



Certificate of Compliance

Certificate: 70192804

Master Contract: 180848

Project: 80127672

Date Issued: July 05, 2023

Issued To: ABB S.p.A.
Via Vaccani 4
(Loc.Ossuccio)
Tremezzina, Como, 22016
Italy

Attention: Walter Volo

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by:


Ian Hulse

PRODUCTS

CLASS - C225802 - PROCESS CONTROL EQUIPMENT For Hazardous Locations

CLASS - C225882 - PROCESS CONTROL EQUIPMENT For Hazardous Locations - Certified to US Standards

CLASS 2258 02

IS Class I, Division 1, Groups A, B, C, D T4

IS Class II, Division 1, Groups E, F, G 120°C

Ex ia IIC T4 Ga

Ex ia IIIC T135°C Da/Db

Ex ta/tb IIIC T135°C Da/Db

Class III, Division 1



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Class I, Division 2, Groups ABCD T4
Ambient Temperature $-40^{\circ}\text{C} < T_{\text{amb}} < +75^{\circ}\text{C}$ or to $+85^{\circ}\text{C}$

CLASS 2258 82

IS Class I, Division 1, Groups A, B, C, D T4
IS Class II, Division 1, Groups E, F, G 120°C
Class I, Zone 0, AEx ia IIC T4 Ga
Zone 20/21 AEx ia IIIC $T135^{\circ}\text{C}$ Da/Db
Zone 20/21 AEx ta/tb IIIC $T135^{\circ}\text{C}$ Da/Db
Class III, Division 1
Class I, Division 2, Groups ABCD T4
Ambient Temperature $-40^{\circ}\text{C} < T_{\text{amb}} < +75^{\circ}\text{C}$ or to $+85^{\circ}\text{C}$

The Pressure Transmitter Type PXX100 is designed to be fitted to the wall of a pipe or vessel. There are the following versions:

PXS100 – General market
PXF100 – Food and beverage market
PXD100 – Remote seals
PXP100 - Pulp and paper market

The PXX100 is a gauge pressure version and the PXX100 an absolute pressure version of the equipment.

There is a HMI version of the equipment that has a touch LCD display behind a glass window in the housing cover and a non-HMI version of the equipment that has a 'blind' cover without a window fitted. The LCD display may optionally have backlight.

The pressure transmitter has one of the following different pressure transducers fitted:

Low Pressure 60 mbar or 400 mbar
Medium Pressure 2.5 bar or 10 bar or 40 bar
High Pressure 100 bar or 600 bar

The equipment signal output may be configured for either 4-20mA analogue signal only or HART digital communication and 4-20mA.

External connections to the equipment are made to via an entry in the side of the enclosure to internal terminals that are accessed by removal of the housing cover. This entry has a M16 x 1.5 thread. The equipment may optionally be supplied with adapters fitted to this entry that provide alternative M16 x 1.5, M20 x 1.5 or 1/2" NPT threaded entries to the equipment. The entries are intended to be fitted with an appropriate cable entry device.

The Pressure Transmitters may optionally be supplied fitted with a Model M26 manifold.



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The equipment ambient temperature range is either -40°C to 85°C or -40°C to 75°C depending upon the protection concept and process temperature as follows.

Protection concepts	Process temperature	Maximum ambient temperature
Ex ia IIC Class I Zone 0 AEx ia IIC Class I Division 1 Groups A B C D	≤120°C	85°C
Class I Division 2 Groups A B C D	≤120°C	85°C
Ex ia IIIC Zone 20/21 AEx ia IIIC IS Class II Division 1 Groups E F G	≤85°C	85°C
	>85°C ≤120°C	75°C
Ex ta/tb IIIC Zone 20/21 AEx ta/tb IIIC Class III Division 1	≤85°C	85°C
	>85°C ≤120°C	75°C

Intrinsic Safety Entity Parameters (applicable to Class I Division 1 Groups A B C D T4, Class II Division 1 Groups E F G 120°C, Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da/Db, Class 1 Zone 0 AEx ia IIC T4 Ga and Zone 20/Zone 21 AEx ia IIIC T135°C Da/Db Approvals).

$U_i / V_{max} = 30V$
 $I_i / I_{max} = 100mA$
 $P_i / P_{max} = 1W$
 $C_i = 3.7nF$
 $L_i = 0$

Nonincendive Field Wiring Apparatus Entity Parameters (applicable to Class I Division 2 Groups A B C D Approval)

$U_i / V_{max} = 30V$
 $C_i = 3.7nF$
 $L_i = 0$

Ratings (applicable to Class II Division 1 Groups E F G 120°C, Class III Division 1, Ex ta/tb IIIC T135°C Da/Db and AEx ta/tb IIIC T135°C Da/Db Approvals):

Without HMI display 10.5Vdc to 42Vdc
 With HMI display 14.5Vdc to 42Vdc

Two wire 4-20mA

Conditions of Acceptability:

- i. The SIL2 version of the Pressure Transmitter, which is identified by 'NL' being included model designation, is not capable of passing a 500V r.m.s. dielectric strength test in accordance Clause 10.3 of ANSI/ISA 60079-11 (12.02.01)-2012 – ANSI/UL 60079-11 Sixth Edition and CAN/CSA-C22.2 No.



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60079-11:14 between its Intrinsically Safe circuits and its enclosure. This shall be considered in any equipment intrinsic safety installation.

- ii. When the Pressure Transmitter is used in a Group III Db Hazardous Area it shall be installed such that it is not subjected to flowing dust.
- iii. For Group III installations the Pressure Transmitter shall be fitted with a hazardous location approved cable entry device. For Group III Ex tb installations this device shall provide ingress protection of at least IP 6X. For Group III Ex ia installations this device shall provide ingress protection of at least IP 5X.
- iv. The HMI version of the Pressure Transducer may either be marked for use in explosive gas atmospheres only, or be marked for use in both explosive gas atmospheres and explosive dust atmospheres. Therefore, when an HMI version of the equipment is to be installed in an explosive dust atmosphere the user / installer shall check the certification marking on the equipment to confirm its suitability for installation in an explosive dust atmosphere.
- v. When an HMI version of the Pressure Transducer is for use in an explosive dust atmosphere, the installation shall be such that the window of the equipment shall not be exposed to a high risk of mechanical danger.

APPLICABLE REQUIREMENTS

CSA C22.2 No. 213-17 Third Edition - 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
CAN/CSA-C22.2 No. 60079-0:19	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA-C22.2 No. 60079-11:14	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety ‘i’
CAN/CSA-C22.2 No. 60079-31:15	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure ‘t’.
CAN/CSA C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements
ANSI/UL 60079-0-2019 Seventh Edition	Explosive atmospheres – Part 0: Equipment – General requirements
ANSI/ISA 60079-11 (12.02.01)-2012 – ANSI/UL 60079-11 Sixth Edition	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety ‘i’
ANSI/ISA 60079-31 - UL 60079-31 Second Edition	Explosive Atmospheres – Part 31: Equipment Dust Ignition Protection by Enclosure ‘t’
UL 913 Eighth Edition	Intrinsically Safe Apparatus and Associated Apparatus for Use in class I, II, and III, Division 1, Hazardous (Classified) Locations
UL 61010-1 3 rd Edition	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements



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MARKINGS



CSA 20CA70192804X

ABB S.p.A Tremezzina (Co) Italy

Model: PXX100

Serial Number: 3KXPxxxxxxxxxx

Production Date: WW/YYYY

Install per control drawing DH3275

For entities see the certificate

(-40°C < Tamb < 75°C or to +85°C See Manual)

**⚠ Use only cable and cable gland with temp rating >85°C
Utilisez uniquement cables et conduit avec le temp nom > 85°C**

**⚠ Warning DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
AVERTISSEMENT NE PAS OUVRIR EN PRESENCE D'UNE ATMOSPHERE EXPLOSIVE**

cCSA:

**IS/Sec Intrinseque (Entity)
CL I, Div 1, Gr A, B, C, D T4
CL II, Div 1, Gr E, F, G 120°C
Ex ia IIC T4 Ga
Ex ta/tb IIIC T135°C Da/Db
Ex ia IIIC T135°C Da/Db
CI III, Div 1
CI I, Div 2, Gr ABCD T4**



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Zone 20/21 AEx ia IIIC T135°C Da/Db
Cl III, Div 1
Class I, Division 2, Groups ABCD T4

Notes:

Products certified under Class C225802, C225882 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca

