

Flue Gas Temperature



The flue gas temperature series is designed to allow monitoring of flue gas operating temperatures. The terminal head is mounted on a stand-off to decrease heat transfer to the terminal block or temperature transmitter and wire connections held within.

- ◆ Easy installation
- ◆ Rapid response
- ◆ Rugged design

Technical Data

Wire:

- 200°C: 24 AWG, teflon/teflon
- 400°C: 24AWG, fiberglass/fiberglass
- 600°C: 20AWG, fiberglass/fiberglass

Coupling / nipple extension:

- Terminal block connection: 2" between head and flange
- Temperature transmitter connection: 6" between head and flange

Sheath material: 316 stainless steel

Probe diameter: 1/4"

Probe length: see ordering data

Sensor type: Pt100 RTD / Thermocouple

Accuracy:

- Pt100: +/- 0.3°C, DIN EN 60751 (according to IEC 751)
- Thermocouple: standard limits of error, special limits available

Operating temperature: see ordering data (200°C, 400°C and 600°C available)

Enclosure: aluminum head

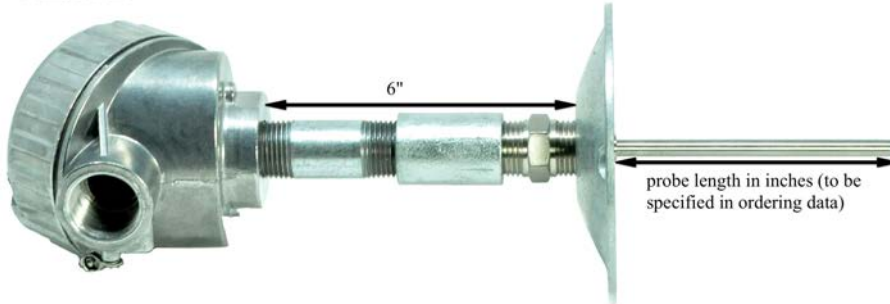
Mounting: aluminum flange

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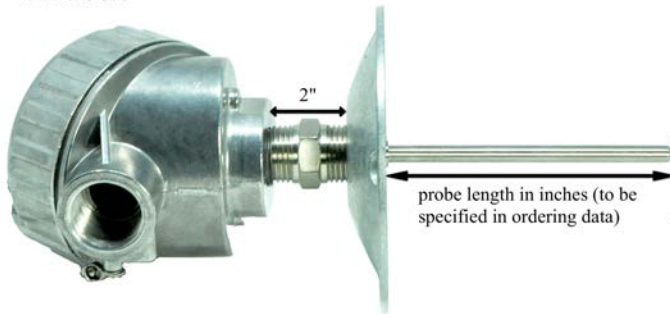
25 Shorncliffe Road, Toronto, ON, M9B3S4, Canada
Tel: 416-231-5335, Toll free: 1-800-363-7267

Industry Usage:
Manufacturing

Flue gas with temperature transmitter
Dimensions



Flue gas w/ terminal block
Dimensions



Ordering Data

TS-F -(probe length)- (sensor type)- (sensor value)- (max operating temp)
in inches R = RTD 100 = 100 ohms in °C
TC = Thermocouple K = K calibration

ie. TS-F-8-R-100-400: Flue gas temperature assembly with 8” long probe, 100 ohm RTD and maximum operating temperature of 400°C

TT-F -(probe length)- (sensor type)- (sensor value)- (max operating temp)/ (temp trans. range)
in inches R = RTD 100 = 100 ohms in °C
TC = Thermocouple K = K calibration

ie. TT-F-8-R-100-600/0C600C: Flue gas temperature assembly with 8” long probe, 100 ohm RTD, maximum operating temperature of 600C and temperature transmitter with a temperature range of 0...600°C

TXP420: Digital Temperature Transmitter



The TXP420 is a digital temperature transmitter and can be reprogrammed to be used with 6 RTD types and 12 thermocouple types. This device is protected against reverse polarity and has sensor fault detection built in.

- ◆ High accuracy
- ◆ Unaffected by EMI
- ◆ PC programmable

Technical Data

Power supply: 24 VDC (10...35 VDC)

Output signal: 4...20mA or 20mA...4mA

Connection type: 2-wire

Sensor type:

- **T/C:** K, J, T, E, L, U, N, C, D, S, B, R
- **RTD:** Pt100, Ni100, Pt500, Ni500, Pt1000, Ni1000

Min. Input current: <3.5mA

Current limit: <23mA

Switch on delay: 4 sec

Response time : 1 sec

Max. load: ($V_{ref} - 8 V$) / 0.025 Amp

Temperature drift: 0.1%/°C

Galvanic isolation (I/O): 3.75 kVAC

Damping (programmable): 0...8 sec

Electrical connection: Plug connection as per DIN EN 175301-803-A

Ambient temperature: -40...85°C

Protection class: IP 66/ IP 00

Climatic class: Cl. C, EN 60654-1

EMC immunity: Acc. to EN 61326-1 and NAMUR NE 21

Vibration protection: 4g/ 2...150Hz

Approval: CE

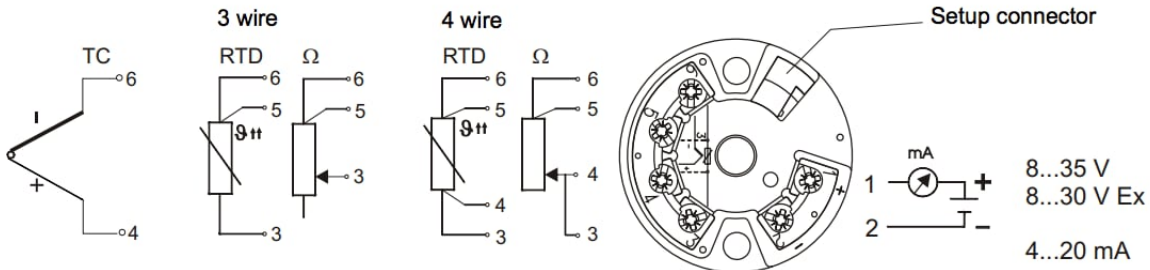
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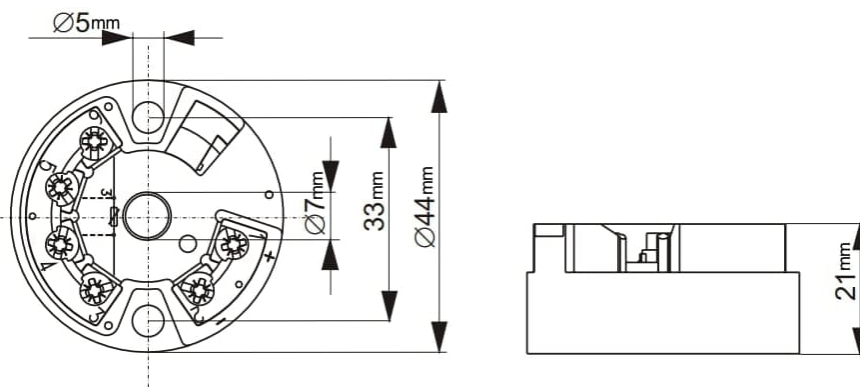
Industry Usage

Waste management, HVAC, Energy management, Food processing, Refineries, Pharmaceutical

Wiring Diagram



Dimensions



Measurement Accuracy

RTD/ TC	Type	Accuracy
TC	K, J, T, E, L, U	typ. 0.5K
TC	N, C, D	typ. 1.0K
TC	S, B, R	typ. 2.0K
RTD	Pt 100, Ni 100	0.1%
RTD	Pt 500, Ni 500	0.2%
RTD	Pt 1000, Ni 1000	0.12%

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RTD Input Table

Type	Min. Temperature	Max. Temperature	Min. Span
Pt100	-200°C	850°C	10°C
Pt500	-200°C	250°C	10°C
Pt1000	-200°C	250°C	10°C
Ni100	-60°C	180°C	10°C
Ni150	-60°C	150°C	10°C
Ni1000	-60°C	150°C	10°C

TC Input Table

Type	Min. Temperature	Max. Temperature	Min. Span
K	-200°C	1372°C	50°C
J	-200°C	1200°C	50°C
T	-200°C	400°C	50°C
E	-200°C	915°C	50°C
L	-200°C	900°C	50°C
U	-200°C	600°C	50°C
N	-270°C	1300°C	50°C
C	0°C	2320°C	500°C
D	0°C	2495°C	500°C
S	0°C	1768°C	500°C
B	0°C	1820°C	500°C
R	0°C	1768°C	500°C

Accessories:

TX420-cable-usb: includes a PC software package, a communication adapter and the serial connection cable.

Ordering Data

TXP420/(programming/temp range)-(sensor type)-(output)-(RTD only) - (RTD only)
0 = no programming Pt = platinum 4 = 4...20mA 3W = 3-wire 100 = 100 ohms
Ni = nickel 20 = 20...4mA 4W = 4-wire
K = K calibration

ie. TXP420/0C1100C-J-4: temperature transmitter calibrated for a type J thermocouple at a temperature range of 0°C...1100°C with a 4...20mA output

ie. TXP420/-20F100F-Pt-4-4W-100: temperature transmitter calibrated for a Pt100 at a temperature range of -20°F...100°F with a 4...20mA output

ie. TXP420/0-0-0: temperature transmitter with no calibration