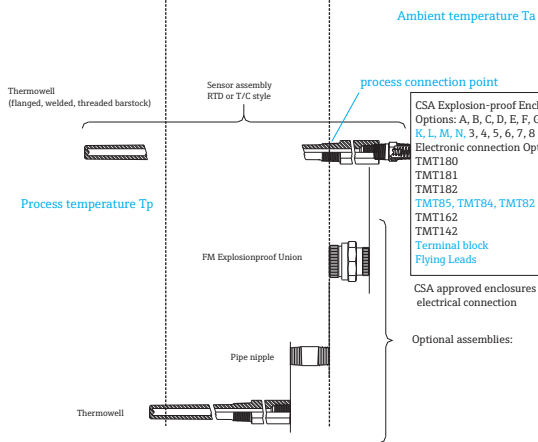


Hazardous (Classified) Location
 Class I / Division 1, 2 / Groups ABCD
 Class II / Division 1, 2 / Groups EFG
 Class III

Nonhazardous Locations



See transmitter's power supply:
 $U \leq 42$ VDC
 current consumption ≤ 30 mA

For remote installation (terminal block)
 Measuring current < 1 mA
 ≤ 50 mW

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.

CSA 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 / Div. 1 / Groups EFG Class III
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 / Div. 1 / Groups EFG Class III

Associated non-incendive power supply unit with max. electrical specifications below the characteristic values for Entity or NIFW of the assembled transmitter:

Transmitter	Ui/Vmax	Ci	Li
TMT180	30 V	144 nF	0
TMT82	35 V	0	0
TMT142 HART	40 V	5.3 nF	0
TMT162 HART	40 V	5.3 nF	0
TMT162 PA/FF	35 V	5 nF	10 μ H
TMT84, TMT85	35 V	5 nF	10 μ H
Terminal block	See table next page		
Flying leads	See table next page		

Installation Notes T13, T14, T53, T54

- CSA approved apparatus must be installed in accordance with manufacturer's instructions.
- Install per Canadian Electrical Code.
- 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 classification.
- Warning: Substitution of components may impair suitability for Class I, Division 2.
 Avertissement: La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Class I, Division 2.



EXPLOSION PROOF DUST IGNITION PROOF

Class I / Div. 1 / Groups ABCD
Class II / Div. 1 / Groups EFG
Class III

- All conduits must be assembled with a minimum of five full threads engagement.
- A seal shall be installed within 18" of the enclosure
 Un scellement doit être installé à moins de 18" du boîtier.
- The flameproof joints are not intended to be repaired.
- For Class II Extension and/or Thermowell must be used to maintain CSA enclosure 4X rating.
- Class II use a dust tight seal.
- Enclosures must be CSA approved, for appropriate area classification.
- Spring loaded temperature sensors must use a thermowell assembly.

NONINCENDIVE

Class I / Div. 2 / Groups ABCD

- Intrinsic safety barrier not required.
- Warning: Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
 Avertissement: Risque d'explosion - Ne pas débrancher tant que le circuit est sous tension, à moins qu'il s'agisse d'un emplacement non dangereux.
- Warning: Substitution of components may impair suitability for Class I, Division 2.
 Avertissement: La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Class I, Division 2.
- Nonincendive field wiring installation:
 The Nonincendive Field Wiring Circuit Concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Intrinsically Safe Apparatus or Associated Apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when $V_{oc} \leq V_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.
- Refer to the enclosed control drawing for Transmitter's Nonincendive Field Wiring parameters. For these current controlled circuits, the parameter I_{max} is not required and need not to be aligned with parameter I_{sc} and I_t of the Associated Nonincendive Field Wiring Apparatus or Associated Apparatus.
- Refer to the marked maximum ratings for assembled temperature transmitter's supply.

	Approved Pfanzelt	Date (yyyy-mm-dd) 2006-03-14	16 01 00 118	Dwg.rev. D	Revision no. W18N20	Revision date (yyyy-mm-dd) 2019-08-26	Name MP	Material 71540286 XA02292T/09/EN/01.20	Endress+Hauser
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2005-10-24	Unit T13, T14, T53, T54	Scale 1:1	Title CONTROL DRAWING CSA XP, NI, DIP		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 1 of 2	Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany		

Permitted ambient temperatures

Class I, Division 1, Groups A, B, C and D;
Class II, Div. 1 Groups E, F & G; Class III:

Type	assembled head transmitter	Temperature class/code	ambient temperature housing
T13, T14 T53, T54	TMT18x	T6/T85°C	-40°C ≤ Ta ≤ +65°C
		T5/T100°C	-40°C ≤ Ta ≤ +80°C
		T4/T135°C	-40°C ≤ Ta ≤ +85°C
	without electronic or with terminal block	T6/T85°C	-50°C ≤ Ta ≤ +70°C
		T5/T100°C	-50°C ≤ Ta ≤ +80°C
		T4/T135°C	-50°C ≤ Ta ≤ +120°C
		T3/T200°C	-50°C ≤ Ta ≤ +120°C
		T2/T300°C	-50°C ≤ Ta ≤ +120°C
		T1/T450°C	-50°C ≤ Ta ≤ +120°C

Type	assembled field transmitter	Temperature class/code	ambient temperature housing
	TMT162, TMT142	T6/T85°C	-40°C ≤ Ta ≤ +55°C
		T5/T100°C	-40°C ≤ Ta ≤ +70°C
		T4/T110°C	-40°C ≤ Ta ≤ +85°C

Class I, Division 2, Groups A, B, C and D:


Type	Assembled transmitter	Temperature class	Ambient temperature range housing Ta
T13, T14 T53, T54	TMT180	T6	-40°C ≤ Ta ≤ +50°C
		T5	-40°C ≤ Ta ≤ +65°C
		T4	-40°C ≤ Ta ≤ +85°C
	TMT181, TMT182, TMT84, TMT85, TMT16 PA/FF, TMT142	T6	-40°C ≤ Ta ≤ +55°C
		T5	-40°C ≤ Ta ≤ +70°C
		T4	-40°C ≤ Ta ≤ +85°C
	TMT162 HART	T6	-50°C ≤ Ta ≤ +55°C
		T5	-50°C ≤ Ta ≤ +70°C
		T4	-50°C ≤ Ta ≤ +85°C
TMT82	T6	-50°C ≤ Ta ≤ +58°C	
	T5	-50°C ≤ Ta ≤ +75°C	
	T4	-50°C ≤ Ta ≤ +85°C	
TMT8x with display	T6	-40°C ≤ Ta ≤ +55°C	
	T5	-40°C ≤ Ta ≤ +70°C	
	T4	-40°C ≤ Ta ≤ +85°C	

Permitted process temperatures

Type	Insert diameter	Temperature class/ Maximum surface	Process temperature range for assembled head transmitter TMT18x, TMT8x	Process temperature range for assembled field transmitter TMT162, TMT142	
T13, T14 T53, T54	3mm, 3mm(dual), 6mm dual	T6 / T85°C	-50°C ≤ Tp ≤ +66°C	-50°C ≤ Tp ≤ +64°C	
		T5 / T100°C	-50°C ≤ Tp ≤ +81°C	-50°C ≤ Tp ≤ +79°C	
		T4 / T135°C	-50°C ≤ Tp ≤ +116°C	-50°C ≤ Tp ≤ +114°C	
		T3 / T200°C	-50°C ≤ Tp ≤ +181°C	-50°C ≤ Tp ≤ +179°C	
		T2 / T300°C	-50°C ≤ Tp ≤ +276°C	-50°C ≤ Tp ≤ +279°C	
		T1 / T450°C	-50°C ≤ Tp ≤ +426°C	-50°C ≤ Tp ≤ +424°C	
		6mm	T6 / T85°C	-50°C ≤ Tp ≤ +73°C	-50°C ≤ Tp ≤ +71°C
			T5 / T100°C	-50°C ≤ Tp ≤ +88°C	-50°C ≤ Tp ≤ +86°C
			T4 / T135°C	-50°C ≤ Tp ≤ +123°C	-50°C ≤ Tp ≤ +121°C
	T3 / T200°C		-50°C ≤ Tp ≤ +188°C	-50°C ≤ Tp ≤ +186°C	
	T2 / T300°C		-50°C ≤ Tp ≤ +283°C	-50°C ≤ Tp ≤ +286°C	
	T1 / T450°C		-50°C ≤ Tp ≤ +433°C	-50°C ≤ Tp ≤ +431°C	

The dependency of the ambient and process temperatures upon the temperature class for assembly without transmitter (without electronic or with terminal block):

Insert diameter	Temperature class / Maximum surface	Process temperature range
		P ≤ 50 mW
3mm, 3mm (dual) or 6mm dual	T6 / T85°C	-50°C ≤ Tp ≤ +66°C
	T5 / T100°C	-50°C ≤ Tp ≤ +81°C
	T4 / T135°C	-50°C ≤ Tp ≤ +116°C
	T3 / T200°C	-50°C ≤ Tp ≤ +181°C
	T2 / T300°C	-50°C ≤ Tp ≤ +276°C
	T1 / T450°C	-50°C ≤ Tp ≤ +426°C
6mm	T6 / T85°C	-50°C ≤ Tp ≤ +73°C
	T5 / T100°C	-50°C ≤ Tp ≤ +88°C
	T4 / T135°C	-50°C ≤ Tp ≤ +123°C
	T3 / T200°C	-50°C ≤ Tp ≤ +188°C
	T2 / T300°C	-50°C ≤ Tp ≤ +283°C
	T1 / T450°C	-50°C ≤ Tp ≤ +433°C

Approved	Pfanzelt	Date (yyyy-mm-dd)	2006-03-14	Dwg. rev.	D	Revision no.	W18N20	Revision date (yyyy-mm-dd)	2019-08-26	Name	MP	Material	71473466 XA02292T/09/EN/01.20	Endress+Hauser 
Volume (mm³)	Designed	Date (yyyy-mm-dd)	2005-10-24	Scale	1:1	Title		CONTROL DRAWING CSA		Series		Objekt version	Sheet	
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No.	16 01 00 118		T13, T14, T53, T54		Format		A4		2 of 2		Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany