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TOLERANCES (UNLESS NOTED)
 DECIMALS = ±incht/mm
 .X = ±.1 /2.54
 .XX = ±.03 /0.76
 .XXX = ±.010/0.25
 HOLES: ±.003-.002/+ .08-.05
 ANGLES: = ± 30°

DRAWN	Gus H. Elias	06/07
CHECKED	S.K.	06/07
ENGINEER	Gus H. Elias	06/07
SCALE	NONE	

CATEGORY
CONTROL DRAWING

TITLE
**Field Installation Diagram:
 TDZ2 [HP] & THZ2 [HPP]
 Intrinsically Safe System
 For Hazardous 'Classified' Locations**

DRAWING NUMBER
100-100-71

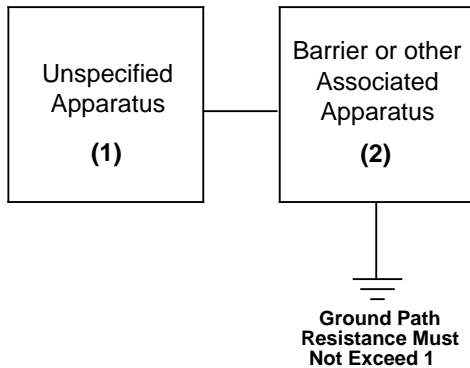
REVISION
A

REVISED BY	DATE	BY	APPROVAL
INITIAL RELEASE	06/07	G.E.	CB

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CERTIFIED PRODUCT

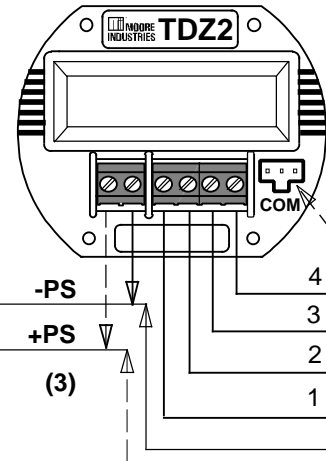
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Non-Hazardous (Safe) Area

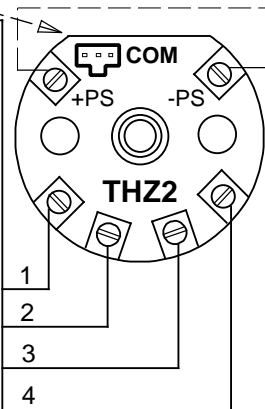
Caution: The 'COM' Port Must Not Be Used In Hazardous 'Classified' Locations.

TDZ2 [HP]: 4-20 mA PC-Programmable Smart HART Temperature Transmitter w/ Display

THZ2 [HPP]: 4-20mA PC-Programmable Smart HART Temperature Transmitter



Sensor Type - mA, mV, POT, RTD, , T/C:
 V_{oc} or $V_t = 6.51$ VDC
 I_{sc} or $I_t = 35.39$ mA
 $P_o = 57.6$ mW
 C_a or $C_o = 20$ μ F, Gr. A/B
 C_a or $C_o = 498$ μ F, Gr. C/D
 C_a or $C_o = 998$ μ F, Gr. D
 L_a or $L_o = 25$ mH, Gr. A/B
 L_a or $L_o = 100$ mH, Gr. C/D
 L_a or $L_o = 200$ mH, Gr. D
Barrier-to-Xmitter Cable:
 3,575 ft, 214.5 nF, Gr. A/B
 103,166 ft, 6.19 μ F, Gr. C/D
 423,166 ft, 25.39 μ F, Gr. D

**I.S. Entity Parameters (Power/Loop, +PS & -PS):**

V_{max} or $U_i = 30$ VDC
 I_{max} or $I_i = 110$ mA
 P_{max} or $P_i = 0.825$ W
 $C_i = 5.83$ nF
 $L_i = 0$ H

C_a or C_o	$C_i + C_{cable}$
L_a or L_o	$L_i + L_{cable}$
V_{max} or U_i	V_{oc} or V_t
I_{max} or I_i	I_{sc} or I_t

Input device must be "Agency-Approved" per application area (CSA, FM, ISSeP, KEMA, LCIE, UL, TestSafe, SIRA, TUV, etc....)

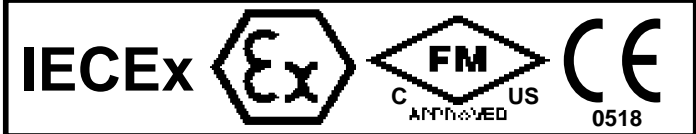
**Hazardous 'Classified' Locations/Areas
 US (NEC 500/505) / Canada (C22.2-1010.1)**

**Intrinsically Safe & Non-Incendive
 Class I, Zone 0, AEx ia IIC, (T4 / T5 / T6)*
 Class I; Divisions 1 & 2; Groups A-D**

ATEX: II 1G Ex ia IIC, II 3G Ex nA IIC, (T4 / T5 / T6)*

IECEx: Ex ia IIC, Ex nA IIC, (T4 / T5 / T6)*

***T. Codes: T4@85°C (TDZ2), T5@85°C/T6@60°C (THZ2)
 Operating Temperature Range: -40°C Tamb. +85°C**



For areas classified with "dust-hazard" (Class II/III, Division 1, Groups E, F & G), these devices must be mounted in approved protective enclosures that are rated and suitable for use in the designated application areas. Use +85°C rated electrical wire.

Notes:

- (1)- Apparatus which is unspecified except that it **must not** be supplied from, or contain under normal or abnormal conditions a source of potential with respect to earth in excess of 250 VRMS or 250 VDC which is considered to be the Safe Area's maximum voltage.
- (2)- The Barrier or other Associated Apparatus **must** be agency-approved (CSA/FM/SAA/SIRA/UL, etc..) per the "specific" installation area for Intrinsically Safe connections (Zones 0/1, Class I / Div. 1). US barriers for USA, Canadian barriers for Canada, ATEX barriers for Europe, IECEx barriers where applicable. The output voltage (V_{oc} , V_t or V_o) **must not** exceed 30 VDC & the output current (I_{sc} , I_t or I_o) **must not** exceed 110 mA. Also, it **must** be installed per the manufacturer's guidelines. *A Shunt Zener Barrier is NOT required for Non-Incendive / Type N installations.*
- (3)- The combined Capacitance and Inductance of the inter-connecting cables of the device (hazardous area) **must not** exceed the values indicated on the Associated Apparatus (safe area).
- 4- For US applications, installation **must** be in accordance to 'ANSI-P12.6' (Installation of I.S. Systems for Hazardous 'Classified' Locations) and the National Electric Code 'ANSI/NFPA 70'. Also, a dust-tight conduit seal **must** be used when installed in Class II and Class III environments. For applications in Canada, adhere to the 'Canadian Electric Code C22.1' most current publication on I.S. installation guidelines. For CENELEC/ATEX and IECEx applications, adhere to 'EN 60079-14:1997' or any equivalent IEC-based, most current and pertaining publication on I.S. installation guidelines.
- 5- **Warning:** Substitution of components is **NOT** allowed as it may impair the Intrinsic Safety of the unit and/or the Non-Incendive circuit. **DO NOT** open the unit when either energized or if an explosive gas/dust atmosphere is present. Disconnect power before servicing. Also read, understand and adhere to the manufacturer's installation and operating procedures.
- 6- The maximum power parameters of the COM port (to be used only in safe/non-hazardous areas) are: $V_{max} = 3.0$ VDC, $I_{max} = 300$ μ A, $P_{max} = 240$ μ W.