



# 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 19.0081X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 3	<a href="#">Issue 2 (2022-01-12)</a>
Date of Issue:	2023-07-05		<a href="#">Issue 1 (2020-06-03)</a>
Applicant:	<b>ABB S.p.A.</b> Via Vaccani 4 22016 Tremezzina (Como) <b>Italy</b>		<a href="#">Issue 0 (2020-03-27)</a>
Equipment:	<b>Pressure Transmitter Model PXX100</b>		
Optional accessory:			
Type of Protection:	<b>Intrinsically Safe "ia" and Dust Protection by Enclosure "ta/tb"</b>		
Marking:	Ex ia IIC T4 Ga Ex ia IIIC T135°C Da/Db Ex ta/tb IIIC T135°C Da/Db -40°C < Tamb < +75°C or to +85°C (See Annexe)		

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: **ABB S.p.A.**  
Via Vaccani 4  
22016 Tremezzina (Como)  
**Italy**

Manufacturing locations: **ABB S.p.A.**  
Via Vaccani 4  
22016 Tremezzina (Como)  
**Italy**

**ABB Engineering (Shanghai) Ltd.**  
No.4528, KangXin Highway,  
PuDong New District,  
Shanghai, , 201319  
**China**

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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

[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/CSAE/ExTR22.0008/00](#)  
[GB/SIR/ExTR23.0116/00](#)

[GB/SIR/ExTR20.0063/00](#)

[GB/SIR/ExTR20.0100/00](#)

Quality Assessment Reports:

[GB/FME/QAR10.0007/12](#)

[IT/CES/QAR07.0001/16](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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 PGX100 is a gauge pressure version and the PAX100 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 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 that does not form part of the certification.

Refer to the Annexe for additional information.

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

1. 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 IEC 60079-11:2011 between its Intrinsically Safe circuits and its enclosure. This shall be considered in any equipment intrinsic safety installation.
2. 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.
3. For Group III installations the Pressure Transmitter shall be fitted with an appropriately IECEx certified 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.
4. 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.
5. 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.



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

**This issue, Issue 3, recognises the following changes; refer to the certificate annex to view a comprehensive history:**

1. Introduction of new PXP100 version of the Pressure Transmitter.
2. Modifications to the circuit.

**Annex:**

[IECEX SIR 19.0081X Annexe Issue 3\\_1.pdf](#)

Annexe to: IECEx SIR 19.0081X Issue 3

Applicant: ABB S.p.A.

Apparatus: Pressure Transmitter Type PXX100



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

Protection concepts	Process temperature	Maximum ambient temperature
Ex ia IIC	≤120°C	85°C
Ex ia IIIC	≤85°C	85°C
	>85°C ≤120°C	75°C
Ex ta/tb IIIC	≤85°C	85°C
	>85°C ≤120°C	75°C

#### Rated supply voltage for Ex ta/tb IIIC:

Without HMI display 10.5Vdc to 42Vdc

With HMI display 14.5Vdc to 42Vdc

#### Intrinsic Safety Entity Parameters:

$U_i = 30V$

$I_i = 100mA$

$P_i = 1W$

$C_i = 3.7nF$

$L_i = 0$

#### Full certificate change history

Issue 1 – this Issue introduced the following change:

1. To recognise an alternative manufacturer's location  
ABB Engineering (Shanghai) Ltd  
No 4528, KangXin Highway,  
PuDong New District,  
Shanghai, 201319  
P.R. China

Issue 2 – this Issue introduced the following changes:

1. Various modifications to the construction and internal wiring of the Pressure Transmitters.
2. To permit the modified version of the HMI version of Pressure Transmitter to be used in explosive dust atmospheres.
3. To permit the Pressure Transmitters to be optionally supplied with adapters fitted to the existing housing entry that provide alternative M16 x 1.5, M20 x 1.5 or ½" NPT threaded entries to the equipment.
4. Introduction of new PXF100 and PXD100 versions of the Pressure Transmitter.
5. Change to the Pressure Transmitter model code specified for the equipment series from Pressure Transmitter Type PXS100 to Pressure Transmitter Type PXX100 to cover the introduction of the new versions of the equipment.
6. Recognition that the Pressure Transmitters may be supplied fitted with a Model M26 manifold.
7. Addition of voltage ratings to the product description on the certificate.

Issue 3 – this Issue introduced the following changes:

1. Introduction of new PXP100 version of the Pressure Transmitter.
2. Modifications to the circuit.

Date: 05 July 2023

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