



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 TUN 20.0015X** Page 1 of 4 [Certificate history](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-06-30

Applicant: **LABOM Mess- und Regeltechnik GmbH**
Im Gewerbepark 13
27798 Hude
Germany

Equipment: **Pressure transmitter type PASCAL CV4xxx**

Optional accessory:

Type of Protection: **Intrinsic safety**

Marking: Ex ia IIC TX Ga/Gb resp. Ex ia IIC TX Gb resp.
Ex ia IIIC Txx°C Da/Db resp. Ex ia IIIC Txx°C Db
For further data see attachment.

Approved for issue on behalf of the IECEx
Certification Body:

Christian Roder

Position:

Head of IECEx Certification Body

Signature:
(for printed version)

Date:

2020-06-30

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:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1, 30519 Hannover
Germany





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Manufacturer: **LABOM Mess- und Regeltechnik GmbH**
Im Gewerbepark 13
27795 Hude
Germany

Additional
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 60079-11:2011 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

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:

DE/TUN/EXTR20.0015/00

Quality Assessment Report:

DE/TUN/QAR10.0006/09



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Pressure transmitter type PASCAL CV4xxx

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The permissible ambient and medium temperatures have to be taken from the certificate.
2. For EPL Ga/Gb applications the medium tangent materials have to be resistant to the media.
3. Since the intrinsically safe circuit is connected with the earth potential for safety reasons, potential equalization has to exist in the complete course of the erection of the intrinsically safe circuit.
4. The equipment has to be earthed by installation for avoiding of electrostatic charges.
5. The membrane made of titanium has to be protected against mechanical impacts to avoid critical sparks.
6. For Ga/Gb applications, the process connection has to be executed sufficiently tight (IP 66 or IP 67).



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Equipment (continued):

The pressure transmitter type PASCAL CV4xxx is used for the pressure measurement of gases, vapours and liquids in explosive gas atmospheres or for pressure measurement of explosive dust atmospheres.

The measuring signal is transmitted via a 4...20 mA current loop with HART protocol.

For further information, see attachment.

Annex:

Attachment to IECEx TUN 20.0015 X Issue 0 CV4.pdf

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Attachment to IECEx 20.0015 X issue no.: 0

Product:

The pressure transmitter type PASCAL CV4xxx is used for the pressure measurement of gases, vapours and liquids in explosive gas atmospheres or for pressure measurement of explosive dust atmospheres.

The measuring signal is transmitted via a 4...20 mA current loop with HART protocol.

Technical Data:

If the pressure transmitter is used in explosion hazardous areas for EPL Ga/Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

	EPL Gb and EPL Ga/Gb	EPL Gb	EPL Ga/Gb
Temperature class	Ambient temperature range	Medium temperature range	Medium temperature range
T1	-40...80 °C	-40...410 °C	-20...60 °C
T2	-40...80 °C	-40...260 °C	-20...60 °C
T3	-40...80 °C	-40...165 °C	-20...60 °C
T4	-40...80 °C	-40...100 °C	-20...60 °C
T5	-40...45 °C	-40...65 °C	-20...52 °C
T6	-40...30 °C	-40...50 °C	-20...40 °C

The measuring sensors are allowed to be operated in an explosion hazardous area for EPL Ga applications, only if atmospheric conditions exist (pressure from 0.8 bar to 1.1 bar).

If the pressure transmitter is used in explosion hazardous areas for EPL Da/Db or EPL Db applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the surface temperature has to be taken from the following table:

	EPL Db and EPL Da/Db	
Max. surface temperature without dust layer	Ambient temperature range	Medium temperature range
T450 °C	-40...80 °C	-40...420 °C
T300 °C	-40...80 °C	-40...270 °C
T200 °C	-40...80 °C	-40...170 °C
T135 °C	-40...80 °C	-40...105 °C
T100 °C	-40...50 °C	-40...70 °C
T85 °C	-40...35 °C	-40...55 °C

Electrical Data:

Supply and signal circuit
(Terminals resp. plug connector;

+Loop, -Loop, GND) in type of protection Intrinsic Safety Ex ia IIC/IIIC

Maximum values:

$U_i = 30 \text{ V}$

$I_i = 150 \text{ mA}$

$P_i = 1 \text{ W}$

Effective internal capacitance: 15.4 nF

Effective internal inductance: 4 μH

Special Conditions for Safe Use / Notes for Erection:

1. The permissible ambient and medium temperatures have to be taken from the certificate.
2. For EPL Ga/Gb applications the medium tangent materials have to be resistant to the media.
3. Since the intrinsically safe circuit is connected with the earth potential for safety reasons, potential equalization has to exist in the complete course of the erection of the intrinsically safe circuit.
4. The equipment has to be earthed by installation for avoiding of electrostatic charges.
5. The membrane made of titanium has to be protected against mechanical impacts to avoid critical sparks.
6. For Ga/Gb applications, the process connection has to be executed sufficiently tight (IP 66 or IP 67).