MOORE INDUSTRIES

DO NOT SCALE DRAWING

TOLERANCES (UNLESS NOTED)		DRAWN	Gus H. Elias	06/07
DECIMALS = ±inch/mm		CHECKED	S.K.	06/07
.X = ±.1 /2.54		ENGINEER	Gus H. Elias	06/07
.XX = ±.03 /0.76		SCALE	NONE	
.XXX = ±.010/0.25				
HOLES:=+.003-.002/+.08-.05				
ANGLES: = ± 30'				

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**

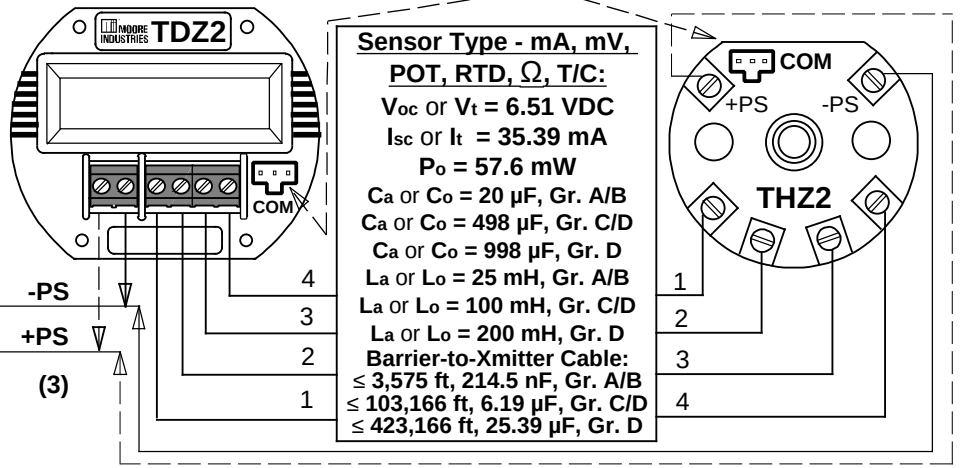
REVISED BY	DATE	BY	APPROVAL
INITIAL RELEASE	06/07	G.E.	***CB***

CERTIFIED PRODUCT
This is a controlled 'Related' or 'Schedule' drawing. No modifications are permitted without the notification and final approval of the Certification Engineer (related dwgs.) or the Certifying Agency (schedule dwgs.).

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, Ω, 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 µF, Gr. A/B
C_a or C_o = 498 µF, Gr. C/D
C_a or C_o = 998 µF, 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 µF, Gr. C/D
≤ 423,166 ft, 25.39 µF, 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....).

Non-Hazardous (Safe) Area

Unspecified Apparatus **(1)**

Barrier or other Associated Apparatus **(2)**

Ground Path Resistance Must Not Exceed 1Ω

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: Ⓔx II 1G Ex ia IIC, Ⓔx 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

IECEx Ex FM C US APPROVED 0518 CE

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 bariers for Europe, IECEx barriers where applicable. The output voltage **(Voc, Vt or Vo) must not** exceed **30 VDC** & the output current **(Isc, It or Io) 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. installationguidelines. 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 µA, P_{max} = 240 µW.