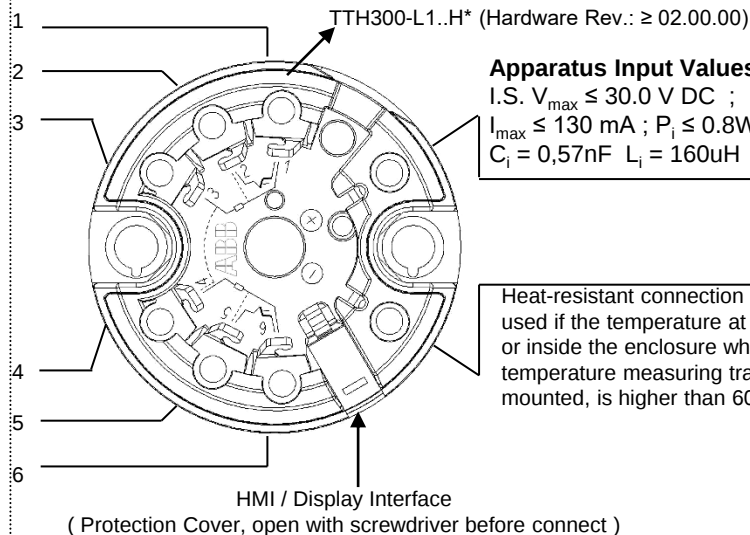
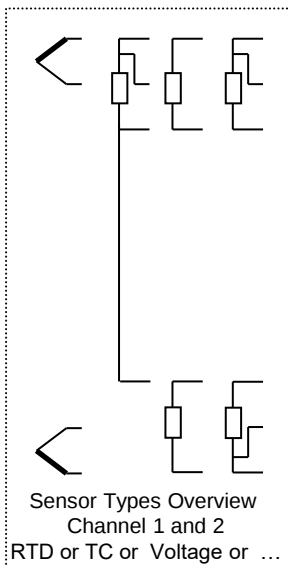


Sensors

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.



Apparatus Input Values

I.S. $V_{max} \leq 30.0 \text{ V DC}$;
 $I_{max} \leq 130 \text{ mA}$; $P_i \leq 0.8 \text{ W}$
 $C_i = 0.57 \text{ nF}$ $L_i = 160 \text{ uH}$

Heat-resistant connection cables shall be used if the temperature at the cable entries or inside the enclosure where the TTH300 temperature measuring transducer is mounted, is higher than 60°C.

Hazardous Location Non – Hazardous Location

Barrier Galvanic Isolator

< 250 V

“ 2 wire hookup”

I.S. 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 $C_a = 1.65 \text{ µF}$; $L_a = 5.0 \text{ mH}$
C,D $C_a = 8.85 \text{ µF}$; $L_a = 5.0 \text{ mH}$

FM intrinsically safe field circuit approval

Tem. Ident.: T6, T5 at $T_{amb} = 56 \text{ °C}$;
T4 ... T1 at $T_{amb} = 85 \text{ °C}$;

Class I Div. 1,2 Groups A,B,C,D or

Class I Zone 0 AEx/Ex ia IIC

FM approved HMI / Display Interface with Intrinsically Safe Output Parameters

Class I Div 1,2 Groups A,B,C,D or

Class I Zone 0 AEx/Ex ia IIC

$V_{oc} = 6.2 \text{ V}$; $I_{sc} < 65.2 \text{ mA}$; $P_o = 101 \text{ mW}$

Terminals: 6 PIN Connector

GP A,B $C_a = 1.4 \text{ µF}$; $L_a = 5.0 \text{ mH}$

C,D $C_a = 8.9 \text{ µF}$; $L_a = 5.0 \text{ mH}$

- Barrier or Galvanic Isolator must be FM approved (US) or listed for Canada (cFM/CSA) and must be installed in accordance with manufacturers instructions.
- Barrier or Galvanic Isolator parameters must meet the following Requirements :
 $V_{oc} \text{ or } V_t \leq V_{max}$; $C_a \leq C_i + C_{cable}$;
 $I_{sc} \text{ or } I_t \leq I_{max}$; $L_a \leq L_i + L_{cable}$;
 $P_o \text{ or } P_t \leq P_{max}$
- Maximum non - hazardous area voltage must not exceed 250V
- Install in accordance with the CE Code CSA C22.1 61010-1, or NEC (ANSI/NFPA 70) and ANSI/ISA RP12.06.01 “ Part 1: Intrinsic Safety’

Temperature Transmitter Model “TTH300” Ordering Code “TTH300-L1..H*” is an open type unit which must be installed within an enclosure appropriate for environmental protection in accordance with

ANSI/ISA 61010-1 (82.02.01) or CSA 22.1 61010-1 and shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

* Includes the TTH300-N variant

Warning:

Resistance between barrier ground and earth ground must be less then 1.0 Ohm

				Do not alter without FM authorization			Title: TTH300 HART (HW Rev. ≥ 02.00.00) I.S. Temperature Transmitter Control Drawing	Scale: -----	
				Approv.	09.10.21	Peterich			
					Date	Name			
				ABB Automation Products			Drawing / Part No.:	Page : of	
2.01	misc	02.12.22	Peterich				TTH300-L1H		1 / 1
2.00	HW02.00	30.03.22	Peterich						
Rev.	Desc.	Date	Name						
							Replacement of: -----		