

DO NOT SCALE DRAWING

TOLERANCES (UNLESS NOTED)		DRAWN	Gus H. Elias	09/00
DECIMALS - \pm inch/mm	X	CHECKED	W. Ho	02/03
XX	\pm .1 / 2.54	ENGINEER	Gus H. Elias	09/00
XXX	\pm .03 / 0.76	SCALE	NONE	
HOLE	\pm .0010 / .25			
ANGLES	\pm .005 / .13			
	\pm .30			

CATEGORY CONTROL DRAWING

TITLE
Field Installation Diagram:
TRX, TRX-R & T2X [HPP]
Non-Isolated PC-Prog. Temp. Xmitters.
Intrinsically Safe System
For Hazardous "Classified" Locations

DRAWING NUMBER

100-100-38

REVISION

D1

REVISED BY

ECO 15730

DATE

12/09

BY

CW

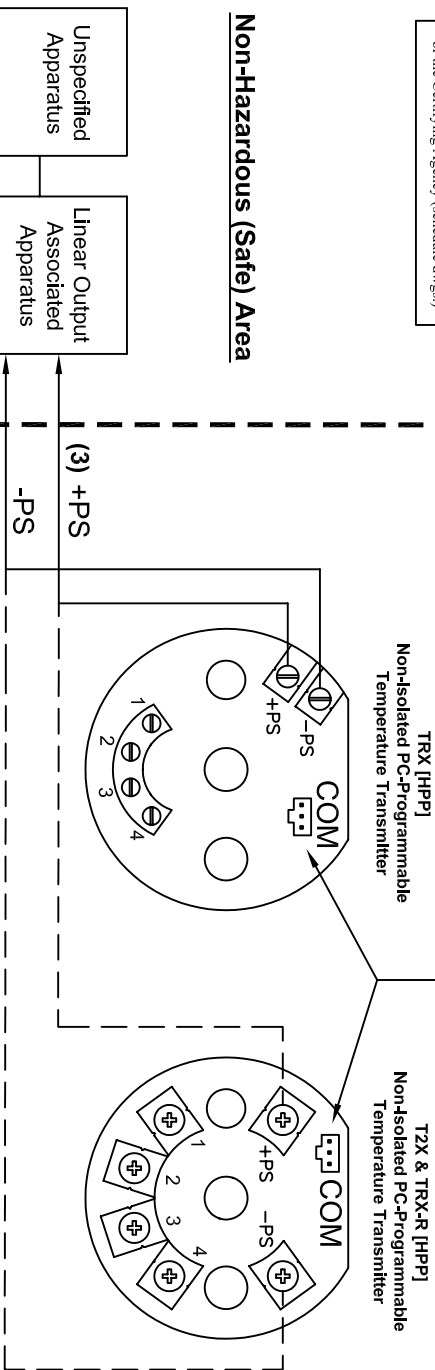
APPROVAL

CB

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Certified Product
This is a controlled 'Revised' or 'Schedule' drawing. No modifications are permitted without the notification and final approval of the Certifying Engineer (related dvgs.) or the Certifying Agency (schedule dvgs.)

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



ANZEx Scheme [TRX-R only]

Input Parameters (+PS & -PS)

U_i = 30 V
I_i = 110 mA
P_i = 0.825 W
C_i = 5.2 nF
L_i = 0 mH

RTD & T/C (1, 2, 3, 4)

U_o = 6.51V
I_o = 110 mA
P_o = 0.532 W
L_o = 1.4 mH
C_o = 2.262 μ F

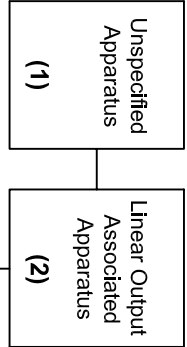
ATEX/FM/CSA Scheme

Entry 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 = 4.7 nF
L_i = 0 μ H
C_a or C_o \geq C_i + C_{cable}
L_a or L_o \geq L_i + L_{cable}
V_{max} or U_i \geq Voc or Vt
Voc or Vt \geq 6.2VDC
I_{sc} or I_t \geq I_{sc} or I_t
P_o \geq P_o

RTD & T/C [T2X: RTD only] (1, 2, 3, 4)

C_a or C_o = 2.262 μ F
L_a or L_o = 3.0 mH
Voc or Vt = 6.51 VDC
I_{sc} or I_t = 110 mA
P_o = 0.716 W



Non-Hazardous (Safe) Area

(1) Unspecified Apparatus
(2) Linear Output Associated Apparatus

Ground/Earth Path
Resistance
Must Not Exceed 1 Ω

(3) +PS
-PS

Hazardous 'Classified' Locations/Areas:

CSA International
Intrinsically Safe: Class I, Div. 1, Groups A-D.
Non-Incendive: Class I, Div. 2, Groups A-D.

KEMA/CENELEC I.S. (TRX only): EEx ia IIC T4/T5
LCIE/ATEX I.S. (T2X/TRX-R): $\text{Ex } \text{II } 1\text{G EEx ia IIC T6}$

T. Code: T6 @ 60°C Maximum Operating Ambient.
Temperature Range: -40°C \leq Tamb. \leq +60°C

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.
US NEC 505 (T2X & TRX-R only); Class I, Zone 0, AEX ia IIC

Input device must be 'Agency' approved per application area (CSA, FM, ISSaP, KEMA, LCIE, TestSafe, SIRA, TÜV, etc.)

Notes:

- 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.
- The Barrier or other Associated Apparatus **must** be approved by the "specific" (CSA/ECS/FM/LCIE/SIRATUV, etc.) certifying agency for I.S. connections in: "Class I-III, Division 1, Groups A-G" locations. The output voltage **6.2VDC \leq (Voc, Vt or Vo) \leq 30VDC** & 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.
- 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.
- 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 'EN 60079-14:1997' or any equivalent, most current and pertaining publication on I.S. installation guidelines.
- Warning:** Substitution of components may impair the Intrinsic Safety of the unit. **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.
- 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.