



Member of the FM Global Group

FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

Model TTH200-ab, Temperature Transmitter

IS/I,II,III/1/ABCDEFGF/ T*; - TTH200-L1P/F(IS) or TTH200-R1P/F(IS); Entity;
I/O/AEx ia IIC; T*- TTH200-L1P/F(IS) or TTH200-R1P/F(IS);
NI/II/2/ABCD/ T*; NI/2/II T* = Ta = *- TTH200-L1P/F(NI) or TTH200-R1P/F(NI);
S/II,III/2/EFG T*

a = Type of protection; L1, L2, R1 or R2.

b = Communication protocol; P or F.

Entity Parameters:

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W, C_i = 5 nF, L_i = 10 μ H
Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W, C_i = 5 nF, L_i = 10 μ H

Output Terminals (1, 2, 3, 4, 5 and 6)

Group AB: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 1.55 μ F, L_o (La) = 5mH
Group CD: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 8.75 μ F, L_o (La) = 5mH

Output Terminals (JP1)

U_o (Voc) = 6.2V, I_o (Isc) = 65.2mA, P_o = 101mW, C_o (Ca) = 1.4 μ F, L_o (La) = 5mH

NonIncendive Field Wiring parameters

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W
Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W

Special Conditions of Use:

- 1 For Intrinsic Safety and Non Incendive Approvals the Temperature code and Ambient temperatures are as follows:

T* = Temperature Code T6 for a Maximum Ambient Temperature of 56°C.

T* = Temperature Code T5 for a Maximum Ambient Temperature of 71°C

T* = Temperature Code T4 for a Maximum Ambient Temperature of 85°C.

- 2 The product will be required in a enclosure which fulfill the NEMA 4X Standard for Class II and III.

Model TTH300-ab, Temperature Transmitter

IS/I,II,III/1/ABCDEFGF/ T*; - TTH300-L1P/F(IS) or TTH300-R1P/F(IS); Entity;
I/O/AEx ia IIC; T*- TTH300-L1P/F(IS) or TTH300-R1P/F(IS);
NI/II/2/ABCD/ T*; NI/2/II T* = Ta = *- TTH300-L1P/F(NI) or TTH300-R1P/F(NI);
S/II,III/2/EFG T*



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a = Type of protection; L1, L2, R1 or R2.

b = Communication protocol; P or F.

Entity Parameters:

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W, C_i = 5 nF, L_i = 10 μ H

Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W, C_i = 5 nF, L_i = 10 μ H

Output Terminals (1, 2, 3, 4, 5 and 6)

Group AB: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 1.55 μ F, L_o (La) = 5mH

Group CD: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 8.75 μ F, L_o (La) = 5mH

Output Terminals (JP1)

U_o (Voc) = 6.2V, I_o (Isc) = 65.2mA, P_o = 101mW, C_o (Ca) = 1.4 μ F, L_o (La) = 5mH

NonIncendive Field Wiring parameters

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W

Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W

Special Conditions of Use:

1. For Intrinsic Safety and Non Incendive Approvals the Temperature code and Ambient temperatures are as follows:

T* = Temperature Code T6 for a Maximum Ambient Temperature of 56°C.

T* = Temperature Code T5 for a Maximum Ambient Temperature of 71°C

T* = Temperature Code T4 for a Maximum Ambient Temperature of 85°C.

2. The product will be required in a enclosure which fulfill the NEMA 4X Standard for Class II and III.

Model TTR200-ab, Temperature Transmitter

IS/I,II,III/1/ABCDEFGH/ T*; - TTR200_TTR200-L6H(IS); Entity;

I/O/AEx ia/IIC; T*- TTR200_TTR200-L6H(IS);

NI/I/2/ABCD/ T*; NI/2/II T* = Ta = *- TTR200_TTR200-L6H(NI).

a = Type of protection; L6, R6.

b = Communication protocol; P or F.

Entity Parameters:

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W, C_i = 5 nF, L_i = 10 μ H

Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W, C_i = 5 nF, L_i = 10 μ H

Sensor Terminals (1, 2, 3, 4, 5 and 6)

Group AB: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 1.55 μ F, L_o (La) = 5mH

Group CD: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 8.75 μ F, L_o (La) = 5mH

Display Connector

U_o (Voc) = 6.2V, I_o (Isc) = 65.2mA, P_o = 101mW, C_o (Ca) = 1.4 μ F, L_o (La) = 5mH

NonIncendive Field Wiring parameters

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W

Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W

Special Conditions of Use:

1. For Intrinsic Safety and Non Incendive Approvals the Temperature code and Ambient temperatures are as follows:

T* = Temperature Code T6 for a Maximum Ambient Temperature of 56°C.

T* = Temperature Code T5 for a Maximum Ambient Temperature of 71°C

T* = Temperature Code T4 for a Maximum Ambient Temperature of 85°C.

2. For a Class II,III rating the instrument is required to be mounted into an Class II, Class III rated enclosure that is compliant to ANSI/ISA 61010 standard.

Model TTR300-ab, Temperature Transmitter

IS/II,III/1/ABCDEFGF/ T*; - TTR200_TTR300-L6H(IS); Entity;
 I/O/AEx ia/IIC; T*- TTR200_TTR300-L6H(IS);
 NI/II/2/ABCD/ T*; NI/2/II T* = Ta = *- TTR200_TTR300-L6H(NI).

a = Type of protection; L6, R6.
 b = Communication protocol; P or F.

Entity Parameters:

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W, C_i = 5 nF, L_i = 10 μ H
 Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W, C_i = 5 nF, L_i = 10 μ H

Sensor Terminals (1, 2, 3, 4, 5 and 6)

Group AB: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 1.55 μ F, L_o (La) = 5mH
 Group CD: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 8.75 μ F, L_o (La) = 5mH

Display Connector

U_o (Voc) = 6.2V, I_o (Isc) = 65.2mA, P_o = 101mW, C_o (Ca) = 1.4 μ F, L_o (La) = 5mH

NonIncendive Field Wiring parameters

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W
 Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W

Special Conditions of Use:

1. For Intrinsic Safety and Non Incendive Approvals the Temperature code and Ambient temperatures are as follows:

T* = Temperature Code T6 for a Maximum Ambient Temperature of 56°C.
 T* = Temperature Code T5 for a Maximum Ambient Temperature of 71°C
 T* = Temperature Code T4 for a Maximum Ambient Temperature of 85°C.

2. For a Class II,III rating the instrument is required to be mounted into an Class II, Class III rated enclosure that is compliant to ANSI/ISA 61010 standard.

Model TTF300-abcd, Temperature Transmitter

IS/II,III/1/ABCDEFGF/ T*; - TTF300-L1..P/F(IS) or TTF300-R1..P/F(IS); Entity;
 I/O/AEx ia IIC; T*- TTF300-L1..P/F(IS) or TTF300-R1..P/F(IS);
 NI/II/2/ABCD/ T*; NI/2/II T* = Ta = *- TTF300-L2..P/F(NI) or TTF300-R2..P/F(NI);
 S/II,III/2/EFG T**,
 XP/II/ABCD/ T*;
 DIP/II,III/EFG/ T**

a = Type of protection; L1, L2, L3,R1, R2 or R3.
 b = Housing/Display; A or B or C or D.
 c = Cable Entry; 1 or 2 or 3 or 4
 d = Communication protocol; P or F.

Entity Parameters:

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W, C_i = 5 nF, L_i = 10 μ H
 Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W, C_i = 5 nF, L_i = 10 μ H

Output Terminals (1, 2, 3, 4, 5 and 6)

Group AB: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 1.55 μ F, L_o (La) = 5mH
 Group CD: U_o (Voc) = 6.5V, I_o (Isc) = 25.0mA, P_o = 38mW, C_o (Ca) = 8.75 μ F, L_o (La) = 5mH

Output Terminals (JP1)

U_o (Voc) = 6.2V, I_o (Isc) = 65.2mA, P_o = 101mW, C_o (Ca) = 1.4 μ F, L_o (La) = 5mH

NonIncendive Field Wiring parameters

FISCO: U_i (Vmax) = 17.5V, I_i (Imax) = 380mA, P_i (Pmax) = 5.32W
 Entity I.S.: U_i (Vmax) = 24V, I_i (Imax) = 250mA, P_i (Pmax) = 1.2W

Special Conditions of Use:

- 1 For Intrinsic Safety and Non Incendive Approvals the Temperature code and Ambient temperatures are as follows:



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T* = Temperature Code T6 for a Maximum Ambient Temperature of 44°C.
T* = Temperature Code T5 for a Maximum Ambient Temperature of 56°C
T* = Temperature Code T4 for a Maximum Ambient Temperature of 84°C.

- 2 For Explosionproof and Dust-Ignitionproof Approvals the Temperature code and Ambient temperatures are as follows:

T** = Temperature Code T6 for a Maximum Ambient Temperature of 56°C.
T** = Temperature Code T5 for a Maximum Ambient Temperature of 71°C
T** = Temperature Code T4 for a Maximum Ambient Temperature of 85°C.

Model TTF350-abcd, Temperature Transmitter

IS/I,II,III/1/ABCDEFG/ T*; - TTF350-L4..P/F(IS); Entity;
I/O/AEx ia IIC; T*-TTF350-L4..P/F;
NI/II/2/ABCD/ T*; NI/2/II T* = Ta = *-TTF350-L5..P/F(NI) or TTF350-L5..P/F(NI);
S/II,III/2/EFG T**;
XP/II/ABCD/ T*;
DIP/II,III/EFG/ T**; Type 4X; IP66 IP67 TTF350-L3..(FM).

a = Type of protection; L3, L4, L5, R3, R4 or R5.

b = Housing/Display; N, or R.

c = Cable Entry; 5,6 or 8.

d = Communication protocol; P or F.

Entity Parameters:

FISCO: $U_i (V_{max}) = 17.5V$, $I_i (I_{max}) = 380mA$, $P_i (P_{max}) = 5.32W$, $C_i = 5 nF$, $L_i = 10\mu H$
Entity I.S.: $U_i (V_{max}) = 24V$, $I_i (I_{max}) = 250mA$, $P_i (P_{max}) = 1.2W$, $C_i = 5 nF$, $L_i = 10\mu H$

$V_{max}=30v$, $I_{max}= 130mA$, $P_{max}= 0.8W$ $C_i=5nF$, $L_i=500\mu H$

Output Terminals (1, 2, 3, 4, 5 and 6)

Group AB: $U_o (V_{oc}) = 6.5V$, $I_o (I_{sc}) = 25.0mA$, $P_o = 38mW$, $C_o (C_a) = 1.55\mu F$, $L_o (L_a) = 5mH$
Group CD: $U_o (V_{oc}) = 6.5V$, $I_o (I_{sc}) = 25.0mA$, $P_o = 38mW$, $C_o (C_a) = 8.75\mu F$, $L_o (L_a) = 5mH$

Output Terminals (JP1)

$U_o (V_{oc}) = 6.2V$, $I_o (I_{sc}) = 65.2mA$, $P_o = 101mW$, $C_o (C_a) = 1.4\mu F$, $L_o (L_a) = 51mH$

NonIncendive Field Wiring parameters

FISCO: $U_i (V_{max}) = 17.5V$, $I_i (I_{max}) = 380mA$, $P_i (P_{max}) = 5.32W$, $C_i = 5 nF$, $L_i = 10\mu H$
Entity I.S.: $U_i (V_{max}) = 24V$, $I_i (I_{max}) = 250mA$, $P_i (P_{max}) = 1.2W$, $C_i = 5 nF$, $L_i = 10\mu H$

Special Conditions of Use:

1. For Intrinsic Safety and Non Incendive Approvals the Temperature code and Ambient temperatures are as follows:

T* = Temperature Code T6 for a Maximum Ambient Temperature of 44°C.
T* = Temperature Code T5 for a Maximum Ambient Temperature of 56°C
T* = Temperature Code T4 for a Maximum Ambient Temperature of 84°C.

2. For Explosionproof and Dust-Ignitionproof Approvals the Temperature code and Ambient temperatures are as follows:

T** = Temperature Code T6 for a Maximum Ambient Temperature of 56°C.
T** = Temperature Code T5 for a Maximum Ambient Temperature of 71°C
T** = Temperature Code T4 for a Maximum Ambient Temperature of 85°C.
T** = Temperature Code T3 for a Maximum Ambient Temperature of 120°C.



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Equipment Ratings:

The TTH200-.P/F, TTH300-.P/F, TTF300-.P/F, TTF350-.P/F, TTR200-.P/F and TTR300-.P/F Profibus/Fieldbus Series Temperature Transmitters are FM Approved for Intrinsic Safety for Class I, II, III, Division 1, Groups A, B, C, D, E, F and G; Non Incendive for Class I, Division 2, Groups A, B, C, D and Suitable for Class II, III, Division 2, Groups E, and G when connected in conjunction with Control Drawings. In addition, the TTF300-.P/F, TTF350-.P/F Temperature Transmitter is FM Approved for Explosionproof For Class I, Division 1, Groups A, B, C and D and Dust-Ignition Proof for Class II, III, Division 1, Groups E, F and G Hazardous(classified) Locations Indoors and Outdoors Type 4X, IP66, IP67.

FM Approved for:

ABB Automation Products GmbH
Alzenau, Germany



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This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	1998
Class 3610	1999
Class 3611	2004
Class 3615	2006
Class 3616	1989
ISAS12.00.01	2002
Class 3810	2005
Nema 250	2003
IEC60529	2004

Original Project ID: 3027610

Approval Granted: January 5, 2007

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
070801	November 2, 2007		
3028938	December 10, 2007		
3031178	October 9, 2008		
3037064	<i>December 18, 2009</i>		

FM Approvals LLC

J. E. Marquedant

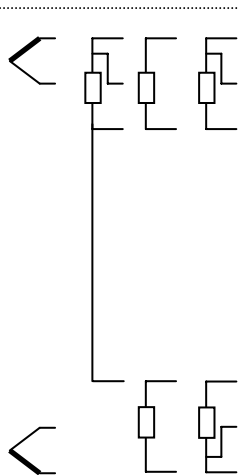
 James E. Marquedant
 Group Manager, Electrical

18 December 2009

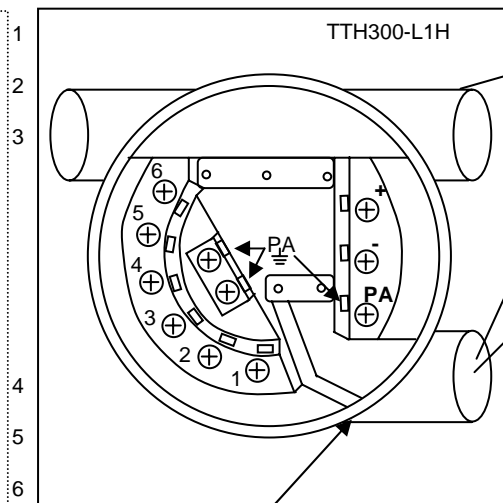
 Date

Hazardous Location

Sensors must be FM approved or be a simple apparatus. Simple apparatus is a device which will neither generate or store more than 1.5 V; 0.1 A; 25 mW or 20 μJ such as switches; RTD's, TC or LED's



Sensor Types Overview
Channel 1 and 2
RTD or TC or Voltage or ...



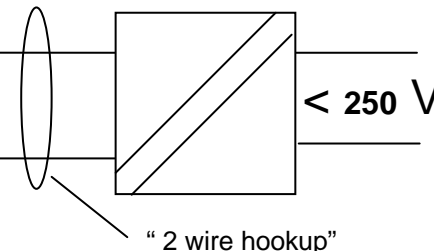
HMI / Display – Interface
(Protection Window Cover, open with screw before connect !)

Type 2-2 T
Enclosure Type 4X

Apparatus input Values
I. S. V max ≤ 30.0 V DC ;
I max ≤ 130 mA ; Pi ≤ 0.8W
Ci = 5nF Li = 0,5mH

Non – Hazardous Location

**Barrier
Galvanic Isolator**



Associated Apparatus

- Barrier or Galvanic Isolator must be FM approved and must be installed in accordance with manufactures instructions.
- Barrier or Galvanic Isolator parameters must meet the following Requirements :
 V_{oc} or $V_t \leq V_{max}$; $C_a \geq C_i + C_{cable}$;
 I_{sc} or $I_t \leq I_{max}$; $L_a \geq L_i + L_{cable}$
 P_o or $P_t \leq P_{max}$
- Maximum non hazardous area voltage must not exceed 250V.
- Install in accordance with the NEC (ANSI/NFPA 70) and ANSI/ISA RP12.6. "Installation of intrinsically safe systems" Do not alter without FM authorization

I.S. Sensor Field Circuit Parameters

$V_{oc} = 6.5 V$; $I_{sc} < 25.0 mA$; $P_o = 38 mW$
 Tem. Ident. for Class I Div 1 and Div 2; Groups: A,B,C,D
 T_6 at $T_{amb} = 56 ^\circ C$; T_5 at $T_{amb} = 71 ^\circ C$; T_4 at $T_{amb} = 85 ^\circ C$;
 Temp. Ident. for Class I Zone 0 AEx ia IIC
 T_6 at $T_{amb} = 44 ^\circ C$; T_5 at $T_{amb} = 56 ^\circ C$; T_4 at $T_{amb} = 84 ^\circ C$;
 Terminals: 1,2,3,4,5,6 GP A,B $C_a = 1.54 \mu F$; $L_a = 5.0 mH$
 C,D $C_a = 8.74 \mu F$; $L_a = 5.0 mH$

HMI / Display Interface

Intrinsically Safe output Parameters
 $V_{oc} = 6.2 V$; $I_{sc} < 65.2 mA$; $P_o = 101 mW$
 Class I Div 1 and Div 2; ; Groups: A,B,C,D or
 Class I Zone 0 AEx ia IIC
 Terminals: 6 PIN Connector
 GP A,B $C_a = 1.4 \mu F$; $L_a = 5.0 mH$
 C,D $C_a = 8.9 \mu F$; $L_a = 5.0 mH$

Temperature Transmitter Model "TTF350"
 Ordering Code "TTF350-L4..H" is an Temperature Transmitter Type TTH300-L1H, which is installed in an enclosure Type 2-2 T Dual Chamber, w/wo FM Approved display HMI-Ex type B. (ID:)

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

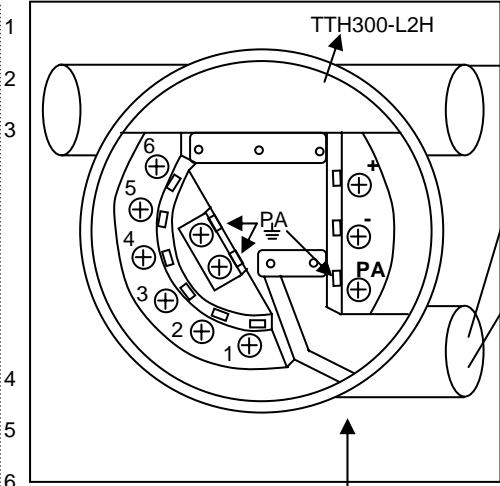
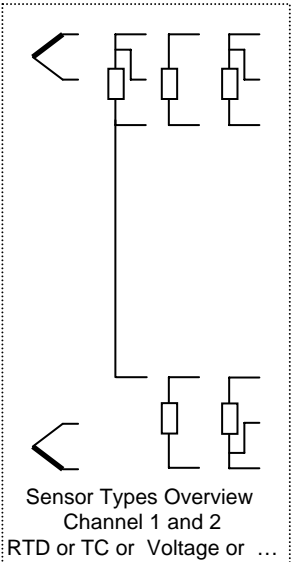
Rev.	Desc.	Date	Name
1.01	O-.Code	13.07.07	Zeiger
1.00	Release	04.12.06	Zeiger

Approv.	13.07.07	Müller
Date		Name
ABB Automation Products		

Title:	TTF350 HART I.S. Temperature Transmitter Control Drawing	Scale:	-----
Drawing / Part No.:	TTF350-L4..H	Page : of	1 / 1
Replacement of:	-----		

Division 2 Hazardous Location

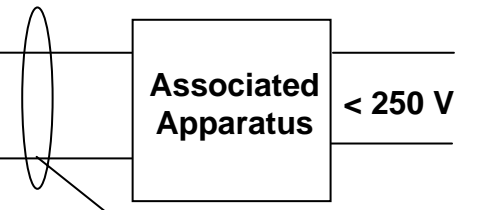
Sensors must be FM approved or be a simple apparatus. Simple apparatus is a device which will neither generate or store more than 1.5 V; 0.1 A; 25 mW or 20 μJ such as switches; RTD's, TC or LED's



Type 2-2 T Enclosure Type 4X

Apparatus Input Values
N.I. V max ≤ 30.0 V ;
I max ≤ 130 mA ; Pi ≤ 0,8W
Ci = 5 nF; Li = 0,5mH

Non – Hazardous Location



“ 2 wire hookup – Nonincendive Field Circuit ”

HMI / Display – Interface
(Protection Window Cover, open with screw before connect !

HMI / Display Interface Non-incendive Output Parameters

Voc = 6.2 V; Isc < 65.2 mA; Po = 101 mW
Terminals: 6 PIN Connector
GP A,B Ca = 1.4 μF; La = 5.0 mH
C,D Ca = 8.9 μF; La = 5.0 mH

Sensor Field Circuit Nonincendive Parameters

Voc = 6.5 V; Isc < 25.0 mA; Po = 38 mW
Class I Div. 2; Groups:A,B,C,D or Class I Zone 2 Group IIC T6
Temp.Ident: T6 at Tamb = 56 °C;
T5 at Tamb = 71 °C;
T4 at Tamb = 85 °C;
Terminals: 1,2,3,4,5,6 GP A,B Ca = 1.54 μF; La = 5.0 mH
C,D Ca = 8.74 μF; La = 5.0 mH

Associated Apparatus Nonincendive Parameters must meet the following Requirements :

Voc or Vt ≤ Vmax; Ca ≥ Ci + Ccable;
Isc or It ≤ I max; La ≥ Li + Lcable
The temperature transmitter are FM approved for nonincendive field circuits when installed per national electrical code (NEC) article 501-4(B) or 502-4(B) exception with FM nonincendive field circuit output apparatus which meet the parameters shown on this drawings.

Exception: Wiring in nonincendive circuits shall be permitted using any of the methods suitable for wiring in ordinary locations !

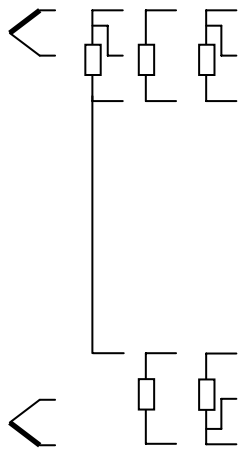
Temperature Transmitter Model “TTF350”
Ordering Code “TTF350-L5..H” is an Temp. Transmitter Type TTH300-L2H which is Installed in an enclosure Type 2-2 T Dual Chamber, w/wo FM approved display HMI-Ex type B.. (ID:)

				Approv.	13.07.07 Müller
				Date	Name
1.01	O-Code	13.07.07	Zeiger		
1.00	Release	04.12.06	Zeiger		
Rev.	desc.	Date	Name		

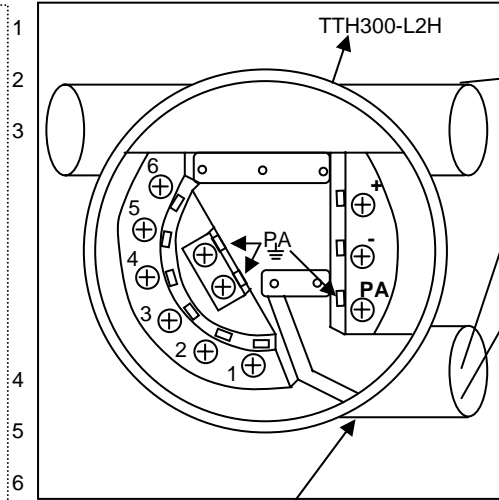
Title:	TTF350 HART N. I. Temperature Transmitter Control Drawing	Scale:	-----
Drawing / Part No.:	TTF350-L5..H (2)	Page : of	1 / 1
Replacement of:	-----		

Hazardous Location

Sensors must be FM approved or be a simple apparatus. Simple apparatus is a device which will neither generate or store more than 1.5 V; 0.1 A; 25 mW or 20 µJ such as switches; RTD's, TC or LED's



Sensor Types Overview
Channel 1 and 2
RTD or TC or Voltage or ...

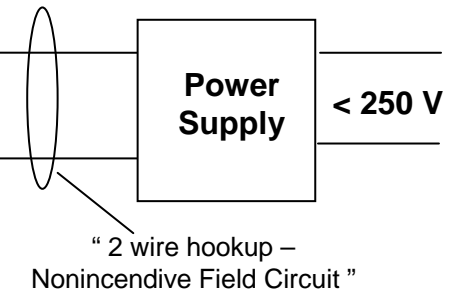


HMI / Display – Interface
(Protection Window Cover, open with screw before connect !)

Type 2-2 T,
Enclosure Type 4X

Apparatus Input Values
V max <= 30.0 V ; I max <= 130 mA

Non – Hazardous Location



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) 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 I Division 2.
3. A dust tight seal must be used at the conduit entry, when the transmitter is used in a class II & III Location.

Sensor Field Circuit Nonincendive Parameters

Class I Div. 2; Groups: A,B,C,D
or Class 1 Zone 2 Group IIC T6
Temp.Ident: T6 at Tamb = 56 °C;
T5 at Tamb = 71 °C;
T4 at Tamb = 85 °C;

Voc = 6.5 V; Isc < 25.0 mA; Po = 38 mW

Terminals: 1,2,3,4,5,6

GP A,B Ca = 1.54 µF; La = 5.0 mH

C,D Ca = 8.74 µF; La = 5.0 mH

HMI / Display Interface

Nonincendive Output Parameters

Voc = 6.2 V;
Isc < 65.2 mA;
Po = 101 mW
Terminals: 6 PIN Connector
GP A,B Ca = 1.4 µF; La = 5.0 mH
C,D Ca = 8.9 µF; La = 5.0 mH

Temperature Transmitter Model "TTF350" ordering code "TTF350-L5..H" is an Temperature Transmitter Type TTH300-L2H which is installed in an enclosure Type 2-2 T Dual Chamber w/wo FM approved display HMI-Ex type B. (ID:)

				Approv.	13.07.07 Müller
				Date	Name
				ABB	
				Automation Products	
1.01	O-Code	13.07.07	Zeiger		
1.00	Release	04.12.06	Zeiger		
Rev.	Desc.	Date	Name		

Title:		Scale:	
TTF350 HART N. I. Temperature Transmitter Control Drawing		-----	
Drawing / Part No.:		Page : of	
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Replacement of: -----			