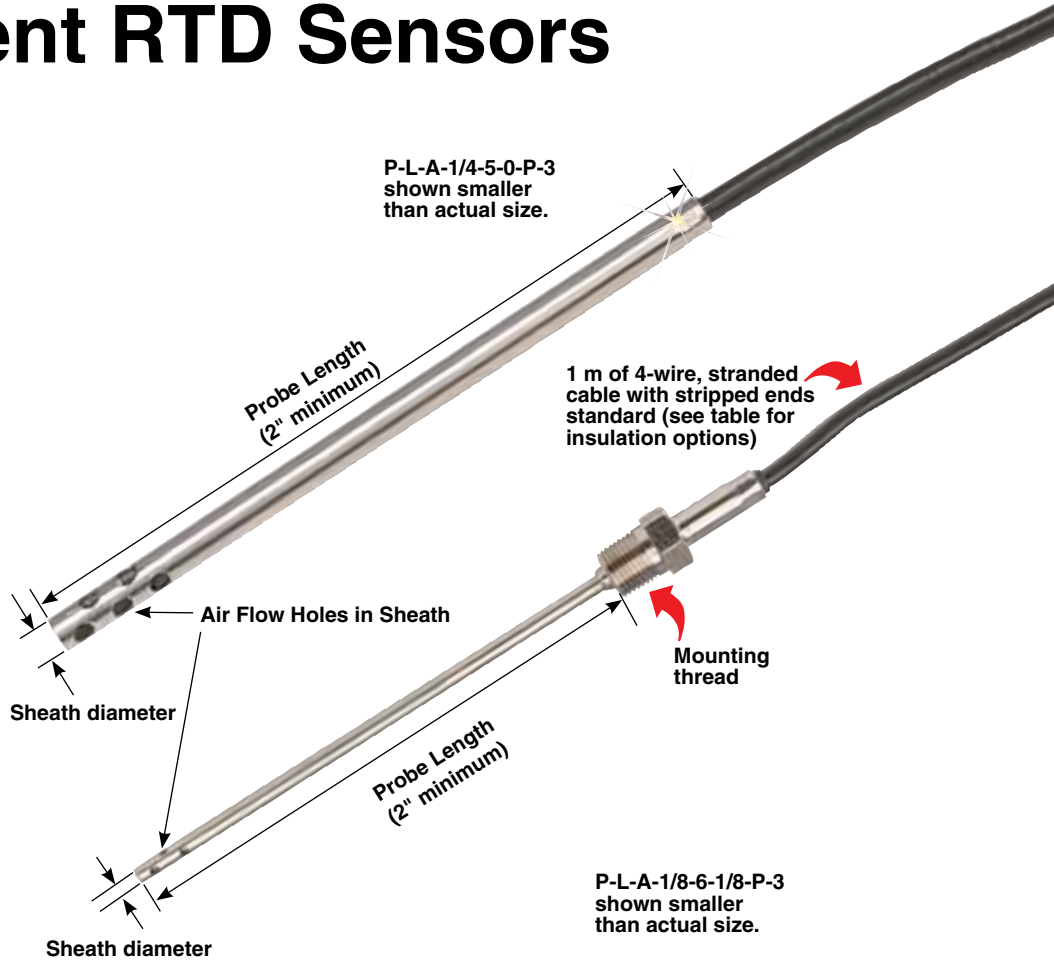| Accuracy	Sensor Diameter	Mounting Thread	PVC Insulated Model Number 150 mm Probe Length	PFA Insulated Model Number 150 mm Probe Length	Fiberglass Insulated Model Number 150 mm Probe Length
¹⁄₁₀ DIN	3 mm	None	P-M-1/10-M30-150-0-P-1	P-M-1/10-M30-150-0-T-1	P-M-1/10-M30-150-0-G-1
		M6x1	P-M-1/10-M30-150-M6-P-1	P-M-1/10-M30-150-M6-T-1	P-M-1/10-M30-150-M6-G-1
	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
		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
⅓ DIN	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
		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
		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
Class A	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
		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
	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.*

Ultra Precise Air and Gas Measurement RTD Sensors

P-L-A-1/4-5-0-P-3
shown smaller
than actual size.

Probe Length
(2" minimum)

1 m of 4-wire, stranded
cable with stripped ends
standard (see table for
insulation options)

✔ **Pt100 (100Ω @ 0°C
0.00385Ω/Ω/°C) Platinum
RTDs with Class "A",
⅓ DIN and ⅒ DIN
Accuracies**

✔ **Temperature Range
-100 to 400°C
(Depending on Cable
and Accuracy Selection)**

✔ **4-Wire Construction in
6 and 3 mm (¼ and ⅛")
Diameters**

✔ **A Range of Mounting
Threads and Cable
Materials are Available**

Air Flow Holes in Sheath

Mounting
thread

Sheath diameter

Probe Length
(2" minimum)

Sheath diameter

P-L-A-1/8-6-1/8-P-3
shown smaller
than actual size.

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**
⅒ **DIN**	⅛	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
		⅛ 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
	¼	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
		⅛ 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
⅓ **DIN**	⅛	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
		⅛ 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
	¼	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
		⅛ 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
Class A	⅛	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
		⅛ 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
	¼	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
		⅛ 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

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 "PS", "TS" or "GS" for additional cost per foot to the price. Mounting threads also available in ¼ NPT, ⅜ NPT and ½ NPT at the same price. ⅛" 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 ⅛" diameter sheath 6" long with ¼ NPT mounting thread, ⅒ DIN accuracy, 4-wire PVC cable 3' long with stripped leads.*

P-L-1/10-1/4-6-0-P-3, *air sensor with ¼" diameter sheath 6" long with no mounting thread, ⅒ 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 DIN	1/10 DIN
-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)
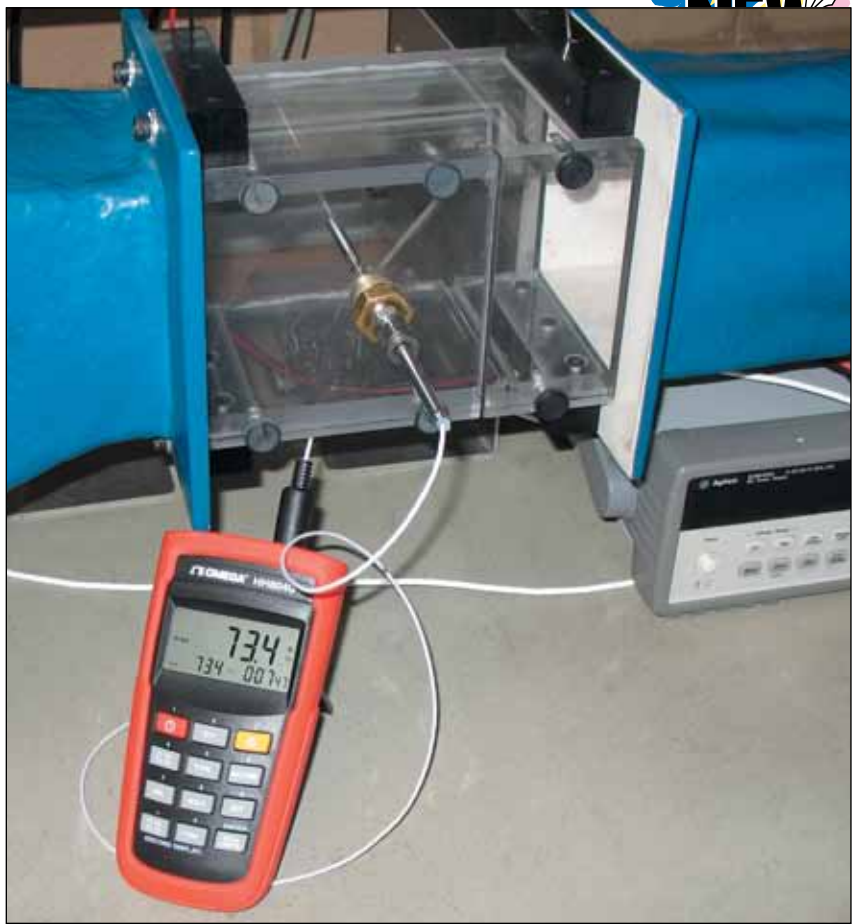
P-L-A-1/4-6-0-T-3 Class A Air Sensor with optional HH804U hand held meter shown smaller than actual size. For more information on HH804U visit omega.com/hh804u

Metric Dimensions

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
1/10 DIN	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
		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
1/3 DIN	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
		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
Class A	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
		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.

omega.co.uk®
Your One-Stop Source for Process Measurement and Control!

UNITED STATES
www.omega.com
1-800-TC-OMEGA
Stamford, CT.

UNITED KINGDOM
www. omega.co.uk
Manchester, England
0800-488-488
+44-(0)161-777-6611

CANADA
www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

FRANCE
www.omega.fr
0800-466-342

GERMANY
www.omega.de
Deckenpfronn, Germany
0800-8266342

BENELUX
www.omega.nl
0800-099-33-44

More than 100,000 Products Available!

• Temperature
Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

• Flow and Level
Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity
Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition
Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ehernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force
Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

• Heaters
Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters