



# 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)

### EX COMPONENT CERTIFICATE

Certificate No.: **IECEX PTB 20.0001U** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-03-20

Applicant: **Emil A. Peters GmbH & Co. KG**  
Westfalenstrasse 85  
D-58636 Iserlohn  
Germany

Ex Component: Cable bushing type ADN 4\***\*\*/\*\*\_\*\*\*\_\*\*\_\*\*\*\_\*\*\***

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **Flameproof Enclosure "db"**

Marking: Ex db IIC Gb  
Ex db I Mb

Approved for issue on behalf of the IECEx  
Certification Body:

**Dr. -Ing. D. Markus**

Position:

**Head of Department "Explosion Protection in Energy  
Technology"**

Signature:  
(for printed version)

Date:

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Certificate issued by:

**Physikalisch-Technische Bundesanstalt (PTB)**  
Bundesallee 100  
38116 Braunschweig  
Germany



Physikalisch-Technische Bundesanstalt  
Braunschweig und Berlin



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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 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

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:

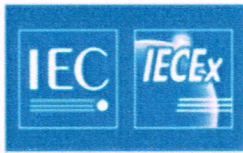
[DE/PTB/EXTR19.0044/00](#)

Quality Assessment Report:

[DE/PTB/QAR06.0018/05](#)







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Electrical Apparatus: Cable bushing, type ADN 4\*-\*\*/\*\*\_\*\*\*\_\*\*\_\*\*\*\_\*\*\*

### Description

The cable bushing, type ADN 4\*-\*\*/\*\*\_\*\*\*\_\*\*\_\*\*\*\_\*\*\* consist of a metallic sleeve with encapsulated cables and serves as electrical connection between two compartments in the type of protection Flameproof Enclosure "db" or between one compartment in the type of protection Flameproof Enclosure "db" and a terminal compartment of another recognized type of protection. The connection is made by the integrated connecting leads. The cable bushing can be screwed into the housing wall from both sides.

### Technical data

Material Sleeve	Brass 58 Brass 58 nickel-plated Stainless steel
Rated voltage	Up to 6000 V
Rated cross-section, depending on the cable	0.128 mm <sup>2</sup> to 500 mm <sup>2</sup>
Number of leads	Depends on the cable 1 to 47
Type and size of threads and torque	M24 x 1.5, 35 Nm M36 x 1.5, 50 Nm M48 x 1.5, 50 Nm
Service temperature range	Depends on the cable and the compound, see list in the annex max. -35 °C to +105 °C



## Nomenclature

ADN	4*	**/	**_	***_	**_	***_	***
1	2	3	4	5	6	7	8

1	Type	AND
2	Material	4M = Brass 58 4V = Brass 58 nickel-plated 4E = Stainless steel
3	Cable number	From list of cables 99 = special mounting
4	Thread	M24 to M48
5	Diameter of cable	0.128 mm <sup>2</sup> to 500 mm <sup>2</sup> See list of cables
6	Number of wires / cables	0 to 47
7	Cable length in the flameproof box	min. 200 mm
8	Cable length in the connection box	min 200 mm

## General Note

Threaded holes into which cable bushing is screwed with the internal thread must meet the minimum requirements of IEC 60079-1, table 4.

The cable bushing is suitable for installation in electrical apparatus of the type of protection flameproof enclosure "db" of groups I, IIA, IIB or IIC.

The cable bushing shall be fixed in the electrical apparatus in such a way that rotation and accidental loosening will be prevented.

The connecting leads of the cable bushing must be connected inside enclosures which are in compliance with a standardized type of protection according to IEC 60079-0, section 1

The cable bushing is a constructional unit. The reproducible assembly and the installation conditions have been documented. According to IEC 60079-1, section 16.2 a routine test together with the flameproof enclosure in compliance with section 16.1 is, therefore, not necessary.

Should the reference pressure exceed 20 bar, the cable bushing shall be included into the type test according to IEC 60079-1 as required by the classification of the electrical apparatus in question (grouping I, IIA, IIB, IIC)

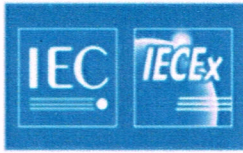
The component can be used in both, group I and group II, as the requirements of the standard are identical in this case.

The temperature increase depends on the size and number of cables. The temperature measurement has to be done on the equipment. The maximum temperature of the cable and of the compound must not be exceeded.



List of approved cables					
No.	Name of cable	Approved temperature range	Over-pressure	Diameter	Min. length
0	USB 3.0 BUM-S18-20	-20 °C to +40 °C	30 bar	5xAWG24 + 4xAWG28	220
1	Chainflex Busleitung	-20 °C to +50 °C	30 bar	0.125-1,5 mm <sup>2</sup>	220
2	H07RN-F	-20 °C to +40 °C	30 bar	1-500mm <sup>2</sup>	220
3	01-.../CWJH-...20 Fiber Optic Simplex,	-20 °C to +50 °C	30 bar	Fiber E9 0.6-0.9mm	220
4	Railcat7 4x (2x24AWG) XMS Radox Traktionsk.		30 bar	24-32AWG	220
5	JZ-500 HMH-C (3x1,5mm <sup>2</sup> )	-20 °C to +40 °C	30 bar	0.5-10mm <sup>2</sup>	220
6	HELUKAT S 100	-25 °C to +60 °C	41.1 bar	1.5mm <sup>2</sup>	220
7	HELUKAT S 200	-25 °C to +60 °C	41.1 bar	AWG24/G19	220
8	HELUKAT S 500	-25 °C to +60 °C	41.1 bar	AWG24/7	220
9	RG Koaxialkabel GR 58 C/U	-25 °C to +60 °C	41.1 bar	0.2-0.6mm <sup>2</sup>	220
10	HELUKAT IND 100	-25 °C to +60 °C	41.1 bar	AWG26/7	220
11	HELUKAT IND 200	-25 °C to +60 °C	41.1 bar	AWG26/7	220
12	HELUKAT IND 600	-25 °C to +60 °C	41.1 bar	AWG23	220
13	HELUKAT IND 1000	-25 °C to +60 °C	41.1 bar	AWG26/7	220
14	HELUKAT IND 1200	-25 °C to +60 °C	41.1 bar	AWG23/1	220
15	HELUKAT 500S	-25 °C to +60 °C	41.1 bar	AWG24/7	220
16	TOPGEBER 512 PUR	-35 °C to +60 °C	43.5 bar	0.14-1.0mm <sup>2</sup>	220
17	TOPSERV PUR	-35 °C to +60 °C	43.5 bar	1.5-95mm <sup>2</sup>	220
18	ÖLFLEX® EB (3x1mm <sup>2</sup> )	-35 °C to +60 °C	43.5 bar	0.75-1.5mm <sup>2</sup>	220
19	H05V-K	-35 °C to +60 °C	43.5 bar	0.5-1.0mm <sup>2</sup>	220
20	Profibus PA	-35 °C to +60 °C	43.5 bar	0.64mm <sup>2</sup>	220
21	Profibus SK	-35 °C to +60 °C	43.5 bar	0.64mm <sup>2</sup>	220
22	BUS USB3.0	-35 °C to +60 °C	43.5 bar	AWG24-28	220
23	Profibus Torsion Unitronic Bus Pb TORSION	-35 °C to +60 °C	43.,5 bar	0.8mm <sup>2</sup>	220
24	12.../FSN(ZN)YR- 130 Radox Drag chain cable	-35 °C to +60 °C	43.5 bar	E9 G50 125µm	220
25	F-C. PURÖ-jz	-35 °C to +60 °C	43.5 bar	0.5-6mm <sup>2</sup>	220
26	ToughCat cat.7S/FTP	-35 °C to +60 °C	43.5 bar	0.27mm <sup>2</sup>	220
27	OZ-500 (3x1,5mm <sup>2</sup> )	-35 °C to +60 °C	43.5 bar	0.5-185mm <sup>2</sup>	220
28	JZ-500 PUR (3x1,5mm <sup>2</sup> )	-35 °C to +60 °C	43.5 bar	0.5-16mm <sup>2</sup>	220
29	JZ-600-Y-CY (3G1,5)	-35 °C to +60 °C	43.5 bar	0.5-185mm <sup>2</sup>	220
30	PAAR TRONIC CY (3x2x0,14)	-35 °C to +60 °C	43.5 bar	0.14-1.5mm <sup>2</sup>	220
31	SUPER PAAR TRONIC (1x2x0,25)	-35 °C to +60 °C	43.5 bar	0.25-1.0mm <sup>2</sup>	220
32	NSSHÖU	-35 °C to +60 °C	43.5 bar	1.5-300mm <sup>2</sup>	220
33	NSGAFÖU	-35 °C to +60 °C	43.5 bar	1.5-300mm <sup>2</sup>	220
34	Tachofeedback Leitung	-35 °C to +60 °C	43.5 bar	0.5-10mm <sup>2</sup>	220
35	H05G-K/H07G-K	-35 °C to +60 °C	43.5 bar	1.5-120mm <sup>2</sup>	220
36	Radox 125	-35 °C to +105 °C	43.5 bar	0.35-300mm <sup>2</sup>	220





37	Radox UL 3266	-35 °C to +105 °C	43.5 bar	0.128-5.26mm <sup>2</sup>	220
38	Radox UL 3271	-35 °C to +105 °C	43.5 bar	0.2-150 mm <sup>2</sup>	220
39	4 GW-AX 1800V 1x10M BK Radox Traktion	-35 °C to +105 °C	43.5 bar	0.5-400mm <sup>2</sup>	220
40	9 GW-AX 3600V 1x10M BK Radox Traktion	-35 °C to +105 °C	43.5 bar	1.5-300mm <sup>2</sup>	220
41	BETAtherm 145UL	-35 °C to +105 °C	43.5 bar	0.5-95mm <sup>2</sup>	220
42	Radox155s FLR Anticapillary	-35 °C to +105 °C	43.5 bar	0.35-6mm <sup>2</sup>	220
43	Radox 155	-35 °C to +105 °C	43.5 bar	0.25-240mm <sup>2</sup>	220
44	Radox155s FLR Anticapillary Automotiv (Single insulation)	-35 °C to +105 °C	43.5 bar	0.35-35mm <sup>2</sup>	220
45	Radox155s FLR Anticapillary Automotive (Double insulation)	-35 °C to +105 °C	43.5 bar	0.35-35mm <sup>2</sup>	220