



(1) **EU-TYPE EXAMINATION CERTIFICATE**  
(Translation)

(2) Component Intended for Use in Potentially Explosive Atmospheres  
**Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

**PTB 01 ATEX 1015 U**

**Issue: 3**

(4) Component: Empty Enclosure Type 8146/-\*\*\*-\*\*

(5) Manufacturer: R. STAHL Schaltgeräte GmbH

(6) Address: Am Bahnhof 30, 74638 Waldenburg, Germany

(7) This component and any acceptable variation thereto is 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 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report PTB Ex 22-11209.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN IEC 60079-0:2018, EN IEC 60079-7:2015+A1:2018, IEC 60079-31:2022-01**

(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 partial certification may be used as a basis for certification of an equipment or protective systems.


(11) This EU-Type Examination Certificate relates only to the design and construction of the specified component in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

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

 **II 2 G Ex eb IIC Gb**

 **II 2 D Ex tb IIIC Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, September 15, 2022  
On behalf of PTB:

  
Dr.-Ing. D. Markus  
Direktor und Professor



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EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

## SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 01 ATEX 1015 U, Issue: 3**

(15) Description of Product

The empty enclosure type 8146/-\*\*\*-\*\*, made from polyester, can be provided with flanges and may be connected in series. It is used in type of protection Increased Safety "eb" and Protection by Enclosure "tb".

### Nomenclature

8146/	-	**	*	-	**
a	b	c	d	-	e

a	Product type / Series
b	Empty enclosure
c	Enclosure size length x width [mm]: 00 = combination 03 = 112.5 x 112.5 04 = 170.0 x 112.5 24 = 227.0 x 112.5 05 = 170.0 x 170.0 06 = 227.0 x 170.0 07 = 340.5 x 170.0 B7 = 340.5 x 170.0 S7 = 340.5 x 17.0 08 = 340.5 x 340.5 09 = 681.5 x 340.5 M9 = 681.5 x 340.5
d	Enclosure height [mm]: 0 = combination 1 = 91 (Cover height 15 mm) 2 = 131 (Cover height 55 mm) 3 = 150 (Cover height 15 mm) 4 = 171 (Cover height 95 mm) 5 = 190 (Cover height 55 mm) 6 = 230 (Cover height 95 mm) 7 = 104 (Cover height 28 mm)
e	Information not relevant for Ex-certification

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**SCHEDULE TO EU-TYPE-EXAMINATION CERTIFICATE PTB 01 ATEX 1015 U, Issue: 3**

**Service temperature**

- 60 °C ≤ T<sub>s</sub> ≤ +100 °C (for gasket D0075, D0187)
- 50 °C ≤ T<sub>s</sub> ≤ +100 °C (for earth assemblies with gasket D0187)
- 20 °C ≤ T<sub>s</sub> ≤ +60 °C (for gasket D0121)

**Ingress protection according to EN 60079-0 Annex F**

When cover of the enclosure, flange enclosure, sealing frame and Ex-components are properly installed: IP66 for sealing material D0075  
IP64 for sealing material D0121 and enclosure with hinges made of D0014 with O ring made of D0187 and with earth assemblies with gaskets D0097, D0187 and D0216.

**Earthing**

Rail cross section [mm x mm]	Maximum conductor size for each terminal				Torque
	Solid wire	Flexible wire	Flexible wire with ferrule	Stranded wire	
10 x 3	1x 6 mm 2x 6 mm	1x 4 mm 2x 4 mm	1x 4 mm 2x 4 mm	-	1.2 Nm
10 x 3	1x 10 mm	1x 10 mm	1x 10 mm	-	1.2 Nm
12 x 4	1x 10 mm 2x 10 mm	1x 10 mm 2x 10 mm	1x 10 mm 2x 10 mm	-	2 Nm
12 x 4	-	1x 35 mm	1x 35 mm	1x 35 mm	2 Nm

**Technical data**

Tightening torque for the cover: 4.5 Nm  
Tightening torque for flange enclosure: 2.7 Nm  
Tightening torque for sealing frame: 2.7 Nm

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**Earth Assemblies:**

Type	Tightening torque	Terminal cross-section
8171A0210-0 BG210	if cable is clamped under/cable plug: 2,5 Nm for nut: 20 Nm	up to 16 mm <sup>2</sup>
8146A0238 BG238	for M10 without conductor connection: 4 Nm for M10 with conductor connection: 16 Nm for M33 mounting: 20 Nm	up to 4 to 120 mm <sup>2</sup>

**Modifications**

- 1) New test according to EN IEC 60079-0:2018, EN 60079-7:2015+A1:2018, IEC 60079-31:2022
- 2) Addition of Earth Assemblies (drawing no. 8146 0 000 085 0)

(16) Test report PTB Ex 22-11209

(17) Notes for manufacture, installation and operation

Service temperature:

- 60 °C ≤ T<sub>s</sub> ≤ +100 °C (for gasket D0075, D0187)
- 50 °C ≤ T<sub>s</sub> ≤ +100 °C (for earth assemblies with gasket D0187)
- 20 °C ≤ T<sub>s</sub> ≤ +60 °C (for gasket D0121)

The use of this component requires a further assessment by an ExCB.

Notes for the safe operation

1. If cable glands or other components made of metal are installed into the empty enclosure (bushings, cable entry fittings, connectors, blanking plugs, PE bushings), they have to have a separate certificate that complies with the requirements specified on the cover sheet and they must be earthed according to the section 15 of the standard EN IEC 60079-0:2018.
2. Openings that are not used must be closed in compliance with the specifications of the standards listed on the cover sheet.
3. In order to ensure the ingress protection IP, the cover of the empty enclosure, the flange enclosure, the sealing frame and other Ex-components must be properly installed and with the appropriate torque.

This information must accompany each device in an adequate form.



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(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz  
On behalf of PTB:

Braunschweig, September 15, 2022

*D. Markus*

Dr.-Ing. D. Markus  
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