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### Cable Bushing

#### TYPE AD

P1B 98 ATEX 1072U  
IECEX PTB 09.0002U

Labeling: EN 60079-0:2018 chapter 29



II 2 G Ex d II



I M2 Ex d I

## Installation and Operating Manual

**PTB0102**

All above listed **cable bushings** are 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-loosening.

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.

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).

Flameproof bushings with pluggable terminal studs (guide tube bushings) must be included into the type test according to IEC/EN 60079-1, chapter 15. They must correspond to group IIA, IIB or IIC.

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, stud-type bushings and bushings 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 has to be done on the equipment. The maximum temperature of the cable and of the compound must not be exceeded.

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.

## 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 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
- Threads are not tightened to their specific application with the fitting torque.
- The rules of IEC/EN 60070 – 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