



DO NOT SCALE DRAWING

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

DRAWN	Gus H. Elias	09/00
CHECKED	W.Ho	09/00
ENGINEER	Gus H. Elias	09/00
SCALE	NONE	

CATEGORY

CONTROL DRAWING

TITLE
**Field Installation Diagram:
 SDY [HP] & TDY [HP]
 Intrinsically Safe System
 For Hazardous 'Classified' Locations**

DRAWING NUMBER

100-100-54

REVISION

C1

REVISED BY

ECO 16267

DATE

05/11

BY

CW

APPROVAL

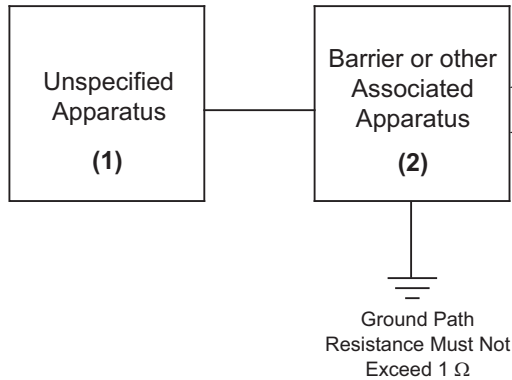
CB

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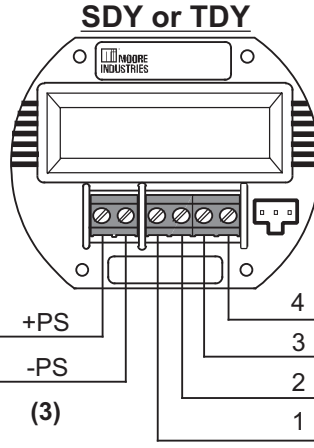
CERTIFIED PRODUCT

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

Non-Hazardous Safe Area



SDY: PC-Programmable Signal Isolator/Converter with Display.
 TDY: PC-Programmable Temperature Transmitter with Display.



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 = 12 nF
 L_i = 0 µH
 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

Hazardous 'Classified' Locations - FM (US NEC 500):
 Intrinsically Safe: Class I,II,III; Div. 1; Groups A-G.
 Non-Incendive: Class I, Div. 2, Groups A-D.
 Class II, Div. 2, Groups F & G and Class III, Div. 2.

Hazardous 'Classified' Locations/Areas:
CSA International
 Intrinsically Safe: Class I, Div. 1, Groups A-D.
 Class I, Div. 2, Groups A-D.
CENELEC/ATEX
 Intrinsically Safe: II 2G EEx ia IIC, T4/T5 @
 Tamb. Range: -40°C ≤ Tamb. ≤ +60°C

T Code: **T4A @ 60°C & T5 @ 40°C**
 Maximum Operating Ambient Temperature.
 Ambient Range: **-40°C ≤ Tamb. ≤ +60°C**

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 approved by the "specific" (CSA/EECS/FM/LCIE/SAA/SIRA/TUV, etc..) certifying agency for I.S. connections in: "Class I-III, Division 1, Groups A-G" locations. 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 (or Class I, Division 2 or Type N) installations.
- (3) The combined Capacitance and Inductance of the inter-connecting cables and the PC Prog. Transmitters **must not** exceed the values indicated on the Associated Apparatus.
- 4- For FM 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 CSA applications, adhere to the 'Canadian Electric Code C22.1' most current publication on I.S. installation guidelines. For CENELEC/ATEX applications, adhere to 'BS5345 or EN 60079-14:1997' or any equivalent, most current and pertaining publication on I.S. installation guidelines.
- 5- **Warning:** Substitution of components may impair the Intrinsic Safety of the unit. **DO NOT** open the unit when either energized or when an explosive gas 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.