



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 21.0002X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-04-06

Applicant: **BARKSDALE GmbH**
Dorn - Assheimer Strasse 27
D - 61203 Reichelsheim
Germany

Equipment: **Pressure Switches types 8xxx-*, D1T-xxxxxSS-*, D2T-xxxxxSS-***

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ia IIC T6 Ga or**
Ex ia IIIC T₂₀₀100°C Da
resp.
Ex ia IIB T6 Ga or
Ex ia IIIC T₂₀₀100°C Da

Approved for issue on behalf of the IECEx
Certification Body:

Christian Roder

Position:

Head of the Certification Body

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

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





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Manufacturer: **BARKSDALE GmbH**
Dorn - Assheimer Strasse 27
D - 61203 Reichelsheim
Germany

Manufacturing
locations: **BARKSDALE GmbH**
Dorn - Assheimer Strasse 27
D - 61203 Reichelsheim
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

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/ExTR22.0001/00](#)

Quality Assessment Report:

[DE/TUN/QAR13.0009/05](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The pressure switches type 8xxx-**PL1**-x-EXI, 8xxx-**PL4**-x-xx-EXI, 8xxx-**PL2**-x-xx-EXI, 8xxx-**PL3**-x-xx-EXI, 8xxx-**PL5**-x-xx-EXI, 8xxx-**PL6**-x-xx-EXI, 8xxx-**CA1**-x-xx-EXI, 8xxx-**CA2**-x-xx-EXI, 8xxx-**CA3**-x-xx-EXI, 8xxx-**CD1**-x-xx-EXI, 8xxx-xxx-x-xx-**PC**-EXI, D1T-xxxxxSS-xxx-EXI, D1T-xxxxxSS-**ST1**-EXI, D2T-xxxxxSS-xxx-EXI and D2T-xxxxxSS-**ST3**-EXI, are used for monitoring and controlling processes with maximum or minimum pressures. When minimum or maximum pressures are reached, an electrical signal is triggered by a microswitch.

Permissible ambient temperature range during operation: $-40\text{ }^{\circ}\text{C} \leq T_a \leq +75\text{ }^{\circ}\text{C}$

For all other data see attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. For IIC Ga uses the pressure switches have to be installed and used in such a way, that electrostatic charging from operation, maintenance and cleaning is excluded.
For IIIC Da uses process-related electrostatic charges, e.g. due to passing media have to be excluded for pressure switches containing non-metallic parts.
2. Metallic parts have to be included in the local potential equalization.
3. The intrinsically safe supply is connected to the ground potential for safety reasons. Potential equalization has to exist in the entire area of the installation of the intrinsically safe circuit.
4. For the uses in areas that require EPL Ga the devices have to be installed in such a way, that ignition hazard due to impact or friction can be excluded.

Annex:

[Attachment to IECEx TUN 21.0002X issue No.0.pdf](#)

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General product information:

Description:

The pressure switches type 8xxx-**PL1**-x-EXI, 8xxx-**PL4**-x-xx-EXI, 8xxx-**PL2**-x-xx-EXI, 8xxx-**PL3**-x-xx-EXI, 8xxx-**PL5**-x-xx-EXI, 8xxx-**PL6**-x-xx-EXI, 8xxx-**CA1**-x-xx-EXI, 8xxx-**CA2**-x-xx-EXI, 8xxx-**CA3**-x-xx-EXI, 8xxx-**CD1**-x-xx-EXI, 8xxx-xxx-x-xx-**PC**-EXI, D1T-xxxxxSS-xxx-EXI, D1T-xxxxxSS-**ST1**-EXI, D2T-xxxxxSS-xxx-EXI and D2T-xxxxxSS-**ST3**-EXI, are used for monitoring and controlling processes with maximum or minimum pressures. When minimum or maximum pressures are reached, an electrical signal is triggered by a microswitch.

Marking:

	Ex ia IIC T6 Ga or Ex ia IIIC T₂₀₀100°C Da	8xxx- PL2 -x-xx-EXI, 8xxx- PL3 -x-xx-EXI, 8xxx- PL5 -x-xx-EXI, 8xxx- PL6 -x-xx-EXI, 8xxx- CA1 -x-xx-EXI, 8xxx- CA2 -x-xx-EXI, 8xxx- CA3 -x-xx-EXI, 8xxx- CD1 -x-xx-EXI, D1T-xxxxxSS-xxx-EXI and D2T-xxxxxSS-xxx-EXI
	Ex ia IIB T6 Ga or Ex ia IIIC T₂₀₀100°C Da	8xxx- PL1 -x-EXI, 8xxx- PL4 -x-xx-EXI, 8xxx-xxx-x-xx- PC -EXI, D1T-xxxxxSS- ST1 -EXI and D2T-xxxxxSS- ST3 -EXI

Type code:

8 x x x - xxx - x - xx - EXI

Option

EXI	ATEX (Ex ia)
GL	Germanischer Lloyd
UL	Underwriter's Laboratories
D	with damping bore
VA	housing made of 1.4305
LH	Low Hysteresis
HP	Test pressure 200 Bar
HD	Rotary knob with scale
K	Short housing
ES	Adjustment screw with lock
PC	Protective Cap, Vinyl (IIB)

Sealing material

B	NBR
V	FPM / FKM Fluor rubber
N	CR Chloroprene rubber
E	EPDM
S	Silicone

Electrical connections

PL1	Cube connector DIN EN 175301-803 A (former DIN 43650) (IIB)
PL2	M12x1 mm connector (4-pins)
PL3	M12x1 mm connector (4-pins), 90° with 2m cable
PL4	Bayonet DIN 72585 (IIB)
PL5	M12x1 mm connector (5-polig)
PL6	VG connector
CA1	IP68 cable gland with x m silicone cable 4x0,75
CA2	IP68 cable gland with x m PVC cable 4x0,75

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CA3 IP68 cable gland with x m Neoprene cable 4x0,75
CD1 1/2" Conduit connector

Micro switch contacts

- 1** Micro switch with Silver contacts
- 2** Micro switch with Gold contacts

Pressure ranges

- 1** 0,6 - 6,0 bar
- 2** 3 - 20 bar
- 3** 4 - 45 bar
- 4** 5 - 180 bar
- 5** 50 - 350 bar
- 6** 80 - 600 bar
- A** 8 - 85 psi
- B** 45 - 250 psi
- C** 60 - 650 psi
- D** 75 - 2600 psi
- E** 750 - 5000 psi
- F** 1200 - 8700 psi

Process connection

- 0** Special connection
- 1** Flange 40 x 40 mm
- 2** G 1/4" female, 40 x 40 mm
- 3** G 1/4" male, 40 x 40 mm
- 4** G 1/4" female, 90° side connection
- A** 1/4" NPT female, 40 x 40 mm
- B** 1/4" NPT male, 40 x 40 mm
- C** 1/8" NPT female, 40 x 40 mm
- D** 1/4" NPT female, 90° side connection
- E** 7/16 SAE 4-20 UNF O-Ring
- F** 9/16 SAE 6-18 UNF O-Ring

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D	x	T	xx	xxx	SS	-	xxx	-	xx x	-	EXI
											Option
											EX
											I ATEX (Ex ia)
											GL Germanischer Lloyd (Marine approval)
											UL Underwriter's Laboratories
											P2 1/2" NPT IG VA-Membrane
											FE Epoxy resin paint
											Electrical connections
											ST1 cube plug DIN EN 175301-803 A(former DIN 43650)(IIB)
											ST3 Connector Amphenol (Tuchel) according to EN 43651 E 6-pin (only for 2 switching points version) (IIB)
											() Wago terminal or screw connection internal
											Material of the medium-contacting parts
					SS						VA-Steel, 17.7 PH / SS304
											Pressure ranges
					2						0,005...0,11 bar
					3						0,012...0,20 bar
					18						0,050...1,20 bar
					80						0,300...5,50 bar
					150						0,500...10,3 bar
					3						Vacuum -0,006...-0,20 bar
					18						Vacuum -0,040...-1,00 bar
											Micro switch contact
					B						B-Micro switch (see datasheet for microswitch data)
					C						C-Micro switch (see datasheet for microswitch data)
					H						H-Micro switch (see datasheet for microswitch data)
					G						
					H						GH-Micro switch (see datasheet for microswitch data)
					J						J-Micro switch (see datasheet for microswitch data)
					M						M-Micro switch (see datasheet for microswitch data)
					G						
					M						GM-Micro switch (see datasheet for microswitch data)
					S						S-Micro switch (see datasheet for microswitch data)
											Housing type
					T						Aluminum enclosure, old and new form
											Number of switching points
					1						1 switch point
					2						2 switch points

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Electrical data:

Power supply

In type of protection intrinsic safety Ex ia IIB/IIC/IIIC
only for the connection to certified intrinsically safe circuits
Maximum values:

$$U_i = 28 \text{ V}$$

$$I_i = 50 \text{ mA}$$

$$P_i = 0.84 \text{ W}$$

Effective internal capacitance

C_i is negligibly small

Effective internal inductance

L_i is negligibly small

Thermal data:

Permissible ambient temperature range during operation: $-40 \text{ °C} \leq T_a \leq +75 \text{ °C}$

Specific Conditions of Use:

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