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 SEV 22.0006**

Page 1 of 5

Certificate history:
Issue 1 (2023-03-30)
Issue 0 (2022-01-27)

Status: **Current**

Issue No: 2

Date of Issue: 2024-03-15

Applicant: **Baumer Electric AG**
Hummelstrasse 17
8501 Frauenfeld
Switzerland

Equipment: **Pressure transmitter, Type: PBMN xxx, PBMH xxx**

Optional accessory:

Type of Protection: **i**

Marking: See Annexe

Approved for issue on behalf of the IECEx Certification Body: **Munira Gamma**

Position: **Manager Product Certification**

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 or use of this QR Code.

Certificate issued by:

Eurofins Electric & Electronic Product Testing AG
Luppmenstrasse 3
8320 FEHRALTORF .
Switzerland

eurofins | E&E

IECEx Certificate of Conformity

Certificate No.: **IECEx SEV 22.0006** Page 2 of 5

Date of issue: 2024-03-15 Issue No: 2

Manufacturer: **Baumer Electric AG**
Hummelstrasse 17
8501 Frauenfeld
Switzerland

Manufacturing 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

IEC 60079-26:2021 Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection
Edition:4.0

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/ExTR22.0006/02

Quality Assessment Report:

CH/SEV/QAR21.0005/01

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Types: PBMN xxx, PBMH xxx

All PBMN/PBMH pressure transmitters are designed so that a sensor element converts the physical quantity pressure into an electrical quantity. The sensor element is contained in a metal pressure connection or metal enclosure. The signal generated by the sensor element is converted into a process signal of 4-20 mA by the integrated electronics. The electronics are silicone encapsulated and protected by a metal enclosure. Industrial connectors or cable versions and a field housing are available as an output connection.
This product series is intended for use in numerous areas including industry, energy supply and water treatment as well as vehicle construction and shipbuilding, where potentially explosive dust atmospheres make the use of these pressure transmitters necessary.
The pressure transmitters must be connected via a Zener barrier with the indicated characteristic values and under the specified ambient and mounting conditions.

Classification of installation and use: Fixed
Ingress protection: IP6x

Rating:

Input and supply circuits with type of protection intrinsic safety Ex ia IIC
Only for connection to a certified intrinsically safe circuit

Maximum values:
Ui ≤ 30 V
Ii ≤ 100 mA
Pi ≤ 750 mW
Ci = 58 nF (effective internal capacitance)
Li = 0.22 µH (effective internal inductance)

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Change of electronic PCB therefor change of Co and Lo.
- Types PSMX and PBMX are removed
- Update of name plate
- Update to standard IEC 60079-11:2023 Edition 7.0
- Update to standard IEC 60079-26:2022 Edition 4.0

IECEx Certificate of Conformity

Additional information:
See Annexe

Annex:

IECEx_SEV_22.0006_App i2.pdf.pdf

Applicant Name: **Baumer Electric AG**

Equipment: **Pressure transmitter**

Remarks

1. Assignment between the maximum permissible ambient temperature in the area of the electronics enclosure, medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx without cooling section with all connection types (vertically or horizontally mounted) for EPL Ga/Gb is shown in the following table:

Temperature class	T4	T6
highest ambient temperature at enclosure part with electronics (°C)	-40 … +85	-40 … +70
highest ambient temperature at pressure connection (°C)	-40 … +115	-40 … +75

2. Assignment between the maximum permissible ambient temperature in the area of the electronics enclosure, medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx with cooling section without field housing (mounted horizontally) for EPL Ga/Gb can be found in the table below:

Temperature class	T3		T3
highest ambient temperature at enclosure part with electronics (°C)	-40 … +85	or	-40 … +70
highest ambient temperature at pressure connection (°C)	-40 … +160		-40 … +200

3. Assignment between the maximum permissible ambient temperature in the area of the electronics enclosure, medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx with cooling section without field housing (vertically mounted) for EPL Ga/Gb can be found in the table below:

Temperature class	T3		T3
highest ambient temperature at enclosure part with electronics (°C)	-40 … +85	or	-40 … +45
highest ambient temperature at pressure connection (°C)	-40 … +130		-40 … +200

4. Assignment between the maximum permissible ambient temperature in the area of the electronics enclosure, medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx with cooling section without field housing (mounted vertically or horizontally) for EPL Ga/Gb can be found in the table below:

Temperature class	T4	T6
highest ambient temperature at enclosure part with electronics (°C)	-40 … +85	-40 … +70
highest ambient temperature at pressure connection (°C)	-40 … +130	-40 … +80

5. Assignment between the maximum permissible ambient temperature in the area of the electronics enclosure, medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx with cooling section and field housing (mounted horizontally) for EPL Ga/Gb can be found in the following table:

Temperature class	T3		T3
highest ambient temperature at enclosure part with electronics (°C)	-40 … +85	or	-40 … +75
highest ambient temperature at pressure connection (°C)	-40 … +170		-40 … +200

6. Assignment between the maximum permissible ambient temperature in the area of the electronics enclosure, medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx with cooling section and field housing (mounted vertically) for EPL Ga/Gb can be found in the following table:

Temperature class	T3
highest ambient temperature at enclosure part with electronics (°C)	-40 … +85
highest ambient temperature at pressure connection (°C)	-40 … +150

7. Assignment between the maximum permissible ambient temperature in the area of the electronics enclosure, medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx with cooling section and field housing (mounted vertically or horizontally) for EPL Ga/Gb can be found in the table below:

Temperature class	T4	T6
highest ambient temperature at enclosure part with electronics (°C)	-40 … +85	-40 … +70
highest ambient temperature at pressure connection (°C)	-40 … +130	-40 … +80

8. The pressure transmitters PBMN xxx or PBMH xxx can be installed in the boundary wall that separates the area with Category 1 (EPL Ga) - requirements (Zone 0) from the area with Category 2 (EPL Gb) - requirements (Zone 1) separates. The process connection must be sufficiently sealed according to EN 60079-26, Section 4.6, e.g. by complying with protection class IP67 according to EN 60529. The measuring cell may only be used for combustible substances for which the membranes of the measuring cells are sufficiently chemically and corrosion resistant.

9. Attention! For applications as category 1 (EPL Ga) group IIC equipment, dangerous electrostatic charges on the surface of the protective cap and along the cable sheath must be avoided (e.g. due to rapid filling and emptying of containers or other mechanical friction processes).

   Note on the marking: Observe the operating instructions.

10. Assignment between the maximum permissible ambient or medium temperature and temperature class for the pressure transmitter PBMN xxx or PBMH xxx pressure transmitter for EPL Da is shown in the following table:

Surface temperature	T_{200} 107 °C
highest ambient temperature (°C)	-40 … +70

Marking:

- For type PBMN xxx or PBMH xxx for version with M12 connector or with field housing

  Ex ia IIC T4/T6 Ga (for pressure transmitters without cooling neck)
  Ex ia IIC T3/T4/T6 Ga (for pressure transmitters with cooling neck)

- PBMN xxx or PBMH xxx for version with DIN connector;

  Ex ia IIC T4/T6 Ga/Gb (for pressure transmitters without cooling neck)
  Ex ia IIC T3/T4/T6 Ga/Gb (for pressure transmitters with cooling neck)

- PBMN xxx or PBMH xxx all versions

  Ex ia IIIC T_{200}107 °C Da