



# 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)

Certificate No.: **IECEX PTB 06.0080U** Page 1 of 5 [Certificate history:](#)  
Status: **Current** Issue No: 2 [Issue 1 \(2010-11-30\)](#)  
[Issue 0 \(2006-09-06\)](#)  
Date of Issue: 2012-01-27  
Applicant: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
Germany  
Equipment: **Bushing type 8171/...-**  
Optional accessory:  
Type of Protection: **Flameproof Enclosure "d", Increased Safety "e"**  
Marking: Ex de II resp. Ex de I

Approved for issue on behalf of the IECEx  
Certification Body:

**Dr. Ing. Uwe Klausmeyer**

Position:

**Head of Section "Flameproof Enclosures"**

Signature:  
(for printed version)

Date:

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.
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Certificate issued by:

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





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Manufacturer: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
Germany

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 60079-0:2007-10** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:5

**IEC 60079-1:2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:6

**IEC 60079-7:2006-07** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:4

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/ExTR10.0084/00](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/15](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

### Description of equipment

The bushing, type 8171/... serves as electrical connection between flameproof enclosures or between flameproof enclosures and a terminal compartment with another type of protection.

Connection is made directly at the connection facilities of the bushing conductor studs or at the connection heads, which are screwed onto the threaded bolts of the bushing and secured against self-loosening and rotation.

### Nomenclature

Bushing	Type	8171/ab-cd
a, b	Design	
c, d	Terminations 1. Symbol = Terminal in terminal compartment 2. Symbol = Terminal in flameproof chamber  A = Hexagon head screw with lock washer and clamp B = Cheese head or hexagon head screw with lock washer (permissible only on Ex d side) C = Saddle clamp D = Terminal piece for cable lug connection F = Flat terminal G = Thread connector K = Split post with hexagon nut and pressure plate L = Solder socket R = Hood type terminal (round) on split post S = Hood type terminal (hexagon) on split post Z = Cheese head screw with lock washer and clamp	

## Electrical data

Rated insulation voltage	up to	1100 V
Rated cross section *)	max.	300 mm <sup>2</sup>
Number of bolts *)		1 to 6
Thread type and size *)		M10 x 1 to M42 x 1.5 other thread types and sizes as marked
Temperature range at the place of installation of the bushing at rating of the electrical equipment		-55 °C to +130 °C

**For determination the max. current carrying capacity of the bushing conductor and wires, the self-heating and the temperature rise of the enclosure at the place of installation at the maximum permissible ambient temperature should be assumed.**

\*) according to the type and design of the bushing and connection head.

### Additional instructions for manufacture and operation

Threaded holes, in which bushings with internal threads are screwed in, have to meet the minimum requirements of IEC 60079-1, section 5.3 (table 3). These bushings are suitable for installation into electrical equipment with type of protection flameproof enclosure "d" of groups I, IIA, IIB or IIC.

The bushing should be involved to the type test to IEC 60079-1, section 15.1.3 (Overpressure test) according to the group subdivision of the respective electrical apparatus (Group I, IIA, IIB or IIC) if the reference pressure exceeds 20 bar.



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**The bushings must be fixed to the electrical equipment in such a way that they are secured against rotation and self-loosening.**

**The connection of the wires of the bushing must be made in enclosures meeting a type of protection to IEC 60079-0, section 1.**

**The classification of the temperatures to the temperature class of the bushing is to be determined in the type test of the respective electrical equipment.**



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**  
New QAR