

Insertion Temperature Sensor



measuring
•
monitoring
•
analyzing

MMA



- Economical and Compact
- Optional In-line Display
- Resistive or 4- 20 mA Transmitter with configuration software
- Measuring Ranges: -320...480 °F (Others on Request)
- Pt100 Sensor Class A, 1/3 DIN, 1/10 DIN, or Cryogenic
- Threaded or Tri-Clamp® Connections
- Electrical Connection DIN 43650 or M12 Micro-DC
- Stainless Steel Construction
- Immunity to Vibration



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KOBOLD Instruments, Inc.
1801 Parkway View Drive
Pittsburgh, PA 15205
☎ Main Office:
1.800.998.1020
1.412.788.4890
✉ info@koboldusa.com
www.koboldusa.com

Description

The MMA temperature sensor with optional AUF compact local electronic display paired together provide an economical digital thermometer. The AUF is also available with an optional limit contact. The MMA temperature probe connections are made of stainless steel and are available in NPT, G, or Tri-Clamp®. The bulbs have been designed for pressures up to 520 PSIG, depending on the process conditions. With an optional DIN 43650 electrical connector, the transmitter can be cable-connected or fitted with the AUF display very easily. The M12 connector has the same cable-connection functionality. The temperature sensor comes with an extension for process temperatures above 300 °F. The Pt100 temperature sensor conforms to IEC 751, class A, 1/3 DIN, 1/10 DIN or cryogenic (for further information see order details).

Integrated Transmitter

Temperature sensors with a transmitter are capable of transmitting measuring signals noise-free over long distances. The two-wire transmitter is integrated into the resistance thermometer. The output signal is 4-20 mA. The transmitter range is configurable by a PC with the Loop Link communication interface and PReset software. A cable with M12 connector is needed.

Applications

- Heating Installation and Furnace Apparatus Construction
- Machine Construction and Building Installations
- Marine Engineering
- General Industrial
- Pharmaceutical Industry

Technical Details

Temperature Probe

- Material:** 316L Stainless Steel
- Diameter:** 6 mm
- Process Connection:** 316L Stainless Steel
1/4" NPT, 1/2" NPT,
Clamp DIN 32676 and ASME
- Transmitter Housing:** Stainless Steel
- Max. Pressure**
 - Threaded:** 520 PSIG
 - Tri-Clamp®:** 230 PSIG
- Sensor Element:** Pt 100
Class A, 1/3 DIN, 1/10 DIN or
Cryogenic
- Connector:** DIN 43650 or M12x1 (4-pin)
- Protection:** IP 65
- Measuring Range**
 - MMA-0:** -90...300 °F
 - MMA-H:** -90...480 °F
- Max. Temperature:** 750 °F (on Request)
- Accuracy:** < 0.5% of Measuring Span



Transmitter

- Output:** 4-20 mA, 2-wire
- Supply:** 8...35 V_{DC}
- Min. Measuring Range:** 77 °F (25 °C)
- Ambient Temperature:** -40...185 °F

AUF Plug-on Display

- Display:** 4-Digit, Red LED
Height of Digits: 0.3"
- Indicating Range:** -1999...9999
- Voltage Drop:** ≤5 V_{DC}
- Programming:** Via 2 Buttons, Menu-assisted
Scaling of Indicating Range
Decimal Point, Damping, Fault
Indication, Switch Point (Optional)
- Protection:** IP 65
- Ambient Temperature:** 32...140 °F



Order Details (Example: **MMA-0 U0 N08 C 2 D 0 0**)

Model	Insertion Length "EL"	Process Connection	Sensor Type / Category	RTD Wiring	Electrical Connection	Transmitter Option	Options
MMA-0¹⁾.. (Standard)	..U0.. = 1" ..U1.. = 2" ..U2.. = 4" ..U3.. = 6" ..U4.. = 8" ..U5.. = 10" ..U6.. = 12" ..U7.. = 16" ..U8.. = 20" ..U9.. = 24" ..XX.. = Special Length	..000.. = without ..N08 ³⁾ .. = ¼" NPT Fixed ..N15 ³⁾ .. = ½" NPT Fixed ..L15 ²⁾ .. = ½" NPT Compression	..C.. = 1xPt100 Class A (-90...300 °F) ..M.. = 1xPt100 Class 1/3 DIN (-90...300 °F) ..N.. = 1xPt100 Class 1/10 DIN (-90...300 °F) ..Q.. = 1xPt100 Class B Cryogenic Type (-320...212 °F)	..2.. = 2-wire ..3.. = 3-wire ..4.. = 4-wire	..D.. = DIN 43650 ..M.. = M12x1 (4-pin)	..0.. = without Transmitter ..A ⁴⁾ .. = with 4-20 mA Transmitter, Standard Configuration (32...212 °F) ..B ⁴⁾ .. = with 4-20 mA Transmitter, Special Configuration	..0 = without ..Y = Non-Standard Request
		..C10.. = Tri-Clamp [®] DN10 (Ø 34) ..C15.. = Tri-Clamp [®] DN15 (Ø 34) ..C20.. = Tri-Clamp [®] DN20 (Ø 34) ..C25.. = Tri-Clamp [®] DN25 (Ø 50.5) ..C40.. = Tri-Clamp [®] DN40 (Ø 50.5) ..C50.. = Tri-Clamp [®] DN50 (Ø 64) ..D15.. = Tri-Clamp [®] ½" (Ø 25) ..D20.. = Tri-Clamp [®] ¾" (Ø 25) ..D25.. = Tri-Clamp [®] 1" (Ø 50.5) ..D40.. = Tri-Clamp [®] 1½" (Ø 50.5) ..D50.. = Tri-Clamp [®] 2" (Ø 64)	..C.. = 1xPt100 Class A (-90...480°F) ..M.. = 1xPt100 Class 1/3 DIN (-90...480 °F) ..N.. = 1xPt100 Class 1/10 DIN (-90...480 °F) ..Q.. = 1xPt100 Class B Cryogenic Type (-320...212 °F)				

Accessories: P/N 807.037 = 4-Pin Micro-DC Connector with 6-foot Cable for Electrical Connection M
 P/N 807.037/5M = 4-Pin Micro-DC Connector with 16-foot Cable for Electrical Connection M
 P/N 807.037/10M = 4-Pin Micro-DC Connector with 32-foot Cable for Electrical Connection M

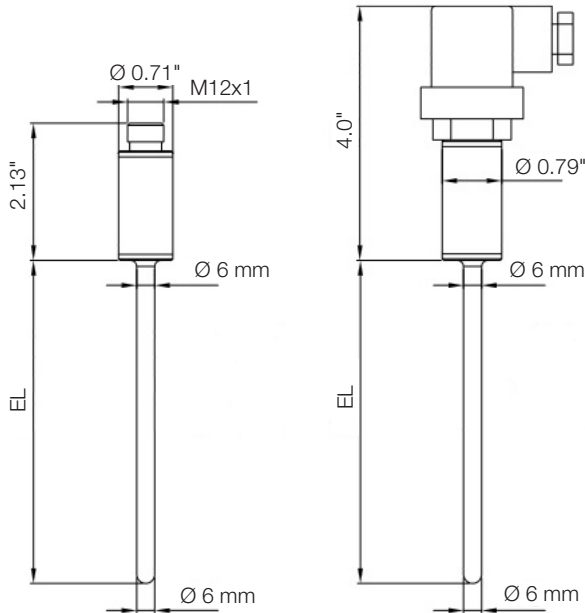
¹⁾ Maximum range -40...300°F with transmitter
²⁾ Only for MMA-0
³⁾ For G connection, replace N with G
⁴⁾ Only with RTD wiring option 3

Order Details AUF Plug-on Display

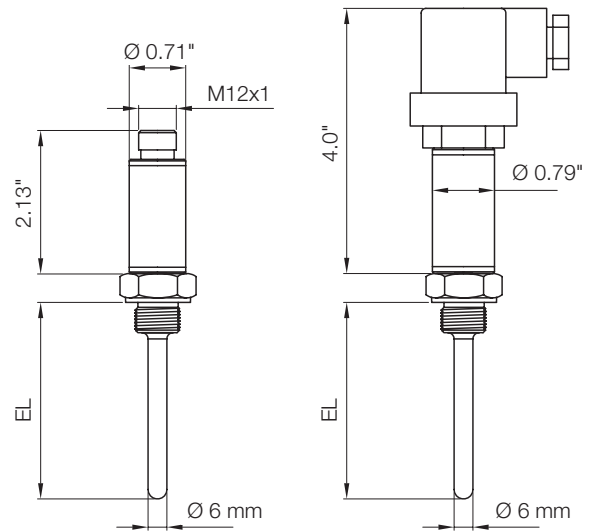
Model	Description
AUF-1000	Standard Plug-on Display, 4 -20 mA, 2-wire
AUF-1001	Plug-on Display with Open Collector, 4 -20 mA, 2-wire

Dimensions

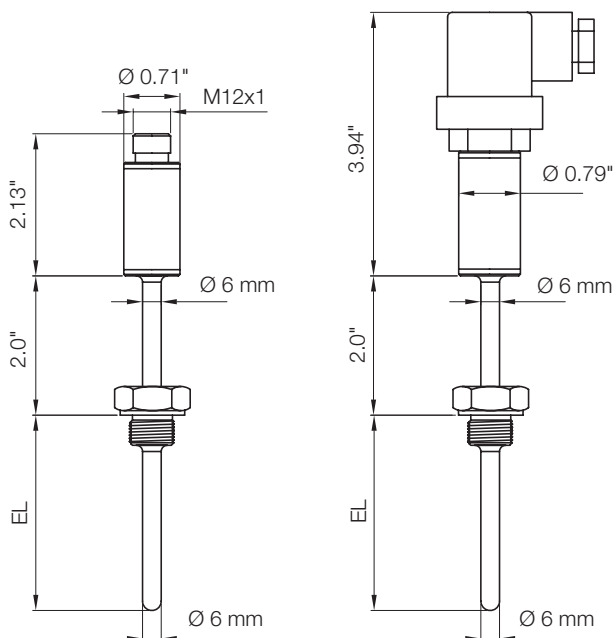
Model MMA-0 Process Connection Slidable Compression Fitting
with M12 Connection Plug and Socket Connection According to DIN 43650



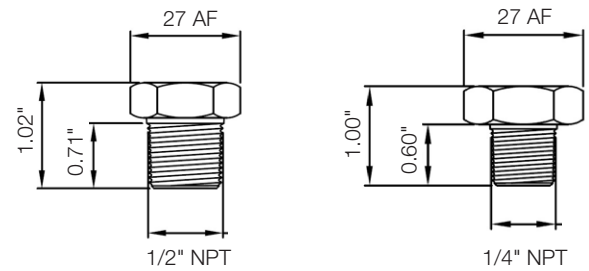
Model MMA-0 Process Connection Fixed Thread
with M12 Connection or Plug and Socket Connection According to DIN 43650 (Without Extension Length 300 °F Max.)



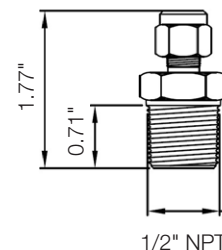
Model MMA-H Process Connection Fixed Thread
with M12 Connection or Plug and Socket Connection According to DIN 43650 (Extension Length 2" - Range up to 480 °F)



Process Connection Fixed Thread



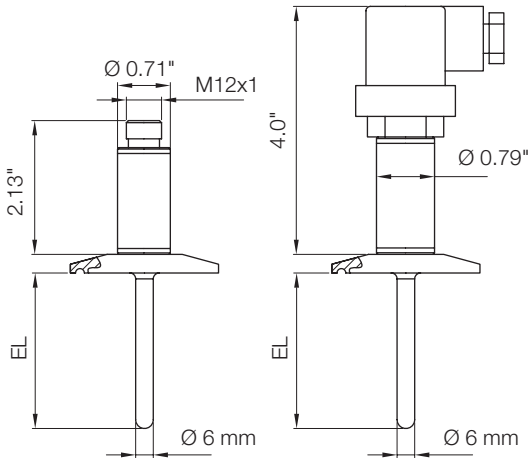
Compression Fitting



Dimensions

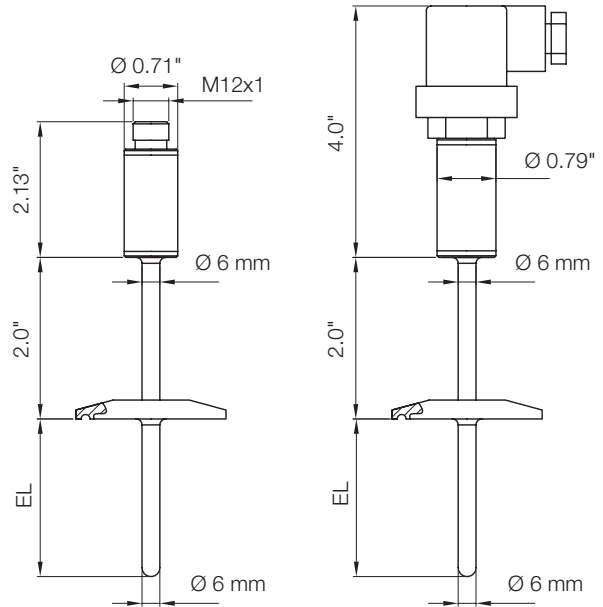
Model MMA-0 Process Connection Acc. to DIN32676

with M12 Connection or Plug and Socket Connection
According to DIN 43650

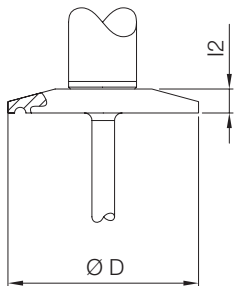


Model MMA-H Process Connection Acc. to DIN32676

with M12 Connection or Plug and Socket Connection According
to DIN 43650 (Extension Length 2" - Range up to 480 °F)



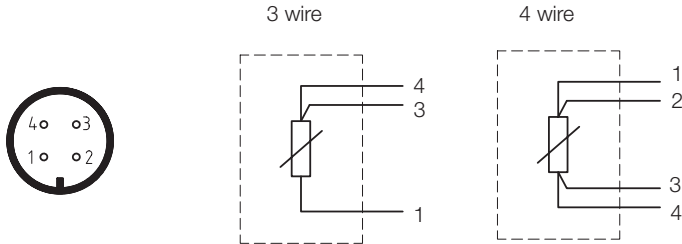
Clamp DIN32676 - ASME



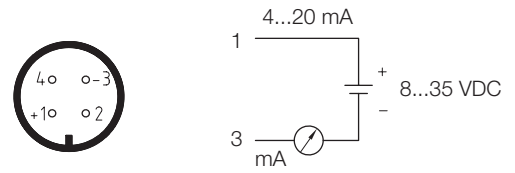
Connection	Nominal Width	PN	Ø D	I2
C10 C15 C20	DN10...20	230 PSIG	34 mm	0.25"
C25 C40	DN25...40	230 PSIG	50.5 mm	0.25"
C50	DN50	230 PSIG	64 mm	0.25"
D05 D34	½"...¾"	230 PSIG	25 mm	0.19"
D10 D15	1"...1-½"	230 PSIG	50.5 mm	0.25"
D20	2"	230 PSIG	64 mm	0.25"

Electrical Connection

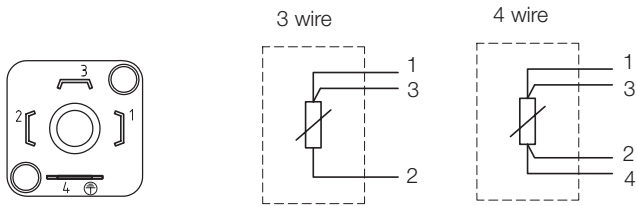
PT100 Connection M12x1



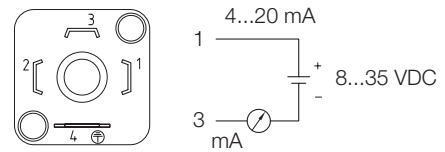
Transmitter Connection M12x1



Pt100 Connection DIN 43650



Transmitter Connection DIN 43650



Communications

