



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 BVS 16.0031	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 2	Issue 1 (2017-05-22) Issue 0 (2016-05-17)
Date of Issue:	2022-06-27		
Applicant:	BROSA GmbH Dr. Klein Straße 1 88069 Tett nang Germany		
Equipment:	Integrated Amplifier type ExDANGmicro2W_***		
Optional accessory:			
Type of Protection:	Equipment protection by intrinsic safety "i"		
Marking:	Ex ib IIC T4 Gb		

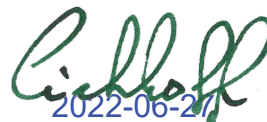
Approved for issue on behalf of the IECEx
Certification Body:

Dr Franz Eickhoff

Position:

Lead Auditor and officially recognised expert

Signature:
(for printed version)



2022-06-27

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:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany



DEKRA
On the safe side.



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Manufacturer: **BROSA GmbH**
Dr. Klein Straße 1
88069 Tettnang
Germany

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 60079-0:2011](#) Explosive atmospheres - Part 0: General requirements
Edition:6.0

[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/BVS/ExTR16.0035/01](#)

Quality Assessment Report:

[DE/BVS/QAR13.0016/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

General product information:

Type Code

See Annex

Description

The Integrated Amplifier type ExDANGmicro2W_*A* comprises of a metallic enclosure of tubular size, fitted with a connection facility or permanently connected cable for the intrinsically safe supply- and signal circuit at the front end and with a pressure-sensitive membrane at the rear end.

One resistive DMS measuring bridge is attached to the internal side of the pressure-sensitive membrane. The printed circuit board carrying electronic components of the amplifier is embedded in casting compound inside the enclosure.

The Integrated Amplifier type ExDANGmicro2W_*B* comprises of a stainless steel enclosure of various size and shape, designed as mechanical force measuring axle. Two resistive DMS measuring bridges are placed on membranes located in chambers inside the axle.

The printed circuit boards carrying the electronic components of the two amplifier channels are embedded in casting compound and located in another chamber inside the axle.

The chamber containing the printed circuit boards of the two amplifier channels is equipped with one or two connectors or with permanently connected cable(s) for the intrinsically safe supply- and signal circuits. The permanently connected cable of the Integrated Amplifier type ExDANGmicro2W_*B2 and type ExDANGmicro2W_*B4 requires protection against damage and mechanical stress, verified by suitable installation.

Listing of all components used, referring to older standards: not applicable.

Rating

See Annex

SPECIFIC CONDITIONS OF USE: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The limited liability company was created by changing the form of the public limited company. There is no influence on the Certificate of Conformity of the explosion-proof device.

Annex:

[BVS_16_0031_Brosa_Annex_issue1.pdf](#)



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Annex
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Type Code

ExDANGmicro2W_*** (single or dual channel version)

1st asterisk: A = intrinsically safe circuit(s) separated from (each other and) the enclosure of the amplifier
B = intrinsically safe circuit(s) connected to the enclosure of the amplifier under fault condition

2nd asterisk: A = single channel
B = dual channel

3rd asterisk: 0 = connector (single channel) or separate connectors (dual channel)
1 = permanently connected cable (single channel) or two separate permanently connected cables (dual channel)
2 = permanently connected 4-wire cable with screen carrying both channels
3 = permanently connected 4-wire cable carrying both channels with separately screened pairs of wires
4 = permanently connected 4-wire cable carrying both channels without screen
5 = connector suitable to carry both channels

Rating

1 Intrinsically safe supply- and signal circuit(s), level of protection Ex ib IIC

Single channel parameters		Integrated Amplifier type	
		ExDANGmicro2W_*A0	ExDANGmicro2W_*A1
		ExDANGmicro2W_*B0	ExDANGmicro2W_*B1
		ExDANGmicro2W_*B5	ExDANGmicro2W_*B2
			ExDANGmicro2W_*B3
			ExDANGmicro2W_*B4
Voltage	U _i	DC 30 V	DC 30 V
Current	I _i	100 mA	100 mA
Power	P _i	750 mW	750 mW
Effective internal capacitance	C _i	24 nF	24 nF + 0.3 nF/m
Effective internal inductance	L _i	3 μH	3 μH + 1 μH/m

2 Ambient temperature range: -40 °C ≤ T_a ≤ +80 °C