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Cable bushings

TYP ADN PTB 20 ATEX 1001U
IECEX PTB 20.0001U
TYP ADS PTB 20 ATEX 1002U
IECEX PTB 20.0002U

Lableing: EN 60079-0:2018 chapter 29

II 2 G Ex db IIC Gb
 I M 2 Ex db I Mb

Intallation and Operating Manual

PTB 0102

All above listed **cable bushings** are – depending on the layout - licensed for installation in electrical equipment type Ex „d“ respectively „e“ for group IIA, IIB, IIC.

They must be installed in electrical equipment and secured against turning and self-loosing.

They are designed as one structural unit. The reproducible assembly and installation is documented.

According to IEC/EN 60079-1 a routine test described in chapter 16.2. and C.2.1.4. with the flameproof enclosure is not necessary.

Special threads of the listed **cable bushings** are especially labelled according to EN 60079-1 chapter 13.2.

Threaded holes for **cable bushings** must comply with the minimum requirements of EN 60079-1, chapter 5.2.1, chapter 5.2.2 and chapter 5.3 (tables 2,3,4 and 5).

All **cable bushings** must be included into the type test according to IEC/EN 60079-1, chapter 15.2 (overpressure test) based on the corresponding group IIA, IIB or IIC, if the relative pressure according to IEC/EN 60079-1 listed in point 5.2.2.1 is exceeded.

The maximum current capacity in Amperes of the connecting wires or pins must be calculated on following basis: the self-heating rate, the enclosure heating rate “u” and the maximum permissible ambient temperature.

The temperature increase depends on the size and number of cables. The temperature measurement must be done on the equipment.

The maximum temperature of the cable and of the compound must not be exceeded. Those are specified in the accompanying papers.

The classification of the temperatures to the corresponding temperature class must be determined during the type test.

The installation in terminal boxes must comply with the IEC/EN 60079-0 chapter 14.2 to 14.4, IEC/EN 60079-7 chapter 4.10.1,

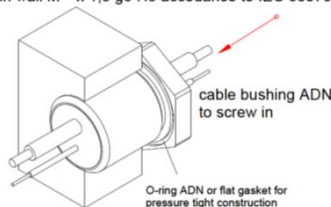
DIN EN 60529-9 and as a minimum IP 64 protection. The appropriate installation must be verified with an EC-type examination certificate for the particular electrical equipment.

For **pressure-tight cable bushings** ADN and ADS it is necessary to slip a sealing (O-ring) according to the individual requirements over the thread underneath the hexagonal of the threaded bush. Additionally, the pluggable cable bushing ADS requires a second O-ring which is slipped over the pluggable sleeve and positioned under the gasket contact face in the dedicated notch supplied by customer.

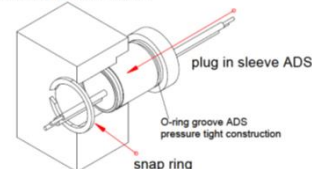
The bolting torques are:

thread	thread lead (mm)	torque in Nm
M24	x1,5	35
M25	x1,5	35
M26	x1,5	35
M28	x1,5	35
M30	x1,5	50
M32	x1,5	50
M33	x1,5	50
M36	x1,5	50
M38	x1,5	50
M40	x1,5	50
M42	x1,5	50
M48	x1,5	50

bore in wall M** x 1,5 g6 H6 accordance to IEC 60079-0



borehole in wall in accordance to IEC 60079-0



Operation, service and maintenance

For maintenance and service of all **cable bushings** we recommend following procedure:

Depending on the environment and operating conditions the operator of must check in regular time intervals the equipment based on:

The Ordinance on Industrial Safety and Health, IEC/EN 60079-14 and IEC-EN 60079-17 to check the proper conditions of all equipment. Damaged parts or partly damaged parts of Ex equipment **only have to be changed against original spare parts or returned to the manufacturer for repair.**

Important safety notes

The explosion protection for **cable bushings** is only maintained, if they are in original state, correct installed and used in the range of their technical specification.

The explosion protection is not or no longer guaranteed if:

- The insulator is damaged, chipped or broken
- The thread of the screwed sleeve, the drill hole of the sled wall or the thread of our threaded bushing is damaged in any way
- The gap surface of the terminal stud and or bore has been modified, machined or damaged (Ra< 6,3 must be compulsory held).
- Threads are not tightened to their specific application with the fitting torque.
- The rules of IEC/EN 60079 – 1 are not followed that the Ex equipment is secured against turning and self-loosening.
- If technical changes are made to this certified equipment. Technical changes are not allowed in any way. The ATEX / IECEx certificate of the product will be invalid.
- Do not kink the cables

If required, please check the particular EC-type examination certificate for complete technical details which are available at
www.emil-a-peters.com