Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

Konformitätsbewertungsstelle, Sektor Explosionsschutz

PTB • Postfach 33 45 • 38023 Braunschweig • Germany

Your reference:
Your letter of:
My reference:
My letter of:

Emil A. Peters GmbH & Co. KG
Michael Flamme
Westfalenstr. 85
58636 Iserlohn

Handled by: Dr.-Ing. Stefan Essmann
Telephone Number: +49 531 592-3550
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E-mail: Stefan.Essmann@ptb.de

Date: October 15, 2021

Subject: Use of bushings type PLD12/6600 instead of KD12/6600

Dear Mr. Flamme,

with regard to safety technology there are no objections to replace, for example in case of repair, bushings of the type

KD12/6600 (Certificate: PTB 98 ATEX 1066 U IECEx PTB 09.0004U)

with the appropriate bushing of the type

PLD12/6600 (Certificate: PTB 98 ATEX 1069 U IECEx PTB 08.0032U).

It must be ensured that the intended use and the technical specifications are covered by the certification of the component PLD12/6600.

Kind regards
By order

Essmann

Dr.-Ing. Stefan Essmann

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1st SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 1066 U

(Translation)

Equipment: Bushing, type KD**/* ***

Marking: Ex **II 2 G EEx d e II I M 2 EEx d e I**

Manufacturer: Emil A. Peters GmbH & Co. KG

Address: Westfalenstraße 85, 58636 Iserlohn, Germany

Description of supplements and modifications

The bushing, type KD12/6600, has been re-examined on the basis of standards EN 60079-0:2012, EN 60079-1:2007 and EN 60079-7:2007.

The marking therefore changes to:

Ex **II 2 G Ex d e IIC Gb resp. I M 2 Ex d e I Mb**

The versions KD../750... and KD../1100... are discontinued and are replaced by the types PLD../690 and PLD../1100 (PTB 98 ATEX 1069U). Type KD6/750 has been replaced by type PkLD6/690 (PTB 98 ATEX 1069U).

Technical data

Rated insulation voltage	6600 V
Conductor size, max.	300 mm²
Number of studs	1
Type and size of thread	M60x2
Operating temperatures	-55 °C to +120 °C
The maximum current carrying capacity of the bushing conductor studs and the connecting cores has to be determined on the basis of the self-heating rate and the heating rate of the enclosure at the place of installation at the maximum permissible ambient temperature.	

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1st SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 1066 U066 U

Type code

KD	12/	6600
1	2	3

1) Type name
2) Diameter of stud, 12 mm
3) Rated voltage, 6600 V

Notes for manufacturing and operation

Threaded holes into which the bushings are screwed with the internal thread must meet the minimum requirements of EN 60079-1, table 3. The bushings are suited for installation in electrical apparatus of flameproof enclosure "d" type of protection of groups I, IIA, IIB or IIC.

Cylindrical boreholes into which glands with a cylindrical joint are installed shall comply with the minimum requirements of EN 60079-1, tables 1 or 2 (cylindrical joints); the joint surfaces shall be designed, so their mean roughness does not exceed a value of Ra 6.3 µm.

If the reference pressure exceeds 20 bar, the cable glands shall be included in the type test in accordance with EN 60079-1, section 15.1.3 (overpressure test) as required for the I, IIA, IIB or IIC classification of the corresponding electrical equipment.
The cable glands with cylindrical joint shall be included in the type test in accordance with EN 60079-1, section 15 as required for I, IIA, IIB or IIC classification of the corresponding electrical equipment.

The bushings have to be fixed in the electrical equipment so that rotation and accidental loosening will be prevented.

The connecting cores of the bushing shall be connected in enclosures that comply with a standardised type of protection in accordance with EN 60079-0, section 1.

The bushing is a structural unit. The reproducible assembly and the installation conditions have been documented. According to EN 60079-1, section 16.2, routine testing together with the flameproof enclosure as specified in section 16.1 is, therefore, not required.

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

Installation of electrical components is subject to re-assessment by a notified body.

Applied standards

EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007

Test report: PTB Ex 14-13053

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, September 23, 2014

On behalf of PTB:

Dipl.-Phys. U. Völkel

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • 38116 Braunschweig • GERMANY

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 98 ATEX 1066 U

(4)	Component:	Cable bushing of types KD../750..., KD../1100... and KD../6600...
(5)	Manufacturer:	Emil A. Peters GmbH & Co. KG
(6)	Address:	Westfalenstr. 85, 58636 Iserlohn

(7) This component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 98-18094.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014:1997 **EN 50 018:1994** **EN 50 019:1994**

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This Component Certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified component in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this component.

(12) The marking of the component shall include the following:

Ex II 2 G EEx de II I M 2 EEx de I

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Oberregierungsrat

Braunschweig, January 20, 1999

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE No. PTB 98 ATEX 1066 U

(15) Description of component

The cable bushing of types KD../750..., KD../1100... and KD../6600... serve as electrical connection between flameproof compartments or between flameproof compartments and a terminal compartment of another recognized type of protection.
Connection is made at connection heads which are screwed on the threaded stem of the cable bushing and which are locked to prevent accidental loosening and rotation.

Electrical data

Rated insulation voltage ..... up to	750 V	1100 V	6600 V
Rated cross-section *) ..... max.		300 mm²	
Number of studs **)		1	
Type and size of thread *)		M 20 x 1,5 to M 60 x 2 other types and sizes of threads with respective identification	
Temperature range at place of installation of the cable bushing, with the electrical apparatus operated under rated conditions		-55 °C to 90 °C	

When the maximum current-carrying capacity of the bushing conductor studs and the connecting leads is determined, the self-heating and the heating of the enclosure at the place of installation at maximum permissible ambient temperature must be taken as a basis.

*) depending on the type and design of cable bushing and connection head

(16) Report PTB Ex 98-18094

(17) Special conditions for safe use

Threaded holes into which cable bushings are screwed with the internal thread must meet the minimum requirements of EN 50 018, section 5.3 (Table 3). These cable bushings are suitable for installation in electrical apparatus of the type of protection flameproof enclosure "d" of groups I, IIA, IIB or IIC.

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Cylindrical holes into which bushings with cylindrical joint are to be installed, must meet the minimum requirements of EN 50 018, Table 1 or 2 (cylindrical joints); the joint surfaces must be such that the average roughness R_a does not exceed 6,3 µm.

The cable bushings with cylindrical joint are to be included in the type test according to EN 50 018, section 15, in compliance with the grouping of the respective electrical apparatus (group I, IIA, IIB or IIC).

The cable bushings must be fastened in the electrical apparatus so that they are locked to prevent rotation and accidental loosening.

The connecting leads of the cable bushing must be connected inside enclosures which are in compliance with a standardized type of protection according to EN 50014, section 1.2.

The cable bushing is a constructional unit. The reproducible assembly and the installation conditions have been documented. According to EN 50 018, section 16.2 (13.4.4) a routine test together with the flameproof enclosure in compliance with section 16.1 is, therefore. not necessary.

The assignment of the temperatures to the temperature class of the cable bushing is to be laid down during the type test of the respective electrical apparatus.

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

This EC-type-examination Certificate and future supplements thereto are at the same time supplements to the component certificates PTB No. Ex-90.C.1008 U, Ex-91.C.1008 U and EX-91.C.1074 U.

(18) Essential health and safety requirements

The tests carried out and their positive results show that the cable bushing meets the requirements of Directive 94/9/EC and of the standards stated on the cover sheet.

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Oberregierungsrat

Braunschweig, January 20, 1999

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

Telefax

Bitte sofort weiterleiten! Please pass on immediately!

an / to

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Fax vom 30. August 1999

Prüfung auf Explosionsschutz nach EN 50 014 ff, Leitungsdurchführungen
Typ KD../660... und KD ../1000 ..., Teilbescheinigung PTB Nr. Ex-91.C.1008 U und 90.C.1008 U
Typ KD../750... und KD ../1100 ..., EG-Baumusterprüfbescheinigung PTB 98 ATEX 1066 U
Typ PLD../750... und PLD ../1100 EG-Baumusterprüfbescheinigung PTB 98 ATEX 1069 U

Sehr geehrte Frau Peters-Schäfer,

es bestehen keine sicherheitstechnischen Bedenken, im Bedarfsfall – z. B. Reparatur – Leitungsdurchführungen der Typen KD ... durch solche der Typen PLD ... gemäß der nachfolgenden Gegenüberstellung zu ersetzen:

Eingesetzter Typ		*ersetzbar durch*
91.C.1008 U	**98 ATEX 1066 U**	**98 ATEX 1069 U**
KD8/660	KD8/750	PLD8/750
KD10/660	KD10/750	PLD10/750
KD12/660	KD12/750	PLD12/750
KD16/660	KD16/750	PLD16/750
90.C.1008 U	**98 ATEX 1066 U**	**98 ATEX 1069 U**
KD8/1000	KD8/1100	PLD8/1100
KD10/1000	KD10/1100	PLD10/1100
KD12/1000	KD12/1100	PLD12/1100
KD16/1000	KD16/1100	PLD16/1100

Die Leitungsdurchführungen der Typen

91.C.1008 U	**98 ATEX 1066 U**	**98 ATEX 1069 U**
KD6/660	KD6/750	PLD6/750

sind nur bedingt austauschbar, da sie sich in der Baulänge des Isolators unterscheiden; ggfs. sind nicht einzelne, sondern alle Leitungsdurchführungen des jeweiligen elektrischen Betriebsmittels auszutauschen.

Mit freundlichen Grüßen
Im Auftrag

Wildschütz