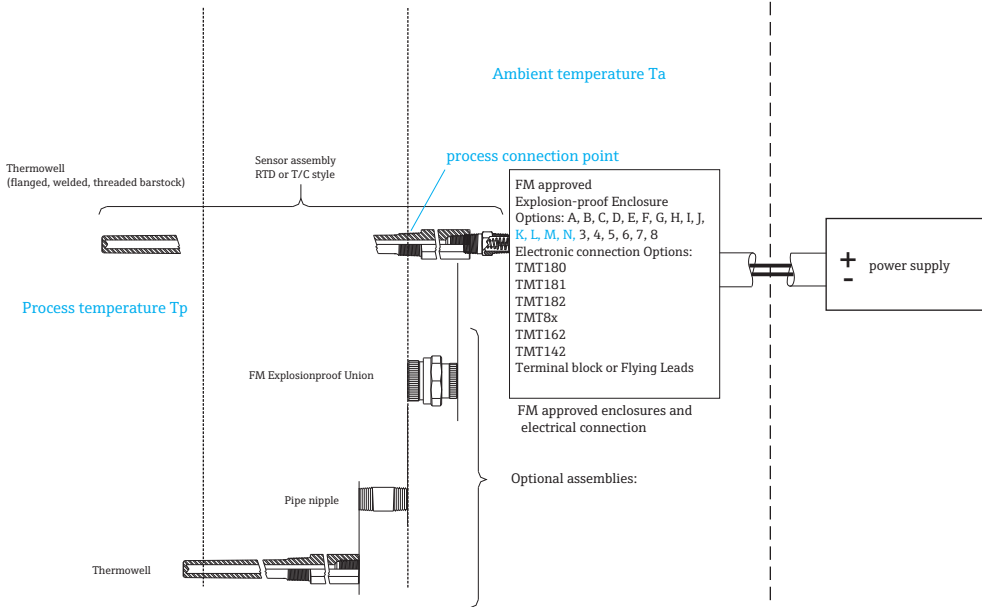


Hazardous (Classified) Location
 Class I / Division 1 / Groups ABCD
 Class II / Division 1 / Groups EFG
 Class III

Nonhazardous Locations



Installation Notes for T13, T14, T53, T54

- FM Approved Apparatus must be installed in accordance with manufacturer's instructions.
- Install per National Electrical Code (NFPA 70).
- Use supply wires suitable for 5°C above surroundings.
- Keep tight when circuits alive.
- Inserts TU111 (RTDs) and TU121 (TC) with Additional Option Code "2" (XP Spare Part) need to be used to ensure approved classifications.
- Warning: Substitution of components may impair suitability for approved classification.

EXPLOSION PROOF **XP** **Class I / Div. 1 / Groups ABCD**
DUST IGNITION PROOF **DIP** **Class II, III / Div. 1 / Groups EFG**

- All conduits must be assembled with a minimum of five full threads engagement.
- For Class II Extension and/or thermowell must be used to maintain enclosure 4X rating.
- Class II use a dust tight seal.
- Enclosures must be FM approved, for appropriate area classification.
- Seal all conduits within 18 inches of enclosure.
- Spring loaded temperature sensors must use a thermowell assembly.

- Refer to the marked maximum ratings for assembled temperature transmitter's supply.
- Optional terminal block's maximum ratings

U ≤ 10 V DC
 I ≤ 1 mA

- Supply circuit for other FM approved head transmitters for ordinary locations

U ≤ 42 V DC
 P ≤ 2.2 W

It shall be verified, taking into account the worst case process and ambient temperatures, that the temperature of the enclosure at the process connection point does not exceed the ambient temperature range of the assembly.

FM Explosion-proof approved temperature sensor assemblies and accessory hardware for the following locations:


Type	Hazardous location
T13/T53 and T14/T54 with enclosures C, D, E, F	Class I / Div. 1 / Groups BCD Class II, III / Div. 1 / Groups EFG
T13/T53 and T14/T54 with enclosures A, B, G, H, I, J, K, L, M, N, 3, 4, 5, 6, 7, 8	Class I / Div. 1 / Groups ABCD Class II, III / Div. 1 / Groups EFG

Approved	Pfanzelt	Date (yyyy-mm-dd)	2006-05-18	Dwg.rev.	B	Revision no.	W18N20	Revision date (yyyy-mm-dd)	2019-04-12	Name	MP	Material	71540288 XA02290T/09/EN/01.20	Endress+Hauser
Volume (mm³)	Designed	Date (yyyy-mm-dd)	2006-03-10	Unit	T13, T14, T53, T54		Scale	1:1		Title		Series		
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No.	Format	A4		CONTROL DRAWING FM Explosion-proof		Objekt version	Sheet	1 of 2		Endress + Hauser Wetzler GmbH+Co. KG Nesselwang / Germany	

Thermal data

The relation between electrical connection, temperature class, maximum surface temperature, ambient temperature range and process temperature range is shown in the following table.

Electrical connection	Temperature class	Maximum surface temperature	Ambient temperature range	Process temperature range sensor type	
				dual	single
Terminal block	T6	T85 °C	-50 °C to +80 °C	-50 °C to +55 °C	-50 °C to +68 °C
	T5	T100 °C	-50 °C to +95 °C	-50 °C to +70 °C	-50 °C to +83 °C
	T4	T135 °C	-50 °C to +100 °C	-50 °C to +105 °C	-50 °C to +118 °C
	T3	T200 °C	-50 °C to +100 °C	-50 °C to +170 °C	-50 °C to +183 °C
	T2	T300 °C	-50 °C to +100 °C	-50 °C to +265 °C	-50 °C to +278 °C
	T1	T450 °C	-50 °C to +100 °C	-50 °C to +415 °C	-50 °C to +428 °C
Flying leads or Transmitter TMT82 TMT84 TMT85 TMT180, TMT181, TMT182	T6	T85 °C	-40 °C to +70 °C	-50 °C to +55 °C	-50 °C to +68 °C
	T5	T100 °C	-40 °C to +80 °C	-50 °C to +70 °C	-50 °C to +83 °C
	T4	T135 °C	-40 °C to +85 °C	-50 °C to +105 °C	-50 °C to +118 °C
	T3	T200 °C	-40 °C to +85 °C	-50 °C to +170 °C	-50 °C to +183 °C
	T2	T300 °C	-40 °C to +85 °C	-50 °C to +265 °C	-50 °C to +278 °C
	T1	T450 °C	-40 °C to +85 °C	-50 °C to +415 °C	-50 °C to +428 °C
Transmitter TMT162 TMT142	T6	T85 °C	-40 °C to +55 °C	-50 °C to +55 °C	-50 °C to +68 °C
	T5	T100 °C	-40 °C to +70 °C	-50 °C to +70 °C	-50 °C to +83 °C
	T4	T135 °C	-40 °C to +85 °C	-50 °C to +105 °C	-50 °C to +118 °C
	T3	T200 °C	-40 °C to +85 °C	-50 °C to +170 °C	-50 °C to +183 °C
	T2	T300 °C	-40 °C to +85 °C	-50 °C to +265 °C	-50 °C to +278 °C
	T1	T450 °C	-40 °C to +85 °C	-50 °C to +415 °C	-50 °C to +428 °C

	Approved Pfanzelt	Date (yyyy-mm-dd) 2006-05-18	16 01 00 113	Dwg.rev. B	Revision no. W18N20	Revision date (yyyy-mm-dd) 2019-04-12	Name MP	Material 71473467 XA02290T/09/EN/01.20	Endress+Hauser 
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2006-03-10	Unit T13, T14, T53, T54	Scale 1:1	Title CONTROL DRAWING FM Explosion-proof		Series		
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No.	Format A4			Objekt version	Sheet 2 of 2	Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany