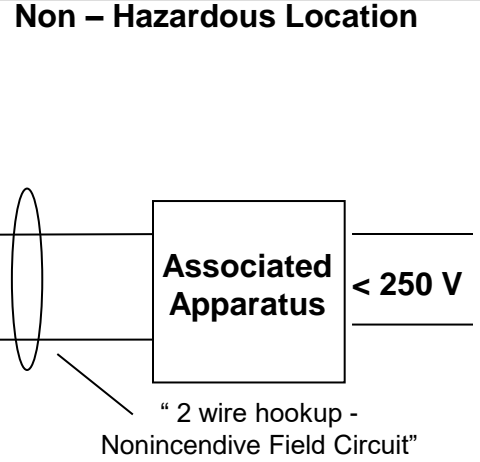
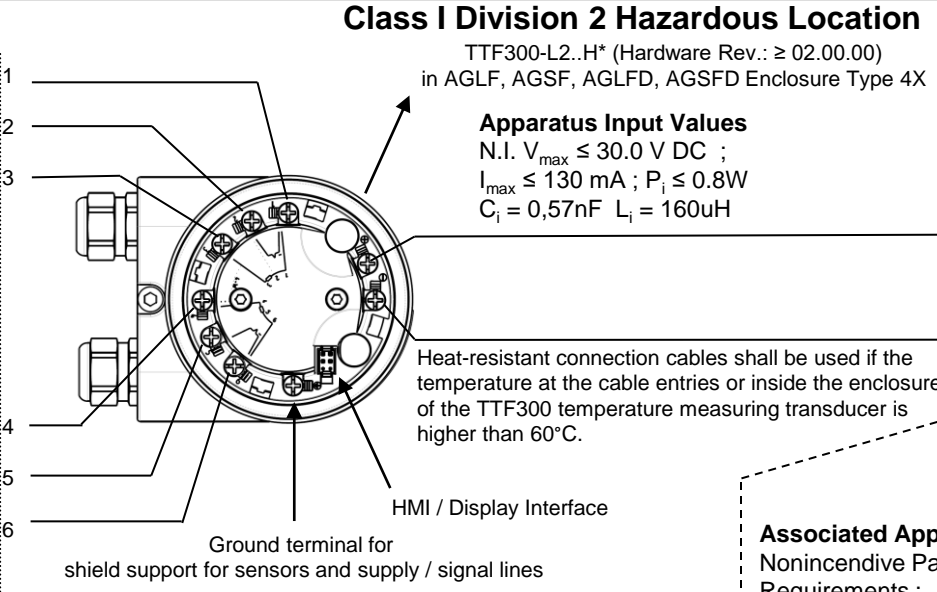
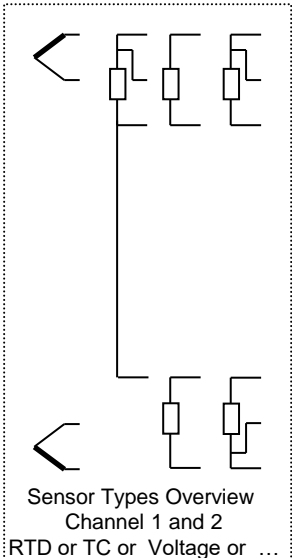


Sensors
must be FM approved or be a simple apparatus. Simple apparatus is a device which will neither generate nor store more than 1.5 V; 0.1 A; 25mW resp. 20 µJ such as switches, RTD's, TC.



N.I. Sensor Field Circuit Entity Parameters

$V_{oc} = 6.5 \text{ V}$; $I_{sc} = 17.8 \text{ mA}$; $P_o = 29 \text{ mW}$
Terminals: 1,2,3,4: GP: A,B $C_a = 1.65 \mu\text{F}$; $L_a = 5.0 \text{ mH}$
C,D $C_a = 8.85 \mu\text{F}$; $L_a = 5.0 \text{ mH}$

FM Nonincendive field circuit approval

Tem. Ident.: T6, T5 at $T_{amb} = 56 \text{ }^\circ\text{C}$;
T4 ... T1 at $T_{amb} = 85 \text{ }^\circ\text{C}$;
Class I Div. 2; Groups A,B,C,D or Zone 2 AEx/Ex na IIC or Zone 2 AEx/Ex ec IIC

FM approved HMI / Display Interface with Output Parameters

Class I Div 2; Groups: A,B,C,D
 $V_{oc} = 6.2 \text{ V}$; $I_{sc} < 65.2 \text{ mA}$; $P_o = 101 \text{ mW}$
Terminals: 6 PIN Connector
GP A,B $C_a = 1.4 \mu\text{F}$; $L_a = 5.0 \text{ mH}$
C,D $C_a = 8.9 \mu\text{F}$; $L_a = 5.0 \text{ mH}$

Associated Apparatus

Nonincendive Parameters must meet the following Requirements :

$V_{oc} \text{ or } V_t \leq V_{max}$; $C_a \leq C_i + C_{cable}$;
 $I_{sc} \text{ or } I_t \leq I_{max}$; $L_a \leq L_i + L_{cable}$

The temperature transmitter is FM approved for nonincendive field circuits when installed per Canadian Electrical Code C22.1 Annex J18 or national electrical code (NEC) article 501-10(B)(3), 502-10(B)(4) or 503-10(B)(4) with FM approved nonincendive field circuit output apparatus which meet the parameters indicated above.

Temperature Transmitter Model “TTF300*” Ordering Code “TTF300-L2..H*” is a Temperature Transmitter Type, which is installed in an enclosure type AGLF, AGSF or AGLFD, AGSFD w/wo FM Approved display HMI-Ex type B, BS.

* Includes the TTF300-N variant

Warning:

„The apparatus enclosure AGL... contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction“.

Rev.	Desc.	Date	Name
2.01	misc	02.12.22	Peterich
2.00	HW02.00	30.03.22	Peterich

Do not alter without FM authorization

Approv.	17.07.07	Müller
Date		Name

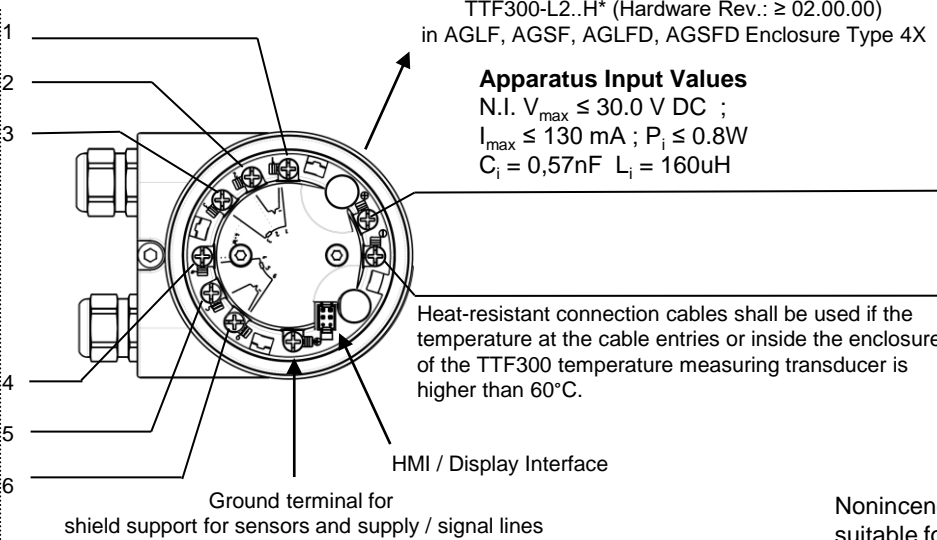
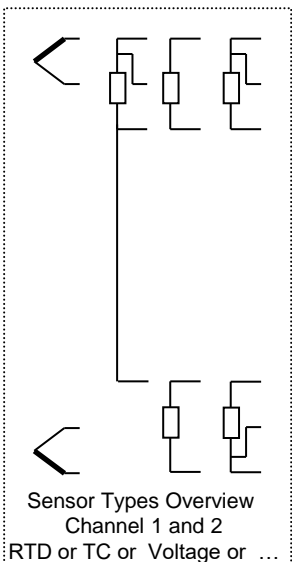
ABB
Automation Products

Title:	TTF300 HART (HW Rev. ≥ 02.00.00) N.I. Temperature Transmitter Control Drawing	Scale:	----
Drawing / Part No.:	TTF300-L2H	Page : of	1 / 2
Replacement of:	-----		

Class I and II Division 2 Hazardous Location

Non – Hazardous Location

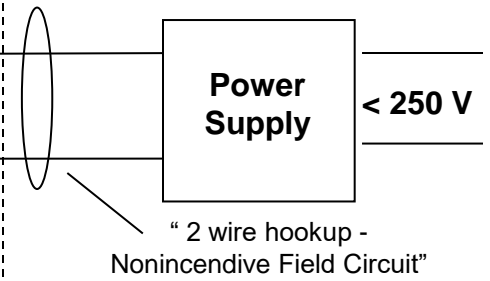
Sensors
must be FM approved or be a simple apparatus. Simple apparatus is a device which will neither generate nor store more than 1.5 V; 0.1 A; 25mW resp. 20 µJ such as switches, RTD's, TC.



TTF300-L2..H* (Hardware Rev.: ≥ 02.00.00)
in AGLF, AGSF, AGLFD, AGSFD Enclosure Type 4X

Apparatus Input Values
N.I. $V_{max} \leq 30.0 \text{ V DC}$;
 $I_{max} \leq 130 \text{ mA}$; $P_i \leq 0.8\text{W}$
 $C_i = 0,57\text{nF}$ $L_i = 160\text{uH}$

Heat-resistant connection cables shall be used if the temperature at the cable entries or inside the enclosure of the TTF300 temperature measuring transducer is higher than 60°C.



N.I. Sensor Field Circuit Entity Parameters

$V_{oc} = 6.5 \text{ V}$; $I_{sc} = 17.8 \text{ mA}$; $P_o = 29 \text{ mW}$
Terminals: 1,2,3,4: GP: A,B $C_a = 1.65 \mu\text{F}$; $L_a = 5.0 \text{ mH}$
C,D $C_a = 8.85 \mu\text{F}$; $L_a = 5.0 \text{ mH}$

FM Nonincendive field circuit approval

Tem. Ident.: T6, T5 at $T_{amb} = 56 \text{ }^\circ\text{C}$;
T4 ... T1 at $T_{amb} = 85 \text{ }^\circ\text{C}$;
Class I Div. 2; Groups A,B,C,D or Zone 2 AEx/Ex na IIC or Zone 2 AEx/Ex ec IIC

FM approved HMI / Display Interface with Output Parameters

Class I Div 2; Groups: A,B,C,D
 $V_{oc} = 6.2 \text{ V}$; $I_{sc} < 65.2 \text{ mA}$; $P_o = 101 \text{ mW}$
Terminals: 6 PIN Connector
GP A,B $C_a = 1.4 \mu\text{F}$; $L_a = 5.0 \text{ mH}$
C,D $C_a = 8.9 \mu\text{F}$; $L_a = 5.0 \text{ mH}$

- Nonincendive Class I Div. 2 Groups A, B, C, D and suitable for Class II and III Div.2 Groups E,F,G Hazardous Location Installations.
1. Install per National Electrical Code (NEC) or Canadian Electrical Code C22.1 annex J18 using Threaded Metal Conduit.
 2. Warning: Explosion Hazard – Do not disconnect equipment unless power has been switched off, or the area is known to be non-hazardous. Warning: Substitution of components may impair suitability for Class 1 Div. 2.
 3. A dust tight seal must be used at the conduit entry, when the transmitter is used in a Class II and III location.

Temperature Transmitter Model “TTF300*” Ordering Code “TTF300-L2..H*” is a Temperature Transmitter Type, which is installed in an enclosure type AGLF, AGSF or AGLFD, AGSFD w/wo FM Approved display HMI-Ex type B, BS.

* Includes the TTF300-N variant

Warning:

„The apparatus enclosure AGL... contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction“.

				Do not alter without FM authorization		Title:		Scale:	
				Approv.	17.07.07	Müller		TTF300 HART (HW Rev. ≥ 02.00.00)	
				Date		Name		N.I. Temperature Transmitter Control Drawing	
						Drawing / Part No.:		Page : of	
2.01	misc	02.12.22	Peterich			TTF300-L2H		2 / 2	
2.00	HW02.00	30.03.22	Peterich						
Rev.	Desc.	Date	Name			Replacement of: -----			