

GHG 64

New Series of Enclosures

Solutions with Flameproof Enclosures

 **COOPER** Crouse-Hinds



GHG 64: Encapsulated Safety

The New Series of Enclosures GHG 64

Explosion protection using flameproof enclosures can also be flexible.

Whether offshore applications, the usage in harsh environments of chemical plants or refineries: The new powder coated light metal enclosures of the GHG 64 series provide the highest standard of explosion protection. The flat flame path, the modular design as well as the extended temperature range (from -55°C up to $+55^{\circ}\text{C}$) are highlights of the GHG 64 series. In addition, the enclosure can be equipped with an high amount of the new Ex-d actuators, due to the compact design of the enclosures.

The enclosures design is optimised to merge the contrasts of weight reduction and strength increase.

The extraordinary rugged hinges are particularly designed to open the cover even if the GHG 64 is mounted directly side by side. Therefore, just unfasten the captive screws and by means of the innovative pull and swing hinges the cover can easily be opened. This simplifies maintenance and speeds up both repair work and the replacement of built-in components.

Furthermore, the individual enclosures can be coupled together using flameproof bushings. With eleven enclosure sizes to choose from, customised solutions for any specific application can be provided.

The advantages at a glance:

- Temperature range from -55°C to $+55^{\circ}\text{C}$
- Ex d IIB + H2 (optional)
- Rated voltage up to 690V, rated current up to 1150A
- Hinged cover with up to 110° opening angle
- Designed for easy maintenance
- Degree of protection IP 65 (IP 66 optional)
- Broad range of new Ex-d actuators and built-in components



11 Enclosure Sizes for Specific Applications



The optimised enclosure size for almost any application.

The mounting space in technical installations is often limited, whereby the smallest enclosure is determined by the amount, dimensions and heat loss of the necessary built-in components.

The better the customisation of the enclosure concerning all requirements of the customer and of the built-in components, the more convenient is the erection on site.

With the new GHG 64 series, Cooper Crouse-Hinds provides an enclosure range to suit the customer requirements best. Eleven different enclosure sizes fulfil nearly every task. However, if the dimensions of our GHG 64 enclosures prove to be too small, all the enclosures can be coupled together by using Ex-d bushings.

Size 11:	650 x 650 x 442 mm
Size 10:	430 x 650 x 437 mm
Size 9:	430 x 650 x 284 mm
Size 8:	430 x 430 x 284 mm
Size 7:	320 x 430 x 284 mm
Size 6:	320 x 430 x 191 mm
Size 5:	320 x 320 x 284 mm
Size 4:	320 x 320 x 191 mm
Size 3:	210 x 320 x 284 mm
Size 2:	210 x 320 x 191 mm
Size 1:	210 x 210 x 191 mm

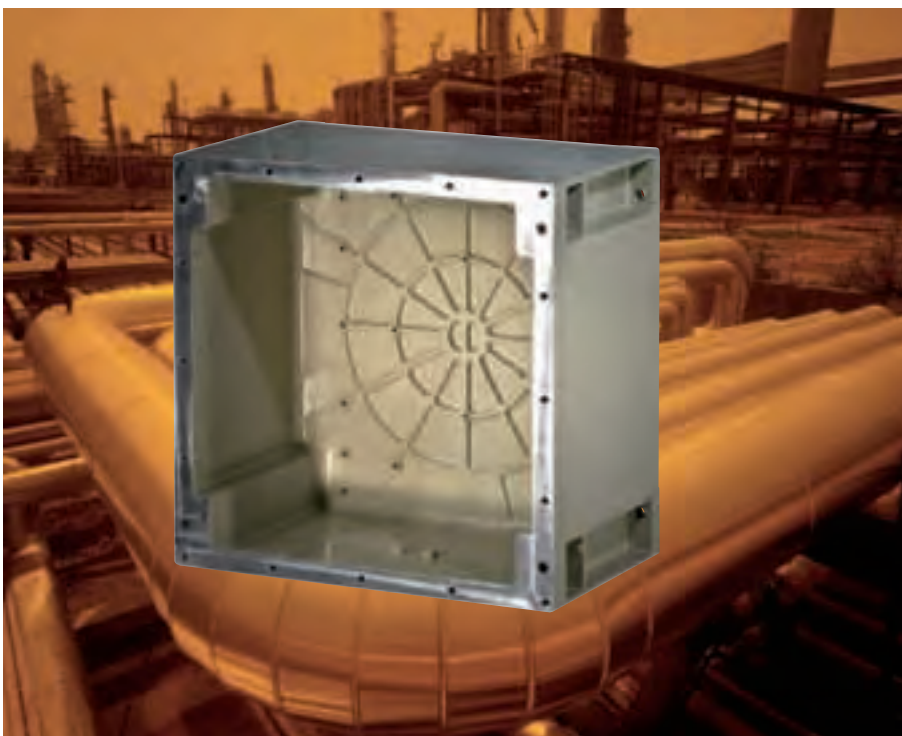
Effective power dissipation!

In addition to the various sizes and enclosure depths, the maximum power dissipation per enclosure is an important feature.

Thanks to an innovative enclosure design, we have succeeded in increasing the amount of heat that can be dissipated by 70% compared to conventional enclosures. This means a higher power loss is possible in an enclosure of the same size without exceeding the permissible temperature of the surface!

- Smaller enclosures for the same power loss

- More components per enclosure and no temperature related problems



GHG 64: Encapsulated Safety

Modular Design

Complex requirements?

In addition to pure Ex-d applications, the GHG 64 series provides a large number of sophisticated solutions to suit the customer requirements best.

Time-tested Ex-e connection boxes or bus bar boxes, new actuators and indicating devices complete the apparatus range. Larger distribution and control panels can be configured easily by using the flameproof couplers.

A wide range of actuators and contact elements, that have been especially adapted for this enclosure series, can be mounted into threaded holes.

Actuating levers for various circuit breakers, locking facilities and actuators complete the product range. Thus, individual solutions like pure Ex-d or Ex-d / Ex-e combinations are available for a wide variety of applications, such as:

- Empty enclosures
- Terminal enclosures
- Control units
- Motor starters
- Main switches
- Flameproof distributions
- Instrumentation



Modular Design - Low Maintenance and Safe -



In addition to the known bus bar and connection boxes, a wide variety of new built-in components, such as switches, indicating devices, actuators and contact blocks, allow a multitude of combinations for customised complex controls.

Threaded Ex-d holes in accordance with your specifications are drilled into the enclosure covers in our works. The desired components are simply screwed into those drillings.

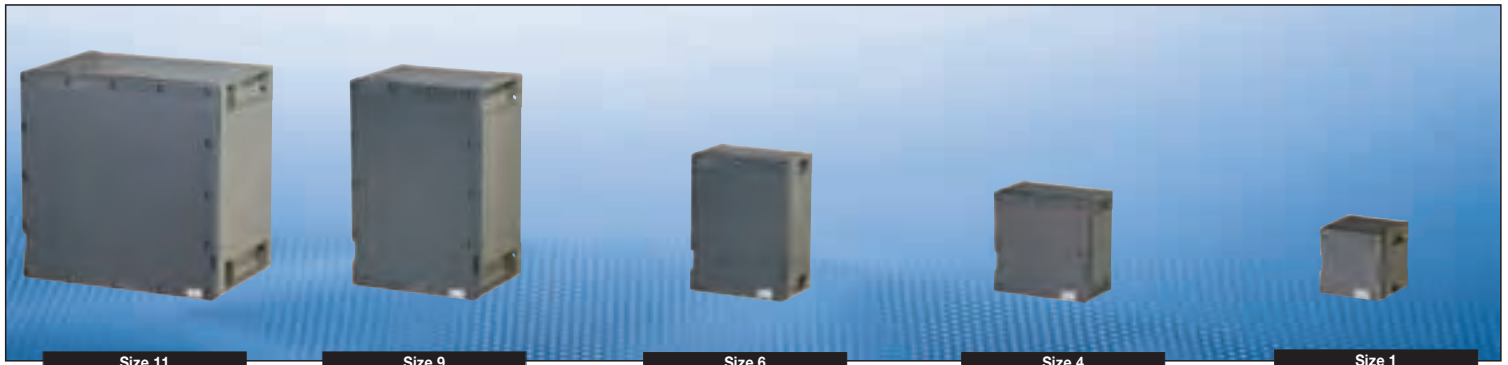
Each part can be easily exchanged due to the modular layout of the actuators and contact blocks: Simply by opening the bayonet coupling between the actuator and the contact block. The contact blocks provide all combinations of N/O and N/C from 1 pole up to 4 poles.

Durable LED indicator lamps ensure safe operation on a lasting basis. Actuating elements for various MCBs resp. RCDs and mushroom-head pushbuttons, key-operated switches or photo-cell inserts complete the product range.

- Pushbuttons (up to 4 poles with any combination of N/O and N/C)
- Pushbuttons with emergency stop function
- Key-operated switches / pushbuttons
- Indicating lamp in various colours
- Padlocking facilities
- Type labels
- Actuators for circuit breakers

GHG 64 Empty Enclosures

Technical Data Ex-Control- and Distribution Units GHG 64



Ex d light alloy empty enclosure GHG 64	
Marking to 94/9/EC	⊕ II 2 G Ex de IIB / IIB + H ₂ , T5, T6
EC-Type Examination Certificate	PTB 08 ATEX 1042U
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	1150 A
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP65 (IP66 as option)
Weight	see ordering details
Enclosure material	aluminium die-cast housing
Enclosure colour	RAL 7032/7022

Ordering details empty enclosures (II B)

Version	Power dissipation (T _{amb.} = 40 °C)		Weight	Dimensions L x W x D	Order No.
	T6	T5			
Ex d light alloy empty enclosures					
Size 1	94 W	134 W	10.5 kg	210 x 210 x 191 mm	GHG 640 1901 R0001
Size 2	112 W	158 W	14.0 kg	320 x 210 x 191 mm	GHG 640 1902 R0001
Size 3	140 W	195 W	17.0 kg	320 x 210 x 284 mm	GHG 640 1903 R0001
Size 4	152 W	214 W	18 kg	320 x 320 x 191 mm	GHG 640 1904 R0001
Size 5	197 W	280 W	21 kg	320 x 320 x 284 mm	GHG 640 1905 R0001
Size 6	240 W	335 W	22 kg	430 x 320 x 191 mm	GHG 640 1906 R0001
Size 7	270 W	390 W	27 kg	430 x 320 x 284 mm	GHG 640 1907 R0001
Size 8	270 W	390 W	35 kg	430 x 430 x 284 mm	GHG 640 1908 R0001
Size 9	390 W	430 W	53 kg	650 x 430 x 284 mm	GHG 640 1909 R0001
Size 10	470 W	640 W	73 kg	650 x 430 x 437 mm	GHG 640 1910 R0001
Size 11	470 W	640 W	105 kg	650 x 650 x 442 mm	GHG 640 1911 R0001

Assembly Devices - Systems

Technical Data Assembly Devices



Mushroom head w. look

Mushroom head pushbutton

pushbutton


Key operated pushbutton



Signal lamp



Ex d built-in control units/signal units / actuators for GHG 64



Marking to 94/9/EC	⊕ II 2 G Ex d II
EC-Type Examination Certificate	PTB 06 ATEX 1009U
Permissible ambient temperature	-20 °C to +40 °C -55 °C to +55 °C (option)
Rated voltage switch	690 V
Rated voltage Indication lamp	230 V
Rated current (switch)	63 A
Degree of protection acc. to EN 60529	IP65 (IP66 as option)
Ex-d fixing thread	M22 x 1,5

Ordering details

Type	Version	Order No.
	1 NO	GHG 640 9617 P0001
	1 NC	GHG 640 9617 P0002
	1S + 1Ö	GHG 640 9617 P0003
	2 NO	GHG 640 9617 P0004
	2 ö	GHG 640 9617 P0005
	2 NO + 1 NC	GHG 640 9617 P0006
	1 NO + 2 NC	GHG 640 9617 P0007
	2 NO + 2 NC	GHG 640 9617 P0008
	3 NO + 1 NC	GHG 640 9617 P0009
	1 NO + 3 NC	GHG 640 9617 P0010
	4 NO	GHG 640 9617 P0011
	4 NC	GHG 640 9617 P0012

Type	Version	Order No.
	yellow	GHG 660 9607 P0001
	blue	GHG 640 9607 P0002
	red	GHG 640 9607 P0003
	green	GHG 640 9607 P0004
	white	GHG 640 9607 P0005
	black	GHG 640 9607 P0006
	Key-operated pushbutton	
	with 2 keys	GHG 640 9608 P0001

Type	Version	Order No.
	Signal lamp unit	
	green	GHG 640 9614 P0001
	red	GHG 640 9614 P0002
	yellow	GHG 640 9614 P0003
	blue	GHG 640 9614 P0004
	colourless	GHG 640 9614 P0005
	Mushroom head pushbutton/ emergency stop pushbutton	
	D 36 mm with lock	GHG 640 9603 P0001
	D 50 mm with lock	GHG 640 9603 P0002
	rotary unlocking	GHG 640 9604 P0001
emerg. stop pushbutton	GHG 640 9606 P0001	

Type	Version	Order No.
	Rotary actuator for MCBs	GHG 640 9602 P0001
	Rotary actuator for 20 A/ 32 - 63 A	GHG 640 9612 P0001
	Locking device	
	Pushbutton pressed	GHG 640 9614 P0001
	Pushbutton unpressed	GHG 640 9614 P0002
	MCB actuator	GHG 640 9614 P0003

Further assembly devices you will find in our master catalogue

Ex-d(e) control units, control switches, terminal boxes and distribution can be built in accordance with the EC-Type Examination Certificate PTB 08 ATEX 1043X.

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