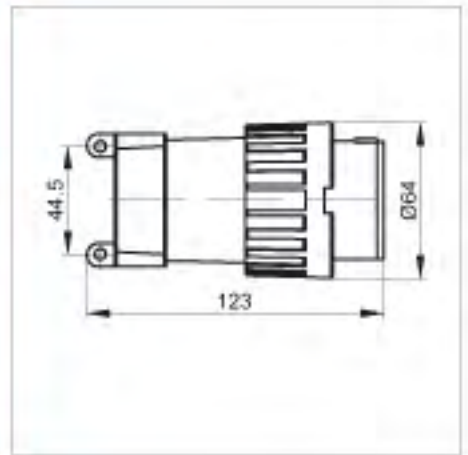


Circular Connectors

Series G Series GM



Modular connector system: G and GM Series

Our G and GM Series connectors are of rugged design providing high-performance reliability and maximum safety in harsh environments. Their modular design lets you build the right connector for every application quickly and easily. Sealed to IP54 and IP67 respectively, our G and

GM Series circular connectors are dustproof, pressure proof and water protected. They are also resistant to the effects of most acids and alkalis as well as the extremes of temperature.

Metal shells: Series G18, G28, G42, G57

Series G connectors come in 4 shell sizes and a variety of contact arrangements (2 to 48 contacts). The shells made of aluminium die-cast alloy and featuring bayonet or threaded coupling are highly resistant to shock, vibration and the harsh environmental conditions the connector is subjected to.

Thermoplastic shells: Series GM42, GM57

Series GM connectors are available in 2 shell sizes and with contact arrangements of 8 up to 64 contacts. The connectors feature threaded coupling and are sealed to IP67. The shells are made of Polyamide-6. The contact inserts are partly identical with the ones of the G Series, in addition to that, however, there is the option of an insert with 64 contacts.

Features

● Modular design:

The modular design of the G and GM Series lets you build many different plug and socket configurations to fit your application:

- Customized and cost-effective realisation of your application.
- Variety of configurations, e.g. plugs and right-angle plugs, receptacles and cable-connecting receptacles and their flange mount versions

● Materials:

- | | |
|-----------|--|
| Contacts: | <ul style="list-style-type: none"> ● High-quality spring-loaded wiping contacts ensure a low contact resistance that does not deteriorate due to the constant pressure of the springs. ● Contact finish: galvanically silver plated and passivated contacts. Gold plated contacts on request. ● Series G: Solder lugs, crimped connections, and screw-type clamping units ● Series GM: Solder lugs and crimped connections ● Crimp contacts are removable |
| Inserts: | <ul style="list-style-type: none"> ● Series G: High-temperature thermoset ● Series GM: High-temperature thermoset, thermoplastic |
| Shells: | <ul style="list-style-type: none"> ● Series G: Aluminium die-cast alloy, hammer-tone enamelled: noncorrosive, impact resistant, shock-, dust-, and splash-proof ● Series GM: Polyamide-6, noncorrosive, impact resistant, dustproof and sealed against pressurised water, UL-listed |

● Interchangeable inserts:

Contact inserts are completely interchangeable between plug and receptacle shell at any time. Thus the fully insulated female inserts can always be mounted on the live part irrespective of the shell.

● Polarization:

Male and female inserts feature five different key positions max. which provide fool-proof orientation and polarization of connector components. This allows the unmistakable connection of 5 connectors of similar type but for different voltages to one and the same piece of equipment.



G18 and G28 Series connectors

Applications, Variants, Standards

Applications

G Series connectors are specifically designed for applications where reliability under difficult conditions is paramount. The hammer-toned enamelled aluminium die-cast shell makes the connector resistant to a wide range of stresses as they occur in public transport, mining and metallurgy, the marine, construction site, and power plant equipment industries, as well as the environmental and food and beverage sectors.

GM Series connectors are the cost-effective alternative for situations that allow the use of a plastic connector and may benefit from the added degree of protection that comes along with it.

Variants

In this catalogue only stock items are presented. Do you need a variant such as a connector with a different layout? Do not hesitate to contact us! Maybe the connector you are looking for is among our many special designs. If not, we also deliver connectors manufactured to customer requirements. In this case, however, minimum order quantities apply.

Standards

- Electrical and mechanical characteristics of connectors to IEC 60512, IEC 61984
- Degree of protection in compliance with IEC 60529
- Material flammability rating: UL94-V0

Shell size, contact arrangement

● Series G18

- Shell size G18 reflects the size of the contact insert which has a diameter of 18 mm
- Contact arrangement: 3, 4, 5, 8 or 12 pole connector without protective earthing contact (PE)

● Series G28

- Shell size G28 reflects the size of the contact insert which has a diameter of 28 mm
- Contact arrangement: 2, 3, 4, 5, 6, and 7 pole connector with PE or 5, 12, 16 and 24 pole connector without PE

● Series G42

- Shell size G42 reflects the size of the contact insert which has a diameter of 42 mm
- Contact arrangement: 3, 4, 6, 6+2, 8, 10, 12, 14, 20 pole connector with PE or 24 pole connector without PE

● Series G57

- Shell size G57 reflects the size of the contact insert which has a diameter of 57 mm
- Contact arrangement: 4, 16, 24, 32, 48 pole connector with PE or 4+5 pole connector without PE

● Series GM42

- Shell size GM42 reflects the size of the contact insert which has a diameter of 42 mm
- Contact arrangement: 6+2, 10, 12, 14, 20 and 64 pole connector with PE

● Series GM57

- Shell size GM57 reflects the size of the contact insert which has a diameter of 57 mm
- Contact arrangement: 4, 16, 32, and 48 pole connector with PE








G42 and G57 Series connectors



GM42 and GM57 Series connectors

Specifications








Connector type	Series G18				
	3 pole	4 pole	5 pole	8 pole	12 pole
Number of contacts					
Contact arrangement					
Contact identification marked on insert:					
Pin insert: Rear view	7 2	7 2	5 7	7 1 2 8 3	8 1 2 9 3 4
Socket insert: Front view	5	4 4	4 3	5 4	7 11 4 3 3
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	25 V	25 V	25 V	25 V	25 V
Key positions (polarization)	5	5	3	5	2
Contacts					
Maximum rated current of individual contact, see also page 44	3 x 16 A	4 x 16 A	5 x 7.5 A	8 x 16 A	12 x 7.5 A
Outer diameter of contact ¹⁾	∅ 1.58 mm	∅ 1.58 mm	∅ 1.58 mm	∅ 1.58 mm	∅ 1.58 mm
Contact type/size (crimp contacts)				A	
PE contact *					
Diameter solder contacts	—	—	—	—	—
Diameter screw-type contacts	—	—	—	—	—
Contact type/size (crimp contacts)	—	—	—	—	—
Wire section and rated current of individual contact					
Solder contacts:					
0.50 mm ² (AWG 20)	—	—	7.5 A (socket)	—	7.5 A (socket)
0.75 mm ² ... 1.00 mm ² (AWG 18 ... 16)	—	—	7.5 A (pin)	—	7.5 A (pin)
1.50 mm ² (AWG 14)	—	—	—	—	—
2.50 mm ² (AWG 12)	16 A	16 A	—	16 A	—
Crimp contacts:					
0.50 mm ² (AWG 20)	—	—	—	7.5 A	—
0.75 mm ² ... 1.00 mm ² (AWG 18 ... 16)	—	—	—	10 A	—
1.50 mm ² (AWG 14)	—	—	—	16 A	—
2.50 mm ² (AWG 12)	—	—	—	16 A	—
4.00 mm ² (AWG 10)	—	—	—	—	—
6.00 mm ² (AWG 9)	—	—	—	—	—
Screw-type contact:					
2.50 mm ² (AWG 12)	—	—	—	—	—
Contact resistance (IEC 60512-2)	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ
Insulation resistance (IEC 60512-2)	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ
Range of operating temperature **	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C
Degree of protection when mated or coupled (IEC 60529)	IP54	IP54	IP54	IP54	IP54
Test standard (IEC 60068-1) (tmin[°C]/tmax[°C]/test days)	-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21
Mechanical endurance (mating cycles) (IEC 60512-5, test 9a)	5,000	5,000	5,000	5,000	5,000
Contact retention (crimp contacts)	— ***	— ***	— ***	> 75 N	— ***
Materials					
Shells			Aluminum die-cast alloy		
Inserts			Polyamide-6 / thermoset		
Flammability rating			UL 94-V0		
Seals			Perbunan, neoprene		
Contacts					
Solder contacts			Brass		
Crimp contacts			Copper wrought alloy		
Plating: Solder contacts			Ag		
Crimp contacts			Ag (Au on request)		

* PE = Protective conductor terminal

** Operating temperatures exceeding 25° C account for lower rated current values, see derating diagrams on page 43.

*** Soldering and screw-type contacts are permanently mounted in the insert

Specifications

Series G28						
2 pole + PE	3 pole + PE	4 pole + PE	5 pole	5 pole + PE	6 pole + PE	7-pole + PE
						
5 2 PE	5 7 2 PE	8 1 4 PE 2	8 1 7 4 3	8 1 7 4 PE 3	8 1 5 2 4 PE 3	8 1 5 7 2 4 PE 3
230 V/400 V PE contact	230 V/400 V PE contact	230 V/400 V PE contact	42 V	230 V/400 V PE contact	230 V/400 V PE contact	230 V/400 V PE contact
5	5	5	5	5	5	5
2x 27.5 A	3x 26 A	4x 25 A	5x 23 A	5x 23 A	6x 22 A	7x 20 A
∅ 2.3 mm	∅ 2.3 mm	∅ 2.3 mm	∅ 2.3 mm	∅ 2.3 mm	∅ 2.3 mm	∅ 2.3 mm B
∅ 3 mm ∅ 2.3 mm	∅ 3 mm ∅ 2.3 mm	∅ 3 mm	—	∅ 3 mm	∅ 3 mm	∅ 3 mm
—	—	—	—	—	—	H
—	—	—	—	—	—	—
—	—	—	—	—	—	—
27.5 A	27.5 A	27.5 A	27.5 A	27.5 A	27.5 A	27.5 A
—	—	—	—	—	—	7.5 A
—	—	—	—	—	—	10 A
—	—	—	—	—	—	16 A
—	—	—	—	—	—	27.5 A
—	—	—	—	—	—	35 A
—	—	—	—	—	—	35 A
27.5 A	27.5 A	—	—	—	—	—
< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ
> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ
-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C
IP54	IP54	IP54	IP54	IP54	IP54	IP54
-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21
5,000	5,000	5,000	5,000	5,000	5,000	5,000
—***	—***	—***	—***	—***	—***	> 75 N
Aluminium die-cast alloy Polyamide-6 / thermoset UL 94-V0 Peibunane, neoprene						
Brass Copper wrought alloy Ag Ag						

Specifications








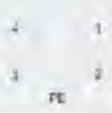
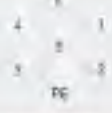
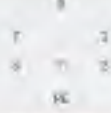
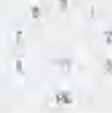
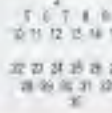
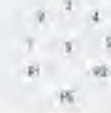
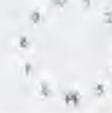
Connector type	Series G28 <small>(continued)</small>			Series G42	
	12 pole	16 pole	24 pole	3 pole + PE	3 pole + PE
Contact arrangement					
Contact identification marked on insert: Pin insert: Rear view Socket insert: Front view					
Rated voltage (IEC 60038) Pollution degree 3 (IEC 60512)	42 V	42 V	42 V	230 V/400 V PE contact	230 V/400 V PE contact
Key positions (polarization)	5	5	5	5	5
Contacts					
Maximum rated current of individual contact, see also page 44	12 x 16 A	16 x 16 A	24 x 7.5 A	3 x 63 A	3 x 20 A
Outer diameter of contact / Contact type/size (crimp contacts)	∅ 1.58 mm	∅ 1.58 mm	∅ 1.58 mm	∅ 6 mm	∅ 3 mm
PE-contact *					
Diameter solder contacts	—	—	—	∅ 6 mm	∅ 3 mm
Diameter screw-type contacts	—	—	—	—	—
Contact type/size (crimp contacts)	—	—	—	—	—
Wire section and rated current of individual contact					
Solder contacts					
0.50 mm ² /AWG 20	—	—	7.5 A (socket) 7.5 A (pin)	—	—
0.75 mm ² ... 1 mm ² /AWG 18 ... 16	—	—	—	—	—
1.50 mm ² /AWG 14	—	—	—	—	—
2.50 mm ² /AWG 12	27.5 A	27.5 A	—	—	—
4 mm ² /AWG 10	—	—	—	—	35 A
6 mm ² /AWG 9	—	—	—	—	—
16 mm ² /AWG 5	—	—	—	80 A	—
Crimp contacts:					
0.75 mm ² ... 1 mm ² /AWG 18 ... 16	—	—	—	—	—
1.50 mm ² /AWG 14	—	—	—	—	—
2.50 mm ² /AWG 12	—	—	—	—	—
4 mm ² /AWG 10	—	—	—	—	—
6 mm ² /AWG 9	—	—	—	—	—
Screw-type contacts					
Contact resistance (IEC 60512-2)	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ
Insulation resistance (IEC 60512-2)	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ
Range of operating temperature **	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C
Degree of protection when mated or coupled (IEC 60529)	IP54	IP54	IP54	IP54	IP54
Test standard (IEC 60068-1) (t _{min} [°C]/t _{max} [°C]/testing time[days])	-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21
Mechanical endurance (mating cycles) (IEC 60512-5, test 9a)	5,000	5,000	5,000	5,000	5,000
Contact retention (crimp contacts)	— ***	— ***	— ***	— ***	— ***
Materials					
Shells		Aluminium die-cast alloy		Aluminium die-cast alloy	
Inserts		Polyamide-6 / thermoset		Polyamide-6 / thermoset	
Flammability rating		UL 94-V0		UL 94-V0	
Seals		Pertunane, neoprene		Pertunane, neoprene	
Contacts					
Solder contacts		Brass		Brass	
Crimp contacts		Copper wrought alloy		Copper wrought alloy	
Plating: Solder contacts		Ag		Ag	
Crimp contacts		Ag		Ag	

* PE = Protective conductor terminal

** Operating temperatures exceeding 25° C account for lower rated current values, see derating diagrams on page 43

*** Soldering and screw-type contacts are permanently mounted in the insert

Specifications

Series G42 <small>compact</small>					Series G42/GM42	
4 pole + PE	6 pole + PE	6 pole + PE	8 pole + PE	24 pole	6+2 pole + PE	10 pole + PE
						
						
230 V/400 V PE contact	230 V/400 V PE contact	230 V/400 V PE contact	230 V/400 V PE contact	42 V	500 V PE contact	500 V PE contact
5	5	5	5	5	5	5
4 x 63 A	6 x 63 A	6 x 20 A	8 x 20 A	24 x 10 A	8 x 25 A	10 x 25 A
∅ 6 mm	∅ 6 mm	∅ 3 mm	∅ 3 mm	∅ 1.58 mm	∅ 3 mm H	∅ 2.3 mm
∅ 6 mm — —	∅ 6 mm — —	∅ 3 mm — —	∅ 3 mm — —	— — —	— — H	∅ 3 mm
— — — — — 80 A	— — — — — 80 A	— — — — 35 A — —	— — — — 35 A — —	— — — — 16 A — —	— — — — — — 10 A 16 A 27.5 A 35 A 50 A	— — — — — — — — — — 27.5 A
< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ
> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ
-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C
IP54	IP54	IP54 / IP67	IP54 / IP67	IP54 / IP67	IP54 / IP67	IP54 / IP67
-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21	-25/100/21
5,000	5,000	5,000	5,000	5,000	5,000	5,000
—***	—***	—***	—***	—***	> 75 N	—***
		Aluminium die-cast alloy Polyamide-6 / thermoset UL 94-V0 Perbunane, neoprene			Aluminium die-cast alloy / Polyamide-6 Polyamide-6 / thermoset UL 94-V0 Perbunane, neoprene	
		Brass Copper wrought alloy Ag Ag			Brass Copper wrought alloy Ag Ag	

Specifications

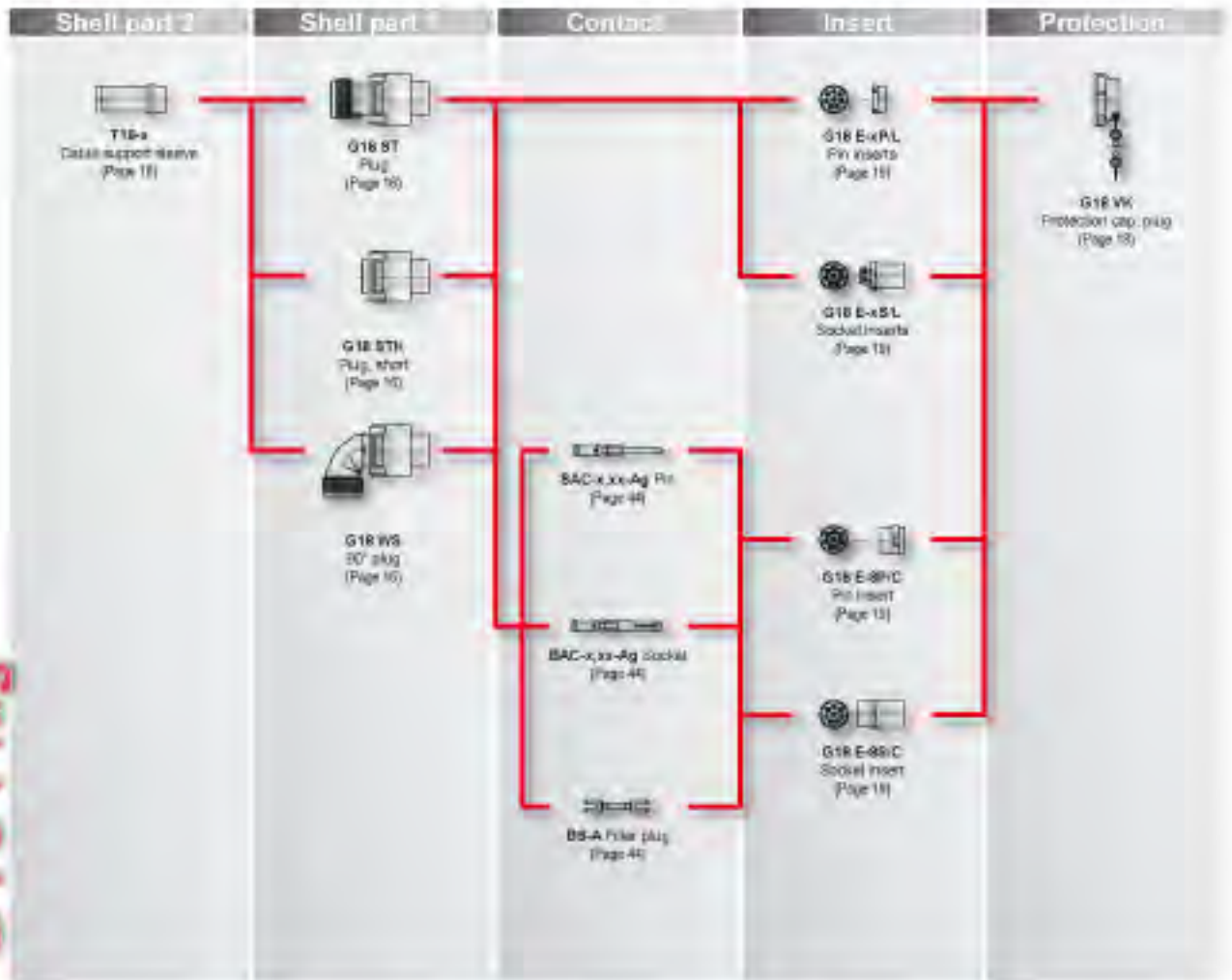
Connector type	Series G42/GM42 <small>(compact)</small>			Series GM42
	12 pole + PE	14 pole + PE	20 pole + PE	64 pole + PE
Contact arrangement				
Contact identification marked on insert:				
Pin insert: Rear view Socket insert: Front view				
Rated voltage (IEC 60038) Pollution degree 3 (IEC 60512)	230 V/400 V PE contact	230 V/400 V PE contact	230 V/400 V PE contact	25 V / 3x 230 V/400 V PE contact
Key positions (polarization)	5	5	5	5
Contacts				
Maximum rated current of individual contact, see also page 44	12 x 25 A	14 x 16 A	20 x 10 A	64 x 10 A
Outer diameter of contact / Contact type/size (crimp contacts)	∅ 3 mm H	∅ 2.3 mm B	∅ 1.58 mm A	∅ 1.6 mm G
PE contact *				
Diameter solder contacts	∅ 3 mm	∅ 3 mm	∅ 3 mm	∅ 1.6 mm
Diameter screw-type contact	—	—	—	—
Contact type/size (crimp contacts)	H	H	H	G
Wire sections and rated current of individual contact				
Solder contacts:				
0.75 mm ² ... 1 mm ² / AWG 18 ... 16	—	—	—	—
1.50 mm ² / AWG 14	—	—	—	—
2.50 mm ² / AWG 12	—	27.5 A	16 A	—
4 mm ² / AWG 10	35 A	—	—	—
6 mm ² / AWG 9	—	—	—	—
16 mm ² / AWG 5	—	—	—	—
35 mm ² / AWG 1	—	—	—	—
Crimp contacts **				
0.50 mm ² / AWG 20	—	7.5 A	7.5 A	7.5 A
0.75 mm ² ... 1 mm ² / AWG 18 ... 16	10 A	10 A	10 A	10 A
1.50 mm ² / AWG 14	16 A	16 A	16 A	16 A
2.50 mm ² / AWG 12	27.5 A	27.5 A	16 A	16 A
4 mm ² / AWG 10	35 A	35 A	—	—
6 mm ² / AWG 9	50 A	35 A	—	—
Screw-type contacts	—	—	—	—
Contact resistance (IEC 60512-2)	< 10 mΩ	< 10 mΩ	< 10 mΩ	< 10 mΩ
Insulation resistance (IEC 60512-2)	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ
Range of operating temperature **	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C	-25° C ... 100° C
Degree of protection when mated or coupled (IEC 60529)	IP54/IP67	IP54/IP67	IP54/IP67	IP67
Test standard (IEC 60068-1) (tmin[°C]/tmax[°C]/testing time[days])	-25/100/21	-25/100/21	-25/100/21	-25/100/21
Mechanical endurance (mating cycles) (IEC 60512-5, test 9a)	5,000	5,000	5,000	500
Contact retention (crimp contacts)	> 75 N	> 75 N	> 75 N	> 40 N
Materials				
Shells		Aluminium die-cast alloy / Polyamide-6		
Inserts		Polyamide-6 / thermoset		
Flammability rating		UL 94-V0		
Seals		Pertunane, neoprene		
Contacts				
Solder contacts		Brass		
Crimp contacts		Copper wrought alloy		
Plating: Solder contacts		Ag		
Crimp contacts		Ag		

* PE = Protective conductor terminal

** Operating temperatures exceeding 25° C account for lower rated current values, see derating diagrams on page 43

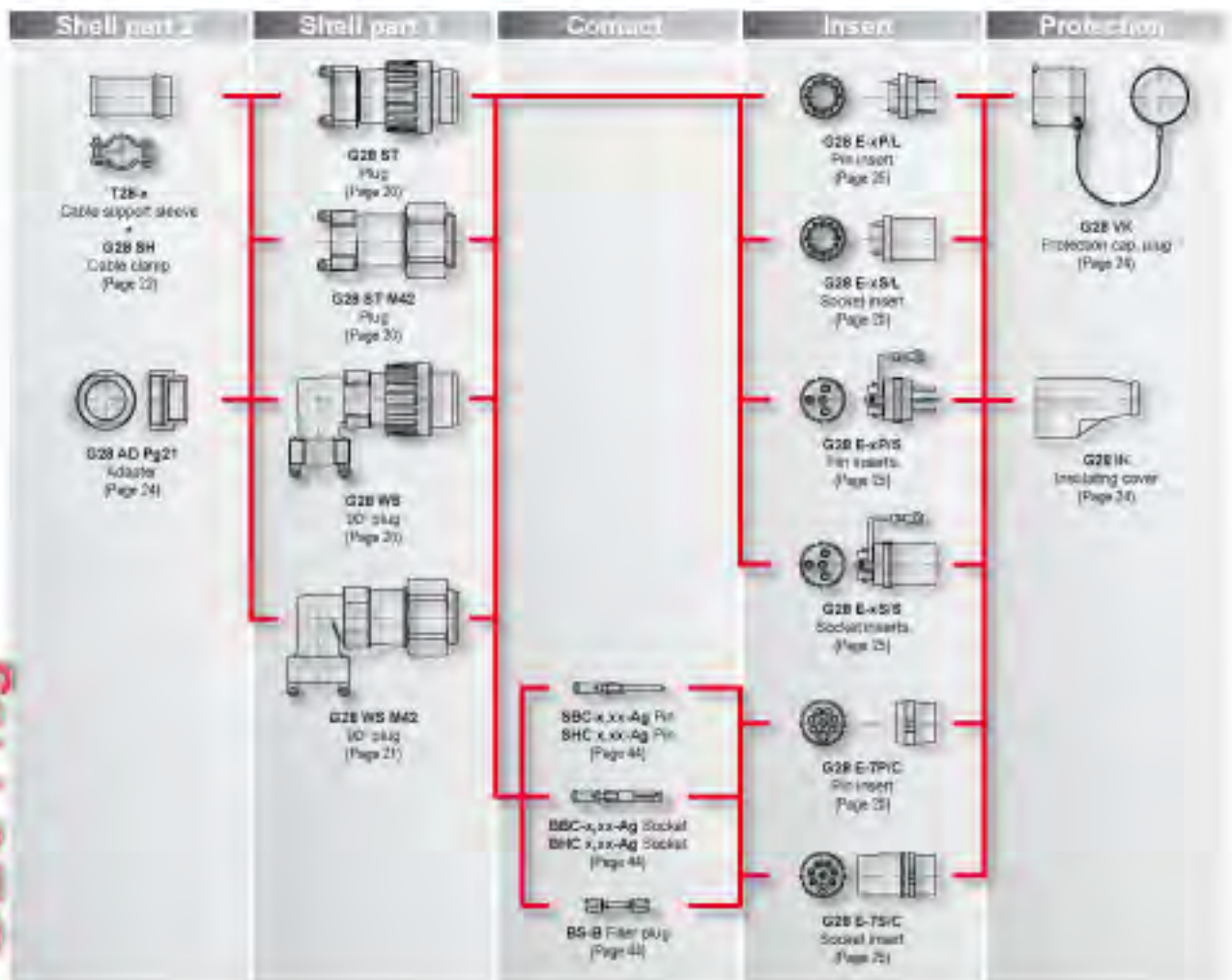
*** Soldering and screw-type contacts are permanently mounted in the rear!

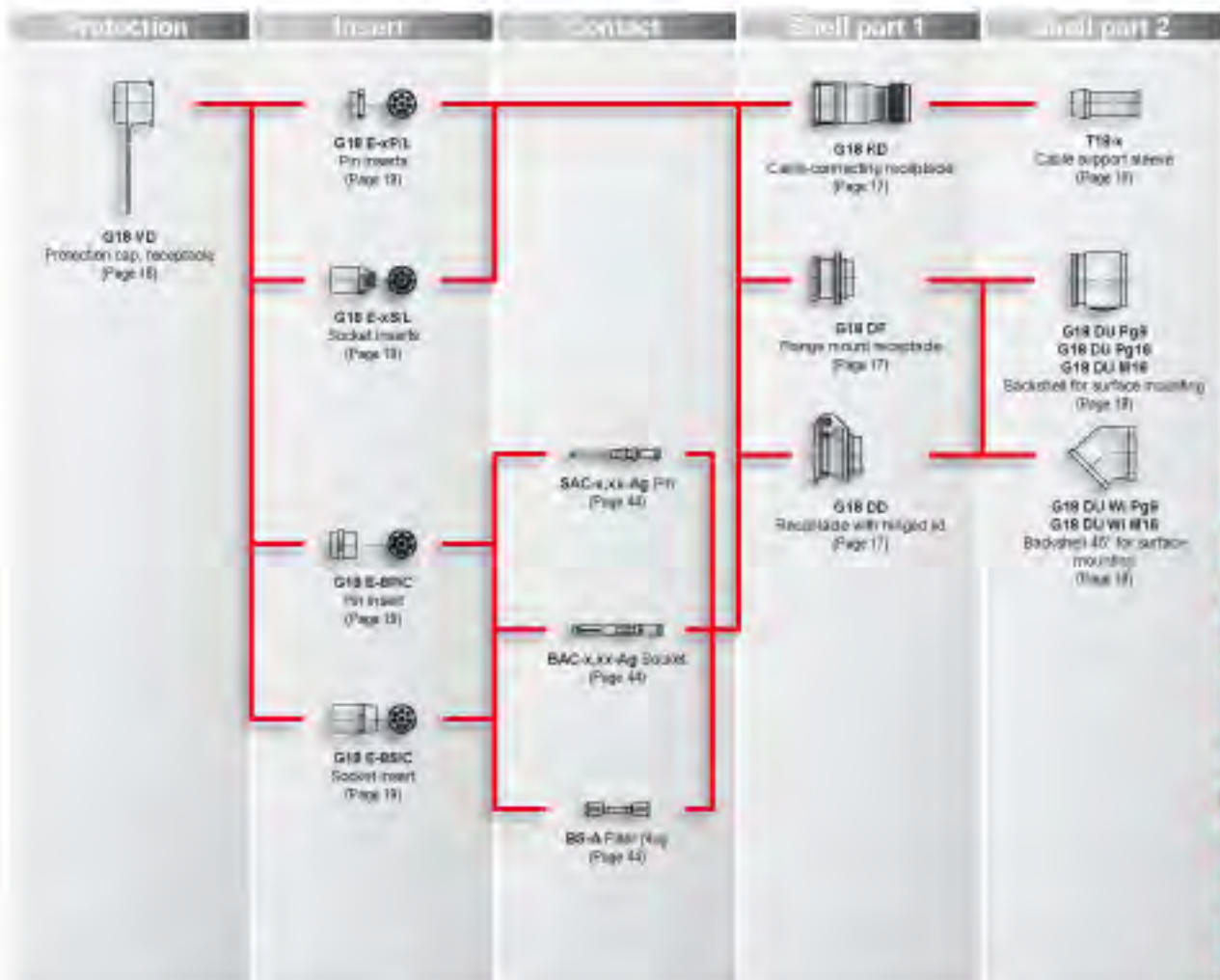
G18 Plug



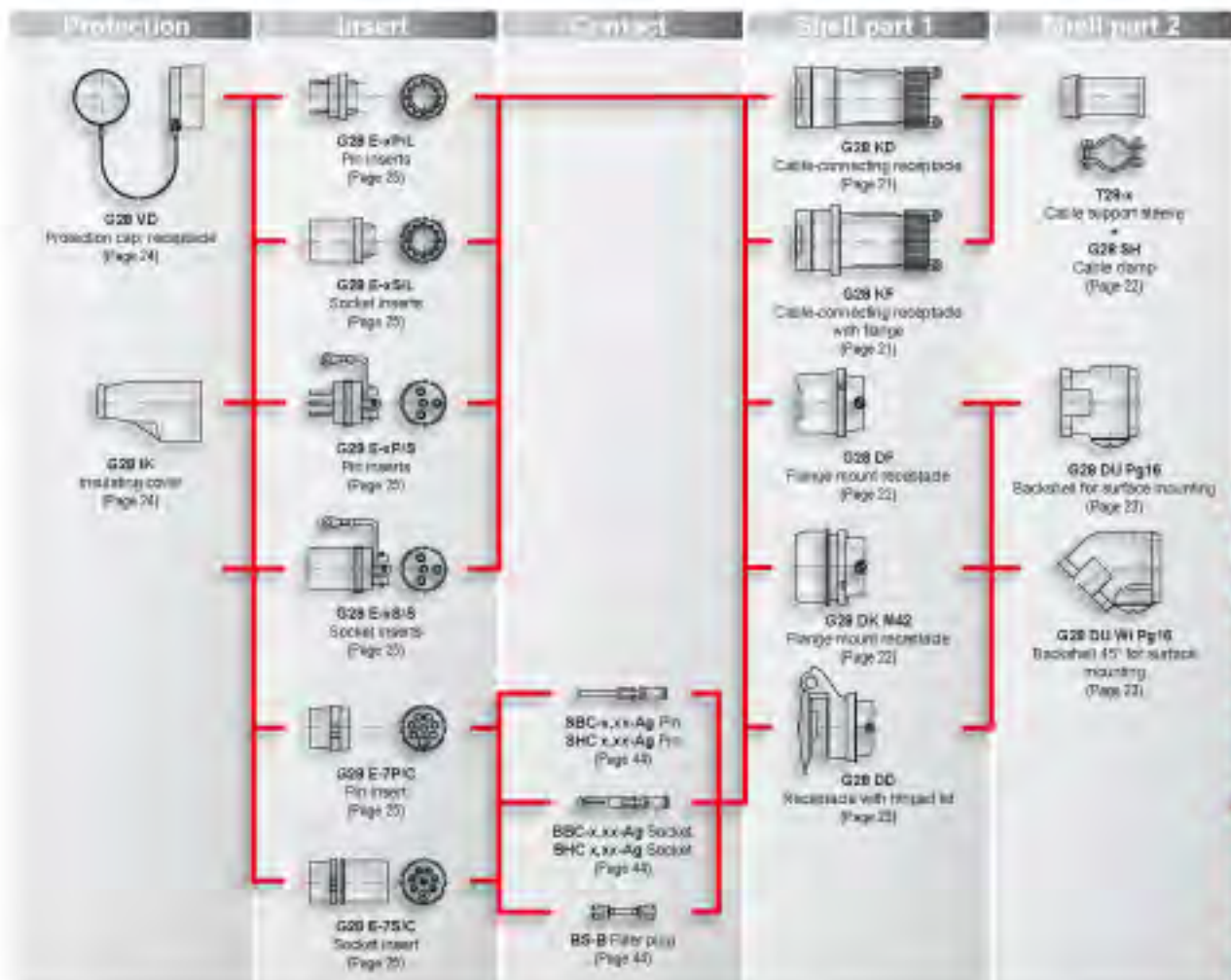
OVERVIEW

G28 Plug



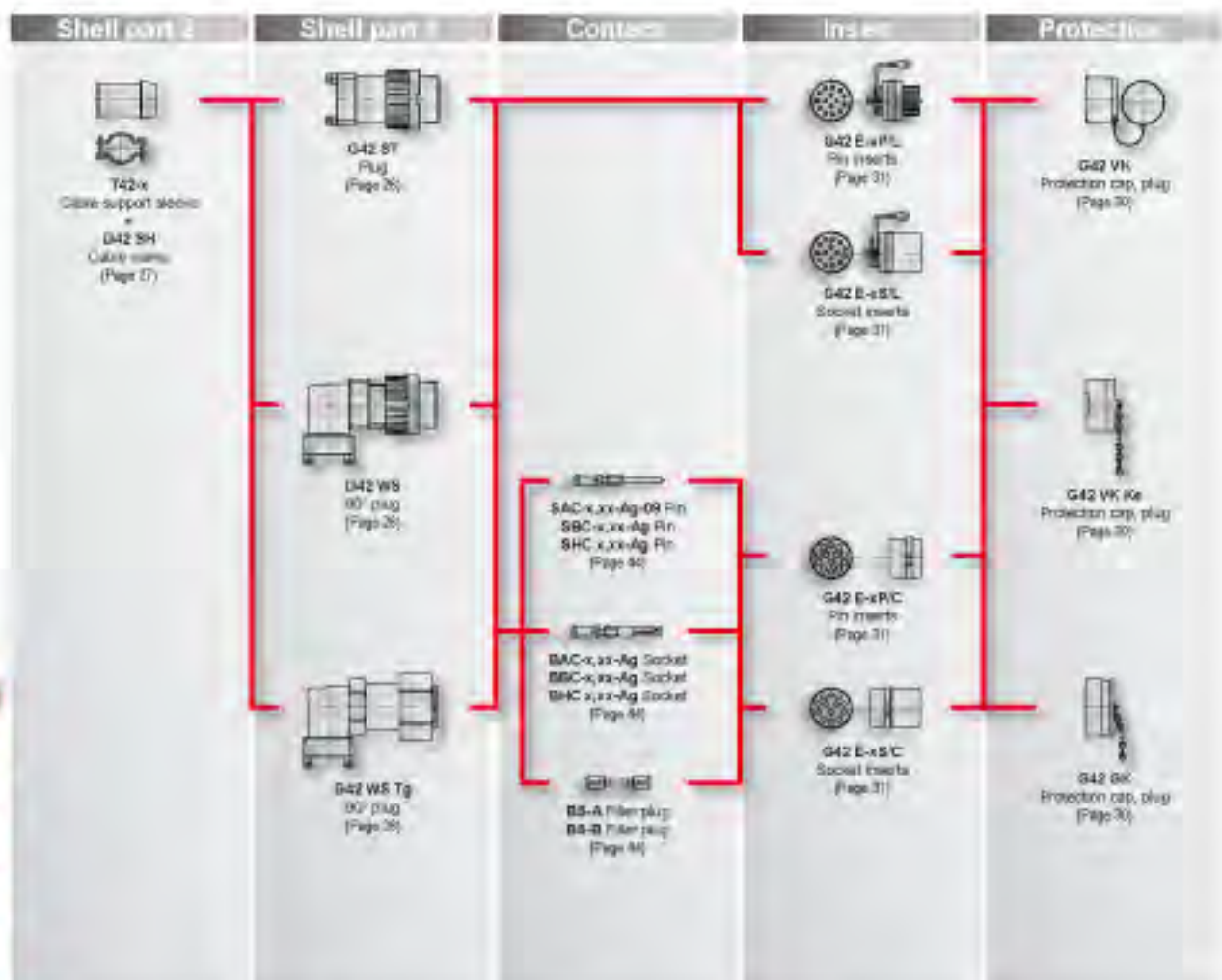


G18 Receptacle



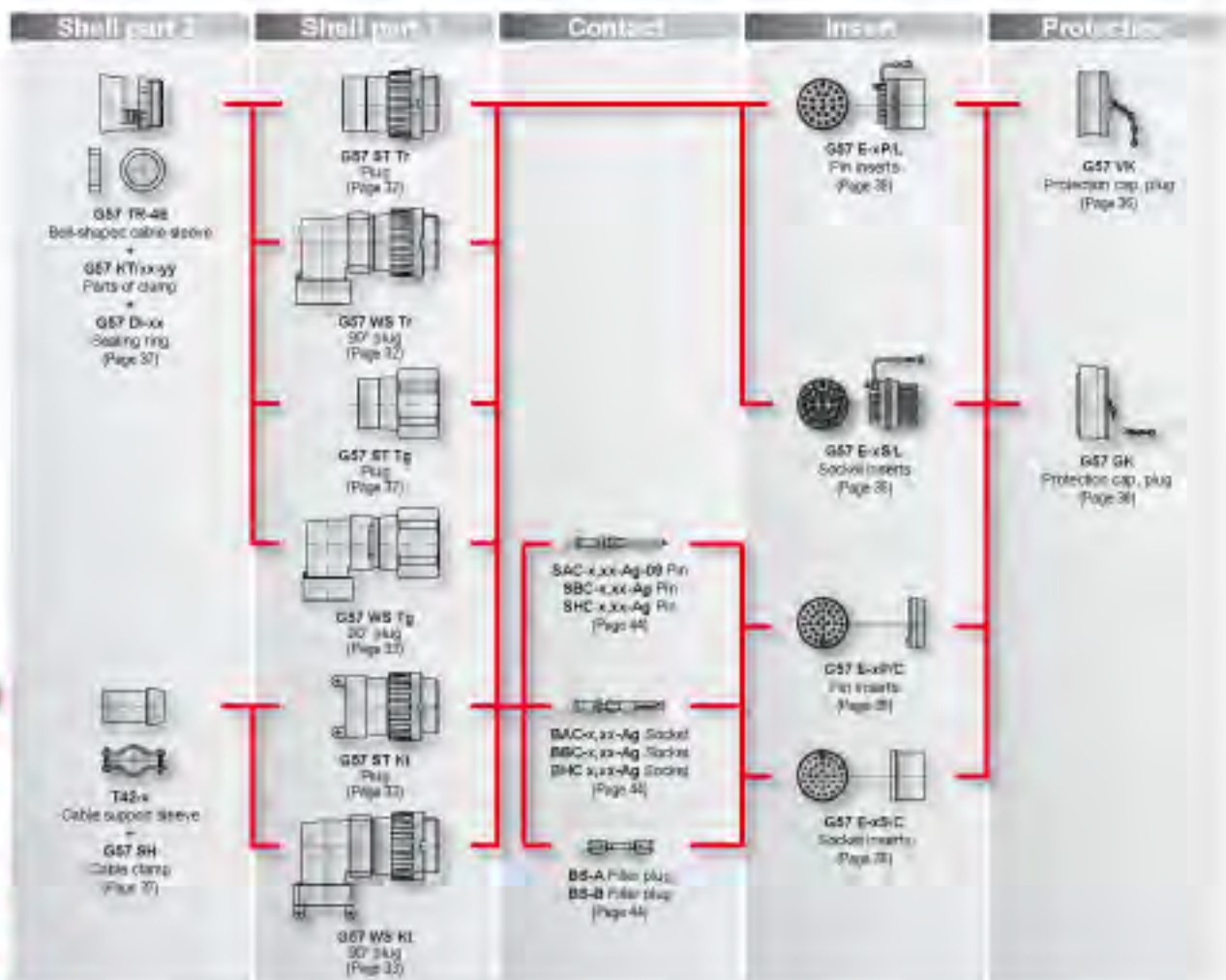
G28 Receptacle

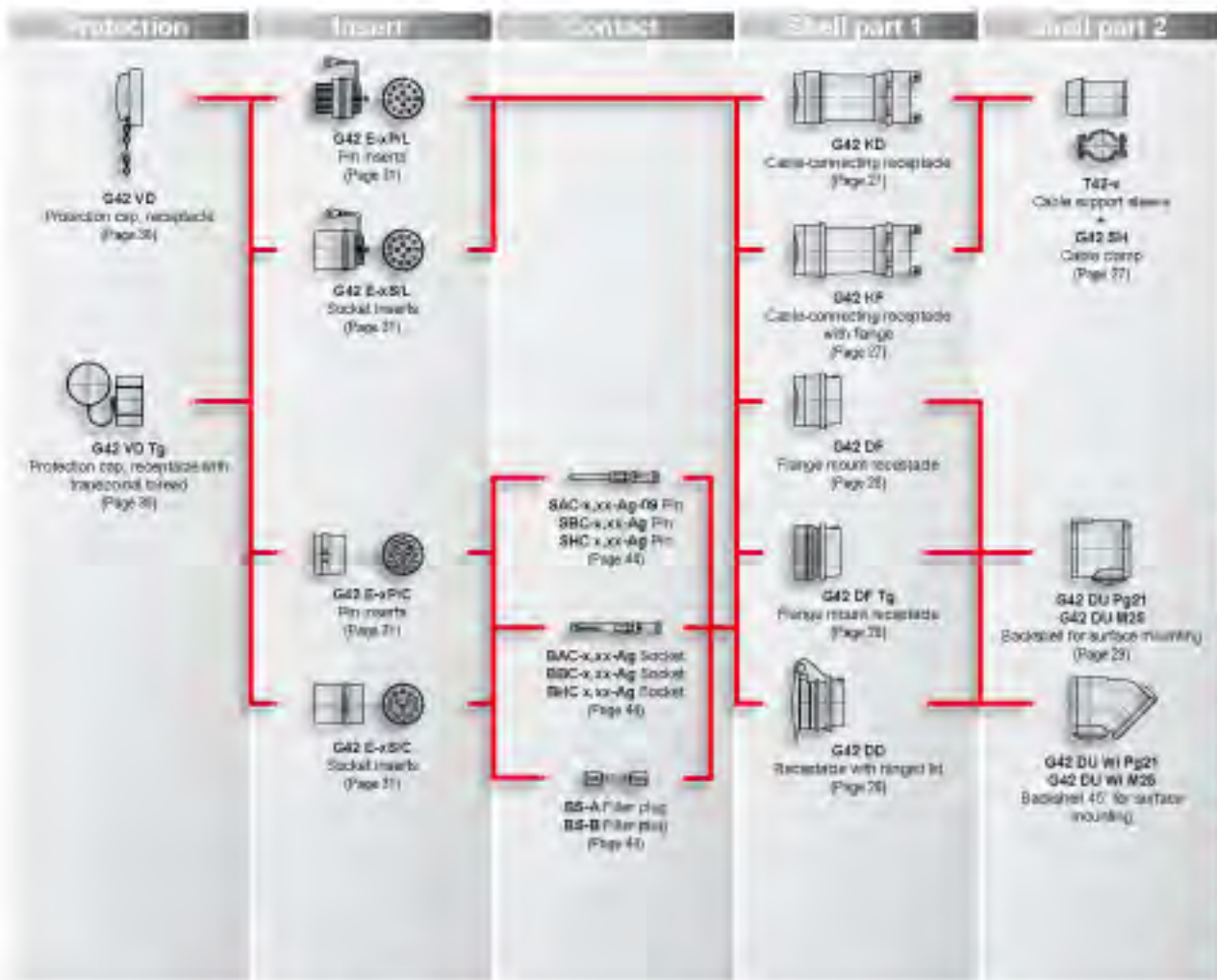
G42 Plug



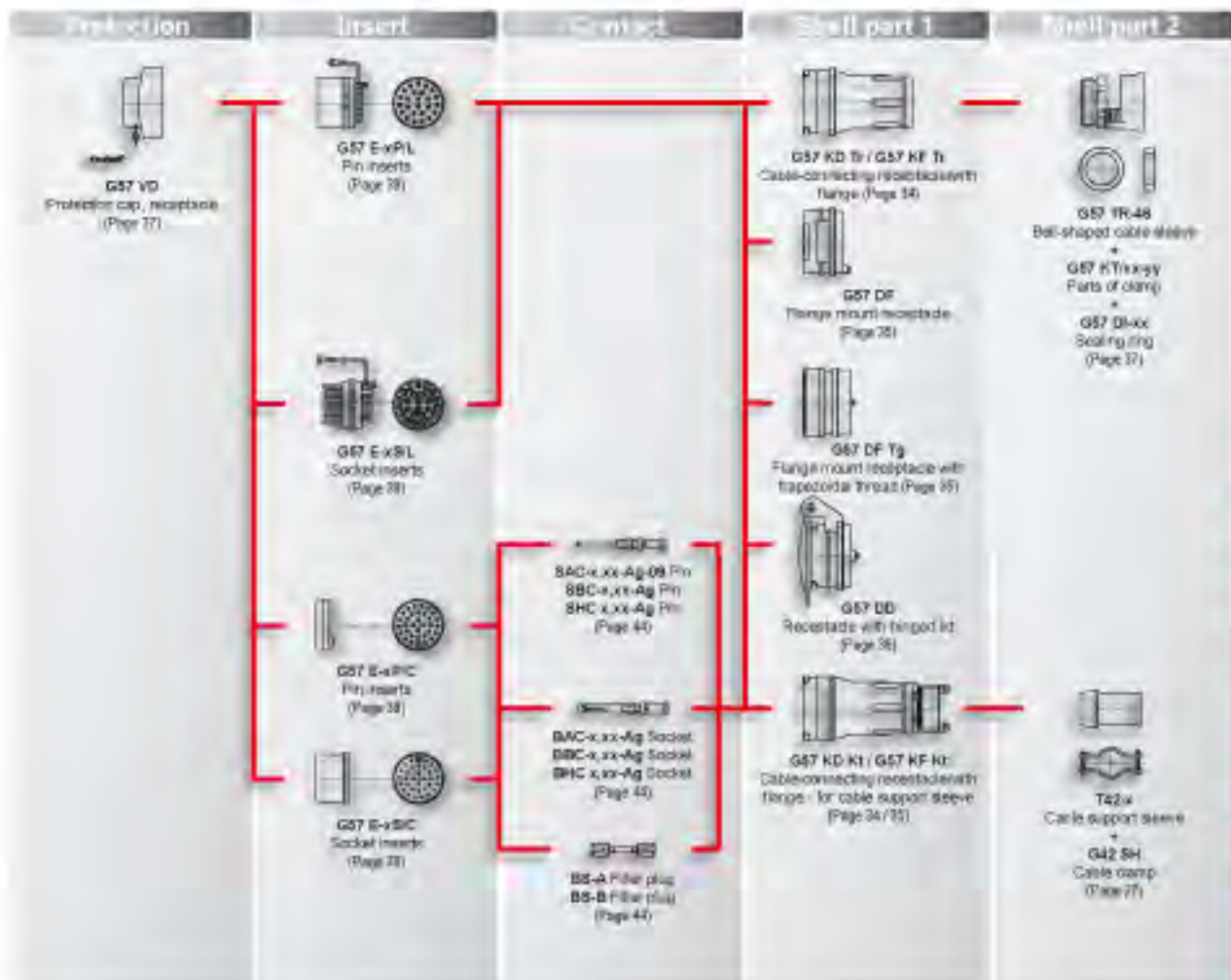
OVERVIEW

G57 Plug



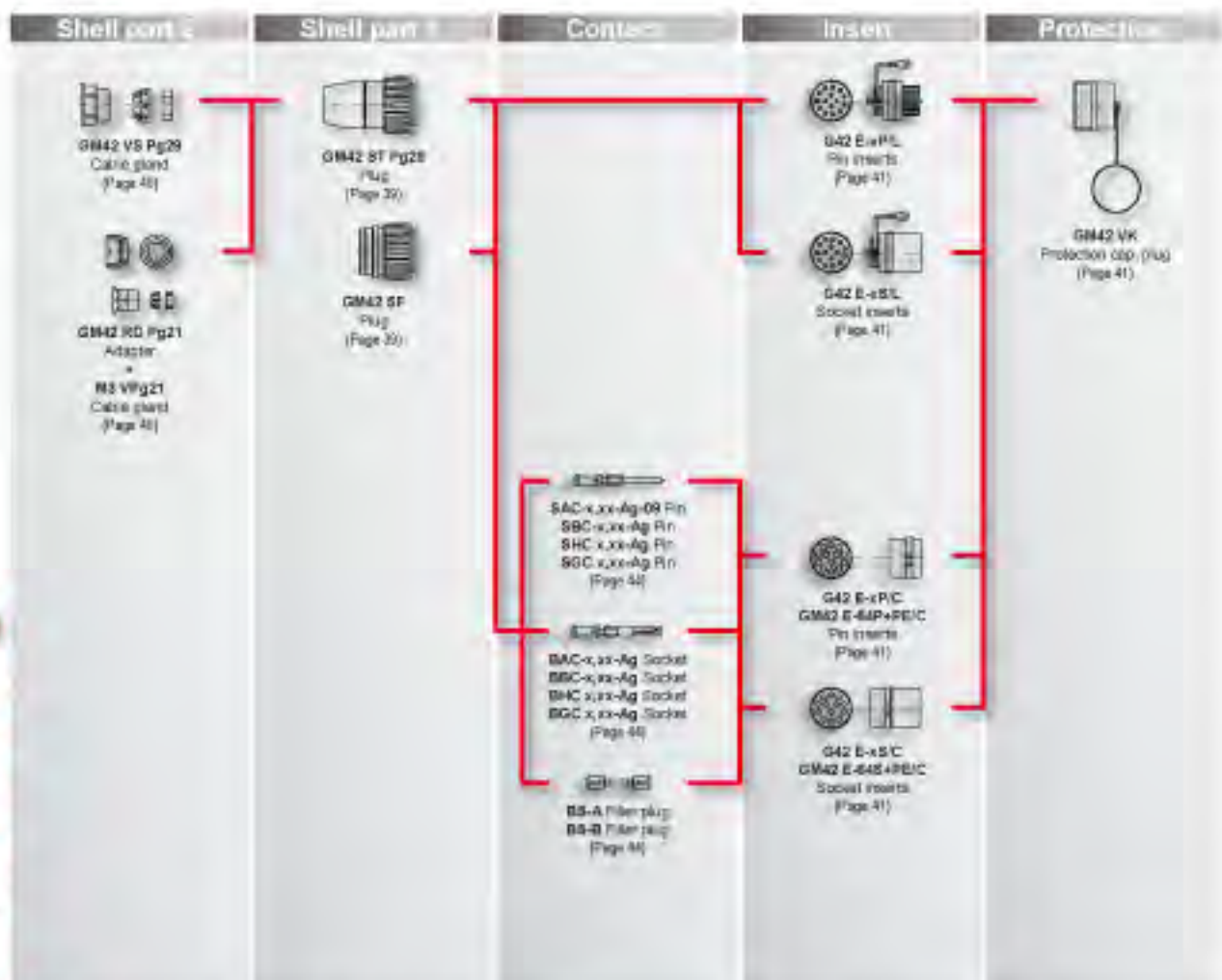


G42 Receptacle



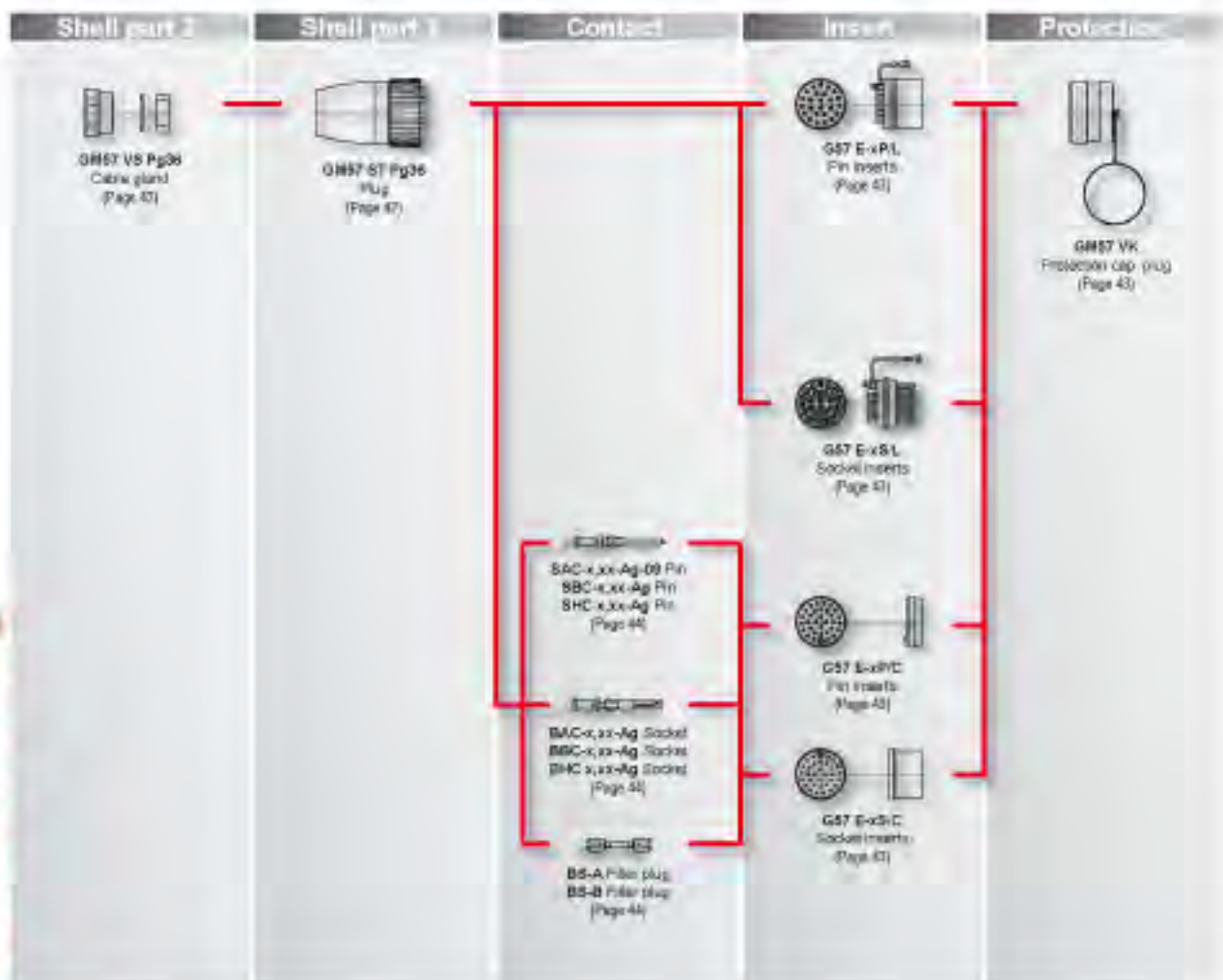
G57 Receptacle

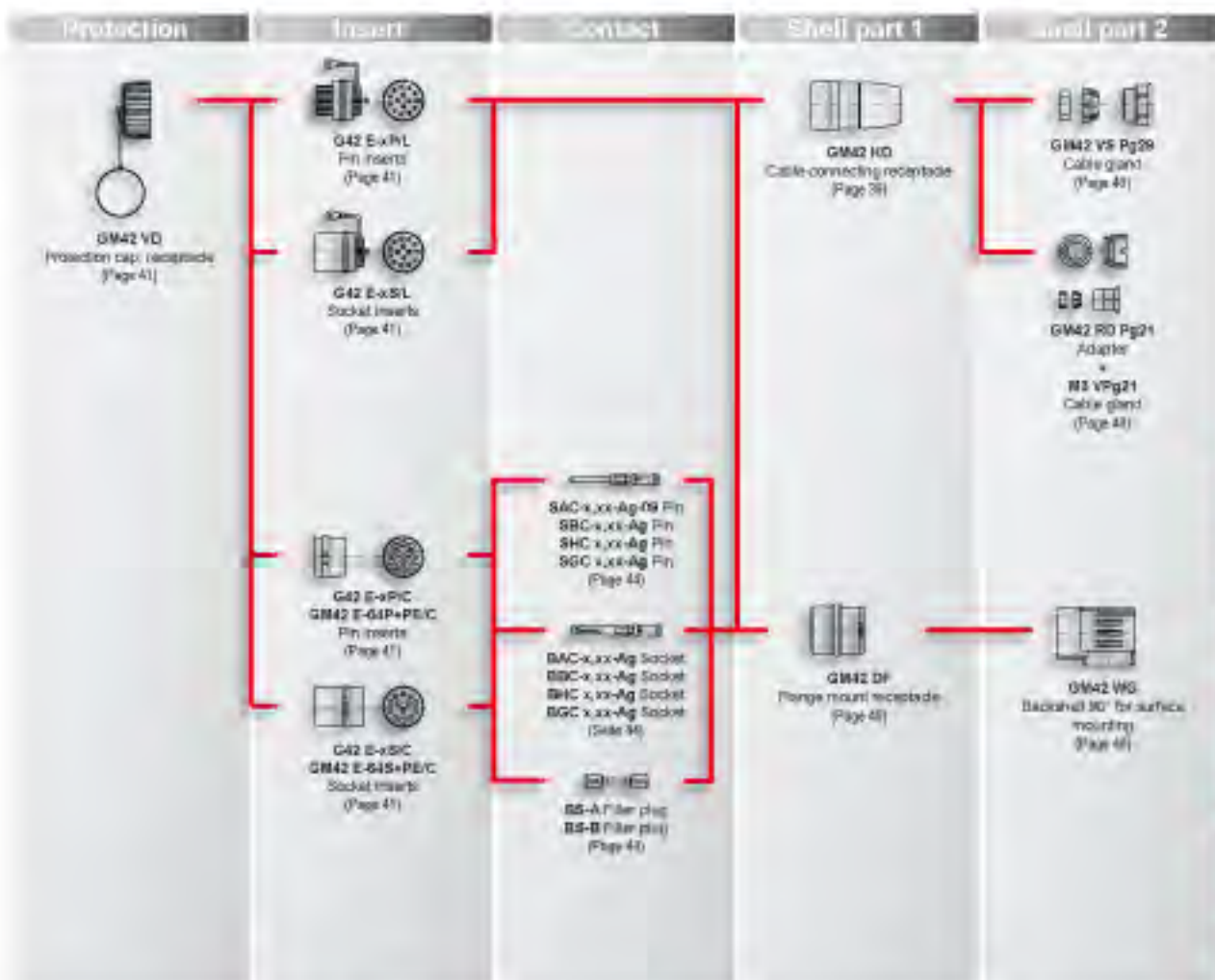
GM42 Plug



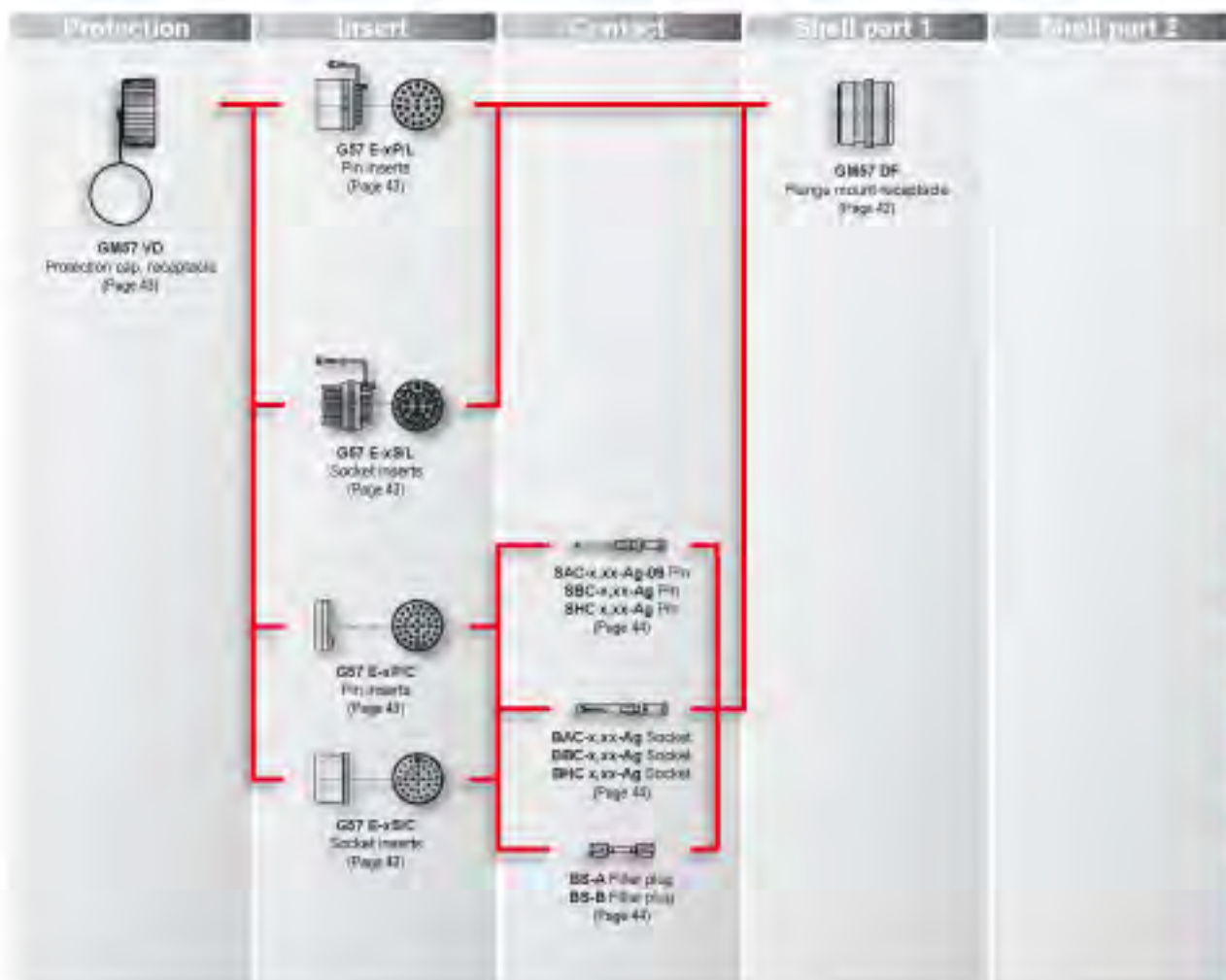
OVERVIEW

GM57 Plug





GM42 Receptacle



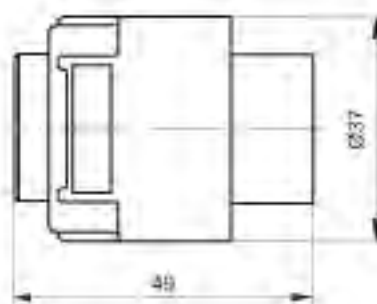
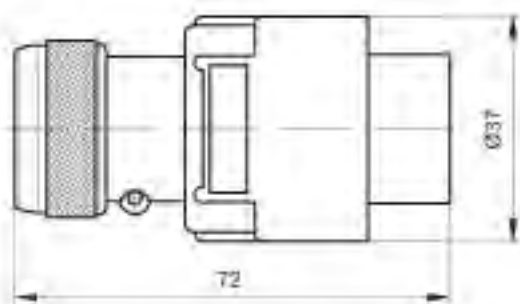
GM57 Receptacle

G18 ST Plug

G18 STK Plug, short

Series G18

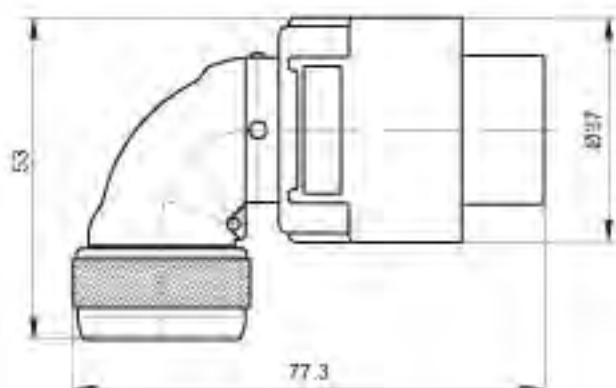
Shell part 1



G18 WS 90° plug

Series G18

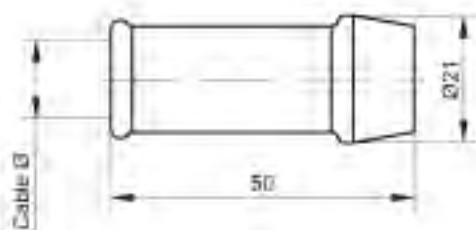
Shell part 1



T18-X Cable support sleeve

Series G18

Shell part 2



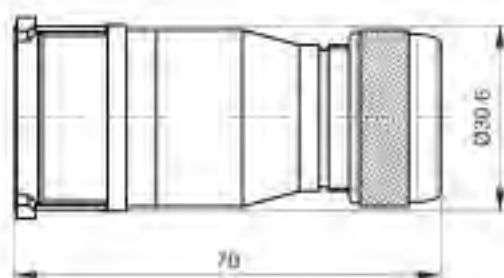
Ordering code	Cable diameter [mm]
T18-7,5	7,5
T18-8,5	8,5
T18-9,5	9,5
T18-10,5	10,5
T18-11,5	11,5
T18-13	13,0
T18-14,5	14,5

Note:
The cable support sleeve is for use with the plugs **G18 ST**, **G18 STK** and **G18 WS** as well as the receptacle **G18 KD**.

G18 KD Cable-connecting receptacle

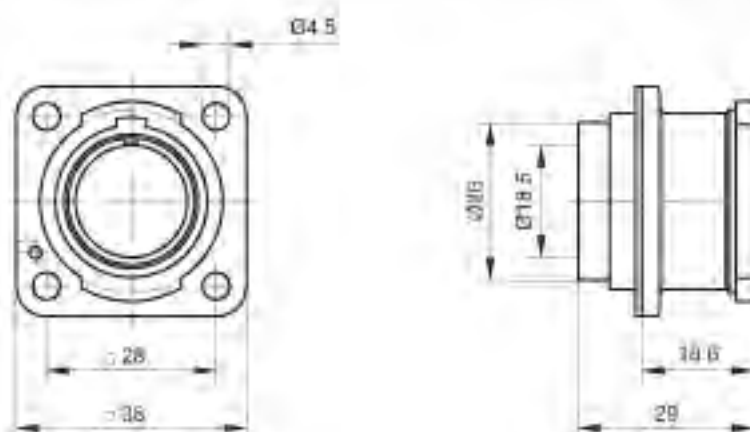
Series G18

Shell part 1


G18 DF Flange mount receptacle

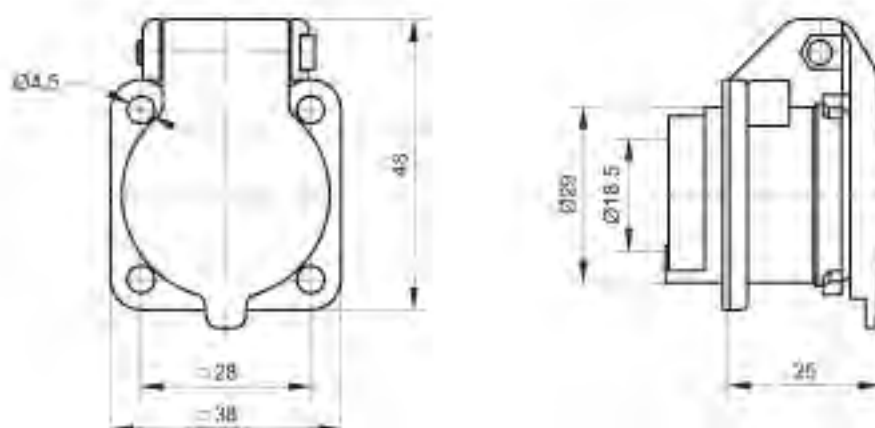
Series G18

Shell part 1


G18 DD Receptacle with hinged lid

Series G18

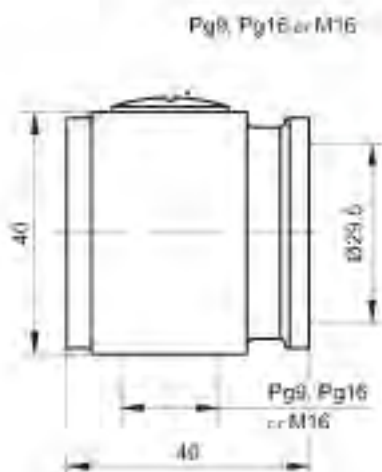
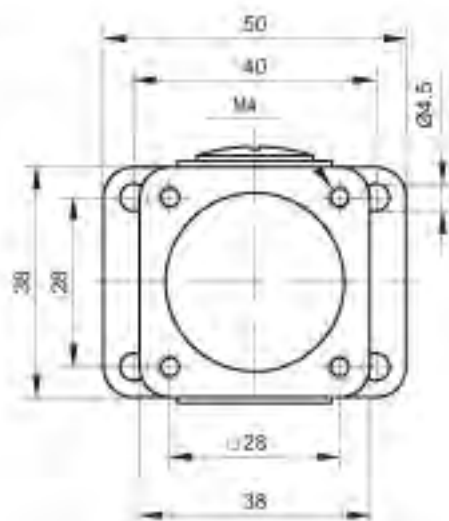
Shell part 1



G18 DU Pg9, G18 DU Pg16, G18 DU M16 Backshell for surface mounting

Series G18

Shell part 2



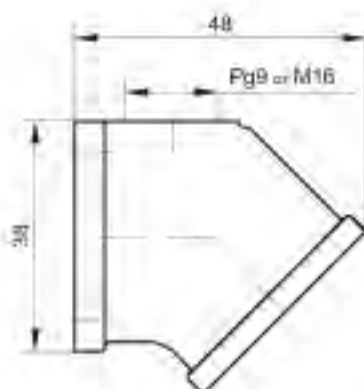
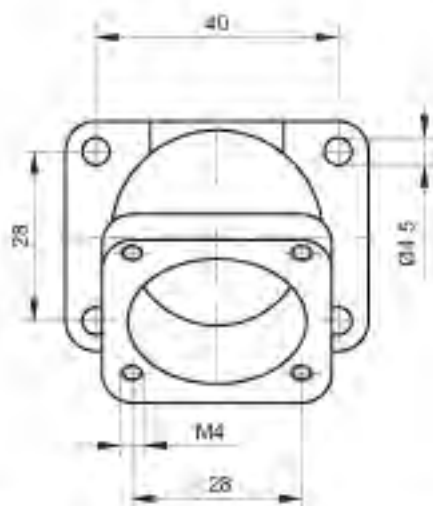
Ordering code	Thread
G18 DU Pg9	Pg size Pg9
G18 DU Pg16	Pg size Pg16
G18 DU M16	Metric size M16

Note:
Backshells for surface mounting come in handy when there is not enough space for the receptacle to be panel mounted. The knockout entry of the backshell allows to enter a cable from the side in front of the panel and into the rear of the receptacle. Backshells with two cable entries can also be used as surface mounted junction boxes.
The flange mounted receptacle and backshell are sealed to IP64.

G18 DU Wi Pg9, G18 DU Wi M16 Backshell 45° for surface mounting

Series G18

Shell part 2



Ordering code	Thread
G18 DU Wi Pg9	Pg size Pg9
G18 DU Wi M16	Metric size M16

Note:
45° backshells for surface mounting come in handy when there is not enough space for the receptacle to be panel mounted. The knockout entry of the backshell allows to enter a cable from the side in front of the panel and into the rear of the receptacle.
The flange mounted receptacle and 45° backshell are sealed to IP64.

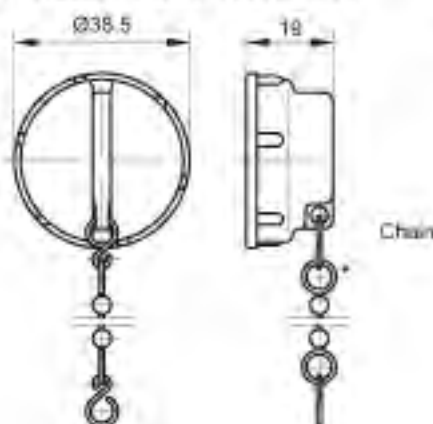
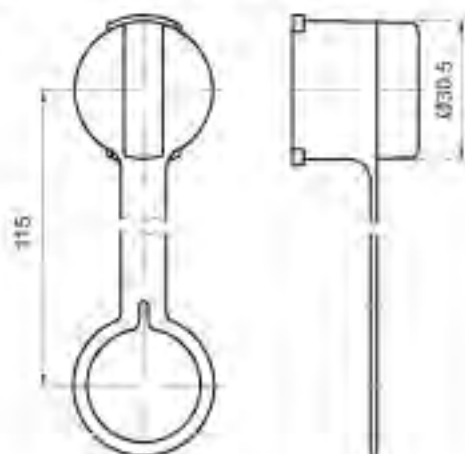
G18 VK, G18 VD Protection caps

Series G18

G18 VK Protection cap for plugs

G18 VD Protection cap for receptacles

Protection



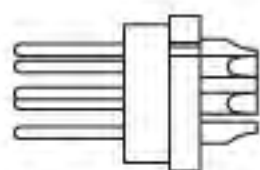
Note Ø18 VD:
For this article minimum order quantity apply.
So, please contact us.

Reduced scale diagrams / dimensions in mm

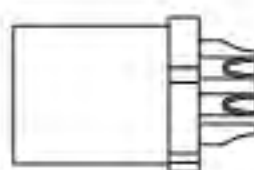
G18 E-3P/4P/5P/8P/12P Pin insert 3/4/5/8/12 pole
G18 E-3S/4S/5S/8S/12S Socket insert 3/4/5/8/12 pole

Series G18

Inserts



Pin insert G18 E-8P/L



Socket insert G18 E-8S/L

Connector type	G18 Series				
	3 pole	4 pole	5 pole	8 pole	12 pole
Number of contacts					
Contact arrangement					
Contact identification marked on insert:					
Pin insert: Rear view					
Socket insert: Front view					
Ordering code					
Pin inserts - solder contacts	G18 E-3P/L	G18 E-4P/L	G18 E-5P/L	G18 E-8P/L	G18 E-12P/L
Socket inserts - solder contacts	G18 E-3S/L	G18 E-4S/L	G18 E-5S/L	G18 E-8S/L	G18 E-12S/L
Pin inserts - crimp contacts	—	—	—	G18 E-8P/C*	—
Socket inserts - crimp contacts	—	—	—	G18 E-8S/C*	—
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	25 V	25 V	25 V	25 V	25 V
Key positions (polarization)	5	5	3	5	2
Contacts **					
Maximum rated current of individual contact	3x 16 A	4x 16 A	5x 7.5 A	8x 16 A	12x 7.5 A
Outer diameter of contact	∅ 1.58 mm	∅ 1.58 mm	∅ 1.58 mm	∅ 1.58 mm	∅ 1.58 mm
Contact type/size (crimp contacts)	—	—	—	Type A	—

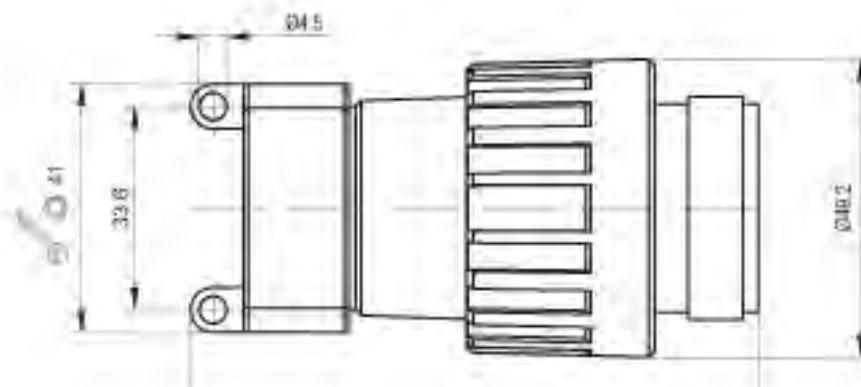
* If implemented accordingly; the 8 pole insert for crimp contacts is interchangeable with the 3 pole and 4 pole insert for solder contacts

† For detailed information on individual contacts see page 44

G28 ST Plug

Series G28

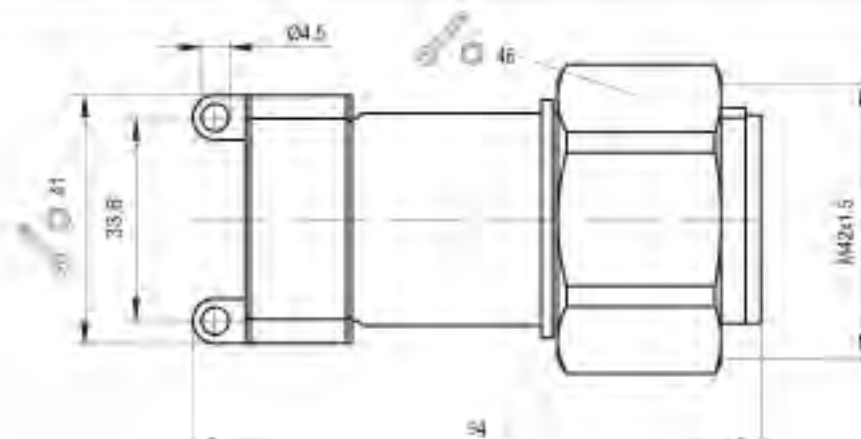
Shell part 1



G28 ST M42 Plug with thread M42x1.5

Series G28

Shell part 1

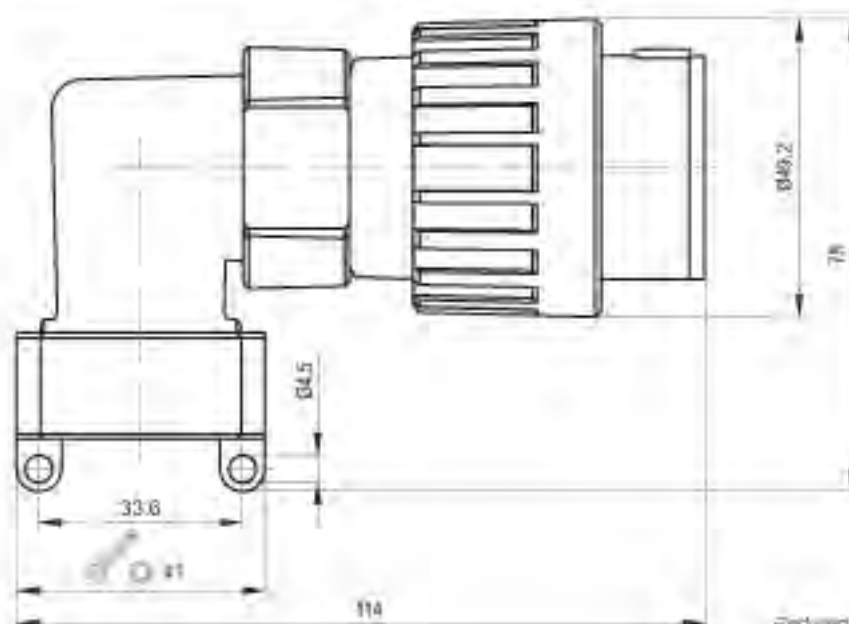


Note:
This plug can only be used with the corresponding receptacle **G28 DK M42**. The mated connector is sealed to **IP67**.

G28 WS 90° plug

Series G28

Shell part 1

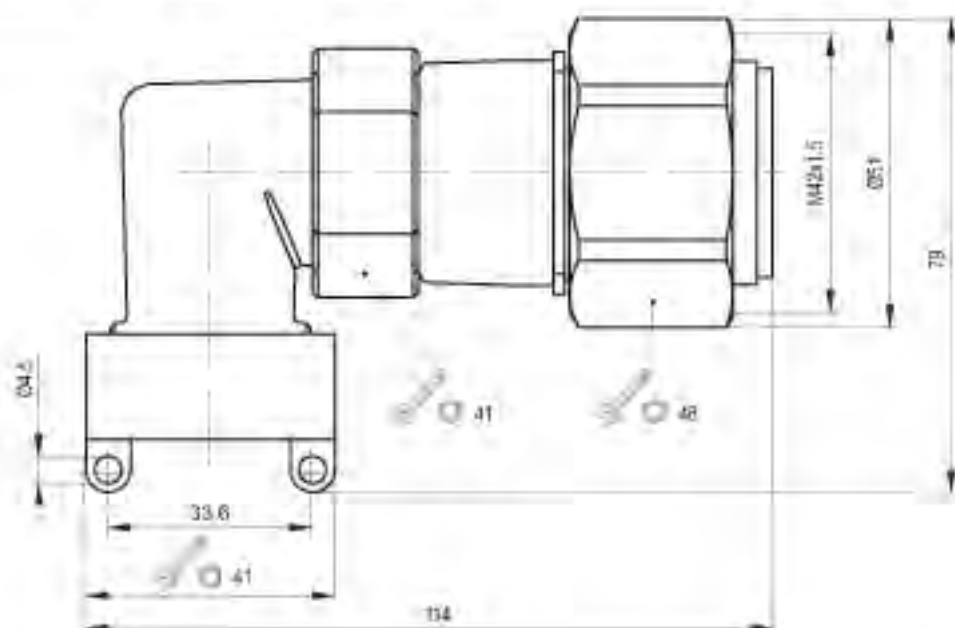


reduced scale diagram / dimensions in mm

G28 WS M42 90° plug with thread M42x1.5

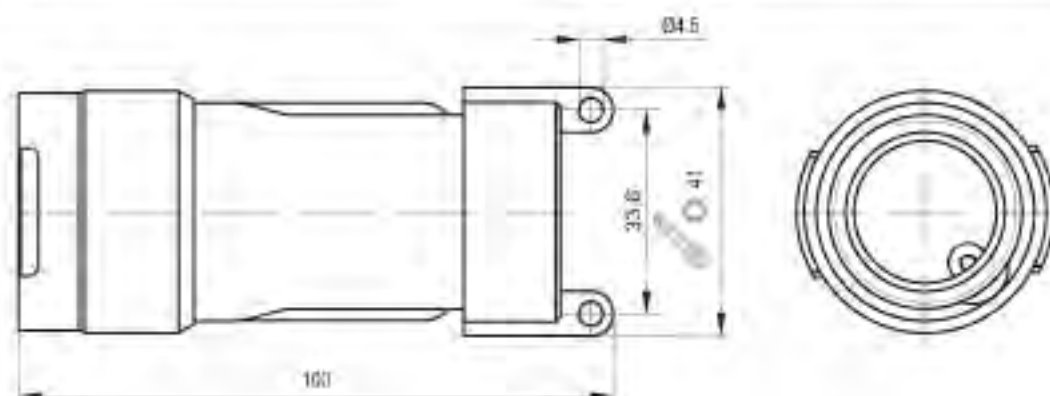
Series G28

Shell part 1

**G28 KD** Cable-connecting receptacle

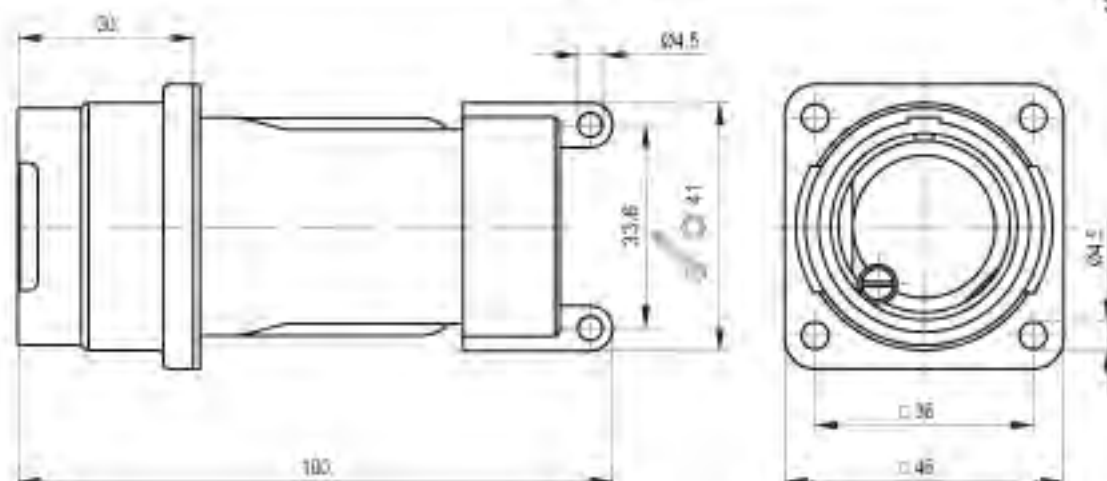
Series G28

Shell part 1

**G28 KF** Cable-connecting receptacle with flange

Series G28

Shell part 1



T28-x, G28 SH Cable support sleeve, Cable clamp

Series G28

Shell part 2

Figure A
Cable support
sleeve T28-x

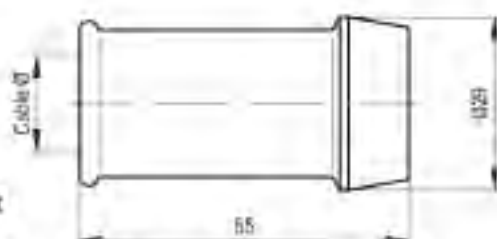
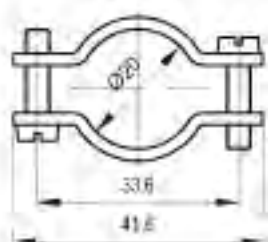


Figure B
Cable clamp
G28 SH



Ordering code	Cable diameter [mm]	Figure
T28-10/13	10 - 13	Fig. A
T28-13/16	13 - 16	Fig. A
T28-16/18,5	16 - 18,5	Fig. A
T28-18,5/20,5	18,5 - 20,5	Fig. A
T28-20,5/22	20,5 - 22	Fig. A
G28 SH	30	Fig. B

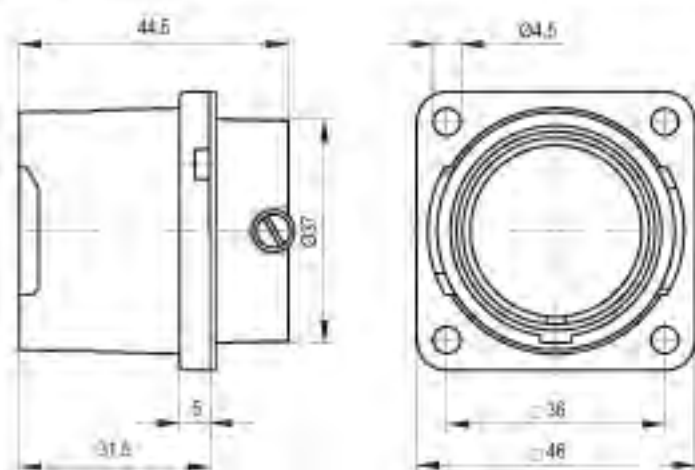
Note:

Cable support sleeve and cable clamp are for use with the plates G28 5T, G28 5T M42, G28 WS and G28 WS M42 as well as the receptacles G28 KD and G28 KP.

G28 DF Flange mount receptacle

Series G28

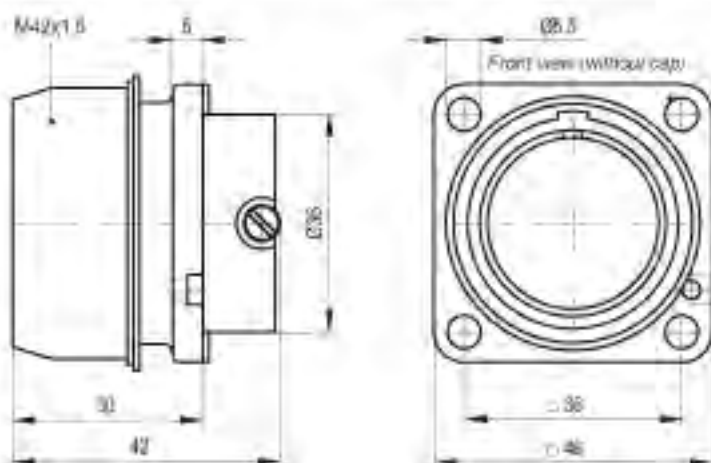
Shell part 1



G28 DK M42 Flange mount receptacle with thread M42x1.5 and protection cap

Series G28

Shell part 1

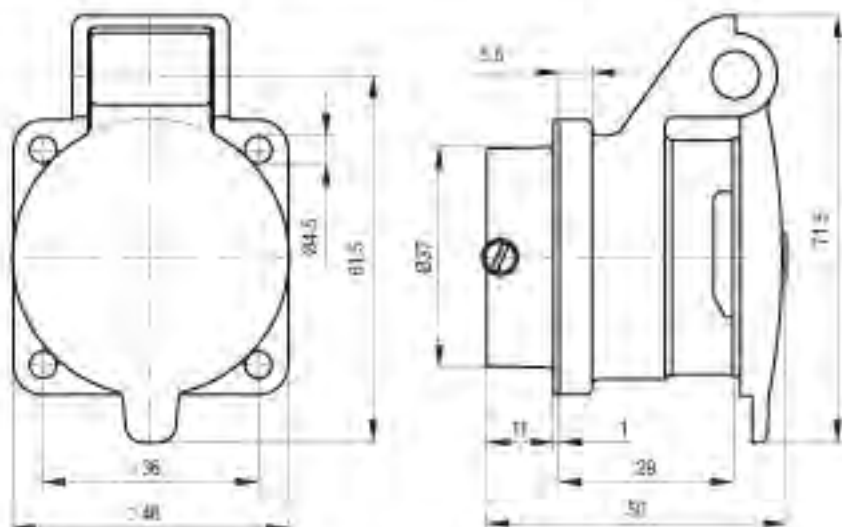


Note: This receptacle can only be used with the corresponding plug G28 5T M42 or G28 WS M42. The rated conductivity is sealed to IP67.

G28 DD Receptacle with hinged lid

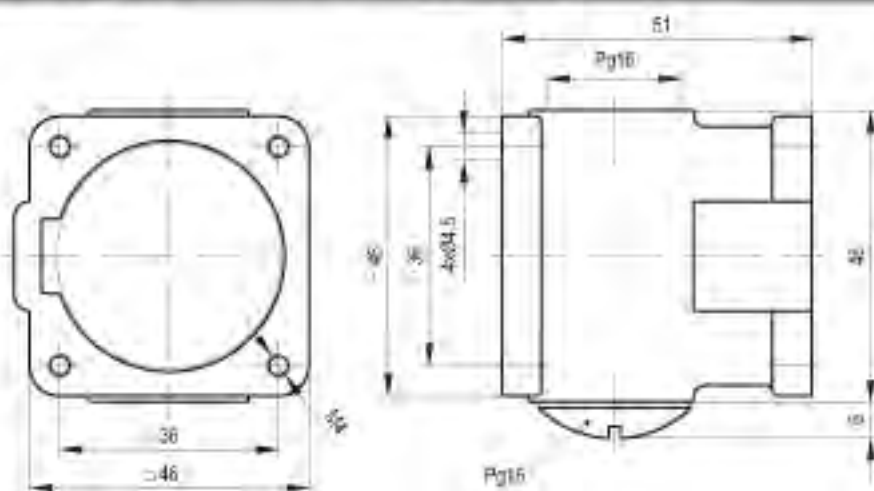
Series G28

Shell part 1


G28 DU Pg16 Backshell for surface mounting

Series G28

Shell part 2

**Note:**

Backshells for surface mounting come in handy when there is not enough space for the receptacle to be panel mounted. The recessed entry of the backshell allows to enter a cable from the side in front of the panel and was therefore of the receptacle. Backshells with two cable entries can also be used as surface mounted junction boxes.

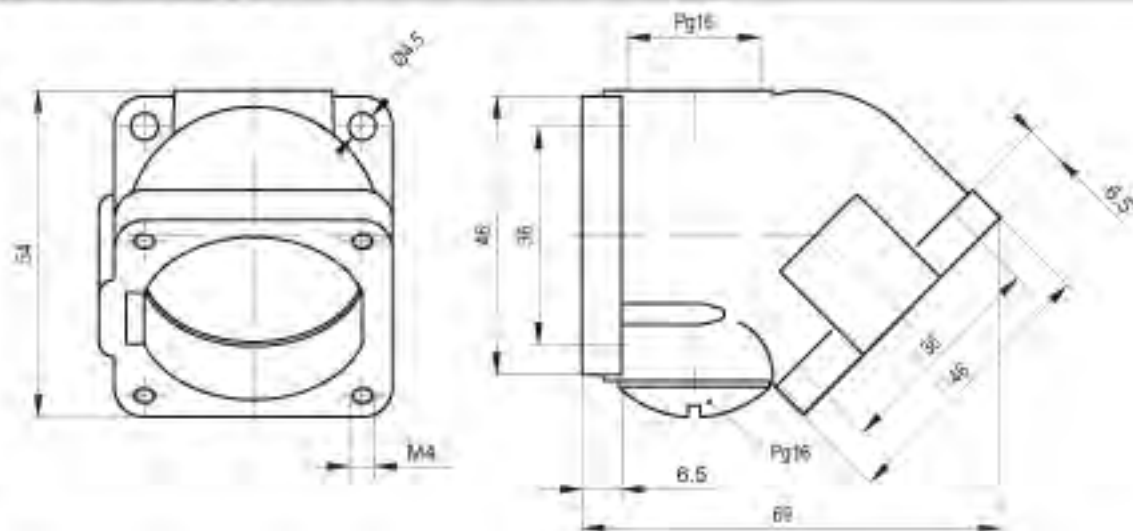
The knockout entries are designed for steel conduit thread (Pg16) or nylon and high-strength cable glands.

The large mounted receptacle and backshell are listed in 1054.

G28 DU Wi Pg16 Backshell 45° for surface mounting

Series G28

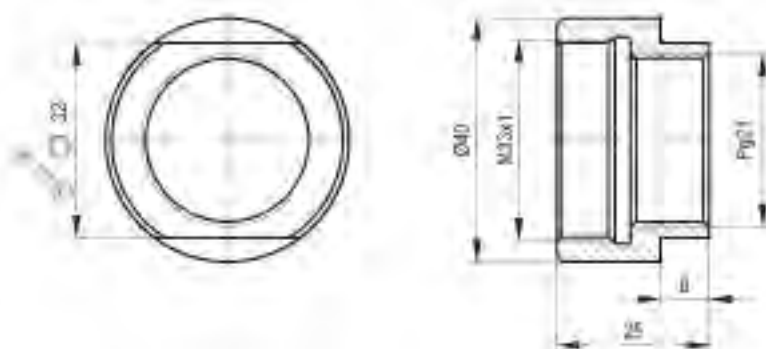
Shell part 2



G28 AD Pg21 Adapter

Series G28

Shell part 2



Note: The adapter for size Pg21 cable glands is for use with the following plugs:

- G28 ST, G28 ST M42
- G28 WS, G28 WS M42

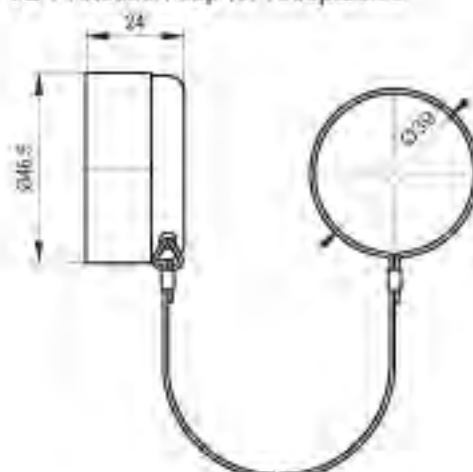
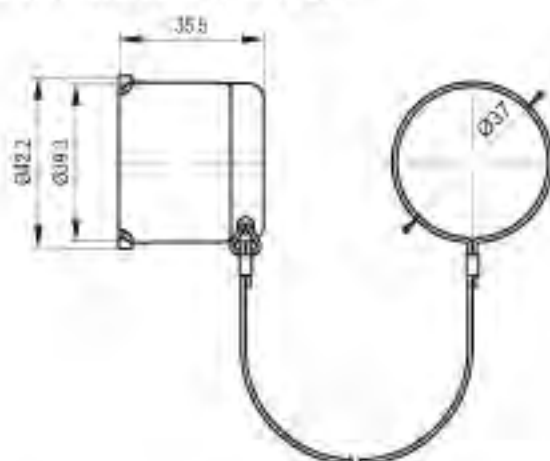
G28 VK, G28 VD Protection caps

Series G28

G28 VK Protection cap for plugs

G28 VD Protection cap for receptacles

Protection

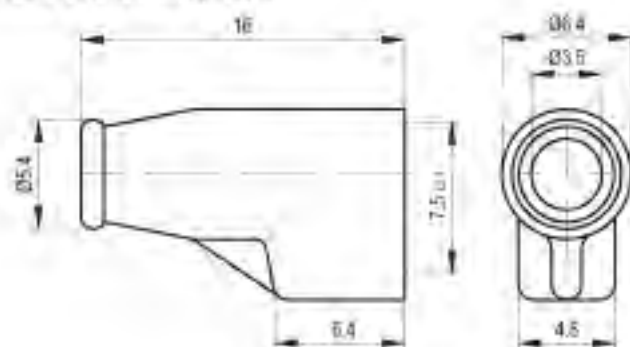


G28 IK Insulating cover

Series G28

G28 IK Insulating cover

Protection



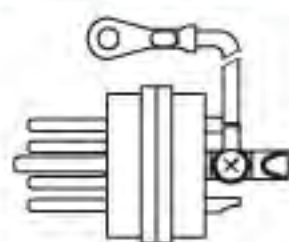
Note: The insulating cover is used for protecting the screw type terminals of the following contact inserts:

- G28 E-2P+PE/S, G28 E-2S+PE/S
- G28 E-3P+PE/S, G28 E-3S+PE/S

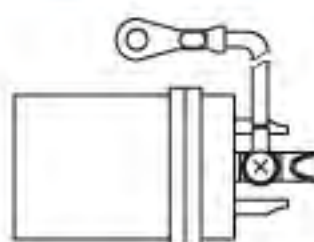
G28 Pin insert G28 Socket insert

2+PE/3+PE/4+PE/5/5+PE/6+PE/7+PE/12/16/24 pole

Series G28



Pin insert G28 E-7P/L



Socket insert G28 E-7S/L

Inserts

Connector type	G28 Series				
Number of contacts	2 pole + PE	3 pole + PE	4 pole + PE	5 pole	5 pole + PE
Contact arrangement Contact identification marked on insert:					
Pin insert: Rear view Socket insert: Front view					
Ordering code					
Pin inserts, solder contacts	G28 E-2P+PE/L	G28 E-3P+PE/L	G28 E-4P+PE/L	G28 E-5P/L	G28 E-5P+PE/L
Socket inserts, solder contacts	G28 E-2S+PE/L	G28 E-3S+PE/L	G28 E-4S+PE/L	G28 E-5S/L	G28 E-5S+PE/L
Pin inserts, crimp contacts	---	---	---	---	---
Socket inserts, crimp contacts	---	---	---	---	---
Pin inserts, screw-type contacts	G28 E-2P+PE/S	G28 E-3P+PE/S	---	---	---
Socket inserts, screw-type contacts	G28 E-2S+PE/S	G28 E-3S+PE/S	---	---	---
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	230 V / 400 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact	42 V	230 V / 400 V PE contact
Key positions (polarization)	5	5	5	5	5
Contacts **					
Max. rated current of individual contact	2x 27.5 A	3x 26 A	4x 25 A	5x 23 A	5x 16 A
Outer diameter of contact	2.3 mm	2.3 mm	2.3 mm	2.3 mm	2.3 mm
Contact type/size (crimp contacts)	---	---	---	---	---
PE contact ***					
Diameter solder contacts	3 mm	3 mm	3 mm	---	3 mm
Contact type/size (crimp contacts)	---	---	---	---	---
Diameter screw-type contacts	2.3 mm	2.3 mm	---	---	---

Connector type	G28 Series				
Number of contacts	6 pole + PE	7 pole + PE	12 pole	16 pole	24 pole
Contact arrangement Contact identification marked on insert:					
Pin insert: Rear view Socket insert: Front view					
Ordering code					
Pin inserts, solder contacts	G28 E-6P+PE/L	G28 E-7P+PE/L	G28 E-12P/L	G28 E-16P/L	G28 E-24P/L
Socket inserts, solder contacts	G28 E-6S+PE/L	G28 E-7S+PE/L	G28 E-12S/L	G28 E-16S/L	G28 E-24S/L
Pin inserts, crimp contacts	---	---	---	---	---
Socket inserts, crimp contacts	---	G28 E-7P+PE/C*	---	---	---
Pin inserts, screw-type contacts	---	---	---	---	---
Socket inserts, screw-type contacts	---	---	---	---	---
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	230 V / 400 V PE contact	230 V / 400 V PE contact	42 V	42 V	42 V
Key positions (polarization)	5	5	5	5	5
Contacts **					
Max. rated current of individual contact	6x 22 A	7x 20 A	12x 16 A	16x 16 A	24x 7.5 A
Outer diameter of contact	2.3 mm	2.3 mm	1.58 mm	1.58 mm	1.58 mm
Contact type/size (crimp contacts)	---	Typ B	---	---	---
PE contact ***					
Diameter solder contacts	3 mm	3 mm	---	---	---
Contact type/size (crimp contacts)	---	Typ H	---	---	---
Diameter screw-type contacts	---	---	---	---	---

* If implemented accordingly, the 7 pole insert for crimp contacts is interchangeable with the 2 + 6 pole inserts for solder contacts

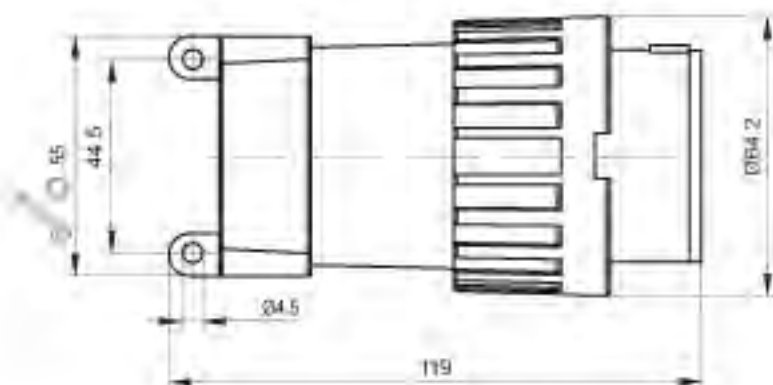
** For detailed information on individual contacts see page 44

*** PE = Protective conductor terminal, for details about PE contacts refer to page 44

G42 ST Plug

Series G42

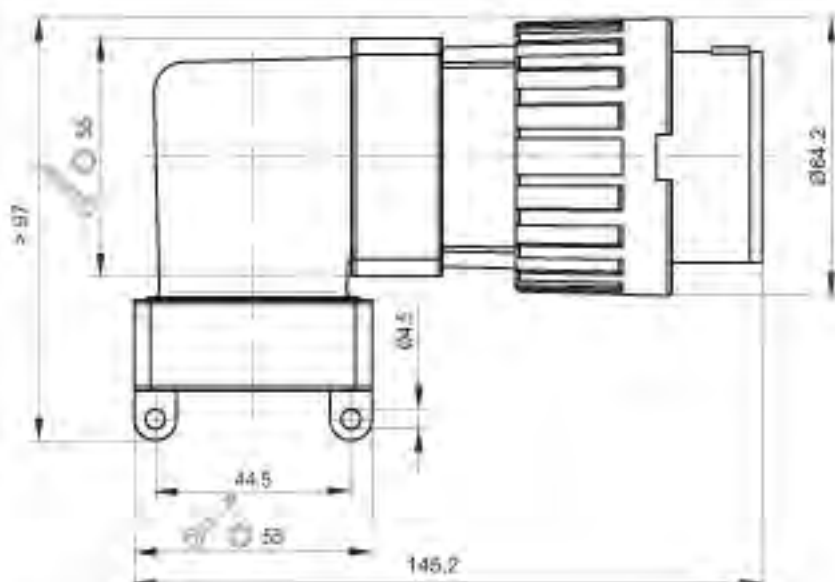
Shell part 1



G42 WS 90° plug

Series G42

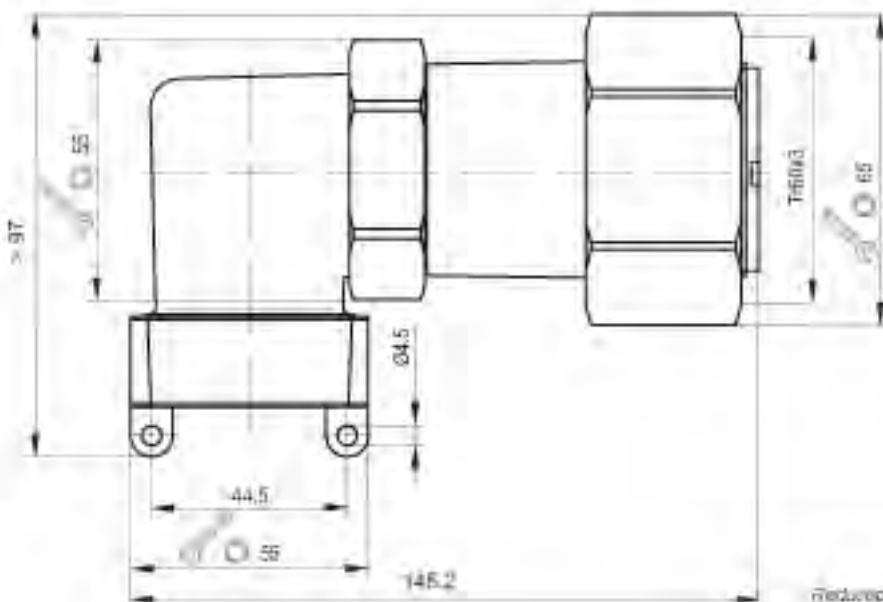
Shell part 1



G42 WS Tg 90° plug with trapezoidal thread

Serie G42

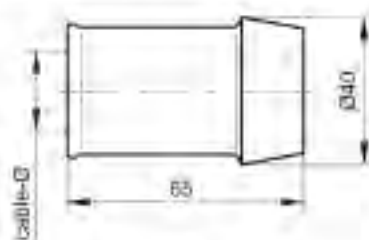
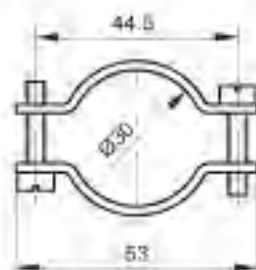
Shell part 1



Note:
This plug can only be used with the corresponding receptacle **G42 DF Tg** Triaxialconnector is sealed to **IP67**

T42-x, G42 SH Cable support sleeve, Cable clamp

Series G42

Figure A
Cable support
sleeve T42-xFigure B
Cable clamp
G42 SH

Shell part 2

Ordering code	Cable diameter (mm)	Figure
T42-14/18	14 - 18	Fig. A
T42-18/22	18 - 22	Fig. A
T42-22/28,5	22 - 28,5	Fig. A
T42-26,5/31	26,5 - 31	Fig. A
G42 SH	30	Fig. B

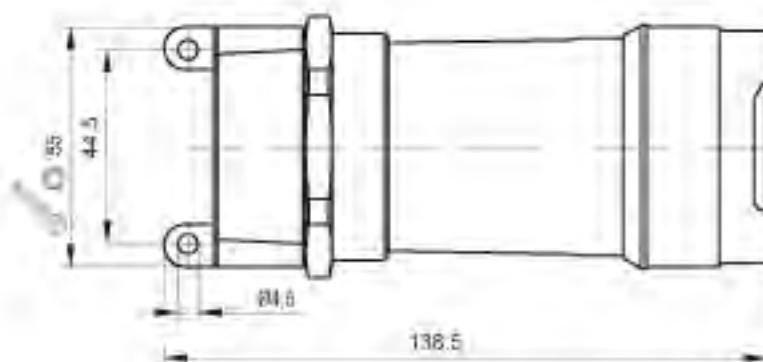
Note:

Cable support sleeves and cable clamp are for use with the plugs G42 ST, G42 WS and G42 WS Tg as well as the receptacles G42 KD, G42 KF and also G3T KD Ki and G3T KF Ki.

G42 KD Cable-connecting receptacle

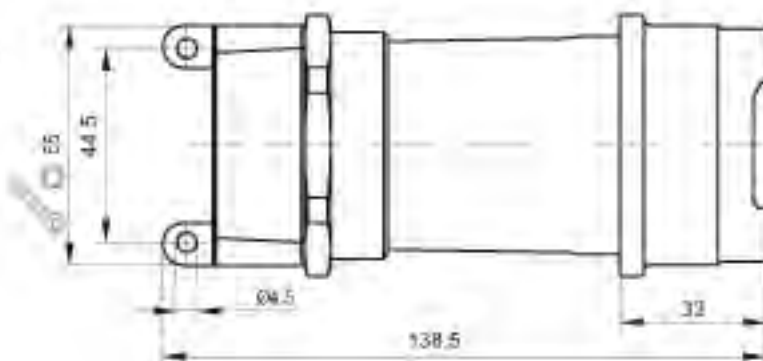
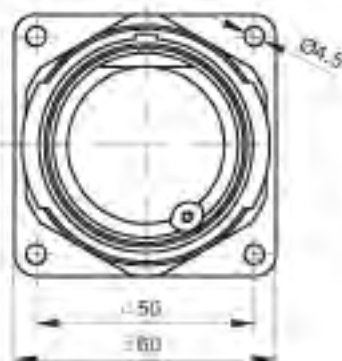
Series G42

Shell part 1

**G42 KF** Cable-connecting receptacle with flange

Series G42

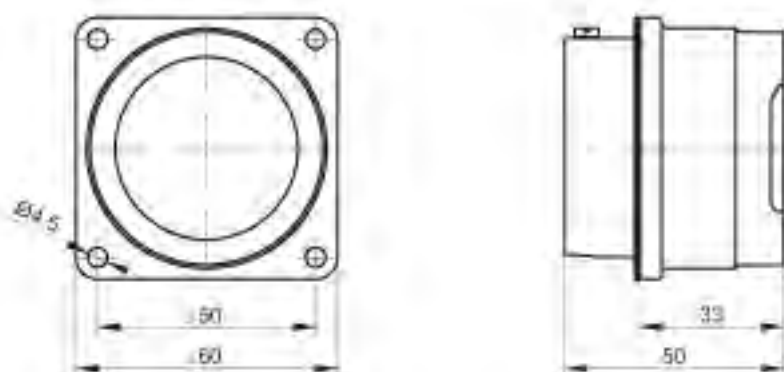
Shell part 1



G42 DF Flange mount receptacle

Series G42

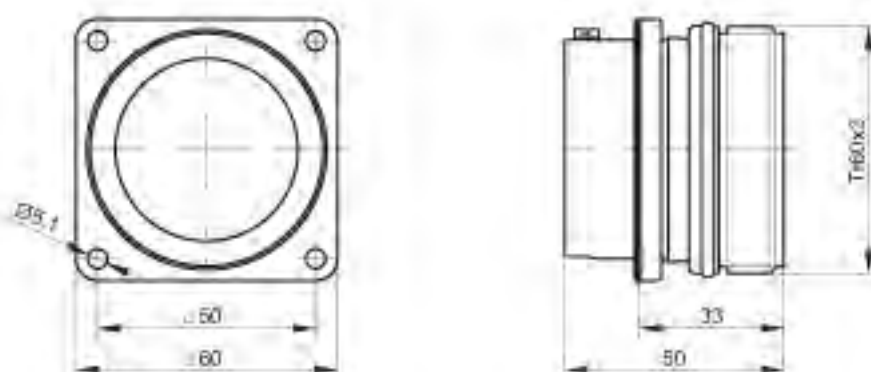
Shell part 1



G42 DF Tg Flange mount receptacle with flange and trapezoidal thread

Series G42

Shell part 1

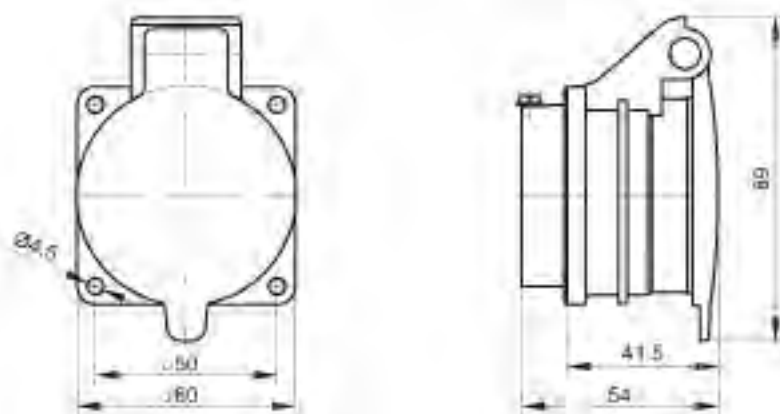


Note:
This receptacle can only be used with the corresponding plug **G42 WS Tg**. The mating connector is sealed to **IP67**.

G42 DD Receptacle with hinged lid

Series G42

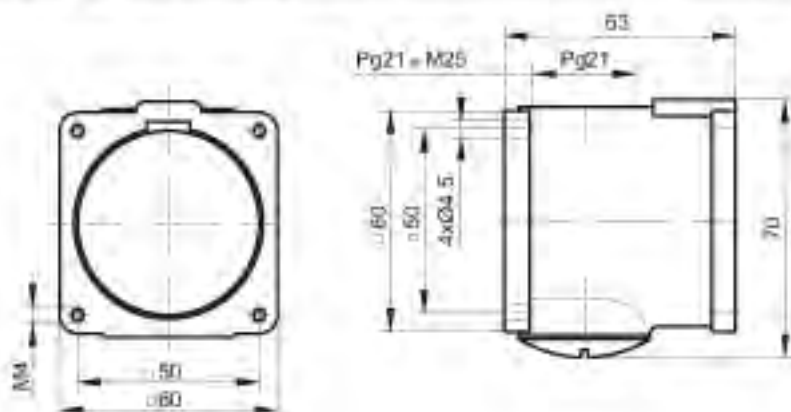
Shell part 1



G42 DU Pg21, G42 DU M25 Backshell for surface mounting

Series G42

Shell part 2



Note:
For this article minimum order quantity (MOS) applies.
Please, contact us.

Ordering code	Thread
G42 DU Pg21	Pg size Pg21
G42 DU M25	Metric size M25

Note:
Backshells for surface mounting come in handy when there is not enough space for the receptacle to be panel mounted. The knockout entry of the backshell allows to enter a cable from the side in front of the panel and wire the rear of the receptacle. Backshells with two cable entries can also be used as surface mounted junction boxes.

The flange mounted receptacle and backshell are sealed to IP54.

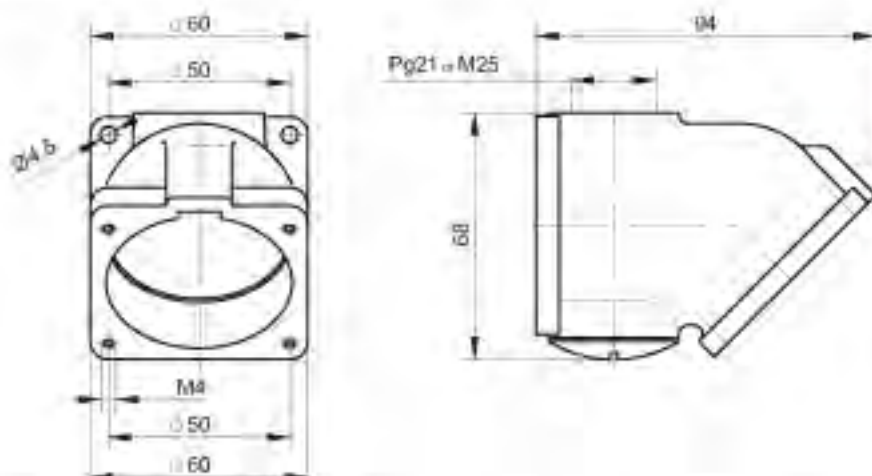
Do not use this backshell with the following pin and socket inserts: G42 E-4/S+PE/L, G42 E-4/P+PE/L, G42 E-6/S+PE/L-2, G42 E-6/P+PE/L-2.

No connection or protective conductor possible for the following pin and socket inserts: G42 E-3/S+PE/L-2, G42 E-3/P+PE/L-2.

G42 DU Wi Pg21, G42 DU Wi M25 Backshell 45° for surface mounting

Series G42

Shell part 2



Note:
For this article minimum order quantity (MOS) applies.
Please, contact us.

Ordering code	Thread
G42 DU Wi Pg21	Pg size Pg21
G42 DU Wi M25	Metric size M25

Note:
Backshells for surface mounting come in handy when there is not enough space for the receptacle to be panel mounted. The knockout entry of the backshell allows to enter a cable from the side in front of the panel and wire the rear of the receptacle. Backshells with two cable entries can also be used as surface mounted junction boxes.

The flange mounted receptacle and backshell are sealed to IP54.

Do not use this backshell with the following pin and socket inserts: G42 E-4/S+PE/L, G42 E-4/P+PE/L, G42 E-6/S+PE/L-2, G42 E-6/P+PE/L-2.

No connection or protective conductor possible for the following pin and socket inserts: G42 E-3/S+PE/L-2, G42 E-3/P+PE/L-2.

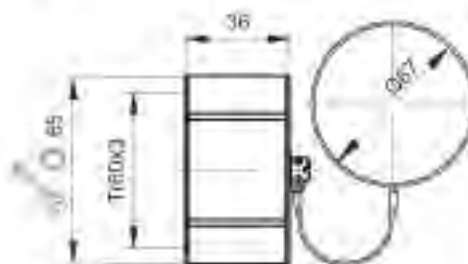
G42 VD, G42 VD Tg Protection caps for receptacles

Series G42

G42 VD Protection cap for receptacles

G42 VD Tg Protection cap for receptacles with trapezoidal thread

Protection



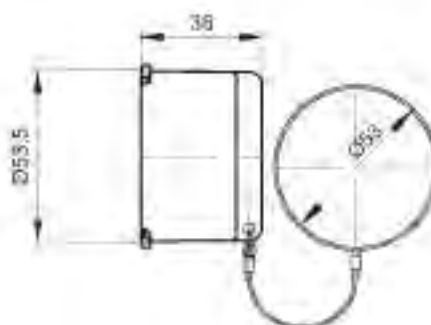
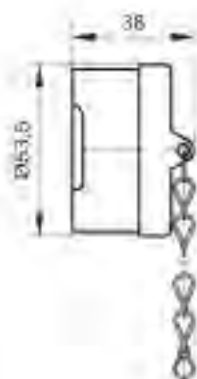
G42 VK Ke, G42 VK Protection caps for plugs

Series G42

G42 VK Ke Protection cap with chain for plugs

G42 VK Protection cap for plugs

Protection



G42 GK Rubber cap for plugs

Series G42

G42 GK Rubber cap for plugs

Protection



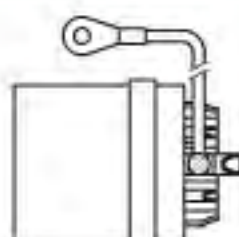
G42 Pin inserts G42 Socket inserts

3+PE/4+PE/6+PE/6+2+PE/8+PE/10+PE/12+PE/
14+PE/ 20+PE/24 pole

Series G42



Pin insert G42 E-14P+PE/L



Socket insert G42 E-14S+PE/L

Inserts

Connector type	G42 Series					
	3 pole + PE	3 pole + PE	4 pole + PE	6 pole + PE	6 pole + PE	6+2 pole + PE
Number of contacts	3	3	4	6	6	6+2
Contact arrangement	Contact identification marked on insert.					
Pin insert: Rear view						
Socket insert: Front view						
Ordering code	Pin inserts, solder contacts					
	G42 E-3P+PE/L-2	G42 E-3P+PE/L	G42 E-4P+PE/L	G42 E-6P+PE/L-2	G42 E-6P+PE/L	—
	Socket inserts, solder contacts					
	G42 E-3S+PE/L-2	G42 E-3S+PE/L	G42 E-4S+PE/L	G42 E-6S+PE/L-2	G42 E-6S+PE/L	—
	Pin inserts, crimp contacts					
	—	—	—	—	—	G42 E-6+2P+PE/C
	Socket inserts, crimp contacts					
	—	—	—	—	—	G42 E-6+2S+PE/C
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	230 V / 400 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact	500 V PE contact
Key positions (polarization)	5	5	5	5	5	5
Contacts **	Max. rated current of individual contact					
	3x 83 A	3x 20 A	4x 63 A	6x 63 A	6x 20 A	8x 25 A
	Outer diameter of contact					
	∅ 6 mm	∅ 3 mm	∅ 6 mm	∅ 6 mm	∅ 3 mm	∅ 3 mm
	Contact type/size (crimp contacts)					
	—	—	—	—	—	Type H
PE contact ***	Diameter solder contacts					
	∅ 6 mm	∅ 3 mm	∅ 6 mm	∅ 6 mm	∅ 3 mm	—
	Contact type/size (crimp contacts)					
	—	—	—	—	—	Type H

Connector type	G42 Series					
	8 pole + PE	10 pole + PE	12 pole + PE	14 pole + PE	20 pole + PE	24 pole
Number of contacts	8	10	12	14	20	24
Contact arrangement	Contact identification marked on insert.					
Pin insert: Rear view						
Socket insert: Front view						
Ordering code	Pin inserts, solder contacts					
	G42 E-8P+PE/L	G42 E-10P+PE/L	G42 E-12P+PE/L	G42 E-14P+PE/L	G42 E-20P+PE/L	G42 E-24P/L
	Socket inserts, solder contacts					
	G42 E-8S+PE/L	G42 E-10S+PE/L	G42 E-12S+PE/L	G42 E-14S+PE/L	G42 E-20S+PE/L	G42 E-24S/L
	Pin inserts, crimp contacts					
	—	—	G42 E-12P+PE/C	G42 E-14P+PE/C*	G42 E-20P+PE/C	—
	Socket inserts, crimp contacts					
	—	—	G42 E-12S+PE/C	G42 E-14S+PE/C*	G42 E-20S+PE/C	—
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	230 V / 400 V PE contact	500 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact	42 V
Key positions (polarization)	5	5	5	5	5	5
Contacts **	Max. rated current of individual contact					
	8x 20 A	10x 25 A	12x 25 A	14x 16 A	20x 10 A	24x 10 A
	Outer diameter of contact					
	∅ 3 mm	∅ 2.3 mm	∅ 3 mm	∅ 2.3 mm	∅ 1.58 mm	∅ 1.58 mm
	Contact type/size (crimp contacts)					
	—	—	Typ H	Typ B	Typ A	—
PE contact ***	Diameter solder contacts					
	∅ 3 mm	∅ 3 mm	∅ 3 mm	∅ 3 mm	∅ 3 mm	—
	Contact type/size (crimp contacts)					
	—	—	Type H	Type H	Type H	—

* If implemented accordingly, the 14-pole insert for crimp contacts is interchangeable with the 10-pole insert for solder contacts.

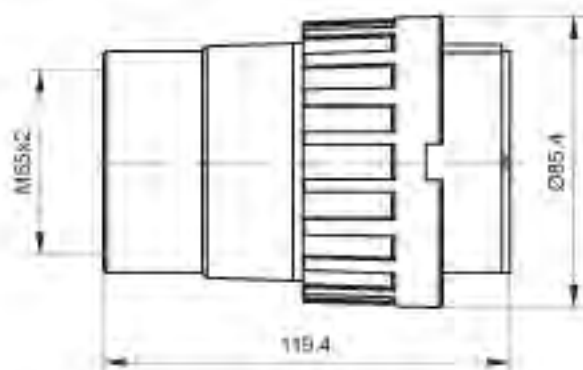
* For detailed information on individual contacts see page 44.

*** PE = Protective conductor terminal, for details about PE contacts refer to page 44.

G57 ST Tr Plug

Series G57

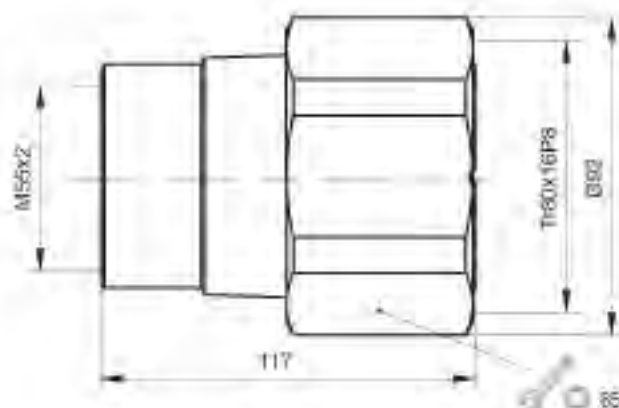
Shell part 1



G57 ST Tg Plug with trapezoidal thread

Series G57

Shell part 1

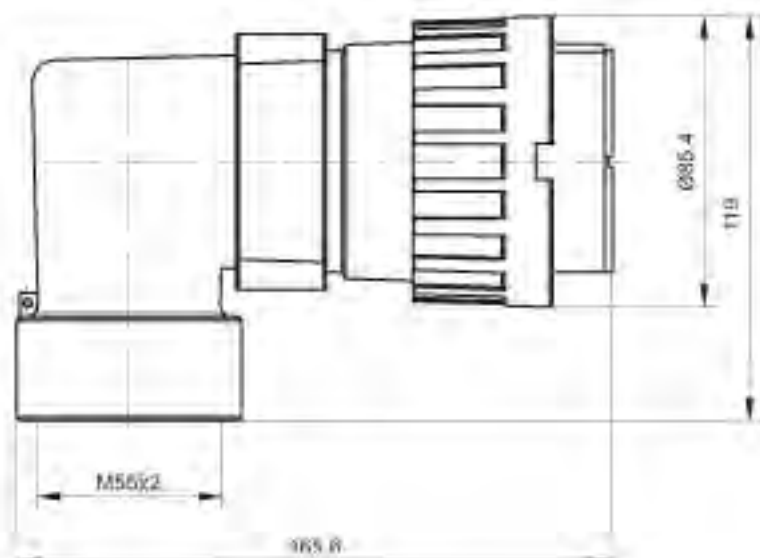


Note:
This plug can only be used with the corresponding receptacle **G57 DF Tg**. The additional contact is sealed to IP67.

G57 WS Tr 90° plug

Series G57

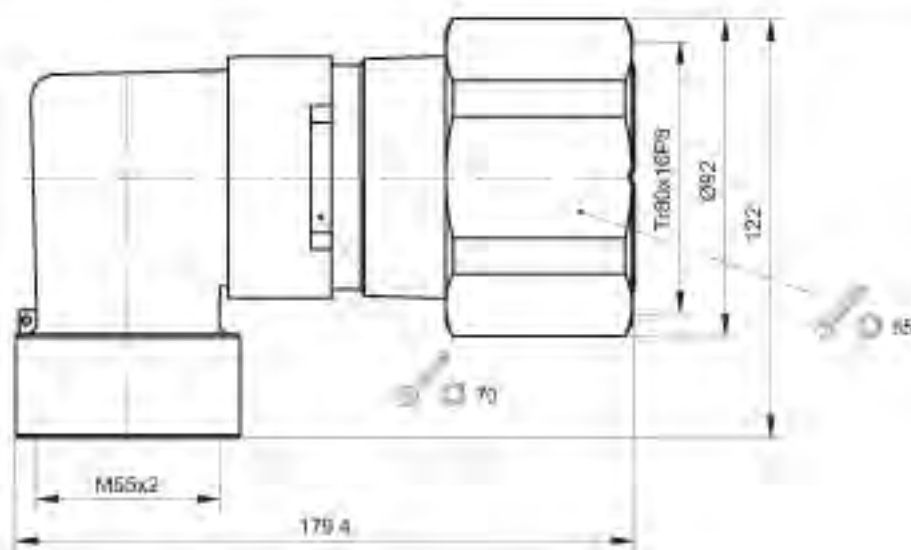
Shell part 1



G57 WS Tg 90° plug with trapezoidal thread

Series G57

Shell part 1

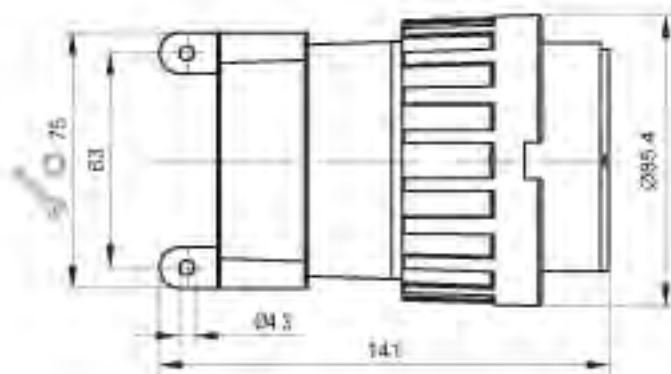


Note:
This plug can only be used with the corresponding receptacle **G57 DF Tg**. The make connection is sealed to **IP67**.

G57 ST Kt Plug

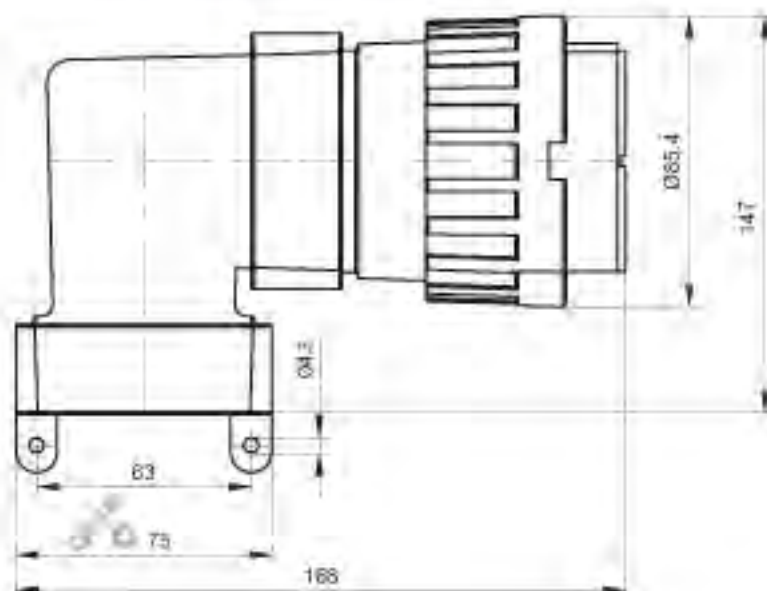
Series G57

Shell part 1

**G57 WS Kt** 90° plug

Series G57

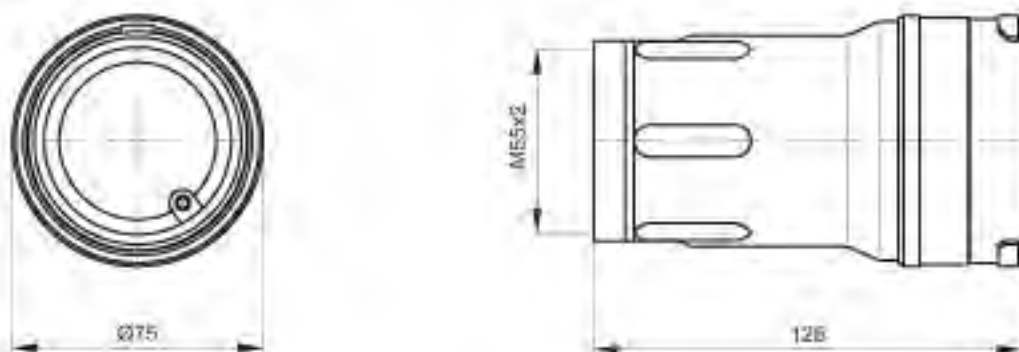
Shell part 1



G57 KD Tr Cable-connecting receptacle for bell-shaped cable sleeve

Series G57

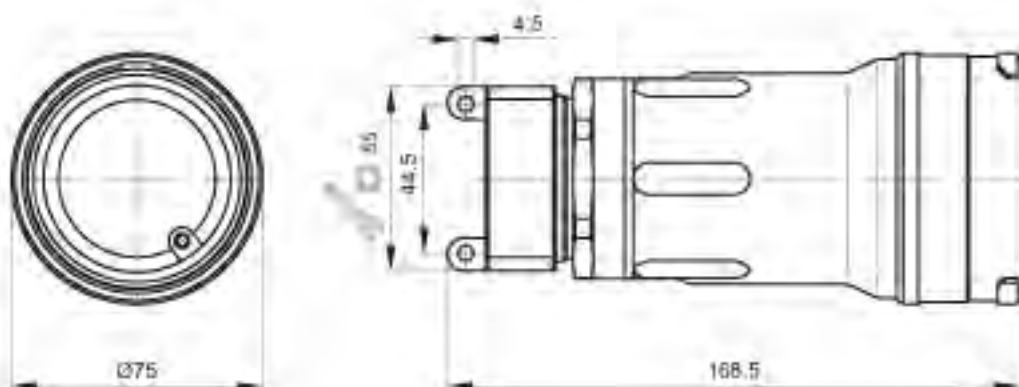
Shell part 1



G57 KD Kt Cable-connecting receptacle for cable support sleeve

Series G57

Shell part 1

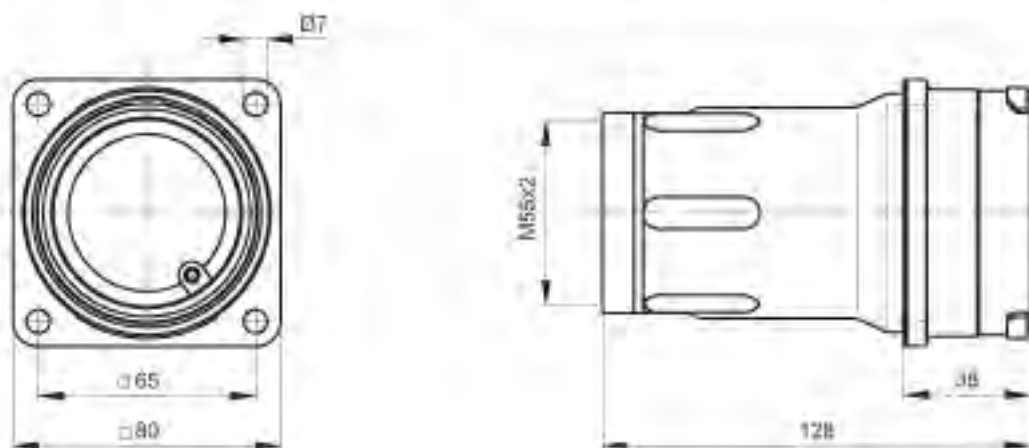


Note:
Use cable clamp **G42 SH** and
cable support sleeve **T42-x** with
this type of connector.

G57 KF Tr Cable-connecting receptacle with flange for bell-shaped cable sleeve

Series G57

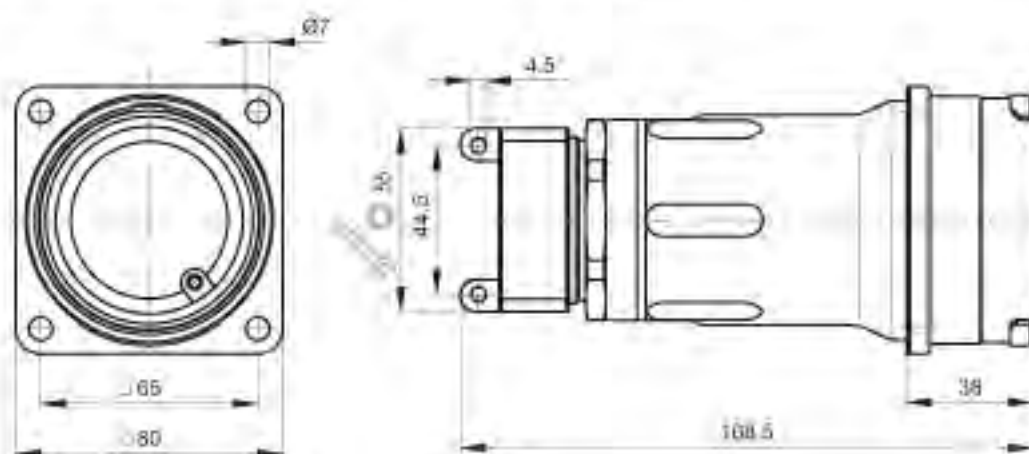
Shell part 1



G57 KF Kt Cable-connecting receptacle with flange for cable support sleeve

Series G57

Shell part 1

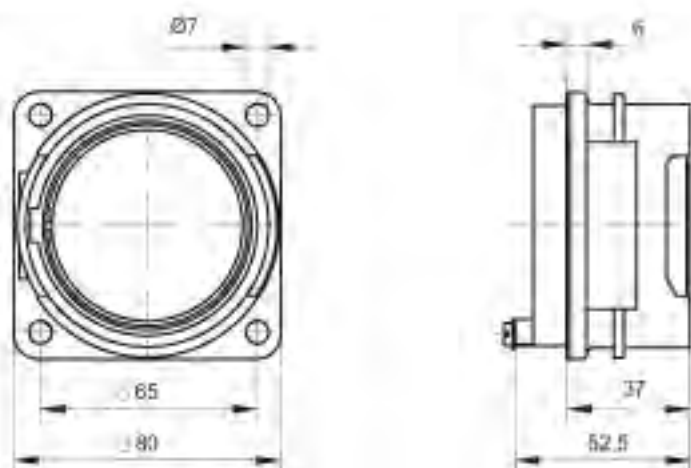


Note:
Use male clamp **G42 SH** and
cable support sleeve **T42-W** with
this type of connector!

G57 DF Flange mount receptacle

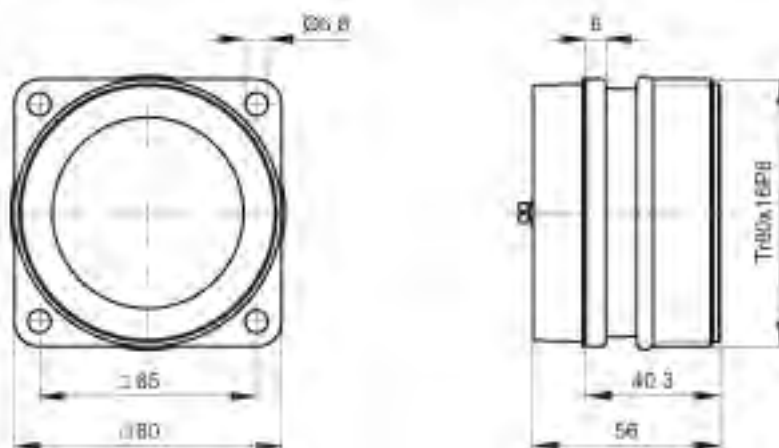
Series G57

Shell part 1


G57 DF Tg Flange mount receptacle with trapezoidal thread

Series G57

Shell part 1

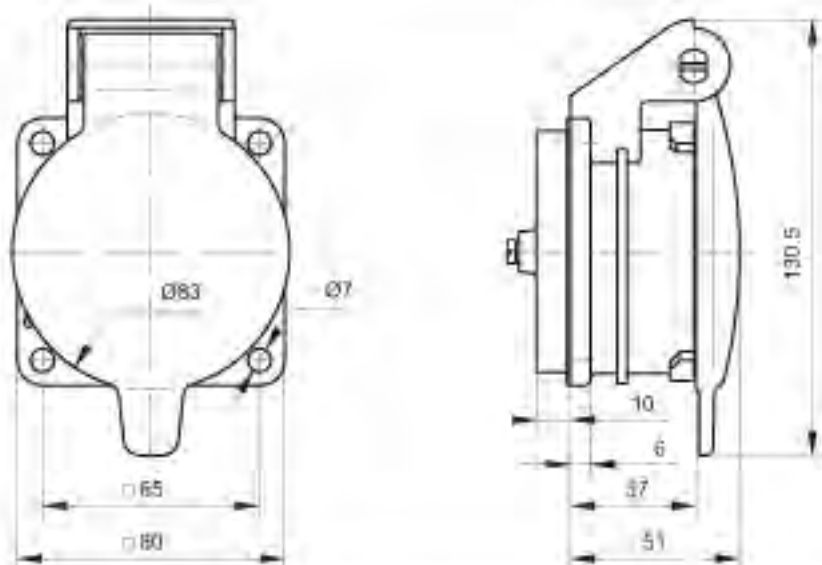


Note:
This receptacle can only be
used with the corresponding
plug **G57 ST Tg**. The male
connector is sealed to **IP67**.

G57 DD Receptacle with hinged lid

Series G57

Shell part I



G57 VK Protection cap

Series G57

G57 VK Protection cap for plugs

Protection



G57 GK Rubber cap for plugs

Series G57

G57 GK Rubber cap for plugs

Protection

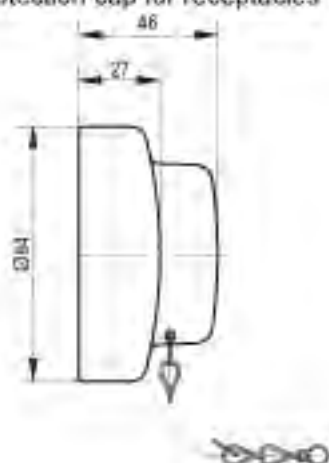


G57 GD Protection cap for receptacles

Series G57

G57 VD Protection cap for receptacles

Protection

**G57 Tr-46 + G57 KT/xx-yy + G57 DI-xx** Bell-shaped cable sleeve

Series G57

Figure A
Bell-shaped cable sleeve
G57 TR-46

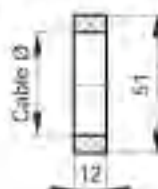


Shell part 2

Figure B
Parts of clamp
G57 KT/xx-yy



Figure C
Sealing ring
G57 DI-xx



Cable Ø (mm)	Ordering code		
	Figure A Bell-shaped cable sleeve	Figure B Parts of clamp	Figure C Sealing ring
30			G57 DI-30
32			G57 DI-32
34	G57 TR-46	G57 KT/30-36	G57 DI-34
36			G57 DI-36
38			G57 DI-38
40	G57 TR-46	G57 KT/38-44	G57 DI-40
42			G57 DI-42

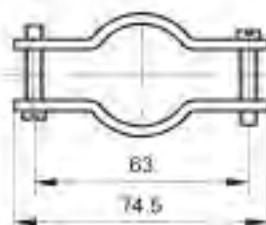
Note:

The new-shaped cable sleeve and its accessories are for use with the plugs G57 ST Tr, G57 ST Tg, G57 WS Tr and G57 WS Tg as well as the receptacles G57 KD Tr and G57 KF Tr.

G57 SH + T42-x Cable clamp + cable support sleeve

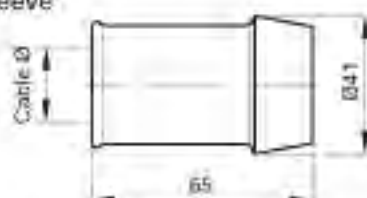
Series G57

Figure A
Cable clamp
G57 SH



Shell part 2

Figure B
Cable support sleeve
T42-x



Cable Ø (mm)	Ordering code	
	Figure A Cable clamp	Figure B Cable support sleeve
G57 SH		
14 - 18	—	T42-14/18
18 - 22	—	T42-18/22
22 - 28,5	—	T42-22/28,5
28,5 - 34	—	T42-28,5/34

Note:

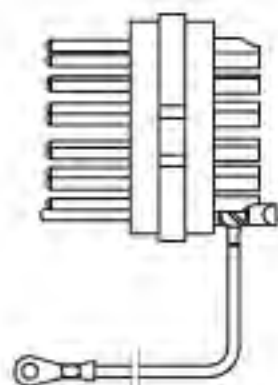
Cable support sleeve and cable clamp are for use with the plugs G57 ST Kl and G57 WS Kl. For the receptacles G57 KD Kl and G57 KF Kl use cable clamp G42 SH along with the cable support sleeve T42-x (see page 27).

G57 Pin inserts
G57 Socket inserts

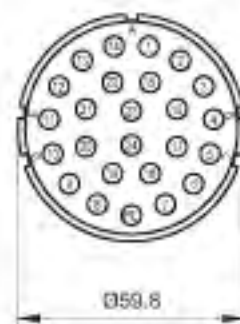
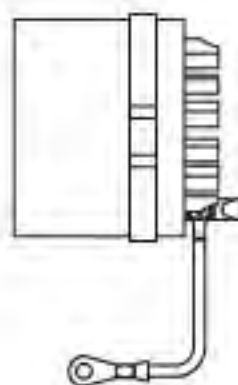
4+PE/4+5/16+PE/24+PE/32+PE/48+PE pole
4+PE/4+5/16+PE/24+PE/32+PE/48+PE pole

Series G57

Inserts



Pin insert G57 E-24P+PE/L



Socket insert G57 E-24S+PE/L

Connector type	G57 Series					
	4 pole + PE	4 + 5 pole	16 pole + PE	24 pole + PE	32 pole + PE	48 pole + PE
Number of contacts	4 pole + PE	4 + 5 pole	16 pole + PE	24 pole + PE	32 pole + PE	48 pole + PE
Contact arrangement Contact identification marked on insert:						
Pin insert: Rear view						
Socket insert: Front view						
Ordering code						
Pin inserts, solder contacts	G57 E-4P+PE/L	G57 E-4P+5/L	G57 E-16P+PE/L	G57 E-24P+PE/L	G57 E-32P+PE/L	—
Socket inserts, solder contacts	G57 E-4S+PE/L	G57 E-4S+5/L	G57 E-16S+PE/L	G57 E-24S+PE/L	G57 E-32S+PE/L	—
Pin inserts, crimp contacts	—	—	—	—	G57 E-32P+PE/C	G57 E-48P+PE/C
Socket inserts, crimp contacts	—	—	—	—	G57 E-32S+PE/C	G57 E-48S+PE/C
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	230 V / 400 V PE contact	25 V	230 V / 400 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact	230 V / 400 V PE contact
Key positions (polarization)	5	5	5	5	5	5
Contacts *						
Max. rated current of individual contact	4x 100 A	4x 50 A 5x 35 A	16x 20 A	24x 20 A	32x 16 A	48x 7.5 A
Outer diameter of contact	∅ 10 mm	∅ 8 mm ∅ 3 mm	∅ 3 mm	∅ 3 mm	∅ 1.68 mm	∅ 2.3 mm
Contact type/size (crimp contacts)	—	—	—	—	Type A	Type B
PE contact **						
Diameter solder contacts	∅ 10 mm	—	∅ 3 mm	∅ 3 mm	∅ 3 mm	∅ 3 mm
Contact type/size (crimp contacts)	—	—	—	—	Type H	Type H

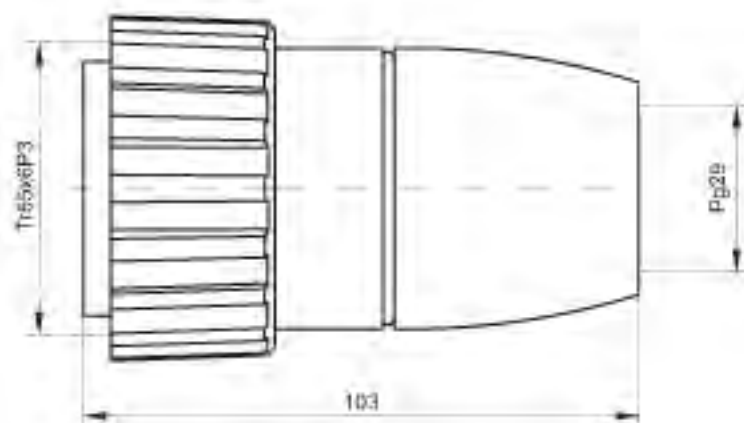
* For detailed information on individual contacts see page 44

** PE = Protective conductor terminal; for details about PE contacts refer to page 44

GM42 ST Pg29 Plug

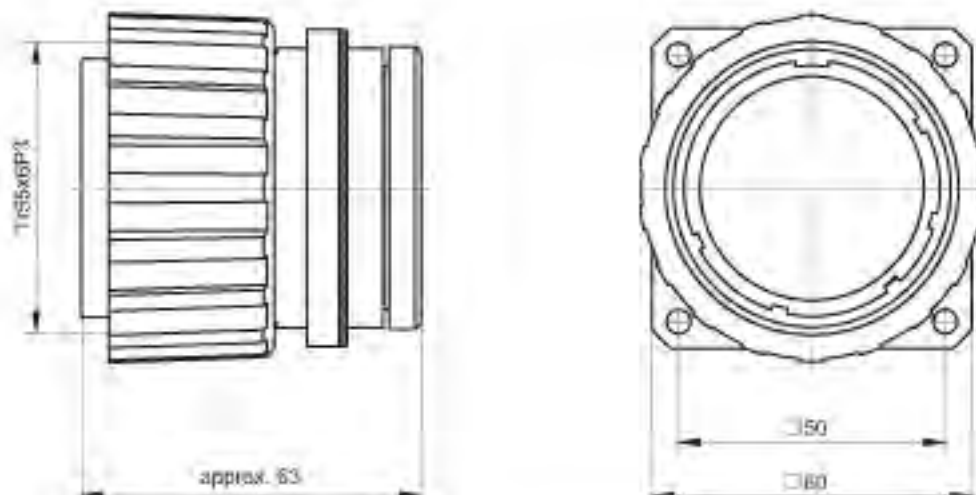
Series GM42

Shell part 1


GM42 SF Flange mount plug

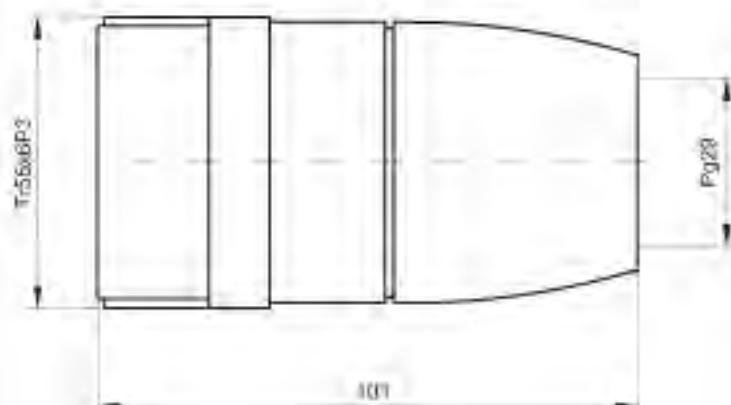
Series GM42

Shell part 1


GM42 KD Cable-connecting receptacle

Series GM42

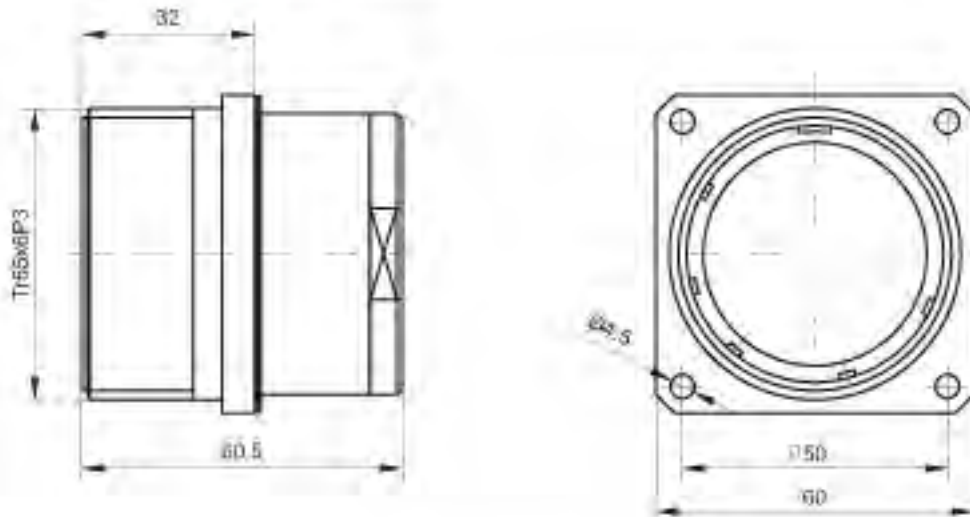
Shell part 1



GM42 DF Flange mount receptacle

Series GM42

Shell part 1

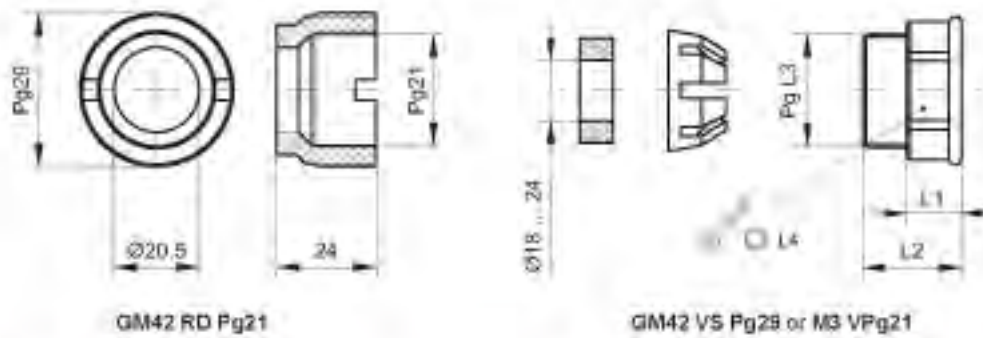


GM42 VS Pg29 Cable gland for cables \varnothing 18 ... 24 mm

Series GM42

GM42 RD Pg21 + M3 VPg21 Adapter + cable gland for cables \varnothing 14 ... 18 mm

Series part 2

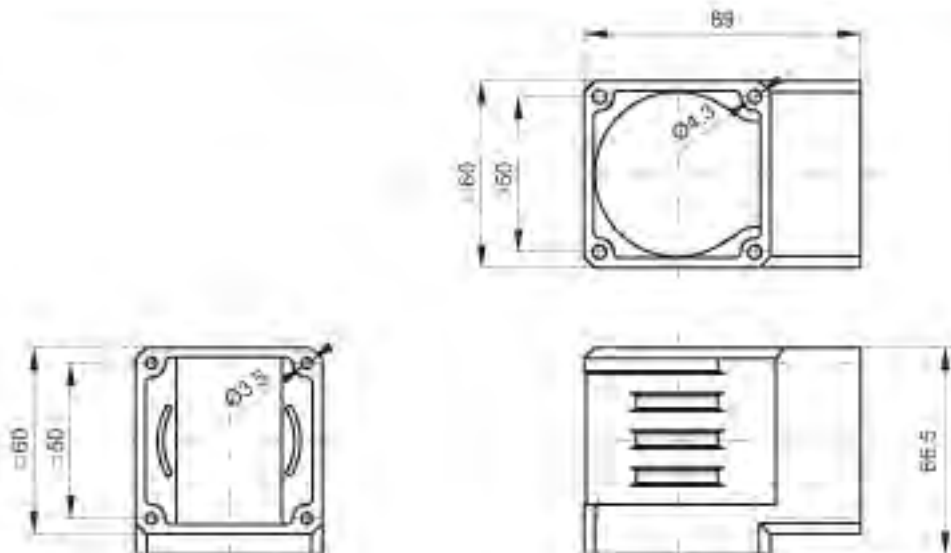


Cable \varnothing	Adapter	Cable gland	L1	L2	L3	L4
14 ... 18	GM42 RD Pg21	M3 VPg21	9	20.5	Pg21	30
18 ... 24	—	GM42 VS Pg29	16	30	Pg29	01

GM42 WG Backshell 90°

Series GM42

Shell part 2



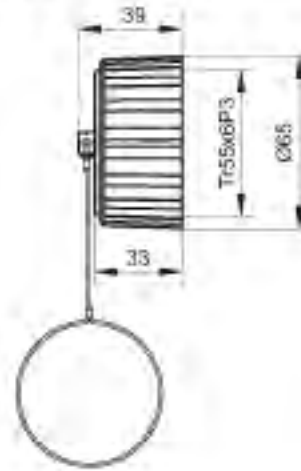
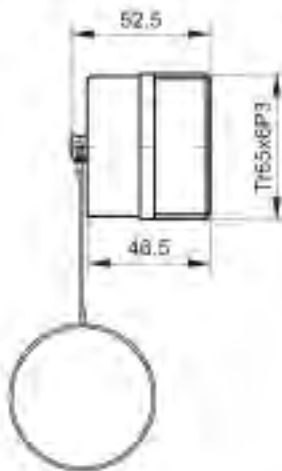
GM42 VK, GM42 VD Protection caps

Series GM42

GM42 VK Protection cap for plugs

GM42 VD Protection cap for receptacles

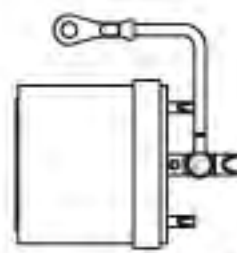
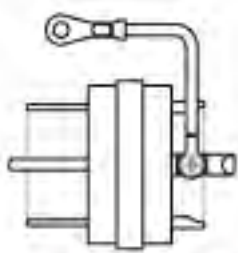
Protection

G42 Pin inserts
G42 Socket inserts

6+2+PE/10+PE/12+PE/14+PE/ 20+PE/64+PE pole

6+2+PE/10+PE/12+PE/14+PE/ 20+PE/64+PE pole

Series GM42



Inserts

Pin Insert G42 E-20P+PE/L

Socket Insert G42 E-20S+PE/L

Connector type	GM42 Series					
	6+2 pole + PE	10 pole + PE	12 pole + PE	14 pole + PE	20 pole + PE	64 pole + PE
Number of contacts	6+2+PE	10+PE	12+PE	14+PE	20+PE	64+PE
Contact arrangement	Contact identification marked on insert:					
Pin insert	Rear view					
Socket insert	Front view					
Ordering code						
Pin inserts, solder contacts	—	G42 E-10P+PE/L	G42 E-12P+PE/L	G42 E-14P+PE/L	G42 E-20P+PE/L	—
Socket inserts, solder contacts	—	G42 E-10S+PE/L	G42 E-12S+PE/L	G42 E-14S+PE/L	G42 E-20S+PE/L	—
Pin inserts, crimp contacts	G42 E-6+2P+PE/C	—	G42 E-12P+PE/C	G42 E-14P+PE/C*	G42 E-20P+PE/C	GM42 E-64P+PE/C
Socket inserts, crimp contacts	G42 E-6+2S+PE/C	—	G42 E-12S+PE/C	G42 E-14S+PE/C*	G42 E-20S+PE/C	GM42 E-64S+PE/C
Rated voltage (IEC 60039)	500 V	500 V	230 V / 400 V	230 V / 400 V	230 V / 400 V	81x 25 V
at pollution degree 3 (IEC 60512)	PE contact	PE contact	PE contact	PE contact	PE contact	3x 230 V / 400 V PE contact
Key positions (polarization)	5	5	5	5	5	5
Contacts **						
Max. rated current of individual contact	8x 25 A	10x 25 A	12x 25 A	14x 16 A	20x 10 A	64x 10 A
Outer diameter of contact	∅ 3 mm	∅ 2.3 mm	∅ 3 mm	∅ 2.3 mm	∅ 1.58 mm	∅ 1.6 mm
Contact type/size (crimp contacts)	Type H	—	Type H	Type B	Type A	Type G
PE contact ***						
Diameter solder contacts	—	∅ 3 mm	∅ 3 mm	∅ 3 mm	∅ 3 mm	∅ 1.6 mm
Contact type/size (crimp contacts)	Type H	—	Type H	Type H	Type H	Type G

* If implemented accordingly; the 14-pole insert for crimp contacts is also available with the 12-pole insert for solder contacts

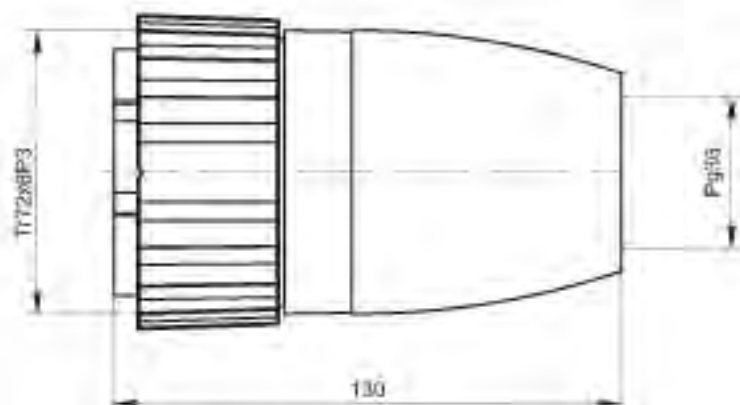
** For detailed information on individual contacts see page 41

*** PE = Protective conductor terminal; for details about PE contacts refer to page 41

GM57 ST Pg36 Plug

Series GM57

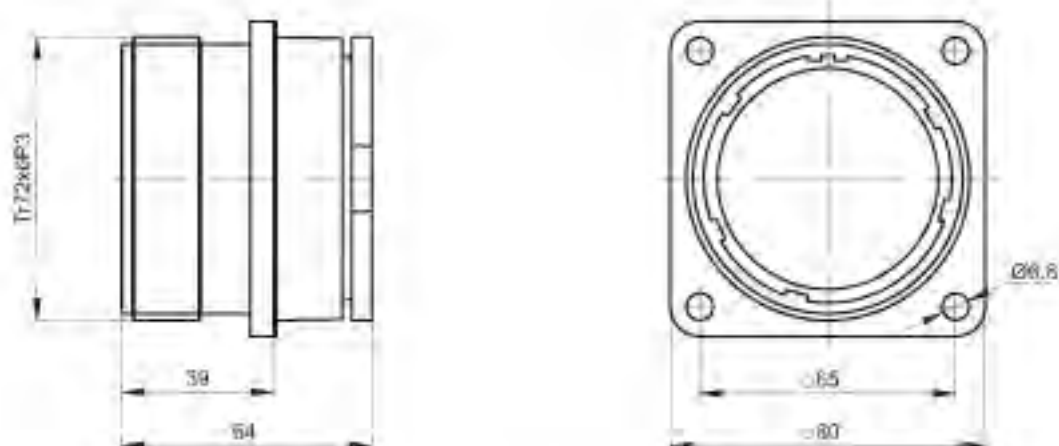
Shell part 1



GM57 DF Flange mount receptacle

Series GM57

Shell part 1



GM57 VS Pg36 Cable gland for cables Ø 28 ... 31 mm

Series GM57

Shell part 2



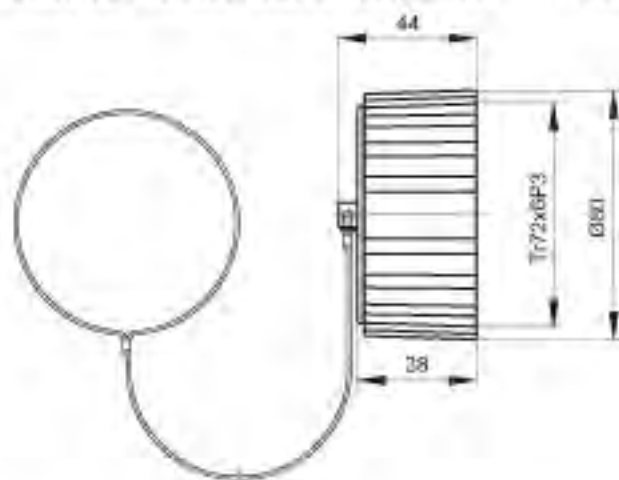
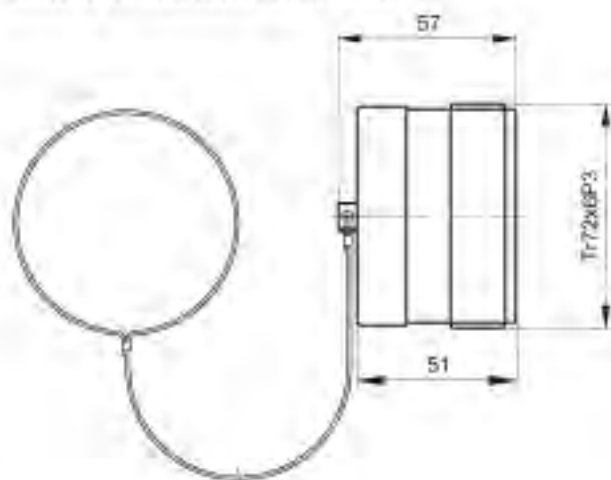
GM57 VK, GM57 VD Protection caps

Series GM57

GM57 VK Protection cap for plugs

GM57 VD Protection cap for receptacles

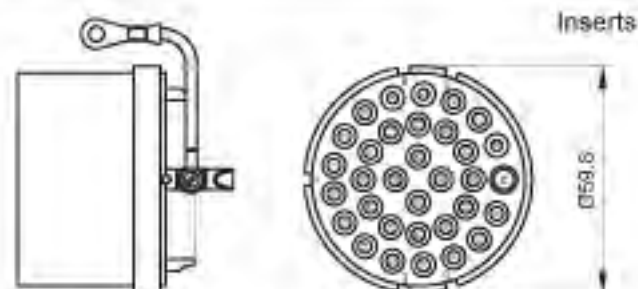
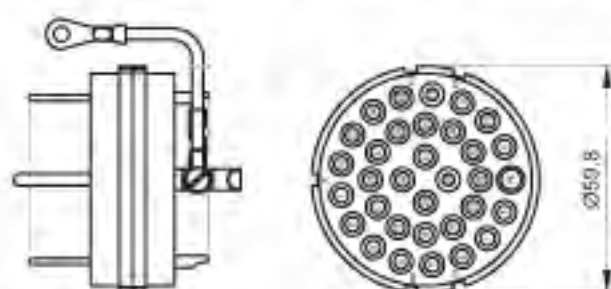
Protection

G57 Pin inserts
G57 Socket inserts

4+PE / 16+PE / 32+PE / 48+PE pole

4+PE / 16+PE / 32+PE / 48+PE pole

Series GM57



Pin insert G57 E-24P+PE/L

Socket insert G57 E-24S+PE/L

Connector type	GM57 Series			
	4 pole + PE	16 pole + PE	32 pole + PE	48 pole + PE
Number of contacts	4 pole + PE	16 pole + PE	32 pole + PE	48 pole + PE
Contact arrangement	Contact identification marked on insert.			
Pin insert: Rear view				
Socket insert: Front view				
Ordering code				
Pin inserts, solder contacts	G57 E-4P+PE/L	G57 E-16P+PE/L	G57 E-32P+PE/L	—
Socket inserts, solder contacts	G57 E-4S+PE/L	G57 E-16S+PE/L	G57 E-32S+PE/L	—
Pin inserts, crimp contacts	—	—	G57 E-32P+PE/C	G57 E-48P+PE/C
Socket inserts, crimp contacts	—	—	G57 E-32S+PE/C	G57 E-48S+PE/C
Rated voltage (IEC 60038)	230 V / 400 V	230 V / 400 V	230 V / 400 V	230 V / 400 V
at pollution degree 3 (IEC 60512)	PE contact	PE contact	PE contact	PE contact
Key positions (polarization)	5	5	5	5
Contacts *				
Max. rated current of individual contact	4x 100 A	16x 20 A	32x 16 A	48x 7.5 A
Outer diameter of contact	∅ 10 mm	∅ 3 mm	∅ 1.58 mm	∅ 2.3 mm
Contact type/size (crimp contacts)	—	—	Type A	Type B
PE contact **				
Diameter solder contacts	∅ 10 mm	∅ 3 mm	∅ 3 mm	∅ 3 mm
Contact type/size (crimp contacts)	—	—	Type H	Type H

* For detailed information on individual contacts see page 44

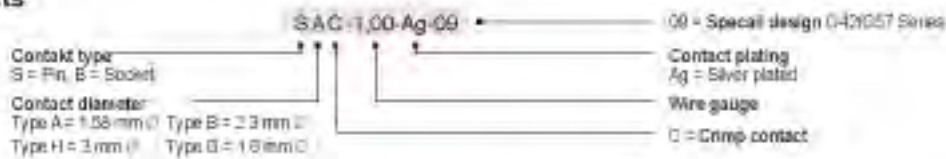
** PE = Protective conductor terminals! for details about PE contacts refer to page 44

Contacts Crimp contacts (pin/socket) and Filler plug

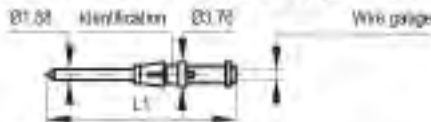
Series G/GM

Contacts

● **Ordering code, contacts**

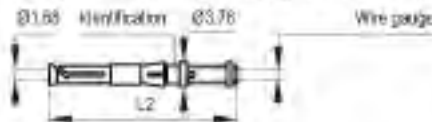


● **Contacts SAC-x, BAC-x, BS-A Crimp contacts (Pin/Socket) and Filler plug:**



Pin contact

Ordering code	L1	Identification
SAC-0,50-Ag	28.8	No groove
SAC-1,00-Ag	28.8	1 groove
SAC-1,50-Ag	28.8	2 grooves
SAC-2,50-Ag	28.8	3 grooves
SAC-1,00-Ag-09	32.8	1 groove
SAC-1,50-Ag-09	32.8	2 grooves



Socket contact

Ordering code	L2	Identification
BAC-0,50-Ag	28.8	No groove
BAC-1,00-Ag	28.8	1 groove
BAC-1,50-Ag	28.8	2 grooves
BAC-2,50-Ag	28.8	3 grooves



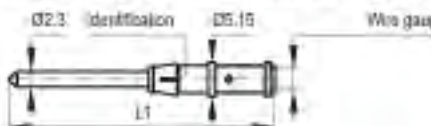
Filler plug:

BS-A: Unimplemented contact cavities can be filled with filler plugs.

Termination

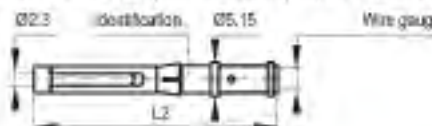
Wire gauge	Rated current
AWG 20	7.5 A
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A
AWG 18 ... 16	10 A
AWG 14	16 A

● **Contacts SBC-x, BBC-x, BS-B Crimp contacts (Pin/Socket) and Filler plug:**



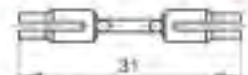
Pin contact

Ordering code	L1	Identification
SBC-0,50-Ag	40.4	No groove
SBC-1,00-Ag	40.4	1 groove
SBC-1,50-Ag	40.4	2 grooves
SBC-2,50-Ag	39.0	3 grooves
SBC-4,00-Ag	39.0	1 wide groove
SBC-6,00-Ag	39.0	2 wide grooves



Socket contact

Ordering code	L2	Identification
BBC-0,50-Ag	37.0	No groove
BBC-1,00-Ag	37.0	1 groove
BBC-1,50-Ag	37.0	2 grooves
BBC-2,50-Ag	35.8	3 grooves
BBC-4,00-Ag	35.8	1 wide groove
BBC-6,00-Ag	35.8	2 wide grooves



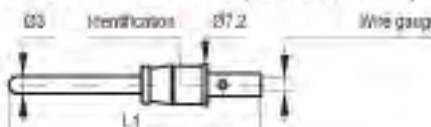
Filler plug:

BS-B: Unimplemented contact cavities can be filled with filler plugs.

Termination

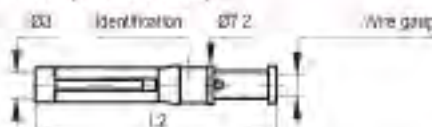
Wire gauge	Rated current
AWG 20	7.5 A
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A
AWG 10	36 A
AWG 9	36 A

● **Contacts SHC-x, BHC-x Crimp contacts (Pin/Socket):**



Pin contact

Ordering code	L1	Identification
SHC-1,00-Ag	43.6	1 groove
SHC-1,50-Ag	43.6	2 grooves
SHC-2,50-Ag	43.6	3 grooves
SHC-4,00-Ag	46.6	1 wide groove
SHC-6,00-Ag	46.6	2 wide grooves



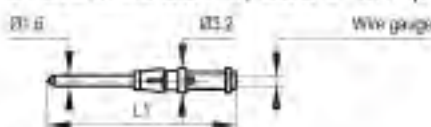
Socket contact

Ordering code	L2	Identification
BHC-1,00-Ag	42.4	1 groove
BHC-1,50-Ag	42.4	2 grooves
BHC-2,50-Ag	42.4	3 grooves
BHC-4,00-Ag	46.4	1 wide groove
BHC-6,00-Ag	46.4	2 wide grooves

Termination

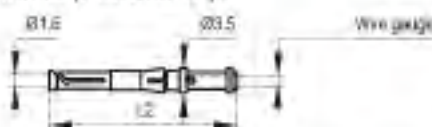
Wire gauge	Rated current
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A
AWG 10	36 A
AWG 9	36 A

● **Contacts SGC-x, BGC-x Crimp contacts (Pin/Socket):**



Pin contact

Ordering code	L1	Identification
SGC-0,37-Ag	25.0	—
SGC-0,50-Ag	25.0	—
SGC-1,00-Ag	25.0	—
SGC-1,50-Ag	25.0	—
SGC-2,50-Ag	25.0	—



Socket contact

Ordering code	L2	Identification
BGC-0,37-Ag	21.8	—
BGC-0,50-Ag	21.8	—
BGC-1,00-Ag	21.8	—
BGC-1,50-Ag	21.8	—
BGC-2,50-Ag	21.8	—

Termination

Wire gauge	Rated current
AWG 28 ... 21	5 A
AWG 20	7.5 A
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A

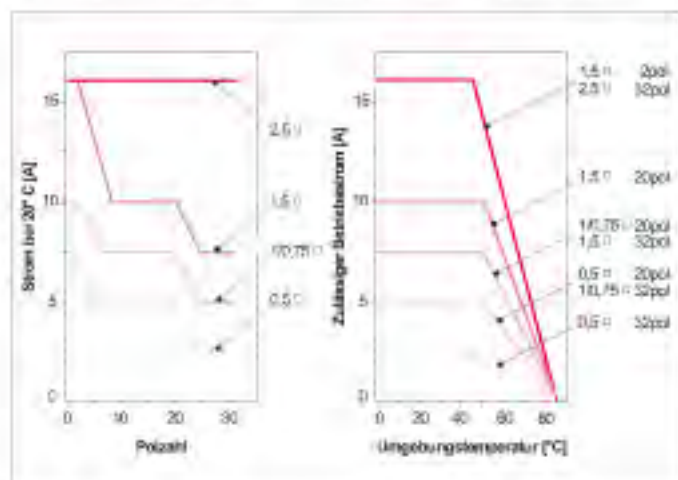
Note: PE contacts must be at least of the same AWG size as the main contacts

Reduced scale diagrams / dimensions in mm

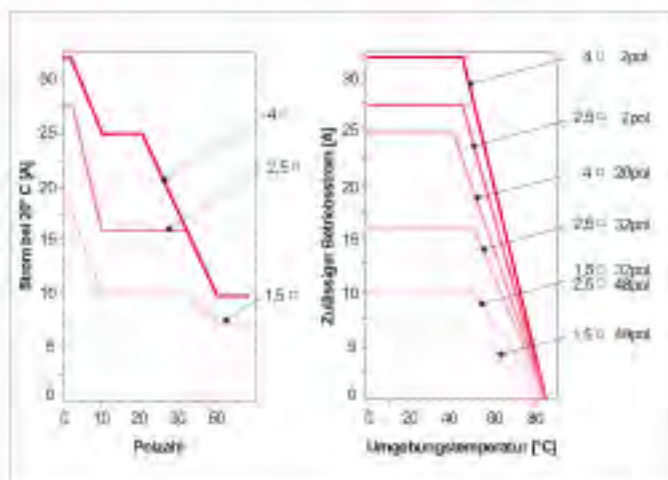
Derating curves

Series G/GM

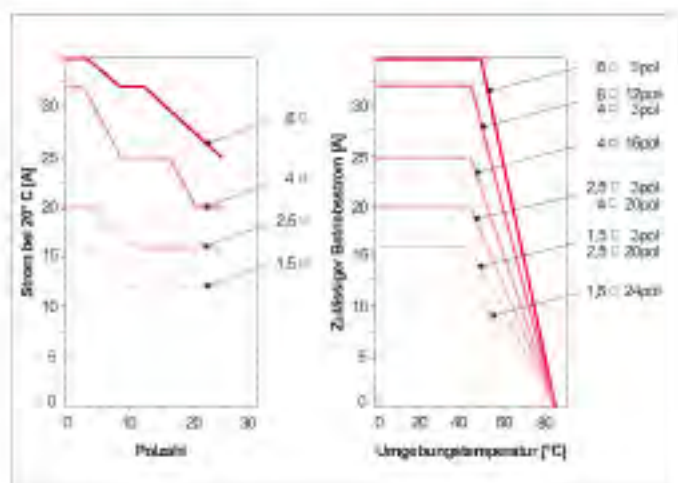
Outer diameter of contact 1.58 mm (pin, front view)
Outer diameter of contact 1.6 mm (pin, front view)



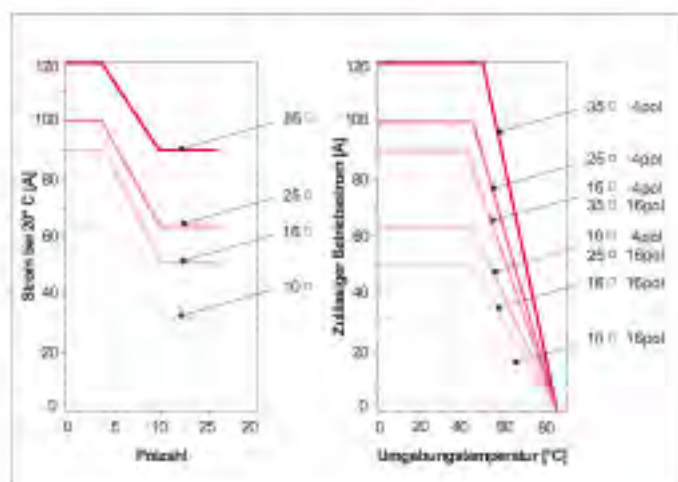
Outer diameter of contact 2.3 mm (pin, front view)



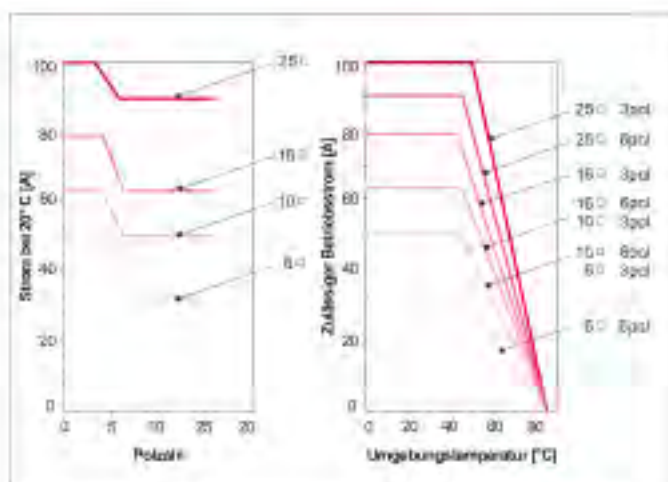
Outer diameter of contact 3 mm (pin, front view)



Outer diameter of contact 6 mm (pin, front view)
Outer diameter of contact 8 mm (pin, front view)



Outer diameter of contact 10 mm (pin, front view)



Gxx MS Assembly tools for G18, G28, G42 and G57 Series

Series G/GM

Gxx MS Assembly tools for assembling pin and socket inserts in plugs and receptacles

Accessories



Ordering code	Description
G18 MS	Assembly tool
G28 MS	Assembly tool
G42 MS	Assembly tool
G42 MS *	Assembly tool, special design Tightening torque 15 Nm
G57 MS	Assembly tool
G57 MS **	Assembly tool, special design Tightening torque 20 Nm

Assembly tool, special design for the following contact inserts:

* G42 E-3S+PE/L-2	** G57 E-3S+2+PE/L
G42 E-3P+PE/L-2	G57 E-3P+2+PE/L
G42 E-4S+PE/L	G57 E-4S+PE/L
G42 E-4P+PE/L	G57 E-4P+PE/L
G42 E-6S+PE/L-2	
G42 E-6P+PE/L-2	

AWZ-x Extraction tool **EWZ-E** Insertion tool

Series G/GM

AWZ-x Extraction tool

Accessories



Ordering code	Description
AWZ-A	Extraction tool for crimp contacts Type A
AWZ-B	Extraction tool for crimp contacts, Type B
AWZ-C/H	Extraction tool for crimp contacts, Type C and H
AWZ-G	Extraction tool for crimp contacts, Type G

EWZ-E Insertion tool


Ordering code	Description
EWZ-E	Insertion tool for crimp contacts, Type G

CWZ-600 Crimp tool

Series G/GM

CWZ-600 Crimp tool

Accessories

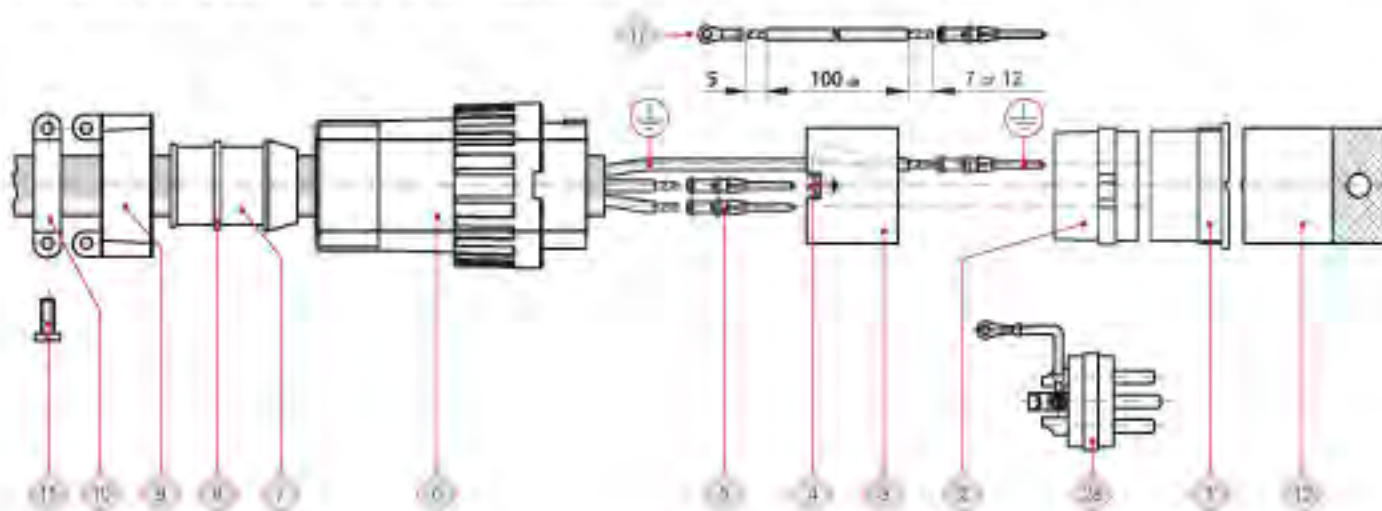


Ordering code	Description
CWZ-600	Crimp tool for wire gauges AWG 25 ... 2 (0.14 mm ² ... 8 mm ²)

Assembly of plugs:

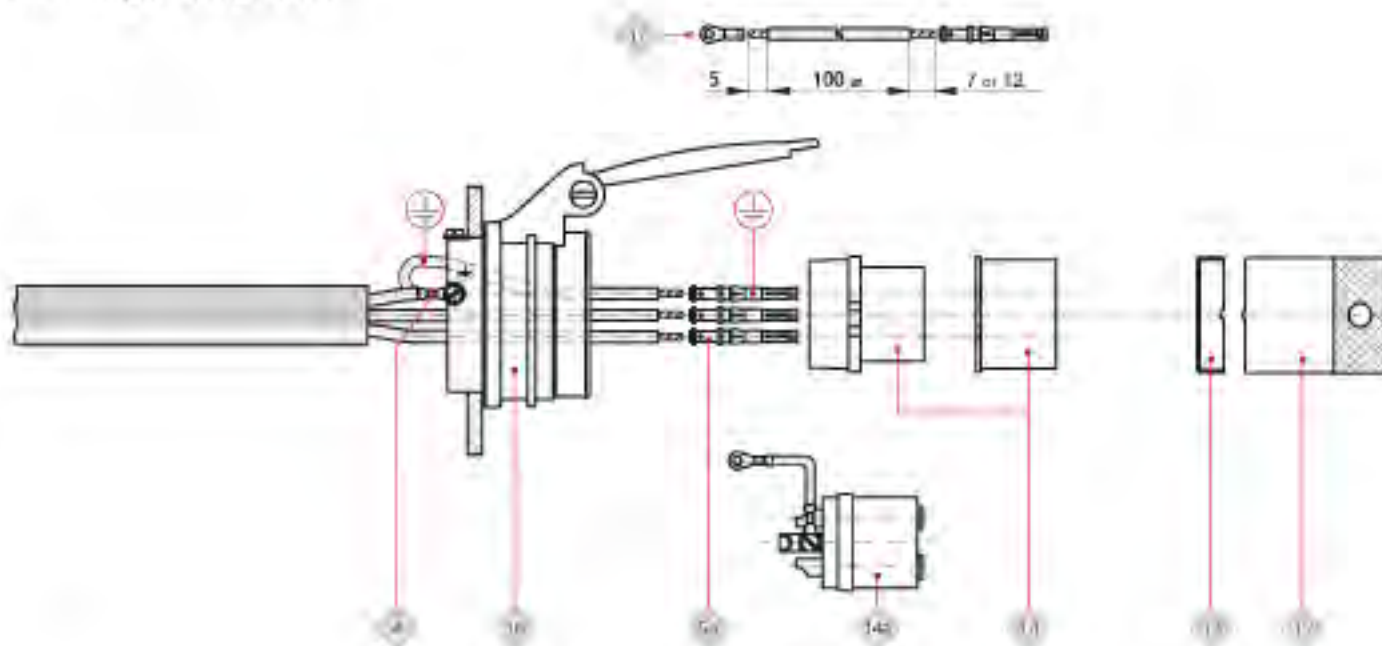
Place components ⑥ through ⑩ on cable in sequence shown. Trim the individual cable conductors to the desired length and strip the insulation to a length of 7 mm (with cables AWG 20 ... 12) and 12 mm respectively (with

cables AWG 10 ... 7). Terminate cable conductors to contacts (crimp, solder, screw-type), see page 46, 'Assembly instructions contacts'.

**Assembly of contact insert in plug:**

Bring earth sleeve ③ into line with the centre of the plug shell ⑥ and press it in. Fit contact insert ② / ②a into plug shell. Ensure key position for polarization is correct. Tighten with threaded ring ① by means of assembly tool ⑫.

Assembly of components for sealing ⑦, ⑧ and for strain relief ⑨ through ⑪: Before you screw the cable gland ⑨ to the back of the plug shell ⑥ to the back of the plug shell (tightening torque approx. 5 Nm) make sure that the connection of the individual conductors is not too tight and the cables are free from stress and strain.

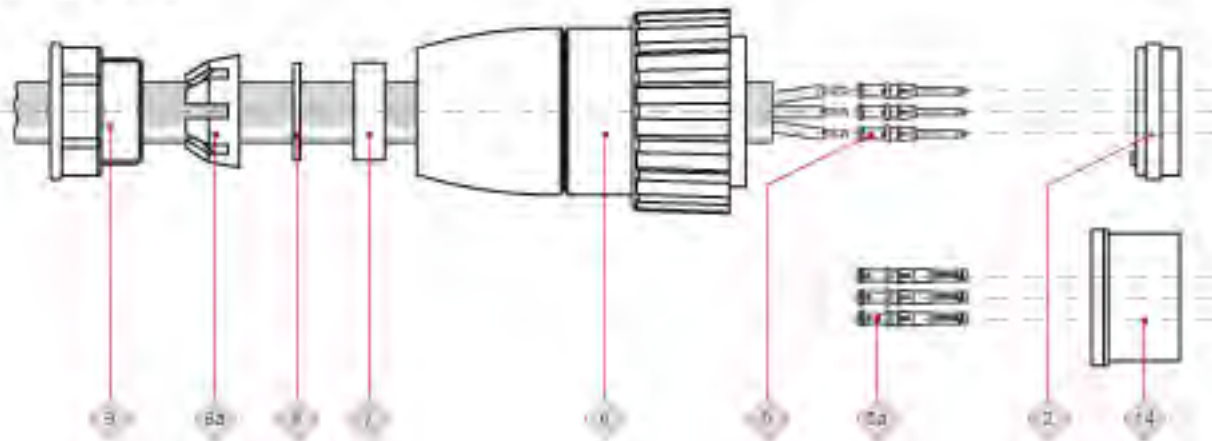
Assembly of receptacles:**Assembly of contact inserts in receptacles:**

Fit contact insert ⑭ / ⑭a in receptacle shell. Ensure key position for polarization is correct. Tighten insert with threaded ring ⑬ by means of assembly tool ⑫.

Assembly instructions GM Series

Series GM

Assembly of plugs:



Place components 9, 8 or 6a, 7, 6 on cable in sequence shown. Crimp stripped individual cable conductors to contacts 5 or 5a. The edge of the insulation where the wire is stripped should abut on the point of crimping. Fit crimped contacts 5 or 5a into contact insert 2 or 14.

Make sure that clip is locked in place in contact insert. We recommend checking of the established contact. The contact retention test force is 40 N. Fit contact insert 2 or 14 into plug shell 9. Take care that key position for polarization is correct.

Assembly instructions contacts

Series G/GM

Crimped connection:

Wire gauge	Crimp tool	Extraction tool
0.5 ... 1.3 mm ² / AWG 20 ... 14	SBZ Crimp tool	AWZ-A Extraction tool for contacts Type A
2.5 mm ² / AWG 12	SBZ Crimp tool	AWZ-B Extraction tool for contacts Type B
4.0 ... 6.0 mm ² / AWG 10 ... 8	SBZ Crimp tool	AWZ-C/H Extraction tool for contacts Type C/H

For connecting the protective conductor and the PE contact a 100 mm long additional green yellow earth wire is required (see diagrams on page 45). Crimp commercial cable lugs 17 to protective conductor and other end of additional earth wire and fasten both cables with screw 4 to the earth sleeve 3 of the plug shell or directly to the receptacle shell 19.

Fit crimped contacts 5 or 5a into contact insert 2 or 14 moving from centre to perimeter.

Make sure that clip is locked in place in contact insert. We recommend checking of the established contacts. The contact retention test force is 40 N.

For a better protection against contact a number of inserts come with a sleeve 14 which is to be assembled in the shell together with the insert.

Soldered connections (AWG 20 ... 1):

- Solder contacts are pre-assembled in the factory and cannot be disassembled from the inserts by the user.
- Choose soldering iron and kind of accessories which ensure that only a short time is needed for soldering.
- The intended use of crimp contacts is that of a solderless connection. So do not use them for soldered connections.

Mounting holes

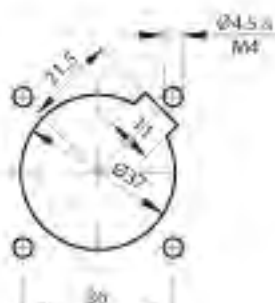
Series G/GM

Mounting holes for panel mount receptacles:

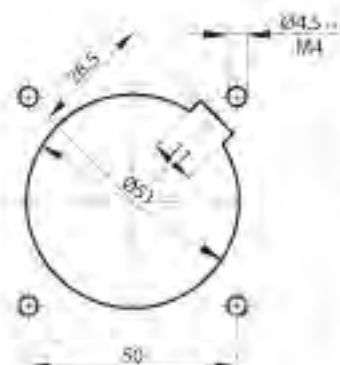
G18 Series



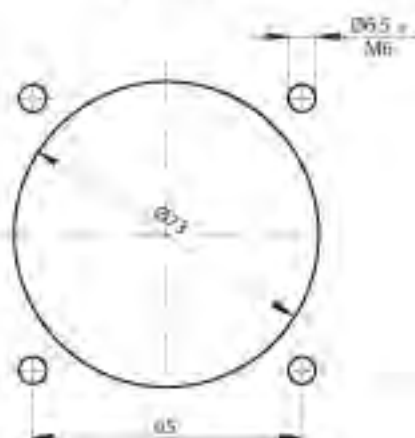
G28 Series



G42 Series



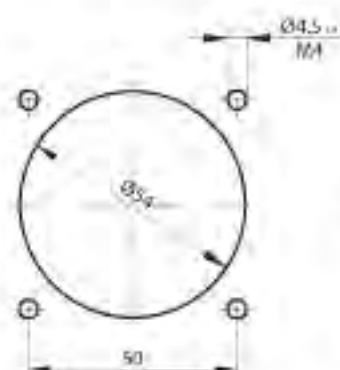
G57 Series



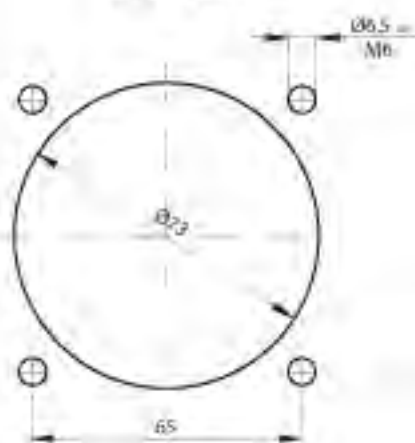
Mounting instructions:

- Please refer to the diagrams shown for the dimensions of the mounting holes as required for panel mount and bulkhead receptacles.
- Cutouts for protective conductors of G28 and G42 connectors are only required for panels and bulkheads thicker than 3 mm. With thickness > 12 mm please observe the required clearance and creepage distances.

GM42 Series



GM57 Series





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 ISO 9001:2008
 management system
 certified according to
 DIN EN ISO 9001

Schaltbau GmbH
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Electrical Components and Systems for Railway Engineering and Industrial Applications

Connectors

- Connectors manufactured to industry standards
- Connectors to suit the special requirements of communications engineering (MIL connectors)
- Charging connectors for battery-powered machines and systems
- Connectors for railway engineering, including UIC connectors
- Special connectors to suit customer requirements

Snap-action switches

- Snap-action switches with positive opening operation
- Snap-action switches with self-cleaning contacts
- Enabling switches
- Special switches to suit customer requirements

Contactors

- Single and multi-pole DC contactors
- High-voltage AC/DC contactors
- Contactors for battery powered vehicles and power supplies
- Contactors for railway applications
- Terminal bolts and fuse holders
- DC emergency stop switches
- Special contactors to suit customer requirements

Control devices

- Master controllers and reversers for railway applications
- Toggle switch devices
- Handles and foot switches for railway applications (dead-man equipment)
- Switching elements with high breaking capacity
- Emergency brake handles
- Signal devices

Transportation system equipment

- Power supplies for passenger coaches (electric equipment)
- Battery chargers for locomotives and passenger coaches
- High-voltage equipment for single and multi-phase operation
- Heating devices and heating controls
- Design and engineering services for high-voltage equipment
- Special equipment to suit customer requirements

Schaltbau GmbH

Klausenburger Strasse 6
 81677 Munich
 Germany

Phone +49 89 9 30 05-0
 Fax +49 89 9 30 05-350
 e-Mail contact@schaltbau.de
 Internet www.schaltbau.de