

# (1) EU-TYPE EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - Directive 2014/34/EU
- (3) EU-Type Examination Certificate Number

**TÜV 15 ATEX 7564 X**

Issue: 00

- (4) Equipment: **Explosion protected junction box  
Type 510\*/(\*\*\*\*)/(\*\*\*\*\*)**
- (5) Manufacturer: **WISKA Hoppmann GmbH**
- (6) Address: **Kisdorfer Weg 28  
24568 Kaltenkirchen, Germany**

- (7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle für Explosionsschutz of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 21 of the Council Directive 2014/34/EU of 26<sup>th</sup> February 2014, certifies this product which 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 atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report 557/Ex7564.00/15

- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

**EN 60079-0:2012 + A11 2013    EN 60079-7:2015    EN 60079-31:2014**

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EU-Type Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.
- (12) The marking of the equipment shall include the following:



**II 2 G Ex eb IIC T6 ...T4 Gb  
II 2 D Ex tb IIIC T85°C Db**

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2018-01-31

  
Dipl.-Ing. Klauspeter Graffi

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This EU-Type Examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the  
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(13)

Annex

(14)

## EU Type Examination Certificate

### TÜV 15 ATEX 7564 X

Issue: 00

(15) Description of equipment

15.1 Equipment and type:

Explosion protected junction box type 510/\*/(\*\*\*\*)/(\*\*\*\*)

Type designation

510/	*/	(****)/	(****)
1	2	3	4

1 = Type designation:

510 = Type designation for the junction box

2 = Specification of number and position of the cable gland

- 1 = one cable gland
- 2 = two cable glands side by side
- 3 = three cable glands
- 4 = four cable glands
- D = two cable glands oppositely

3 = alternative specification for mounting in terminal bloc, f. e.:

No -specification = equipped with two terminal blocks type  
 GHG 790 1108 R0001 (acc. PTB 00 SATEx 3102 U, IECEx PTB  
 11.0029U)  
 11WDU1.5 = 11 terminal blocks type WDU 1.5 (Weidmüller)  
 etc.

4 = Specification of size and sort of cable gland (only if delivered with cable glands), f. e.

2x24-Z14 = two cable glands with rated size M24 with earth link 14 mm  
 1x20-W10/1x20-Z10 = one cable gland rated size M20 without earth links  
 For cable diameter 10mm and cable gland size M20  
 with earth links for cable diameter 10mm etc.

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## 15.2 Description / Details of Change

### General product information

The Explosion Junction Box is intended for use in gas- or dust explosive atmospheres.

The Explosion protected junction box is designed in Equipment protection by increased safety "e" and Equipment dust ignition protection by enclosure "t".

The junction box consists of a bottom enclosure and a lid made of cast brass.

The bottom enclosure can be equipped inside with separately certified terminals blocks directly mounted or terminals mounted on special rails.

The bottom enclosure is equipped with four threaded boreholes up to a thread form of M25 x 1.5 equipped with up to four separately certified cable glands. Not used openings will be closed by separately certified blind plugs.

### Technical Data

Protection by enclosure acc. to IEC 60529 IP66

For standard terminal type GHG 790 1108 R0001  
 (acc. to IECEx PTB 11.0029U, PTB 00 ATEX 3102 U)

Rated insulation voltage	630 V
Rated voltage	up to 690 V
Rated service temperature range	-55 °C to + 130 °C

Rated cross section	Rated current	Temperature increase ( $\Delta T$ )
1,0 mm <sup>2</sup>	12,4 A	max. 18 K
1,5 mm <sup>2</sup>	16,1 A	max. 19 K
2,5 mm <sup>2</sup>	22,0 A	max. 24 K
4,0 mm <sup>2</sup>	30,0 A	max. 27 K
6,0 mm <sup>2</sup> *	33,0 A	max. 23 K
* 6,0 mm <sup>2</sup> only single wire or with pin-end connector		

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Capacity per terminal	Kind of connectable wires	Torque
8 x 1.0 mm <sup>2</sup>	single wire, finely stranded with ferrule	2,5 Nm
6 x 1.0 mm <sup>2</sup>	finely stranded with ferrule / pin-end connector	2,5 Nm
8 x 1.5 mm <sup>2</sup>	single wire	2,5 Nm
5 x 1.5 mm <sup>2</sup>	finely stranded with ferrule / pin-end connector	2,5 Nm
6 x 2.5 mm <sup>2</sup>	single wire	2,5 Nm
4 x 2.5 mm <sup>2</sup>	finely stranded with ferrule / pin-end connector	2,5 Nm
4 x 4.0 mm <sup>2</sup>	single wire	2,5 Nm
3 x 4,0 mm <sup>2</sup>	finely stranded with ferrule / pin-end connector	2,5 Nm
3 x 6.0 mm <sup>2</sup>	single wire / finely stranded with pin-end connector	2,5 Nm

Number of terminals type GHG 790 1108 R0001	Max. current [A]	Ambient temperature range	Temperature class
2	33	-40 °C ≤ Ta ≤ +55 °C	T4
2	22	-40 °C ≤ Ta ≤ +55 °C	T5
2	22	-40 °C ≤ Ta ≤ +45 °C	T6

For rail terminal blocks (separately certified in type of protection "e")

Rated insulation voltage	Dependent of the used terminals
Rated voltage	Dependent of the used terminals
Rated service temperature range	min. required -40 °C to + 100 °C

Number of terminals	Cross section [mm <sup>2</sup> ]	Max. current [A]	Ambient temperature range	Temperature class
11	1,5	6	-40 °C ≤ Ta ≤ +45 °C	T5
11	1,5	5	-40 °C ≤ Ta ≤ +45 °C	T6
11	1,5	5	-40 °C ≤ Ta ≤ +55 °C	T5
6	4	18	-40 °C ≤ Ta ≤ +45 °C	T6
6	4	18	-40 °C ≤ Ta ≤ +55 °C	T5

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Minimum operating temperature range for separately certified cable glands dependent on the ambient temperature range

Ambient temperature range	Operating temperature range
$-40\text{ °C} \leq T_a \leq +45\text{ °C}$	$-40\text{ °C}$ to $+75\text{ °C}$
$-40\text{ °C} \leq T_a \leq +55\text{ °C}$	$-40\text{ °C}$ to $+85\text{ °C}$

Minimum operating temperature range for cables dependent on the ambient temperature range

Ambient temperature range	Operating temperature range
$-40\text{ °C} \leq T_a \leq +45\text{ °C}$	$-40\text{ °C}$ to $+80\text{ °C}$
$-40\text{ °C} \leq T_a \leq +55\text{ °C}$	$-40\text{ °C}$ to $+90\text{ °C}$

List of used equipment and components

Device	Manufacturer	Type	Ex-Marking	Certificate no.
Terminal block	Cooper crouse-Hinds	GHG 790 1108 R0001	Ex eb II Gb	IECEX PTB 11.0029U, PTB 00 ATEX 3102 U
Terminal blocks W-Reihe	Weidmüller	W-Reihe	Ex eb II	IECEX ULD 05.0008U KEMA 98 ATEX 1683U
Terminal blocks	Weidmüller	SAK, EK	Ex eb II	IECEX KEM 06.0014U KEMA 97 ATEX 1798U
Separately certified rail mount terminal blocks in type of protection "e" of other manufactures with actual declaration of conformity in state of the art and in observance of the above mentioned parameters.				

(16) Test-Report No. 557/Ex7564.00/15

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(17) Special Conditions for safe use

1. Only separately certified cable glands which comply with the type of protection should be used.
2. The dust exclusion tests were carried out with cable glands and blind plugs with gaskets / O-Rings. For type of protection "Equipment dust ignition protection by enclosure "t"" separately certified blanking elements and cable glands with affiliated gaskets/o-rings or tightening between enclosure and cable gland should be used. The gaskets / o-rings must be tested and certified together with the cable glands and must be suitable for this purpose (min. IP66).
3. For an ambient temperature of  $-40^{\circ}\text{C}$  up to  $+45^{\circ}\text{C}$ :
  - cable glands must be used with a minimum temperature resistance of  $-40^{\circ}\text{C}$  up to  $+75^{\circ}\text{C}$
  - cables must be used with a minimum temperature resistance of  $-40^{\circ}\text{C}$  up to  $+80^{\circ}\text{C}$For an ambient temperature of  $-40^{\circ}\text{C}$  up to  $+55^{\circ}\text{C}$ :
  - cable glands must be used with a minimum temperature resistance of  $-40^{\circ}\text{C}$  up to  $+85^{\circ}\text{C}$
  - cables must be used with a minimum temperature resistance of  $-40^{\circ}\text{C}$  up to  $+90^{\circ}\text{C}$
4. This equipment is designed for an other than the normal ambient temperature range. References are given in the operating manual

(18) Basic Safety and Health Requirements

Covered by afore mentioned standard

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

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