

Translation

EU-Type Examination Certificate

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 18 ATEX E 077 X**

Product: **Junction-/ Terminal boxes type GHG 762^{aa bb c dddd} or type^{GBX1)1)2)3)3)}**

Manufacturer: **Cooper Crouse-Hinds GmbH**

Address: **Neuer Weg Nord 49, 69412 Eberbach, Germany**

This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

DEKRA EXAM GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product 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 Report No. BVS PP 18.2185 EU.

The Essential Health and Safety Requirements are assured in consideration of:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018 Increased Safety "e"

EN 60079-31:2014

Protection by Enclosure "t"

Except in respect of those requirements listed under item 18 of the appendix.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:



II 2G Ex eb IIC T6/T5/T4* Gb

II 2D Ex tb IIIC T80°C/T95°C/T100°C* Db

* *The values of the temperature class and the surface temperature depending on the defined ambient temperature range and the specific power dissipation of each terminal box variant. See clause "Parameters" for details.*

DEKRA EXAM GmbH
Bochum, 2018-12-07

Signed: Jörg Koch

Certifier

Signed: Dr Michael Wittler

Approver

13 **Appendix**

14 **EU-Type Examination Certificate
BVS 18 ATEX E 077 X**

15 **Product description**

15.1 **Subject and type**

Junction-/ Terminal boxes type GHG 762^{aa bb c dddd} or type GBX¹⁾¹⁾²⁾²⁾³⁾³⁾

aa Enclosure made from plastic material in size length x height x depth [mm]

- 02 122 x 120 x 90
- 03 220 x 120 x 90
- 04 160 x 160 x 90
- 05 260 x 160 x 90
- 06 360 x 160 x 90
- 07 255 x 250 x 120
- 09 400 x 250 x 120
- 11 400 x 405 x 120

bb Variation numbers without influence on the explosion protection

c Variation numbers without influence on the explosion protection

dddd Variation numbers without influence on the explosion protection

- 1)1) Length (rounded in cm)
- 2)2) Width (rounded in cm)
- 3)3) Depth (rounded in cm)

15.2 **Description**

The terminal box type GHG 762^{aa bb c dddd} or type GBX¹⁾¹⁾²⁾²⁾³⁾³⁾ is designed in type of protection Increased Safety "e" for use in areas with potentially explosive gas atmosphere and in type of protection Protection by Enclosure "t" for areas with potentially explosive dust atmospheres.

The used empty enclosure type GBXE¹⁾¹⁾²⁾²⁾³⁾³⁾ is separately tested and certified with IECEx CoC IECEx TUR 18.0033U and with ATEX certificate TÜV 18 ATEX 8239 U.

Inside the enclosure several different terminal blocks can be installed according to the documentation of the manufacturer.

In case of intrinsic safe circuits inside the terminal box it is a simple apparatus according to standard EN 60079-11 and a marking must be added to the enclosure. The creepage and clearance distances between intrinsic safe circuits to ground, between two different intrinsic safe circuits and between intrinsic and non-intrinsic safe circuits are taken into account by using a separating plate during the installation of the terminals.

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Empty enclosure type GBXE ¹⁾¹⁾²⁾²⁾³⁾³⁾	TÜV 18 ATEX 8239 U ^{AA}	EN 60079-0:2012+ A11:2013
Terminals	According „List of components“ GHG9025018F0001 ^A	EN 60079-0:2012

^A No applicable technical differences.

^B Technical differences evaluated and found satisfactory

15.3 Parameters

Electrical parameters

Rated voltage ¹	AC / DC	690 V
Rated current ²	up to	200 A
Cross section ³	up to	95 mm ²

- ¹ The rated voltage depends on the used type of terminal and the creepage and clearance distances.
- ² The rated current depends on the used type of terminal, the cross section and the number of conductors.
- ³ According to the cross section / current table for each size of enclosure.

Thermal parameters (general)

Ambient temperature range $-50\text{ °C} \leq T_{\text{amb}} \leq +40\text{ °C} / +55\text{ °C} / +70\text{ °C}$

Terminal box size	T _{amb,max}	Maximum permitted dissipation power [W] for an installation at a wall as single mounted enclosure. According to the temperature class (Gb) and the maximum surface temperature (Db)		
		T6 (T80°C)	T5 (T95°C)	T4 (T100°C)
02	40 °C	6.8	9.3	10.2
	55 °C	4.2	6.8	7.6
	70 °C	1.7	4.2	5.1
03	40 °C	10.2	14.1	15.3
	55 °C	6.4	10.2	11.5
	70 °C	2.6	6.4	7.7
04	40 °C	9.7	13.3	14.6
	55 °C	6.1	9.7	10.9
	70 °C	2.4	6.1	7.3
05	40 °C	13.7	18.8	20.5
	55 °C	8.5	13.7	15.4
	70 °C	3.4	8.5	10.3
06	40 °C	17.6	24.3	26.5
	55 °C	11.0	17.6	19.8
	70 °C	4.4	11.0	13.2
07	40 °C	21.6	29.7	32.4
	55 °C	13.5	21.6	24.3
	70 °C	5.4	13.5	16.2
09	40 °C	29.9	41.1	44.8
	55 °C	18.7	29.9	33.6
	70 °C	7.5	18.7	22.4
11	40 °C	41.4	57.0	62.2
	55 °C	25.9	41.4	46.6
	70 °C	10.4	25.9	31.1

Thermal parameters for each size of terminal box

Terminal box size 2, 122mm x 120mm x 90mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	43														
10	14	28		4)											
16	6	16	32												
20		7	18	35											
25			5	13											
35				2											
50															
63		5)													3)
1)	See explanation below the tables														
2)	See explanation below the tables														

Terminal box size 3, 220mm x 120mm x 90mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	45														
10	15	30		4)											
16	6	17	34												
20		8	19	37											
25			5	14	36										
35				2	11	30									
50					4	14									
63		5)				5									3)
1)	See explanation below the tables														
2)	See explanation below the tables														

Terminal box size 4, 160mm x 160mm x 90mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	48														
10	16	32		4)											
16	6	18	36												
20		9	20	39											
25			6	15	38										
35				2	12	31									
50					4	14									
63		5)				5									3)
1)	See explanation below the tables														
2)	See explanation below the tables														

Terminal box size 5, 260mm x 160mm x 90mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	52														
10	18	34		4)											
16	7	20	39												
20		9	22	42											
25			6	16	41										
35				2	13	34									
50					4	16	56								
63		5)				6	17	63							3)
80							7	16							
100								6							
1)	See explanation below the tables														
2)	See explanation below the tables														

Terminal box size 6, 360mm x 160mm x 90mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	53														
10	18	35		4)											
16	7	20	40												
20		9	22	43											
25			6	17	42										
35				2	13	35									
50					4	16	58								
63		5)				6	18	64							3)
80							7	17							
100								6							
1)	See explanation below the tables														
2)	See explanation below the tables														

Terminal box size 7, 255m x 250mm x 120mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	70														
10	24	46		4)											
16	10	27	52												
20		13	29	57											
25			8	22	55										
35				3	18	46									
50					6	21	76								
63		5)				6	23	85							3)
80							10	22							
100								9							
1)	See explanation below the tables														
2)	See explanation below the tables														

Terminal box size 9, 400m x 250mm x 120mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	76														
10	26	50		4)											
16	10	29	57												
20		15	32	62											
25			9	24	60										
35				9	19	50									
50					6	23	82								
63		5)				9	25	92							3)
80							11	24							
100								9	24						
125									8	21					
160										7					
200											3				
1)	See explanation below the tables														
2)	See explanation below the tables														

Terminal box size 11, 400m x 405mm x 120mm

Current [A]	Cross section [mm ²]														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
6	91														
10	31	61	236	4)											
16	13	35	68												
20		17	39	75											
25			11	29	72										
35				4	23	60									
50					8	28	99								
63		5)				10	31	111							3)
80							13	29							
100								11	29						
125									10	26					
160										9	22				
200											3	13			
225															
1)	See explanation below the tables														
2)	See explanation below the tables														

- 1) Max. number of terminals depending on the above mentioned apparatus type and the built-in 2 wire terminals.
- 2) Max. number of terminals depending on the above mentioned apparatus type and the max. number of conductors.
- 3) Max. number of conductors depending on the cross-section and allowed continuous current for the mentioned apparatus type. The number of conductors is the sum of all incoming conductors and internal wire connections. Bridge links and earth conductors do not count.
- 4) This area can be used for the installation of further terminals taking into account the definition of the clearance parameters.
- 5) Terminal installation in this area requires separate temperature rise tests for each different variant of installation.

During the selection process of the terminals the limits of the technical Parameters according to the „List of components“ GHG9025018F0001 have to be taken into account.



16 Report Number

BVS PP 18.2185 EU, as of 2018-12-07

17 Special Conditions for Use

In case of outer earthing connection part without protection against turning the use of cable lugs is not allowed. In this case only a fixed installation of the connecting cables is allowed.

The schedules of limitation of the used terminals must be handed out by passing the complete and relevant documentation of the terminal to the operator by the manufacturer.

The values for the permitted power loss according to temperature class and ambient temperature given in clause parameters apply to wall mounting as a single unit (radiating surface = 4 side walls plus cover). If the radiating surface becomes smaller due to possible obstacles, the max. permissible power loss must be reduced correspondingly.

18 Essential Health and Safety Requirements

For this product the standard EN IEC 60079-0:2018 is equivalent to the harmonized standard EN 60079-0:2012 + A11:2013 in terms of safety

19 Drawings and Documents

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH
Bochum, dated 2018-12-07
BVS-Ld/Nu A 20180576



Certifier



Approver

