



# 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.: **IECEX SEV 20.0009X** Page 1 of 4 Certificate history:  
Issue 0 (2020-07-03)

Status: **Current** Issue No: 1

Date of Issue: 2020-08-03

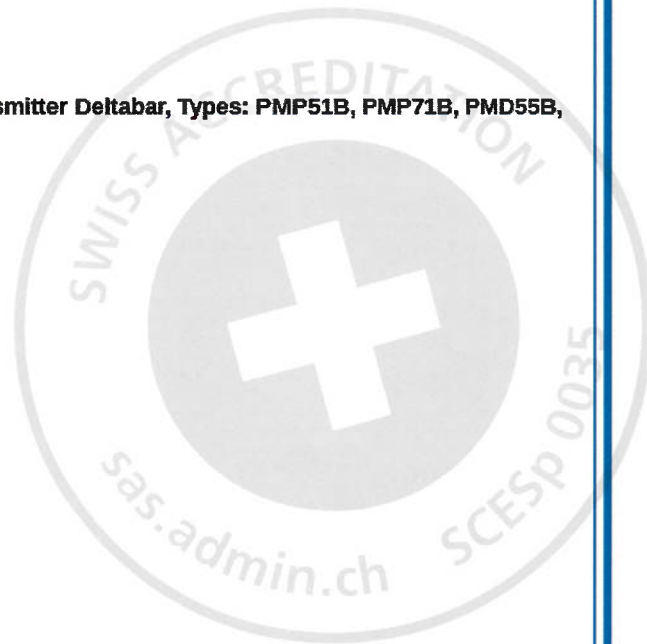
Applicant: **Endress+Hauser SE+Co. KG**  
Hauptstraße 1  
79689 Maulburg  
Germany

Equipment: **Pressure transmitter Cerabar Differential pressure transmitter Deltabar, Types: PMP51B, PMP71B, PMD55B, PMD75B, PMD78B, PMC51B, PMC71B**

Optional accessory:

Type of Protection: **ec, ia**

Marking: Refer to marking at description of product



Approved for issue on behalf of the IECEx  
Certification Body:

**Martin Plüss**

Position:

**Manager Product Certification**

Signature:  
(for printed version)

Date:

2020-08-03

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Certificate issued by:

**Eurofins Electric & Electronic Product Testing AG**  
Luppenstrasse 3  
CH-8320 FEHRALTORF  
Switzerland



E&E



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

Additional manufacturing locations: **Endress + Hauser**  
This equipment may be manufactured at any Endress + Hauser facility listed on the current QAR DE/TUN/QAR06.0003/08, that has been audited for the manufacture of the type of product and Ex protection listed on this certificate.  
Germany

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 60079-26:2014-10** Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga  
Edition:3.0

**IEC 60079-7:2015** Explosive atmospheres – Part 7: Equipment protection by increased safety "e"  
Edition:5.0

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 Report:

[CH/SEV/EXTR20.0012/00](#)

Quality Assessment Report:

[DE/TUN/QAR06.0003/08](#)





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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Pressure transmitter Cerabar

Differential pressure transmitter Deltabar

Types: PMP51B, PMP71B, PMD55B, PMD75B, PMD78B, PMC51B, PMC71B

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

For EPL Ga enclosures made of aluminium must be installed protected from impact and friction.

To avoid electrostatic charging: Do not rub surfaces with a dry cloth.

## Rating:

Type of protection Ia:

$U_i \leq 30$  V DC,  $I_i \leq 300$  mA,  $P_i \leq 1$  W,  $C_i \leq 10$  nF,  $L_i = 0$

Type of protection ec:

$U \leq 35$  V DC,  $P \leq 1$  W

For temperature classification and marking see Annexe





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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**  
New issue due to a correction of the standards.

**Annex:**

[IECEX 20.0009X Annexe issue1.pdf](#)



**Annexe to:** IECEx SEV 20.0009X

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**Applicant Name:** Endress+Hauser SE+Co. KG  
 Hauptstrasse 1, 79689 Maulburg, GERMANY  
**Electrical Apparatus:** Pressure transmitter Cerabar  
 Differential pressure transmitter Deltabar

**Temperature classification:**

Ex ia IIIC Txxx°C Da/Db and Ex ia IIIC Txxx°C Db

Model	Type	Process connection type	maximum surface temperature <sup>1)</sup>	Process temperature range Tp <sup>2)</sup>	Ambient temperature range <sup>2)</sup>
			EPL Da and EPL Db part		
Cerabar	PMP51B PMP71B	compact	T125°C	-40°C ≤ Tp ≤ 125°C	-40°C ≤ Ta ≤ +60°C
		T decoupled, capillary remote		-40°C ≤ Tp ≤ 400°C	-40°C ≤ Ta ≤ +65°C

<sup>1)</sup> the surface temperature only depends on the applied process temperature. The self-heating is negligible. Functional limitations depend on the process connection and are provided by the manufacturer documentation. The marked surface temperature considers all direct heat influences from process heat and self-heating at the apparatus housing. Surface temperatures at process side, e.g. at high temperature process connections maybe higher and must be considered by the user. T marking is based on the process temperature of the compact designs.

<sup>2)</sup> the lower ambient and process temperature decreases to -50°C for order code option 580 = "JL"

Ex ia IIC T6...T1 Ga and Ex ia IIC T6...T1 Ga/Gb and Ex ia IIC T6...T1 Gb

Model	Type	Process connection type	Temperature class	Process temperature <sup>1)</sup>		Ambient temperature <sup>1)</sup>	
				Tp min ≤ Tp ≤ Tp max	Ta min ≤ Ta ≤ Ta max		
Deltabar	PMD55B PMD75B	compact, flanges	T6	-50°C	+80°C	-50°C	+50°C
			T4...T1		+100°C		+60°C
	PMD78B	all types	T6		+80°C		+50°C
			T4...T1		+130°C...400°C		+70°C

<sup>1)</sup> lower ambient temperature decreases to -52°C for order code option 580 = "JN"

**Eurofins Electric & Electronic Product Testing AG**  
 Swiss Certification Body

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**Ex ia IIIC Txxx°C Da/Db and Ex ia IIIC Txxx°C Db**

Model	Type	Process connection type	maximum surface temperature <sup>1)</sup>	Process temperature range Tp <sup>2)</sup>	Ambient temperature range <sup>2)</sup>
			EPL Da and EPL Db part		
Deltabar	PMD55B PMD75B	compact	T100°C	-40°C ≤ Tp ≤ 100°C	-40°C ≤ Ta ≤ +60°C
	PMD78B	T decoupled, capillary remote	T100°C	-40°C ≤ Tp ≤ 400°C	-40°C ≤ Ta ≤ +70°C

<sup>1)</sup> the surface temperature only depends on the applied process temperature. The self-heating is negligible. Functional limitations depend on the process connection and are provided by the manufacturer documentation. The marked surface temperature considers all direct heat influences from process heat and self-heating at the apparatus housing. Surface temperatures at process side, e.g. at high temperature process connections at FMD78B maybe higher and must be considered by the user. T marking is based on the process temperature of the compact designs.

<sup>2)</sup> the lower ambient and process temperature decreases to -50°C for order code option 580 = "JL".

**Ex ia IIC T6...T1 Ga and Ex ia IIC T6...T1 Ga/Gb and Ex ia IIC T6...T1 Gb**

Model	Type	Process connection type	Temperature class	Process temperature range Tp min ≤ Tp ≤ Tp max		Ambient temperature range Ta min ≤ Ta ≤ Ta max	
				Tp min	Tp max	Ta min	Ta max
Cerabar	PMC51B PMC71B	compact, flanges	T6	-40 °C	+80 °C	-40 °C	+50 °C
			T4...T1		+125 °C		+50 °C
		high temperature version	T6		+80 °C		+50 °C
			T4...T1		+150 °C		+60 °C

The lower temperature is limited to -40 °C due to functional reasons.

**Ex ia IIIC Txxx°C Da/Db and Ex ia IIIC Txxx°C Db**

Model	Type	Process connection type	maximum surface temperature <sup>1)</sup>	Process temperature range Tp	Ambient temperature range Ta
			EPL Da and EPL Db part		
Cerabar	PMC51B PMC71B	compact	T135°C	-40°C ≤ Tp ≤ 125°C	-40°C ≤ Ta ≤ +55°C
		high temperature	T150°C	-40°C ≤ Tp ≤ 150°C	-40°C ≤ Ta ≤ +55°C

<sup>1)</sup> the surface temperature only depends on the applied process temperature. The self-heating is negligible. Functional limitations depend on the process connection and are provided by the manufacturer documentation.

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Ex ec IIC T6...T1 Gc:

Model	Type	Process connection type	Temperature class	Process temperature <sup>1)</sup> Tp min ≤ Tp ≤ Tp max		Ambient temperature <sup>1)</sup> Ta min ≤ Ta ≤ Ta max	
				Tp min	Tp max	Ta min	Ta max
Cerabar	PMP51B PMP71B	compact, flanges	T6	-40°C	+80°C	-40°C	+65°C
			T4		+125°C		+60°C
		temperature decoupling, high temperature, capillary remote	T6		+80°C		+65°C
			T4...T1		+130°C...400°C		+70°C

<sup>1)</sup> the lower ambient and process temperature decreases to -50°C for order code option 580 = "JL".

Model	Type	Process connection type	Temperature class	Process temperature <sup>1)</sup> Tp min ≤ Tp ≤ Tp max		Ambient temperature <sup>1)</sup> Ta min ≤ Ta ≤ Ta max	
				Tp min	Tp max	Ta min	Ta max
Deltabar	PMD55B PMD75B	compact, flanges	T6	-40°C	+80°C	-40°C	+60°C
			T4		+100°C		+65°C
	PMD78B	all types	T6		+80°C		+60°C
			T4...T1		+130°C...400°C		+70°C

<sup>1)</sup> the lower ambient and process temperature decreases to -50°C for order code option 580 = "JL".

Model	Type	Process connection type	Temperature class	Process temperature range Tp min ≤ Tp ≤ Tp max		Ambient temperature range Ta min ≤ Ta ≤ Ta max	
				Tp min	Tp max	Ta min	Ta max
Cerabar	PMC51B PMC71B	compact, flanges	T6	-40 °C	+80 °C	-40 °C	+55 °C
			T4		+125 °C		+65 °C
		high temperature version	T6		+80 °C		+65 °C
			T4...T1		+150 °C		+60 °C

The lower temperature is limited to -40 °C due to functional reasons.

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**Marking:**

The following marking strings are possible for all types and in combination with each other.


Ex ia IIC T6...T1 Ga

Ex ia IIC T6...T1 Gb


Ex ia IIC T6...T1 Ga/Gb

Ex ec IIC T6...T1 Gc

Type:PMC51B, PMP51B, PMD55B, PMD75B, PMD78B, PMC71B, PMP71B

 Ex ia IIIC T200 xxx °C Da/Db (for temperature see table below)

Type:PMC51B, PMP51B, PMD55B, PMD75B, PMD78B, PMC71B, PMP71B

 Ex ia IIIC TL xxx °C Db (for temperature see table below)

PMP51B, PMP71B	125 °C
PMC51B, PMC71B compact	135 °C
PMC51B, PMC71B high temp.	150 °C
PMD55B, PMD75B, PMD78B	100 °C

