



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEX SIR 10.0056X</b>	Page 1 of 5	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 3	Issue 2 (2016-03-10)
Date of Issue:	2023-01-06		Issue 1 (2012-10-02)
Applicant:	<b>Precision Digital Corporation</b> 233 South Street Hopkinton Massachusetts 01748 <b>United States of America</b>		Issue 0 (2010-06-03)
Equipment:	<b>A Range of Explosion Proof Process Meters</b>		
Optional accessory:			
Type of Protection:	<b>Flameproof "db" and Dust Protection by Enclosure "tb"</b>		
Marking:	<b>When using 8100 or 8066 Enclosures</b> Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP68 Ta = -40°C to +75°C		
	<b>When using EC200, EX200, EC500 or EX500 Enclosures</b> Ex db IIC T6 Gb Ex tb IIIC T85°C Db IP68 Ta = -55°C to +75°C		

Approved for issue on behalf of the IECEx  
Certification Body:

**Michelle Halliwell**

Position:

**Director Operations, UK & Industrial Europe**

Signature:  
(for printed version)

Date:  
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**CSA Group Testing UK Ltd**  
**Unit 6, Hawarden Industrial Park**  
**Hawarden, Deeside CH5 3US**  
**United Kingdom**





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Manufacturer: **Precision Digital Corporation**  
233 South Street  
Hopkinton  
Massachusetts 01748  
**United States of America**

Manufacturing locations: **Precision Digital Corporation**  
233 South Street  
Hopkinton  
Massachusetts 01748  
**United States of America**

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

#### STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

#### TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/SIR/ExTR10.0113/00](#)  
[GB/SIR/ExTR23.0001/00](#)

[GB/SIR/ExTR12.0231/00](#)

[GB/SIR/ExTR16.0046/00](#)

Quality Assessment Report:

[GB/SIR/QAR10.0005/13](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The meters utilise one of 6 component certified flameproof enclosures. The enclosure comprises a cylindrical base with a threaded cover housing a liquid crystal display. Models within the series may be powered by battery, directly from the 4-20 mA loop, or by low voltage DC and accept process inputs such as from a loop transmitter or pulse transmitter. Each enclosure is fitted with up to three conduit openings which may be fitted with suitably certified and dimensioned cable entry devices or stopping plugs.

For additional details refer to the Certificate Annexe.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. The battery shall not be recharged, in addition, it shall only be replaced by a Precision Digital battery with the same part number as the one being replaced.
2. The equipment label and epoxy coating may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.
3. Flameproof joints are not intended to be repaired.
4. All entry closure devices shall be suitably certified as "Ex d", "Ex t" and "IP66/68" as applicable. Suitable thread sealing compound (non-setting, non-insulating, non-corrosive, not solvent based, suitable for the ambient rating) must be used at the NPT conduit entries to achieve the IPx8 rating while maintaining the Ex protection concept.



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## Equipment (continued):

### Conditions of Manufacture

The Manufacturer shall comply with the following:

1. The maximum power dissipated within the equipment is set to a maximum of 2 Watts.
2. The products covered by this certificate incorporate previously certified parts, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these parts, and the manufacturer shall inform CSA Group of any modifications of the parts that may impinge upon the explosion safety design of their products.
3. The equipment shall be marked for an ambient temperature range dependent of the enclosure type used in the construction as detailed below:  
Model 8066 (IECEX SIR 07.0111U) Ta = -40°C to +75°C  
Model 8100 (IECEX SIR 08.0126U) Ta = -40°C to +75°C  
Model EC/EX200 (IECEX SIR 19.0075U) Ta = -55°C to +75°C  
Model EC/EX500 (IECEX SIR 19.0075U) Ta = -55°C to +75°C



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

**Issue 1** – this Issue introduced the following changes:

1. As it is no longer manufactured, the PD312 Model was removed, the description was amended accordingly, refer to Issue 0 for details of the PD312 version.
2. The introduction of new PD68xx series models, the description was changed to recognise the latest reference details.
3. A new battery was introduced, PDABAT36C, this is smaller than the existing PDABAT36D battery and therefore the battery board was modified, a Special Condition for Safe Use relative to the application of the batteries was applied.
4. A new circuit for the PD6830 was introduced.
5. Minor drawing changes were recognised e.g. the addition of a note about Field Modification, the re-definition of the exterior label material, the push buttons are now defined as optional; these amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
6. Following appropriate assessment to demonstrate compliance with the requirements of the later standards, IEC 60079-0:2007 Ed 5, IEC 60079-1:2003 Ed 5 were replaced by those currently listed.
7. The removal of a superfluous Condition of Manufacture.

**Issue 2** – this Issue introduced the following change:

1. The company address was changed from 89 October Hill Road, STE 5, Holliston, Massachusetts 01746-1378, USA to 233 South Street, Hopkinton, Massachusetts 01748, USA.

**Issue 3** – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge:  
IEC 60079-0:2011 Ed 6 was replaced by IEC 60079-0:2017 Ed 7.  
IEC 60079-1:2007 Ed 6 was replaced by IEC 60079-1:2014 Ed 7.  
IEC 60079-31:2008 Ed 1 was replaced by IEC 60079-31:2013 Ed 2.
2. To allow the addition of optional enclosures covered by the certificates IECEX SIR 19.0075U for use in a low ambient of -55, with the currently certified internal arrangement.
3. To allow the introduction of the PD69xx series models which includes alternative electronics and battery arrangements and is for use in the enclosures covered by the certificates IECEX SIR 19.0075U only.

## Annex:

[IECEX SIR 10.0056X Issue3\\_Annexe.pdf](#)



**DESCRIPTION OF APPARATUS**

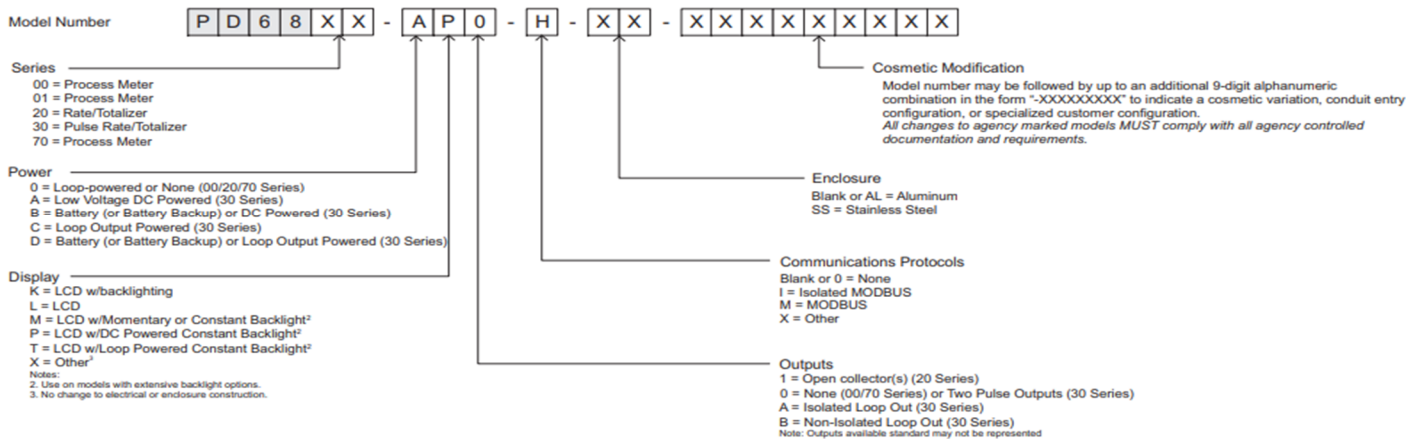
The meters utilise one of 6 component certified flameproof enclosures. The enclosure comprises a cylindrical base with a threaded cover housing a liquid crystal display. Models within the series may be powered by battery, directly from the 4-20 mA loop, or by low voltage DC and accept process inputs such as from a loop transmitter or pulse transmitter. Each enclosure is fitted with up to three conduit openings which may be fitted with suitably certified and dimensioned cable entry devices or stopping plugs.

**The PD68xx series**

The PD6800 series are explosion-proof meters with a liquid crystal display. The backlight option allows the display to be visible under any lighting condition. Models within the series may be powered by battery, directly from the 4-20 mA loop, or by low voltage DC and accept process inputs such as from a loop transmitter or pulse transmitter. The instrument enclosure is a cylindrical single compartment enclosure comprising a base and cover with a maximum internal volume of up to 888cm<sup>3</sup>, and may be manufactured from cast aluminium or stainless steel depending on enclosure type, which may include an epoxy paint finish. The enclosure's cover contains a circular tempered glass window. Each enclosure is fitted with up to three conduit openings which may be fitted with suitably certified and dimensioned cable entry devices or stopping plugs.



**Model Variations:**



**The PD69xx series**

The PD6900 series are explosion-proof meters with a liquid crystal display. The backlight option allows the display to be visible under any lighting condition. Models within the series may be powered by battery, directly from the 4-20 mA loop, or by low voltage DC and accept process inputs such as from a loop transmitter or pulse transmitter. The instrument enclosure is a cylindrical single compartment enclosure comprising a base and cover with a maximum internal volume of up to 888cm<sup>3</sup>, and may be manufactured from cast aluminium or stainless steel depending on enclosure type, which may include an epoxy paint finish. The enclosure's cover contains a circular tempered glass window. Each enclosure is fitted with up to three conduit openings which may be fitted with suitably certified and dimensioned cable entry devices or stopping plugs.



**The PD663 Series**

The PD663 derives all its power from 4-20 mA loop. The PD663's series is scaled using four push buttons or through the explosion-proof enclosure with optional reed switches and a magnetic key. Scaling can be done without applying an actual calibration signal. The loop-powered backlighting option allows the display to be visible under any lighting condition.

The instrument enclosure is a cylindrical single compartment enclosure comprising a base and cover with a maximum internal volume of up to 298cm<sup>3</sup>, and may be manufactured from cast aluminium or stainless steel depending on enclosure type, which may include an epoxy paint finish.

The enclosure cover contains a circular tempered glass window. Each enclosure is fitted with up to 3 conduit openings which may be fitted with suitably certified and dimensioned cable entry devices or stopping plugs.



**PD663 Model Variations:**

Model	Series Description	Options	Enclosure Type
PD663-0L0-00	Explosion-Proof Process Meter	Loop-Powered	Aluminum
PD663-0L0-SS	Explosion-Proof Process Meter	Loop-Powered	Stainless Steel
PD663-0K0-00	Explosion-Proof Process Meter	Loop-Powered, Backlight	Aluminum
PD663-0K0-SS	Explosion-Proof Process Meter	Loop-Powered, Backlight	Stainless Steel
PD663-0LA-00	Explosion-Proof Process Meter	Loop-Powered, Magnetic Buttons	Aluminum
PD663-0LA-SS	Explosion-Proof Process Meter	Loop-Powered, Magnetic Buttons	Stainless Steel
PD663-0KA-00	Explosion-Proof Process Meter	Loop-Powered, Backlight, Magnetic Buttons	Aluminum
PD663-0KA-SS	Explosion-Proof Process Meter	Loop-Powered, Backlight, Magnetic Buttons	Stainless Steel

Note: Model number may be followed by up to an additional 9-digit alphanumeric combination in the form "-XXXXXXXXX" to indicate a cosmetic variation, conduit entry configuration, or specialized customer configuration.  
All changes to agency marked models MUST comply with all agency controlled documentation and requirements.



### The PD310 Series

PD310 The ExSense T Series is a line of smart temperature transmitters with HART® communication capabilities. They can be configured using a HART modem and a PC, running the free HART software provided, or using a handheld HART communicator. The PD310 model does not include a sensor.

The backlit LCD provides the user with information such as the process variable, input type, and engineering units. The display can be programmed to show the PV, mA output, or %. The loop-powered backlight is standard on all models and allows the display to be visible under any lighting condition.



The instrument enclosure is a cylindrical single compartment enclosure comprising a base and cover with a maximum internal volume of up to 298cm<sup>3</sup>, and may be manufactured from cast aluminium or stainless steel depending on enclosure type, which may include an epoxy paint finish.

The enclosure cover contains a circular tempered glass window. Each enclosure is fitted with up to 3 conduit openings with one utilised as a process sensor connection port. For remote mounting applications the PD310 may be ordered without the process sensor connection port.

### PD310 Model Variations:

