PD685 ATEX AND IECEx CERTIFIED LOOP-POWERED METER
Intrinsic Safety Control Drawing

SECTION	AGENCY	DESCRIPTION
1.0		Safety Information
2.0	ATEX and IECEx	Special Conditions for Safe Use
3.0	ATEX and IECEx	Conduit Installation Instructions
4.0	ATEX and IECEx	Hazardous Area Approvals

NOTE: THIS IS AN ATEX AND IECEx CONTROLLED DOCUMENT. NO CHANGES CAN BE MADE WITHOUT PRIOR APPROVAL.

1.0 SAFETY INFORMATION

1.1 Read complete instructions prior to installation and operation of the meter.

1.2 **For European Community:** The PD685 must be installed in accordance with the Essential Health & Safety Requirements of Directive 2014/34/EU, the product certificates CML 17ATEX2113X and IECEx CML 17.0052X, and the product manual.

1.3 **For North American Community:** Installation and service of this device and/or associated apparatus (barrier) should be performed only by trained service personnel, and must be in accordance with the manufacturer's control drawing, Article 504 of the National Electric Code (ANSI/NFPA 70) for installation in the United States, or Section 18 of the Canadian Electrical Code for installations in Canada.

1.4 Service requiring replacement of internal components must be performed at the factory.

1.5 Control equipment must not use or generate more than 250 V rms or dc with respect to earth.

1.6 Hazardous location installation instructions for associated apparatus (barrier) must be followed when installing this equipment.

1.7 For safe installation of an ATEX approved transmitter in series with PD685 loop indicator, the hazardous location installation instructions for the transmitter, PD685 loop indicator, and associated apparatus (barrier) must be compatible.

1.8 PD685 indicator does not add capacitance or inductance to loop under normal or fault conditions.

1.9 Substitution of components may impair hazardous location safety.

2.0 SPECIAL CONDITIONS FOR SAFE USE

2.1 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. This is particularly important if the equipment is installed in a zone 0 location. In addition, the equipment shall only be cleaned with a damp cloth.

2.2 The cable entry into the enclosure shall be by means of conduit or cable gland and shall provide a minimum degree of protection of IP5X.

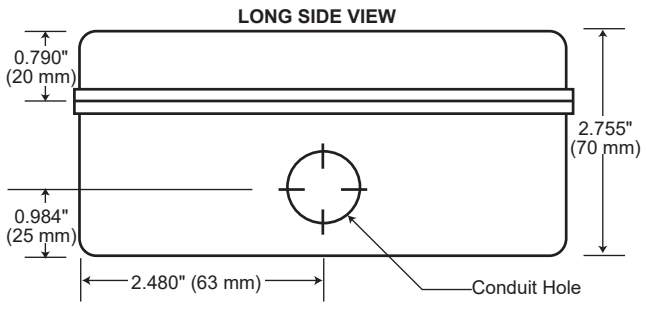
3.0 CONDUIT INSTALLATION INSTRUCTIONS

3.1 Remove the printed circuit board from the enclosure.

3.2 Connect appropriate size conduit fittings to the hole provided. For enclosures without a pre-drilled hole, the installer must make a hole in accordance with the instructions for the particular conduit fitting being installed.

3.3 Connect conduit (with attached hubs*) to the enclosure.
*Conduit hubs must be connected to the conduit prior to being connected to the enclosure. Use only conduit hubs that are designed to maintain NEMA 4X or IP67 ratings.

Note: See Figure below for typical hole location and dimension.



TYPICAL HOLE LOCATION

4.0 HAZARDOUS AREA APPROVALS

Application Notes:

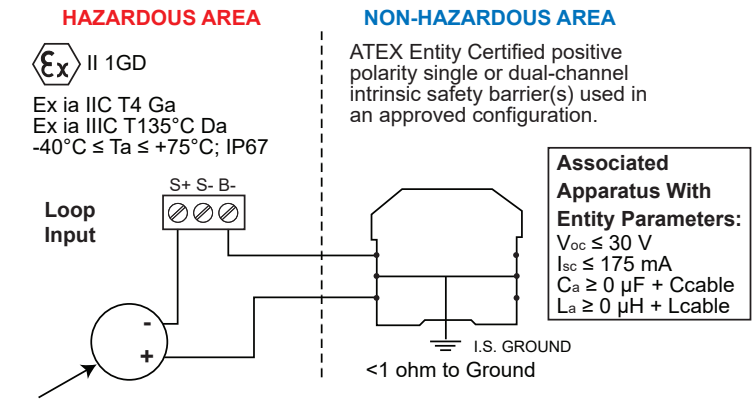
4.1 Entity parameters must meet the following requirements:
Ui = 30 V
Ii = 175 mA
Pi = 1 W
Ci = 0
Li = 0

4.2 The PD685 will carry the following markings:

Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da
-40°C ≤ Ta ≤ +75°C; IP67

4.3 **Wiring Diagrams:**

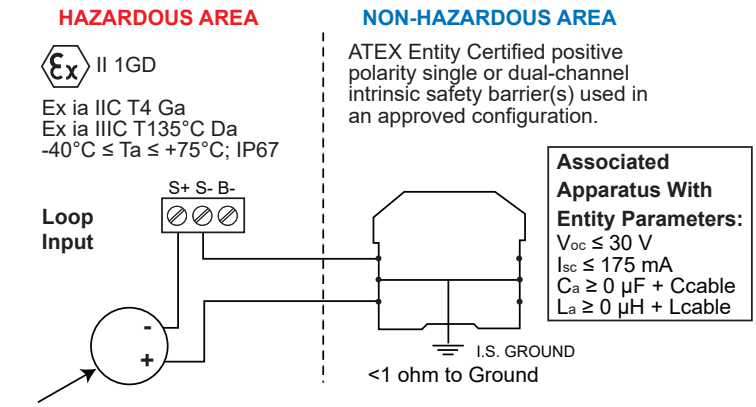
With Backlight



ATEX Entity Certified transmitter installed per transmitter manufacturer's Hazardous Location Installation Drawing.

PD685 Entity Parameters:
Ui = 30 V; Ii = 175 mA; Pi = 1 W; Ci = 0; Li = 0

Without Backlight



ATEX Entity Certified transmitter installed per transmitter manufacturer's Hazardous Location Installation Drawing.

PD685 Entity Parameters:
Ui = 30 V; Ii = 175 mA; Pi = 1 W; Ci = 0; Li = 0

DW2443_A
LIM685-2_A 02/18

PRECISION DIGITAL CORPORATION
233 South Street • Hopkinton MA 01748 USA • Tel (800) 343-1001 • Fax (508) 655-8990
www.predig.com