Certificate of Compliance

Certificate: 80011200 **Master Contract:** 157123

Project: 80055209 **Date Issued:** 2020-11-20

Issued to: Precision Digital Corporation
233 South Street
Hopkinton, Massachusetts, 01748
USA

Attention: Scott Ewen

The products listed below are eligible to bear the CSA Mark shown

Issued by: *Marius Manastireanu*
Marius Manastireanu

PRODUCTS

CLASS - C441802 - OUTLET BOXES AND FITTINGS Boxes - For Hazardous Locations
CLASS - C441882 - OUTLET BOXES AND FITTINGS Boxes - For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Group E, F, G; Class III
Ex db IIC Gb; Ex tb IIIC Db
Class I, Zone 1, AEx db IIC Gb; Zone 21, AEx tb IIIC Db

EX Series and EC Series empty enclosure models: EX/EC aaa-bb-c-dd-eeeeee; Ambient Temperature Range: -55°C to +85°C; Service Temperature Range: -55°C to +85°C; Enclosure Ratings: IP66, IP68, Type 4X

C = Component Instruments Housing; no shipping package, used within the manufacturer's network
X = Product Instrument Housing with shipping package

aaa = Model:
- 200 = small single-compartment instrument housing
- 500 = medium single-compartment instrument housing
- 550 = medium dual-compartment instrument housing
- 700 = large single-compartment instrument housing

bb = Enclosure material:
- AL = aluminum enclosure

SS = stainless steel enclosure (not available for EX/EC 550 model)

c = Cover type:
S = solid cover
W = cemented window cover

dd = Conduit entries:
2-digit alphanumeric code indicating a combination / permutation of the following optional threaded entries: none, 1/2-14 NPT, 3/4-14 NPT, 1-11 NPT and/or M20x1.5

eeeeee = Optional cosmetic modifications:
blank = none
6-digit alphanumeric code indicating cosmetic variations or specialized customer configurations

Conditions of Acceptability:

1. Refer to drawing DW2426 for flamepath joint dimensions.

2. All entry closure devices shall be suitably certified as "Class I, Division 1", "Ex d", "Class II, Division 1", "Ex t", "IP66" or "IP68" and/or "Type 4X" as applicable. Suitable thread sealing compound must be used at the NPT conduit entries to achieve the IPx8 rating.

3. The EX/EC Series enclosures are rated for use in an ambient and service temperature range of -55°C to +85°C. The non-metallic window cement has a COT of -55°C to +105°C. Equipment utilizing the EX/EC Series enclosures may require de-rating of the maximum ambient temperature, in order to maintain the service temperature ratings of the enclosure.

4. Anodized or epoxy coated aluminum models must not be installed in locations where they may be subjected to conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conductive surfaces. Additionally, cleaning of the equipment should only be done with a damp cloth.

5. "Class I, Division 1" and "Ex d" equipment utilizing the EX/EC Series enclosures shall have no holes, whether for mechanical or electrical purpose and whether blind or clear, drilled through the enclosure, except for the following:
    a. EX/EC550 User Modification Instructions: 1/2-14 NPT or 3/4-14 NPT openings, with a minimum of 5 full threads, may be drilled and tapped through the 10.6 mm (0.4 in) thick internal wall for installation of a suitably certified bushing, in order to maintain the isolation between chambers.

6. "Class I, Division 1" and "Ex d" equipment shall not utilize the EX/EC series enclosures to contain oil-filled circuit-breakers, contactors or arcing current-interrupting devices used in circuits with > 10,000 A rms available short-circuit current.

7. "Class I, Division 1" and "Ex d" equipment may utilize the following EX/EC series enclosures to contain internal components in any arrangement, provided that ≥ 40% of each cross-sectional area remains free to permit unimpeded gas flow. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm. Otherwise, additional Explosion Reference Pressure and even Overpressure Testing may be deemed necessary.

Model series	Internal cross-sectional area	Internal volume (max)	Reference pressure (max)
EX/EC200	70.3 mm (2.77 in)	357 cm^3 (22 in^3)	245 PSI
EX/EC 500	104.3 mm (4.11 in)	1003 cm^3 (61 in^3)	215 PSI
EX/EC 550 (dual)	104.5 mm (4.12 in)	534 cm^3 (33 in^3) 618 cm^3 (38 in^3)	245 PSI
EX/EC 700	125.5 mm (4.94 in)	2335 cm^3 (143 in^3)	379 PSI

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APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-10 (Reaffirmed 2015)	General Requirements – Canadian Electrical Code, Part II
CAN/CSA C22.2 No. 25-17	Enclosures for Use in Class II, Division 1, Groups E, F and G Hazardous Locations
CAN/CSA C22.2 No. 30-M1986 (Reaffirmed 2016)	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA C22.2 No. 94.1-15	Enclosures for Electrical Equipment, Non-Environmental Considerations
CAN/CSA C22.2 No. 94.2-15	Enclosures for Electrical Equipment, Environmental Considerations
CAN/CSA C22.2 No. 213-17	Nonincendive Electrical Equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
CAN/CSA C22.2 No. 60079-0:19	Explosive Atmospheres – Part 0: Equipment – General Requirements
CAN/CSA C22.2 No. 60079-1:16	Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures “d”
CAN/CSA C22.2 No. 60079-31:15	Explosive Atmospheres – Part 31: Equipment Dust Ignition Protection by Enclosure “t”
CAN/CSA C22.2 No. 60529:16	Degrees of Protection Provided by Enclosure (IP Code)
ANSI/UL 50 (Thirteenth Edition)	Enclosures for Electrical Equipment, Non-Environmental Considerations
ANSI/UL 50E (Second Edition)	Enclosures for Electrical Equipment, Environmental Considerations
ANSI/UL 1203 (Fifth Edition) (April 16, 2019)	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
ANSI/UL 60079-0 (Seventh Edition)	Explosive Atmospheres – Part 0: Equipment – General Requirements
ANSI/UL 60079-1 (Seventh Edition)	Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures “d”
ANSI/UL 60079-31 (Second Edition)	Explosive Atmospheres – Part 31: Equipment Dust Ignition Protection by Enclosure “t”
ANSI/UL 121201 (Ninth Edition)	Nonincendive Electrical Equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
ANSI/IEC 60529-2004 (Reaffirmed 2011)	Degrees of Protection Provided by Enclosure (IP Code)

Note: Standards C22.2 No. 213 and UL 121201 only applied for Class III assessment.

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark, without any adjacent indicators, indicating that products have been manufactured to the requirements of Canadian Standards.

Method of Marking: The following markings are provided on 0.5 mm minimum thick stainless steel or aluminum nameplate mechanically secured with non-removable fasteners, or otherwise cast, etched, hot stamped, silkscreened, molded, or embossed directly on the enclosure housing.

The following markings shall appear on all products marked with the CSA monogram:

1. Manufacturer's name, or CSA registered trademark / tradename, or CSA Master Contract "157123" adjacent to the CSA Mark in lieu of the manufacturer name.
   Note: The following trademarks are considered acceptable:
   PRECISION DIGITAL or EXDIRECT A PRECISION DIGITAL BRAND
2. Model number: As specified in the PRODUCTS section above.
3. The CSA Mark, as shown on the Certificate of Conformity
4. The characters "CSA19.80011200U" or "19.80011200U" when located adjacent to the CSA mark, designating the certification body, followed by the last two digits of the year of report issue, followed by a period ".", followed by the original report / certificate number, followed by the letter "U".
5. Hazardous Location designation and Method of Protection (Ex) markings: As specified in the PRODUCTS section above.
6. Ambient temperature rating: As specified in the PRODUCTS section above.
7. Internal volume, in cubic centimeters and/or cubic inches.
8. Enclosure ratings: As specified in the PRODUCTS section above.
9. Manufacturing date in MMYY format, or serial number, traceable to year and month of manufacture.
10. Identification of factory location, when produced at multiple locations.
11. The following or technically equivalent warning markings:
    a. "CAUTION – OPEN CIRCUIT BEFORE REMOVING COVER" and "ATTENTION – OUVRIR LE CIRCUIT AVANT D'ENLEVER LE COUVERCLE".
    b. "SEAL REQUIRED WITHIN 18 INCHES" and "JOINT EXIGÉ DANS LES 18 POUCES".
    c. "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS", and "AVERTISSEMENT - RISQUE POTENTIEL DE CHARGEMENT PAR ÉLECTROSTATIQUE - VOIR LES INSTRUCTIONS"
12. The following markings may appear on or within the product:
    a. ISO 60417, Symbol 5019 ⏚ adjacent to the equipment ground (protective conductors) terminal.
    b. Identification of thread form and type for each conduit entry shall appear adjacent to the entry.

Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80055209	2020-11-20	Update to 80011200 Certificate to include “IP68” rating and changes to the product nomenclature, includes revised drawing. Addition of “EC Series” models which are of identical construction as the “EX Series”.
80011200	2019-10-11	Original certification of the EX200, EX500, EX550 and EX700 series empty enclosures for use in Class I, Division 1, Groups A, B, C, D; Ex db IIC; Class 1, Zone 1, AEx db 11C; Class II, Division 1, Groups E, F, G; Ex tb IIIC; Zone 21, AEX tb IIIC; Class III hazardous locations, IP66 and Type 4X.