

TC17 Direct Mount Thermocouple Assembly

Class I, Division 1, Groups B, C, D; Class II, Division 1, Groups E, F, G; Class III; T6...T1

Class I, Zone 1, Groups IIB plus hydrogen, IIB; Zone 20; T6...T1



Overview

Description:

The TC17 direct mount thermocouple assembly is a thermocouple designed for use in hazardous locations. The TC17 is a customizable product that is model number configured and made to order.

The TC17 consists of a thermocouple sensor probe, complete with connection extension fittings that will spring load the sensor into a thermowell or a fixed fitting can be used without a thermowell. The TC17 is designed to be direct mounted to a temperature transmitter.

Features:

- Simple design that is used and accepted across multiple process industries.
- TC17 configuration options allow for many different arrangements to be configured for almost any temperature measurement application.

Application:

- Hazardous location temperature measurement
- Industrial temperature measurement
- Process control
- Outdoor / indoor use

Specifications

Accuracy TC	Tolerance per ASTM E230
T-Code	T6...T1
Electrical rating	30 Vdc, 1.0 A max
Ambient temperature	-50°C to +50°C (-58°F to +122°F)
Process temperature	-50°C to +450°C (-58°F to +842°F)
CSA Certificate of	1526478

Note: Specifications will depend on model code variants, and the values shown are the full rated model ranges.



TC17 Thermocouple Assembly Model Code

TC17 - T1 - T2 - T3 - T4 - T5 - T6 - T7 - T8 - T9

TC17 Direct mount thermocouple assembly with connection extension fittings

T1	Direct Mount Transmitter
"Code"	Aircom listed direct mount transmitter model code (consult factory)
X	Not required

T2	Connection Extension	Material	CSA Note
TX	Spring loaded fitting 1/2"x1/2" NPT	Stainless Steel	Thermowell required ² for hazardous rating
TXUN	Spring loaded fitting-union-nipple	Galvanized	
STXUN	Spring loaded fitting-union-nipple	Stainless Steel	Canada only, Thermowell required ² for hazardous rating
FS	Fixed bushing 1/2"x1/2" NPT	Stainless Steel	CSA process pressure rating ≤ 34.4 MPa @ +20°C (5000 psi @ +68°F)
FX	Fixed hex instrument fitting 1/2" NPT	Stainless Steel	CRN process pressure rating ≤ 25.5 MPa @ +20°C (3700 psi @ +68°F)

T3	Connection Extension "A" length (inches)	Connection Extension (T2) Options	CSA Rating
X	Fixed length for T2 options FS, FX, TX	FS, FX, TX	-50°C to +50°C (-50°F to +122°F), T6
3.5	3" installed length	TXUN, STXUN	-50°C to +230°C (-58°F to +446°F), T3C
4.5	4" installed length	TXUN, STXUN	-50°C to +230°C (-58°F to +446°F), T3C
8.5	8" installed length	TXUN, STXUN	-50°C to +450°C (-58°F to +842°F), T2
"inches"	Installed length is the fitting length minus approximately 1/2 inch for thread engagement.		

T4	Thermocouple Type		
K	Type K	N	Type N
J	Type J	R	Type R
T	Type T	S	Type S
E	Type E	B	Type B

T5	Sensor Sheath Diameter
18	1/8" OD
36	3/16" OD
14	1/4" OD
38	3/8" OD

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TC17 Thermocouple Assembly Model Code

TC17 - T1 - T2 - T3 - T4 - T5 - T6 - T7 - T8 - T9

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T6	Thermocouple Junction
G	Grounded
U	Ungrounded
E	Exposed

T7	Thermocouple Junction Quantity
S	Single
D	Dual
T	Triple
Q	Quad

T8	Sensor Sheath Material
304	304/304L stainless steel
316	316/316L stainless steel
310	310 stainless steel
600	Inconel 600
HAC	Hastelloy C-276
Other	Consult factory

T9	Sensor "L" Length (inches)
"inches"	Specify length in inches

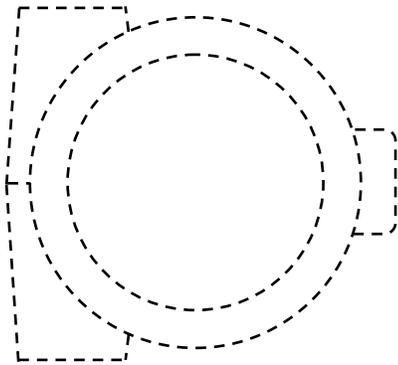
NOTES:

1. Part number example: TC17-X-TXUN-3.5-K-14-U-S-316-12
2. Must be installed into certified thermowell at Aircom or in the field (Aircom thermowell CSA process pressure rating ≤ 48.26 MPa @ $+20^{\circ}\text{C}$ (≤ 7000 psi @ $+68^{\circ}\text{F}$))
3. Reference page 4 for outline and page 5 for dimensions
4. Bold text indicates most common part selections



TC17 Thermocouple Assembly Outline

Direct Mount Transmitter



Connection Extension

FS



FX



TX



TXUN & STXUN



Sensor Probe (OD)

18
(0.125")



36
(0.188")



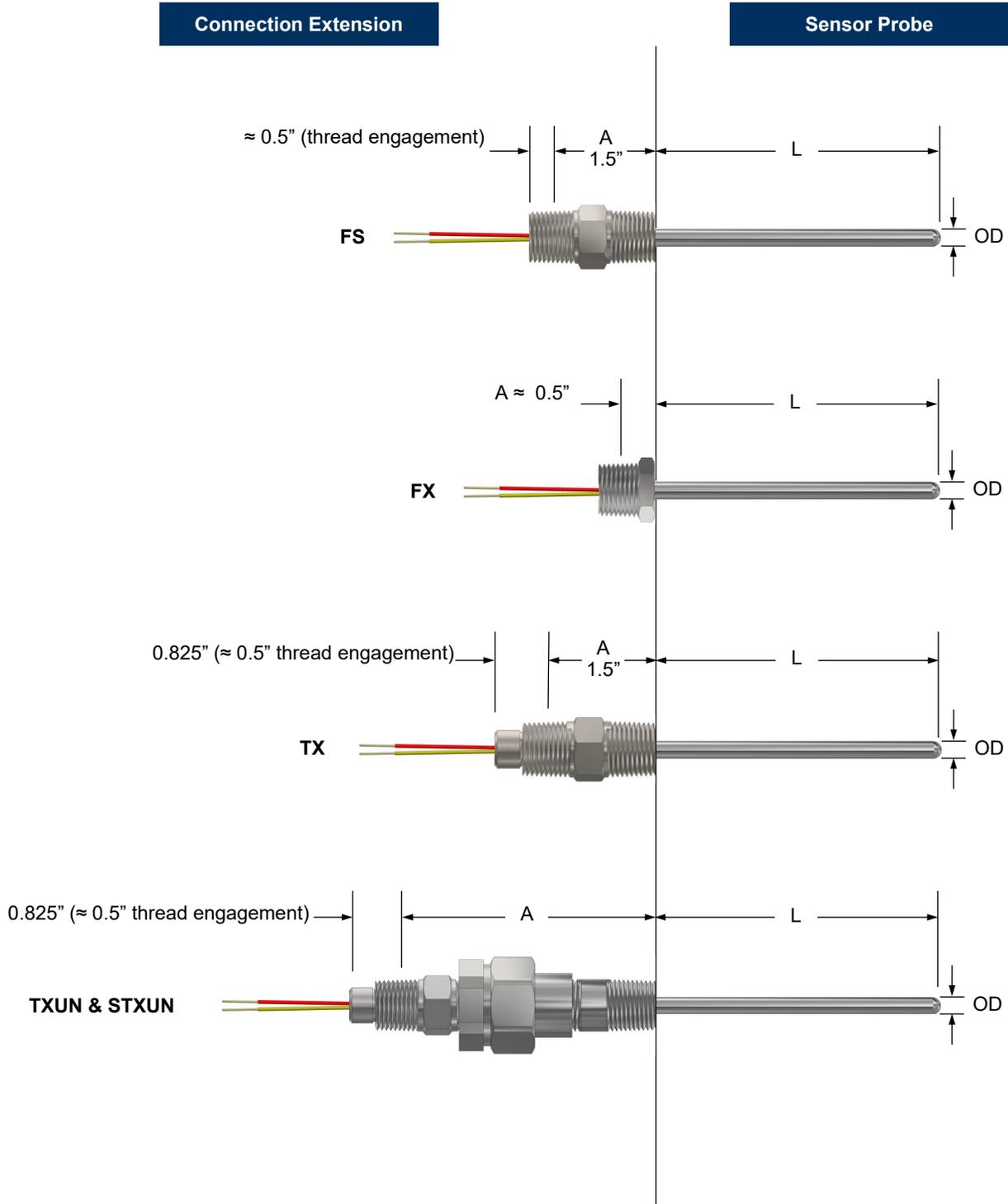
14
(0.250")



38
(0.375")



TC17 Thermocouple Assembly Dimensions



NOTE:

1. Assemblies are supplied with 6" to 8" of lead wire

