



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

Certificate No.: **IECEX CSA 25.0016X** Page 1 of 5 [Certificate history:](#)
Issue 0 (2025-02-06)

Status: **Current** Issue No: 1

Date of Issue: 2025-04-17

Applicant: **Endress+Hauser SE+Co. KG**
Hauptstraße 1
Maulburg 79689
Germany

Equipment: **Pressure Transmitter Cerabar PMP43**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia" & "ic"**

Marking: Ex ia IIC T4...T1 Ga
Ex ic IIC T4...T1 Gc

Ex ia IIIB T135°C Da
Ex ic IIIB T135°C Dc

Approved for issue on behalf of the IECEx
Certification Body:

Dave Magee

Position:

Senior Director of Operations

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada





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Date of issue: 2025-04-17

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Manufacturer: **Endress+Hauser SE+Co. KG**
Hauptstraße 1
79689 Maulburg
Germany

Manufacturing locations: **Endress+Hauser SE+Co. KG**
Hauptstraße 1
79689 Maulburg
Germany

Endress+Hauser (USA)
Automation Instrumentation Inc.
2340 Endress Place
Greenwood, Indiana 46143
United States of America

Endress+Hauser (India) Automation Instrumentation Pvt. Ltd.
M-192, Waluj MIDC, Aurangabad - 431
136
Maharashtra State
India

See following pages for more locations

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 60079-11:2023](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

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:

[CA/CSA/ExTR25.0004/00](#)

[CA/CSA/ExTR25.0004/01](#)

Quality Assessment Report:

[DE/TUN/QAR06.0003/11](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The PMP43 is a pressure device which converts pressure into an electrical output signal. The PMP43 consists of Compact Platform electronics covered under Ex Component certificate IECEX CSA 24.0035U and pressure sensor also covered under Ex Component certificate IECEX CSA 24.0024U.

The Compact Platform electronics consists of a electronic PCBs: terminal board (TA20-01A), main board (MA20-01A) and display assembly for visualization (VA20-01A/02A LCD or VA22-01A LED).

The pressure sensor (SP21A01) has a metal membrane and uses oil to transmit the pressure from the membrane to the sensor chip. The electronic transforms this physical pressure signal into an electrical signal which is evaluated and converted as analogue (e.g. 4...20mA) or digital (HART/ IO-Link) output measurement value. The sensor consists of a stainless steel housed electronics, pressure membrane with the cylindrical shaft filled with an oil.

The equipment is housed in a stainless-steel metallic enclosure with a plastic viewing window for an LCD or LED display, equipped with an M12 field wiring connector for external wiring, and includes an adapted pressure connection.

The entity parameters, in type of protection Ex ia IIC or Ex ic IIC:

$U_i = 30\text{ V}$ $I_i = 100\text{ mA}$ $P_i = 700\text{ mW}$ $C_i = 15\text{ nF}$ $L_i = 0.69\text{ mH}$

In type of protection Ex ia IIIB or Ex ic IIIB:

$U_i = 30\text{ V}$ $I_i = 100\text{ mA}$ $P_i = 650\text{ mW}$ $C_i = 15\text{ nF}$ $L_i = 0.69\text{ mH}$

Refer to the certificate Annexe for additional information.

Conditions of Manufacture

The Manufacturer shall comply with the following:

1. Routine test for the encapsulant for the complete device has to be conducted as per E+H procedure to comply with IEC 60079-11 Ed. 7 Cl 10.4.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The maximum ambient temperature for group II, temperature class T4 process temperature T_p , are de-rated in tables provided in Safety Instructions.
2. Ambient and process temperature range for group III is from -40 °C to $+70\text{ °C}$.
3. In applications where the process temperature exceeds the maximum surface temperature limits of the required maximum surface temperature, the hot surface ignition hazard at the process connecting parts of the device shall be addressed.
4. To avoid electrostatic charging in explosive atmospheres, avoid rubbing of the non-metallic surfaces using electrostatic generating materials. Do not use the device in applications with moving dust atmosphere causing electrostatic charging.
5. The device shall use a power supply that is galvanically isolated from earth..



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1 – this Issue introduced the following changes:

1. Additional potting and coating on terminal board.
2. Modifications of Specific Conditions of Use.
3. Additional manual for gas or dust.



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Additional manufacturing locations:

Endress+Hauser (Brasil) Instrumentação e Aut.Ltda.
Estrada Municipal Antonio Sesti
600 Bairro Recreio Costa Verde
Itatiba, SP - 13254-085
Brazil

Endress+Hauser Yamanashi Co., Ltd
862-1 Mitsukunugi Sakaigawa-cho
Fuefuki-shi Yamanashi Pref. 406-0846
Japan

Endress+Hauser (Suzhou) Automation Instrumentation Co. Ltd.
China – Singapore Industrial Park (SIP)
Su-Hong-Zhong-Lu, No. 491
Jiangsu Province, 215021 Suzhou
China

Annex:

[IECEX CSA 25.0016X Iss 1 Annexe.pdf](#)

Annexe to: IECEx CSA 25.0016X Issue 1

Applicant: Endress+Hauser SE+Co. KG

Apparatus: Pressure Transmitter Cerabar PMP43



EQUIPMENT (continued)

Ordercodes Cerabar PMP43

PMP43-aa bb c d e f g hh i k ll mmm n o + pp rr ss tt uu vv ww xx zz aa yy		
aa=10		Approval:
	BA	ATEX/IEC II 1G Ex ia IIC T4 Ga
	BH	ATEX/IEC II 1D Ex ia IIIB T135°C Da
	BI	ATEX/IEC II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIB T135°C Da
	BT	ATEX/IEC II 3D Ex ic IIIB T135°C Dc
	BU	ATEX/IEC II 3G Ex ic IIC T4 Gc
	UA	UK Ex ia IIC T4 Ga
	UH	UK Ex ia IIIB T135°C Da
	UI	UK Ex ia IIC T4 Ga, UK Ex ia IIIB T135°C Da
	UT	UK Ex ic IIIB T135°C Dc
	UU	UK Ex ic IIC T4 Gc
bb=20		Output:
	AA	2-wire 4-20mA
	BA	2-wire 4-20mA HART
c=30		Display; Operation:
	C	LED signaling with push button
	D	LED signaling with push button + Bluetooth
	G	Colored display
	H	Colored display + Bluetooth
	J	Colored display with touch control
	K	Colored display with touch control + Bluetooth
d=40		Housing; Material:
	F	Compact; 316L
e=50		Electrical Connection:
	N	Plug M12, IP66/68/69 NEMA Type 4X/6P
f=55		Pressure Type:
	6	Gauge
	8	Absolute
g=60		Application
	A	Process temperature max 100 °C/212 °F
	B	Process temperature max 130 °C /266 °F, 150 °C /302 °F max 1h
	C	Process temperature max 150 °C /302 °F
	D	Process temperature max 200 °C /392 °F
	E	Advanced condensation resistance
hh=75		Sensor Range
	Any digit	Sensor pressure, not assessed by the certification
i=80		Surface Refinement:

Date: 17 April 2025

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Apparatus: Pressure Transmitter Cerabar PMP43



PMP43-aa bb c d e f g hh i k ll mmm n o + pp rr ss tt uu vv ww xx zz aa yy		
	A	Standard
	E	Hygienic Ra<0.38µm/15µin, electro-polished
k=90		Calibration; Unit:
	Any digit	Sensor calibration unit not relevant to the certification
ll=105		Process connection, Sealing Surface:
	AA to ZZ	Standard industrial process connection: threaded, flange
mmm=110		Process Connection:
	AAA to ZZZ	Standard industrial process connection: flanges, threaded , flushmount diaphragm seal, 316L, Alloy C , plastic coated
n=170		Membrane material
	Any digit	Not relevant to the certification
o=180		Fill fluid of the sensor part
	Any digit	Not relevant to the certification
pp=500		Operation Language Display:
	Any digit	Not relevant to the certification
rr=540		>>Application Package:
	Any digit	Heartbeat Verification + Monitoring, special versions of software or microchip related settings, not relevant for the certification
ss=545		>Reference Accuracy:
	Any digit	Not relevant for the certification
tt=550		>Calibration:
	Any digit	calibration certificate; not relevant for the certification
uu=570		>>Service:
	Any digit	Software related adjustments, not relevant for the certification
vv=580		>>Test, Certificate, Declaration:
	Any digit	material certificates wetted metallic parts, pressure test, leakage test, PMI-test; not covered by certification
ww=590		>>Additional Approval:
	Any digit	additional approvals, no influence to explosion protection; e.g.: SIL, WHG, Ship building, drinking water, CRN
zz=620		>>Accessory Enclosed:
	QA to QZ	Weld-in adapter, flanges different sizes
	Rx	Process adapter different types
	Sx	Pipe connection different types

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Apparatus: Pressure Transmitter Cerabar PMP43



PMP43-aa bb c d e f g hh i k ll mmm n o + pp rr ss tt uu vv ww xx zz aa yy		
	TB	Plug connector M12, IP69
	TC	Plug connector M12 90deg, IP69
	TD	Plug connector M12 90deg, IP69, 5m cable, union nut, 316L
	TE	Plug connector M12 100deg, IP67, 5m cable, union nut, Cu Sn/Ni
aa=850		>Firmware Version
	Any digit	Hart, not relevant to the certification. Related to different versions of the microchip.
yy =895		>>Marking:
	Any digit	Tagging, not relevant to the certification