

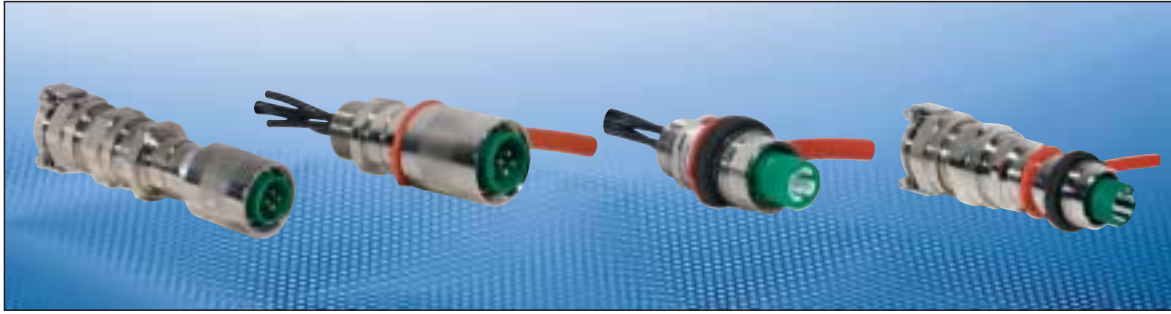
# eXLink Mining

Electrical connectors for mining

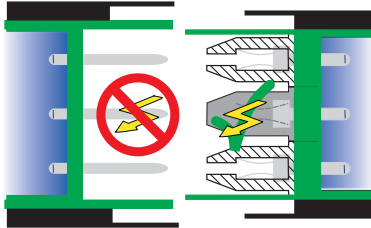
 **COOPER** Crouse-Hinds



## | What is eXLink? |



### What is eXLink?



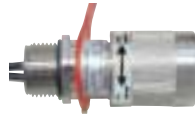
**eXLink** is a complete system for connecting and disconnecting products electrically. This system is available in different versions for different applications: 4-pole, 4-pole + PE and 6-pole + PE.

Here it is necessary to distinguish between active components (couplers/receptacles) that, due to the design of the live parts (contact sockets in IP 30), can also be live when open, and passive components (plugs/inlets) that, due to the exposed plug pins, must not be live.



#### • Connection of armoured cables:

In order to be able to provide a solution for the connection of armoured, braided or screened cables, we have developed a metal version with an universal armouring clamp. This allows the use of many commonly used armoured cables. An external strain relief provides protection against strong external forces. This solution is available in nickel-plated brass and stainless steel for plugs and couplers.



#### • Threads:

The 4-pole and 4-pole + PE inlets and receptacles feature an integral M20 or NPT 1/2" thread. The 6-pole + PE inlets and receptacles have an integral M25 or NPT 3/4" thread.



#### • Plug:

Suitable as a cable end – with plug pins (male), must not be live when disconnected (passive component), for inline connection.



#### • Coupler:

Suitable as a cable end – with contact sockets (female), can be live when disconnected (active component), for inline connection.



#### • Receptacle:

Suitable for installation in products – with contact sockets (female), can be live when disconnect (active component).



#### • Inlet:

Suitable for installation in products – with plug pins (male), must not be live when disconnected (passive component).



Source: Deutsche Steinkohle AG

### Miniature electrical connectors for mining

Connecting and disconnecting electrical equipment in underground mining – without tools, without switching off and without hot work permit – is a decisive step into a future where the assembly, maintenance and repair of electrical equipment can be handled simply, safely and at low cost. With connectors for armoured cables approved for operation in areas where there is danger of fire damp you can connect lamps, indicators, sensors, motors etc. with a current consumption of up to 16 A easily by plugging.



For example, lamps connected via **eXLink** can be serviced or changed at any time without having to switch off the entire lamp line. Actuators and sensors with **eXLink** connection can be changed quickly and safely at any time. Components of large machines can be changed easily by plugging and with the **eXLink 6+1** any current consumers with 3 phases up to 16 A, PE and 2-wire control cable can be connected by just one small plug.

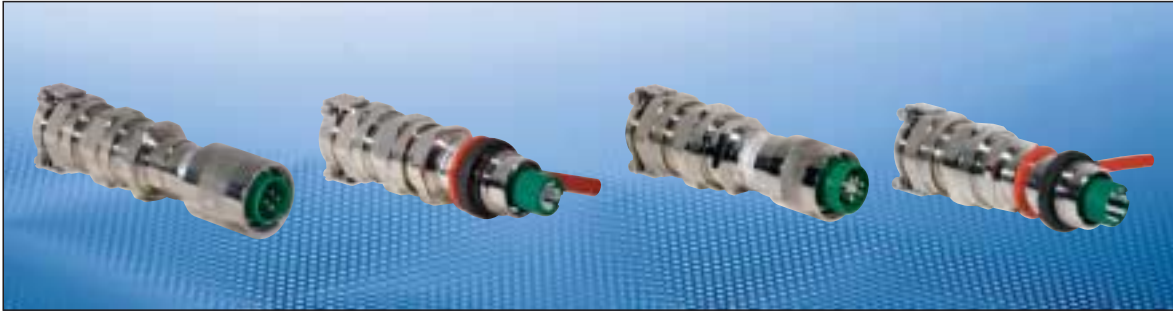
The plugs and coupler of the **eXLink** series designed in Ex-de type of protection are handy and small. The sockets have the proven CEAG contacts of shutter-like punched and specially treated copper beryllium strip which provide a continuously perfect electrical connection with the large number of contact points. An Ex-d space around the plug pins provides reliable explosion protection in fire damp hazard areas when connecting and disconnecting the apparatus. The plugs and sockets can be coded similarly to the CEE system. Depending on the area of application you can choose between the versions 4-pole plus PE (**eXLink 4+1**) or 6-pole plus PE (**eXLink 6+1**). Housing material is available in AISI 316L.

According to the requirements of a modern, reliable and time-saving assembly, all components are designed without screws and are available with crimp and spring terminal types.

- Quick connection and disconnection in areas where there is a risk of fire damp
- Secure electrical and mechanical connection in compact housings
- No switching off and disconnection necessary
- Reduction in downtimes
- Maximum type of protection IP 66/IP 68
- Wide operating temperature range
- Infinite flexibility due to different versions and codings
- Reverse polarity protected connections by coding



**| eXLink 4-pole / 4-pole + PE / 6-pole + PE / 7-pole |**

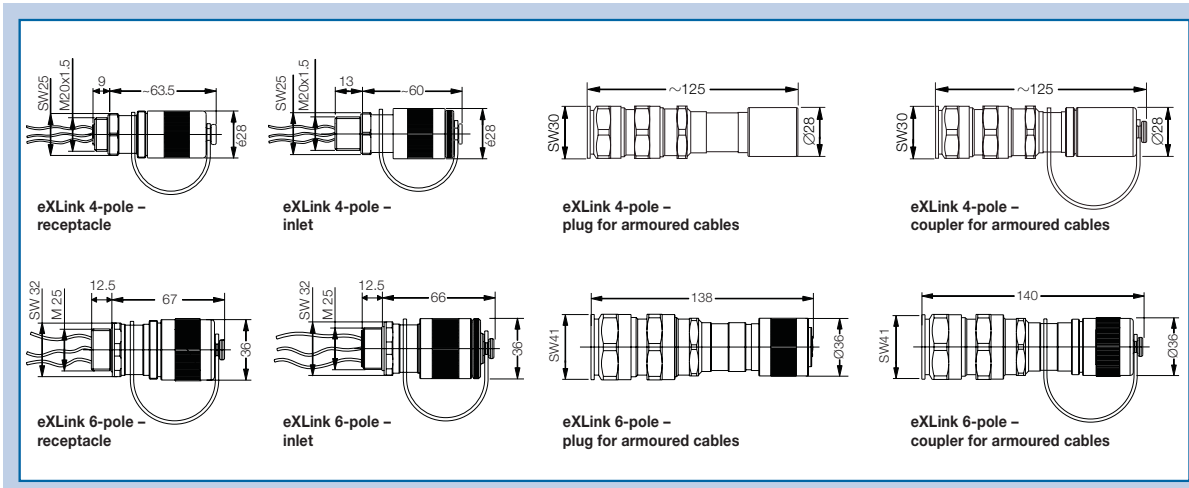


**Technical data**

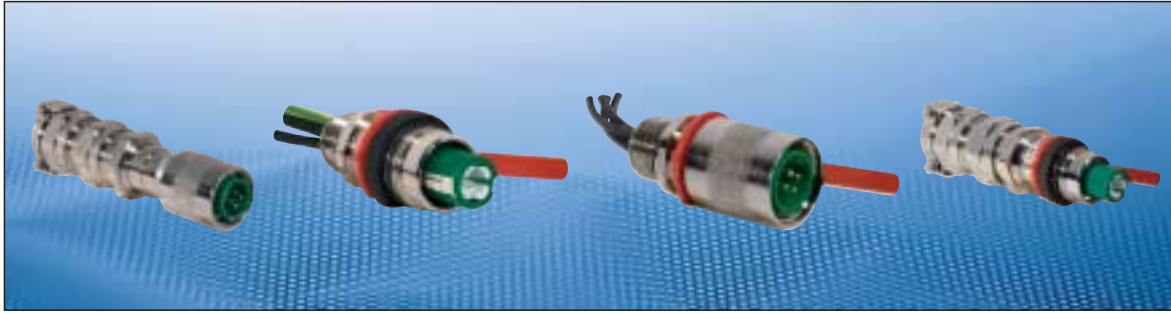
eXLink 4-pole / 4-pole + PE / 6-pole + PE / 7-pole	
Marking to 94/9/EC	Ⓜ I M2 Ex de I
Type of protection	Ex de IIC T6
EC-Type Examination Certificate	BVS 07 ATEX E 020 X
Frequency range	0-100 MHz, fast Ethernet compatible
Transmission performance acc. to TIA/EIA-568-B.2	Category 5e up to 100 Mbaud
Degree of protection EN 60529	IP 66/IP 68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	Stainless steel AISI 316L
Terminal cross section	Plug/Coupler: Crimp 1.5 mm <sup>2</sup> : 0.75 - 1.5 mm <sup>2</sup> / Solder: 0.34 - 1.0 mm <sup>2</sup> Crimp 2.5 mm <sup>2</sup> : 1.5 - 2.5 mm <sup>2</sup>
	Receptacle/Inlet: 30 cm multi wire: 1.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>

eXLink	4-pole/4-pole + PE 1	6-pole + PE 1 / 7
Permissible ambient temperature	-55 °C up to +40 °C (rated current 10 A)	-20 °C up to +40 °C (rated current 16 A)
Extended temperature range	-55 °C up to +75 °C (rated current 2 A)	-55 °C up to +75 °C (rated current 2 A)
Store temperature in original wrapping	-55 °C up to +80 °C	-55 °C up to +80 °C
Rated voltage	AC up to 250 V, 50/60 Hz / DC up to 60 V	AC up to 400 V, 50/60 Hz / DC up to 60 V
Rated current	max. 10 A	max. 3 x 16 A
Switching capacity acc. EN 61 984	AC: 250 V / 10 A DC: 60 V / 2.5 A	400 V / 16 A
Switching capacity acc. EN 60 947-4	AC-3: 250 V / 1 A DC-3: 60 V / 0.5 A	250 V / 1 A 60 V / 0.5 A
Back-up fuse max. without thermal protection	10 A	16 A
Back-up fuse max. with thermal protection	20 A gL	20 A gL
Insulation class acc. EN 60598	I	I
Cable entry	Plug/Coupler: external isol. Ø 12 - 21 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm	external isol. Ø 16 - 26 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm
	Receptacle/Inlet: M20 x 1.5 / opt. 1/2" NPT	M25 x 1.5 / opt. 3/4" NPT

**Dimension drawing**

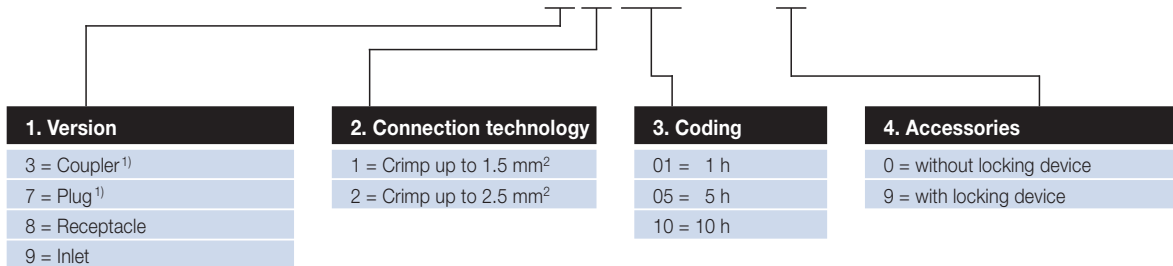


Dimensions in mm



**Ordering key eXLink 4-pole + PE for armoured cables**

# GHG 574 XXXX R7X0X

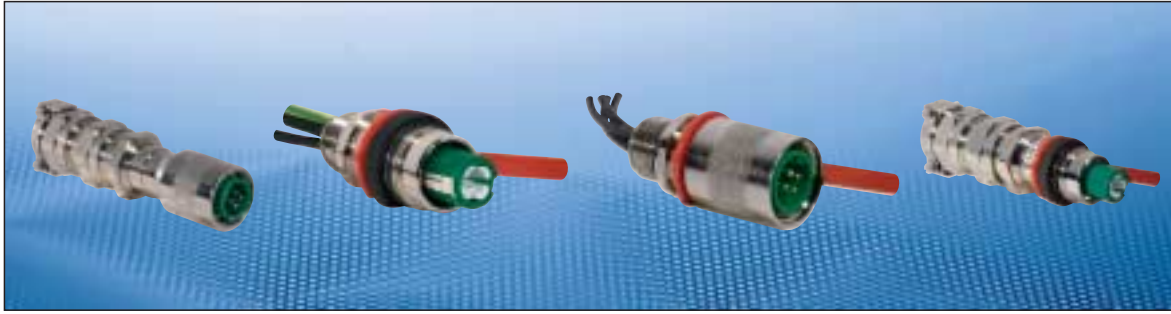


**Ordering details**

Voltage	No. of poles	Coding	Connection	Diameter of connection cable 12 - 21 mm	
				Order No.	Order No.
Plug/coupler in stainless steel AISI 316L for armoured cables <sup>1)</sup>				Plug	Coupler
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 574 7101 R7003</b>	<b>GHG 574 3101 R7003</b>
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 574 7105 R7003</b>	<b>GHG 574 3105 R7003</b>
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm <sup>2</sup>	<b>GHG 574 7205 R7003</b>	<b>GHG 574 3205 R7003</b>
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 574 7110 R7003</b>	<b>GHG 574 3110 R7003</b>
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm <sup>2</sup>	<b>GHG 574 7210 R7003</b>	<b>GHG 574 3210 R7003</b>

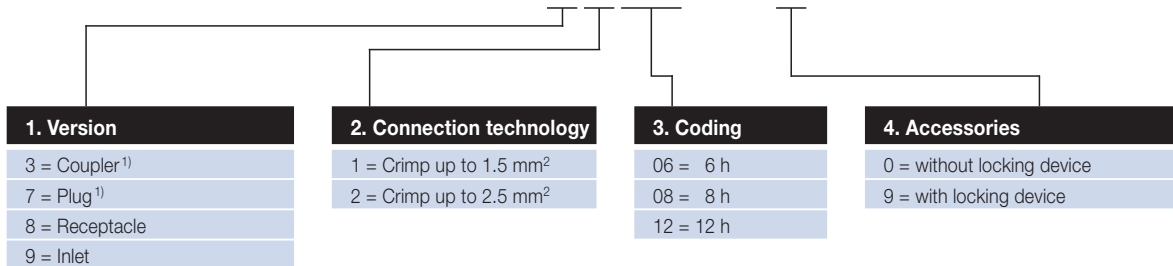
Inlet/Receptacle in stainless steel AISI 316L				Inlet	Receptacle
Ethernet/Bus	4-pol + PA	1 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 574 9101 R7001</b>	<b>GHG 574 8101 R7001</b>
24 V DC	4-pol + PE	5 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 574 9105 R7001</b>	<b>GHG 574 8105 R7001</b>
24 V DC	4-pol + PE	5 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 574 9205 R7001</b>	<b>GHG 574 8205 R7001</b>
230 V AC	4-pol + PE	10 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 574 9110 R7001</b>	<b>GHG 574 8110 R7001</b>
230 V AC	4-pol + PE	10 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 574 9210 R7001</b>	<b>GHG 574 8210 R7001</b>

<sup>1)</sup> Strain relief in nickel-plated brass



**Ordering key eXLink 4-pole for armoured cables**

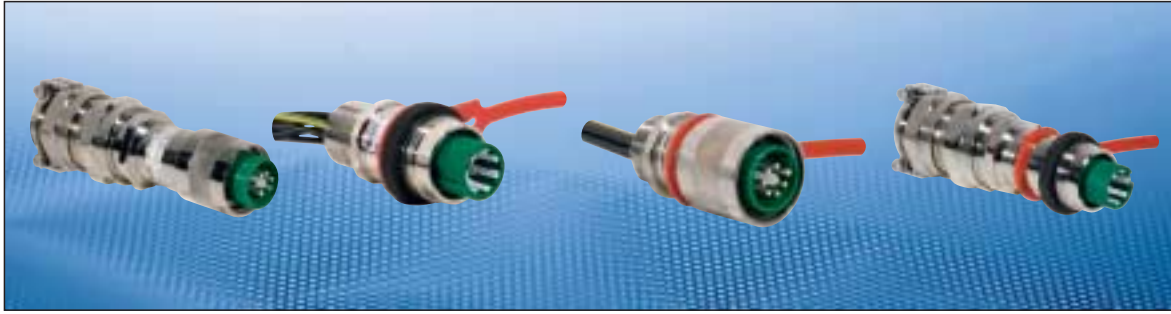
# GHG 571 XXXX R7X0X



**Ordering details**

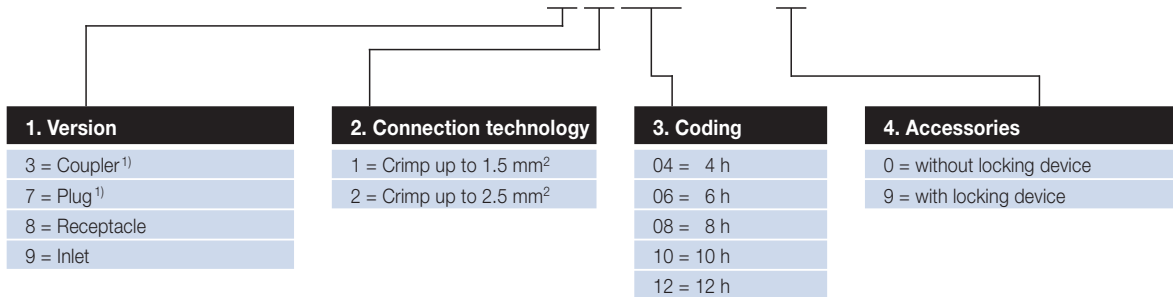
Voltage	No. of poles	Coding	Connection	Diameter of connection cable 12 - 21 mm	
				Order No.	Order No.
Plug/coupler in stainless steel AISI 316L for armoured cables <sup>1)</sup>				Plug	Coupler
230 V AC	2-pol + PE	6 h	1.5 mm <sup>2</sup> Crimp	<b>GHG 571 7106 R7003</b>	<b>GHG 571 3106 R7003</b>
230 V AC	2-pol + PE	6 h	2.5 mm <sup>2</sup> Crimp	<b>GHG 571 7206 R7003</b>	<b>GHG 571 3206 R7003</b>
24 V DC	4-pol	8 h	1.5 mm <sup>2</sup> Crimp	<b>GHG 571 7108 R7003</b>	<b>GHG 571 3108 R7003</b>
24 V DC	4-pol	8 h	2.5 mm <sup>2</sup> Crimp	<b>GHG 571 7208 R7003</b>	<b>GHG 571 3208 R7003</b>
24 V AC	2-pol + PE	12 h	1.5 mm <sup>2</sup> Crimp	<b>GHG 571 7112 R7003</b>	<b>GHG 571 3112 R7003</b>
24 V AC	2-pol + PE	12 h	2.5 mm <sup>2</sup> Crimp	<b>GHG 571 7212 R7003</b>	<b>GHG 571 3212 R7003</b>
Inlet/Receptacle in stainless steel AISI 316L				Inlet	Receptacle
230 V AC	2-pol + PE	6 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 571 9106 R7001</b>	<b>GHG 571 8106 R7001</b>
230 V AC	2-pol + PE	6 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 571 9206 R7001</b>	<b>GHG 571 8206 R7001</b>
24 V DC	4-pol	8 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 571 9108 R7001</b>	<b>GHG 571 8108 R7001</b>
24 V DC	4-pol	8 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 571 9208 R7001</b>	<b>GHG 571 8208 R7001</b>
24 V AC	2-pol + PE	12 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 571 9112 R7001</b>	<b>GHG 571 8112 R7001</b>
24 V AC	2-pol + PE	12 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 571 9212 R7001</b>	<b>GHG 571 8212 R7001</b>

<sup>1)</sup> Strain relief in nickel-plated brass



**Ordering key eXLink 6-pole + PE for armoured cables**

# GHG 572 XXXX R7X0X



**Ordering details**

Voltage	No. of poles	Coding	Connection	Diameter of connection cable 16 - 26 mm	
				Order No.	Order No.
Plug/coupler in stainless steel AISI 316L for armoured cables <sup>1)</sup>				Plug	Coupler
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 572 7104 R7003</b>	<b>GHG 572 3104 R7003</b>
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm <sup>2</sup>	<b>GHG 572 7204 R7003</b>	<b>GHG 572 3204 R7003</b>
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 572 7106 R7003</b>	<b>GHG 572 3106 R7003</b>
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm <sup>2</sup>	<b>GHG 572 7206 R7003</b>	<b>GHG 572 3206 R7003</b>
24 V DC	7-pol	8 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 572 7108 R7003</b>	<b>GHG 572 3108 R7003</b>
24 V DC	7-pol	8 h	Crimp up to 2.5 mm <sup>2</sup>	<b>GHG 572 7208 R7003</b>	<b>GHG 572 3208 R7003</b>
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 572 7110 R7003</b>	<b>GHG 572 3110 R7003</b>
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm <sup>2</sup>	<b>GHG 572 7210 R7003</b>	<b>GHG 572 3210 R7003</b>
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm <sup>2</sup>	<b>GHG 572 7112 R7003</b>	<b>GHG 572 3112 R7003</b>
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm <sup>2</sup>	<b>GHG 572 7212 R7003</b>	<b>GHG 572 3212 R7003</b>

Inlet/receptacle in stainless steel AISI 316L				Inlet	Receptacle
110 V AC	6-pol + PE	4 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 572 9104 R7001</b>	<b>GHG 572 8104 R7001</b>
110 V AC	6-pol + PE	4 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 572 9204 R7001</b>	<b>GHG 572 8204 R7001</b>
230 V AC	6-pol + PE	6 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 572 9106 R7001</b>	<b>GHG 572 8106 R7001</b>
230 V AC	6-pol + PE	6 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 572 9206 R7001</b>	<b>GHG 572 8206 R7001</b>
24 V DC	7-pol	8 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 572 9108 R7001</b>	<b>GHG 572 8108 R7001</b>
24 V DC	7-pol	8 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 572 9208 R7001</b>	<b>GHG 572 8208 R7001</b>
400 V AC	6-pol + PE	10 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 572 9110 R7001</b>	<b>GHG 572 8110 R7001</b>
400 V AC	6-pol + PE	10 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 572 9210 R7001</b>	<b>GHG 572 8210 R7001</b>
24 V AC	6-pol + PE	12 h	300 mm 1.5 mm <sup>2</sup>	<b>GHG 572 9112 R7001</b>	<b>GHG 572 8112 R7001</b>
24 V AC	6-pol + PE	12 h	300 mm 2.5 mm <sup>2</sup>	<b>GHG 572 9212 R7001</b>	<b>GHG 572 8212 R7001</b>

<sup>1)</sup> Strain relief in nickel-plated brass

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