

## DO NOT SCALE DRAWING

TOLERANCES (UNLESS NOTED)	DRAWN	K. Darbey	10/16
	CHECKED	V. Garcia	10/16
DECIMALS = 1/16 in/mm	ENGINEER	W. Chan	10/16
X = ±.1 / 2.54	SCALE	NONE	
XX = ±.03 / 0.76			
XXX = ±.005 / 0.25			
HOLE SIZES = ±.005 / 0.13			
ANGLES = ±30°			

## CATEGORY CONTROL DRAWING

TITLE	I.S. Installation Diagram FDY: Frequency-to-DC X-mitter Hazardous 'Classified' Locations
-------	--

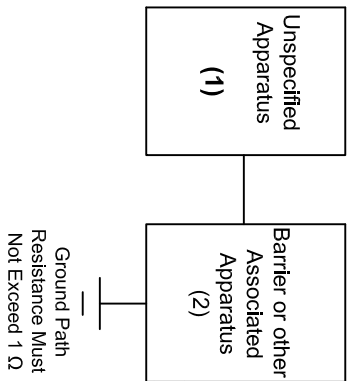
## DRAWING NUMBER 100-100-64

REVISED BY	ECO 17968	DATE	10/16	BY	KD	APPROVAL	CB
------------	-----------	------	-------	----	----	----------	----

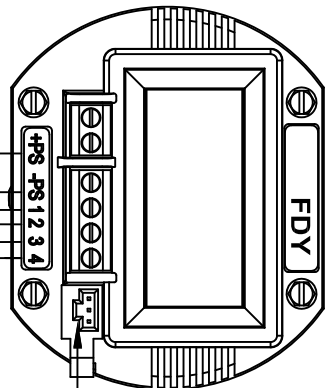
NOTICE RE PROPRIETARY INFORMATION: This drawing and the information contained herein are the proprietary property of Moore Industries International, Inc. (MII) and should not be reproduced or disclosed to any third party without the written consent of an authorized officer of MII.

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

### Non-Hazardous (Safe) Area



### FDY [HPI]: PC-Programmable Frequency-to-DC Transmitter with Display (Certified Input Ranges: PRG, 0.02-30AC, 10MV, but not the 10-250AC)



### Hazardous (Classified) Location/Area

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

+PS

-PS

<b>FM (US NEC- 500)</b>	Intrinsically Safe Class I, II, III; Division 1; Groups A-G, Non-Incendive; Class I, Division 2; Groups A-D.
FM (US NEC- 505)	Class I, Zone 0, AEx ia IIC T4@60°C.
CSA (1010-1)	Class I, Div. 1 & 2, Groups A-D, T4@60°C.
GENELEC/ATEX 2014/34/EU	II 1G EEx ia IIC T4@60°C.
Operating Ambient Temperature: -40°C ≤ Tamb. ≤ +60°C	

VAC (0.5Hz-25KHz):  
North America / Europe  
Co = 65 / 22 uF  
Lo = 850 / 146 mH  
Uo = 5.355 / 6.51 VDC  
Io = 5.15 / 16 mA  
Po = 6.9 / 26 mW

**Entry Parameters (Power/Loop, +PS & -PS)**  
Vmax = 30 VDC  
Imax = 110 mA  
Pmax = 0.65 W  
Ci = 18nF  
Li = 0µH  
Ca ≥ Ci + Ccable  
La ≥ Li + Lcable  
Vmax ≥ Voc or Vt  
Imax ≥ Isc or It

Input device must be 'Agency' approved per application area (CSA, EECs, FM, ISSep, LCIE, SIRA, SAA, TUV, etc...).

**Equivalency Table:**

U <sub>i</sub> = V <sub>max</sub>
U <sub>o</sub> = V <sub>t</sub> or Voc
I <sub>i</sub> = I <sub>max</sub>
I <sub>o</sub> = I <sub>t</sub> or I <sub>sC</sub>
P <sub>i</sub> = P <sub>max</sub>
P <sub>o</sub> = P <sub>t</sub>
Co = Ca
Lo = La

### 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. FDY [HPI] enclosure material: Aluminum Alloy Type 6063-T6 with a 0.7% Magnesium (Mg) content [ASM Metals Reference Book, 2nd Edition].
- The Barrier type 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 (or other type) Barrier is NOT required for Non-Incendive (Class I, Division 2), Type N or similar applications.*
- 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 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 GENELEC/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 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: Vmax = 3.0 VDC, Imax = 300 µA, Pmax = 240 µW.