

# 3E Explosion Protected Terminal Boxes

Series GHG 744, 745, 746, 749

UL/cUL Listed  
 Cl. I, Div. 2, Groups A, B, C, D  
 Cl. I, Zones 1 & 2, AEx de IIB + H<sub>2</sub>, T6  
 Cl. II, Div. 1, Groups E, F, G (cUL)  
 ATEX Certified  
 IECEX  
 CEPEL Certified

Ex de IIC, T6, Zones 1 & 2  
 Ex de IIC, T6 Zones 21 & 22  
 IP66, NEMA 4X  
 GOST-R  
 GOST-K

## Applications:

Explosion protected terminal boxes are used in a metallic conduit or cable system for a marshalling cabinet between main circuits to the control room and branch circuits into the field.

- Junction boxes for intrinsically safe or increased safety connections
- Are designed for industrial areas such as chemical plants, oil and gas refineries, paint and varnish manufacturing plants, gasoline bulk loading terminals and finishing areas where nonmetallic, weatherproof enclosures

## Features:

- Enclosures can be mounted on walls, conduits or strut systems
- Connection terminals accessible from all sides
- Snap-out brass plates for metallic entry and grounding continuity
- Snap-out terminal rails
- Clip-in grounding PE rail
- Different sizes to accommodate any number of terminal connections

## Certifications and Compliances:

- UL/cUL Listed
- Class I, Division 2, Groups A, B, C, D
- Class I, Zones 1 and 2, (A)Ex de IIB+H<sub>2</sub>, T6
- Class II, Division 1, Groups E, F, G (cUL)
- ATEX Certified
- Ex de IIC, T6, Zones 1 and 2
- Ex de IIC, T6, Zones 21 and 22
- IP66, NEMA 4X
- GOST-R and GOST-K

## Standard Materials:

- Fiberglass-reinforced polyester housings
- Enclosure gasket – silicone
- Cover screws – stainless steel
- Metal entry plates – brass
- Conduit entries – zinc Myers hubs

## Technical Data:

- Suitable from 1 to 296 terminal blocks (2.5mm<sup>2</sup>)
- Suitable for up to 90 – 3/4" hubs (largest size)
- Suitable for up to 72 – 3/4" metallic hubs
- Suitable for use as control panels
- Ex-e boxes and brass flanges can be field drilled



## Ordering Data:

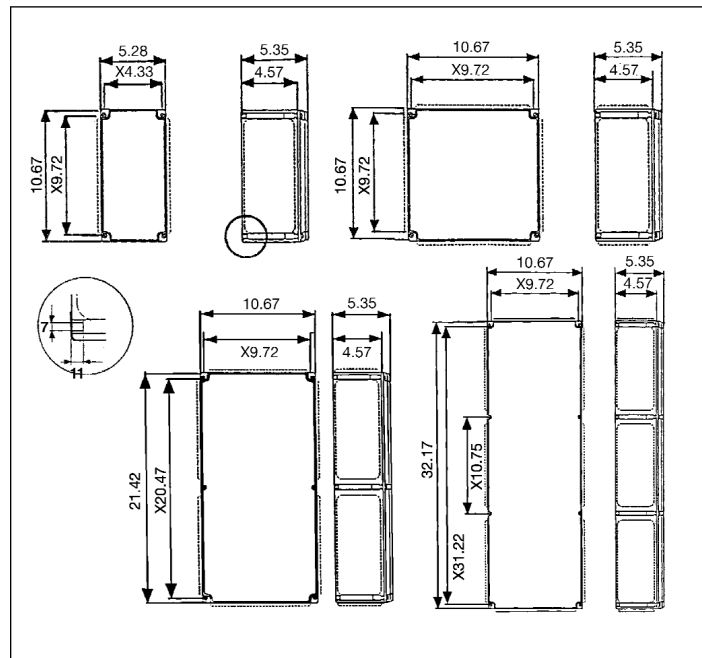
Contact factory for catalog numbers and pricing.

Have the following information ready –

- Number and size of terminals (Table 1)
- Number, size and location of entries (Tables 2 and 3)
- Required ground points (Table 4) Eaton's Crouse-Hinds will provide you with an extended list

## Dimensions

In Inches:



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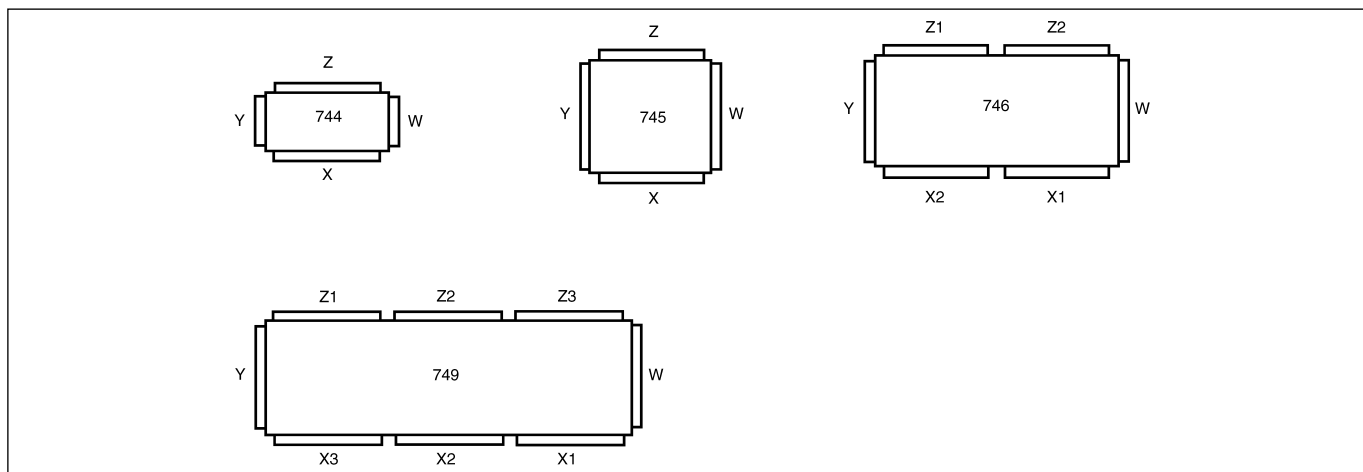
**3E**

## Panel and Side Designation:

The sides of the enclosures are designated as W, X, Y and Z alphabetically in a clockwise rotation. The narrow sides are always W and Y and the long sides are X and Z.

## Dimensions

In Inches:



**Table 1**  
 Maximum Number of Built-in Terminals Supplied with Enclosure

Type	Terminal cross section in mm <sup>2</sup>							Length of terminal rail
	2.5	4	6	10	16	25	35	
GHG 744	39	33	33	33	17	13	–	(1) 230 mm
GHG 745	2 x 40	2 x 33	2 x 39	2 x 33	40	30	20	(2) 235 mm
GHG 746	2 x 94	2 x 78	2 x 78	2 x 35	2 x 45	2 x 34	2 x 32	(2) 510 mm
GHG 749	2 x 148	2 x 124	2 x 94	2 x 75	2 x 63	2 x 63	2 x 51	(2) 795 mm

**Table 2**  
 Flange Arrangement for Each Enclosure

Enclosure	744	745	746	749
Removable Flanges	2 total 1 - top and bottom	4 total 1 per side	6 total 2 top and bottom 1 each side	8 total 3 top and bottom 1 each side
Covers*	Shallow	Deep or shallow	Deep or shallow	Shallow
# of DIN rails	1	1 or 2	1, 2, or 4	1, 2, or 6

**Table 3**  
 Maximum Number of Glands Per Side

Type	Side	M12	M16	M20	M25	M32	M40	M50	M63
NPT equivalent				1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
GHG 744	X/Z	60	36	26	18	10	7	4	3
GHG 745	X/Z	60	36	26	18	10	7	4	3
GHG 746	X/Z	120	72	52	36	20	14	8	6
GHG 749	X/Z	180	108	78	54	30	21	12	9
# of glands/flange†		46	25	20	11	8	4	3	2
# of Myers hubs/flange†			–	10	9	6	3	3	2

† If flanges are used, fewer glands can be installed. See Table 1 for flange arrangement.  
 Example: In the GHG 745 box a maximum of (10) 1/2" Myers hubs can be installed on each brass flange plates. Each side will take one brass flange for a total of (40) 1/2" Myers hubs.

\*The shallow cover is standard for terminal boxes. The deep cover is used when mounting larger sized terminal (>95 mm<sup>2</sup>) or switches for 80 amps and larger.

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## Ground Rails:

- Used to connect ground points to common ground
- PE "potential earth" – European designation
- Designated by 3 number ordering code (see Table 4)

**Table 4**  
**Explanation of 14 x 2 x 4 mm<sup>2</sup>**

Number	Meaning	Example
1 <sup>st</sup>	Number of screw terminals	14 screw terminals on strip
2 <sup>nd</sup>	# wires that can be connected on each terminal	2 ground wires can be connected
3 <sup>rd</sup>	Maximum conductor diameter	4 mm <sup>2</sup> conductors can be terminated on the ground rail (28 total, 14 terminals; 2 wires per terminal)

Use Table 5 as a conversion from AWG to mm<sup>2</sup>

**Table 5**  
**Equivalent of AWG Conductor to mm<sup>2</sup>**

AWG	Area mm <sup>2</sup>
14	2.08
12	3.31
10	5.26
8	8.37
6	13.3
4	21.15
3	26.66
2	33.63
1	42.41
1/0	53.51
2/0	67.44
3/0	85.03
4/0	107.22

