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Connectors

G, GM series

Modular
Circular
Connectors

Catalogue A20.en



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

Series GM connectors are available in shell size 42 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

Series G, GM

- **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
- **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.
- **Materials:**
 - Contacts:
 - 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:
 - Series G: High-temperature thermoset
 - Series GM: High-temperature thermoset, thermoplastic
 - Shells:
 - 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

Applications, Variants, Standards

Series G, GM

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: UL 94-V0

Shell size, contact arrangement

Series G, GM

- **Series G18**
 - Shell size G18 reflects the size of the contact insert which has a diameter of 18 mm
 - Contact arrangement: 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: 7 pole connector with PE or 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: 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



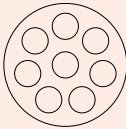
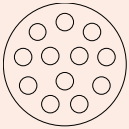
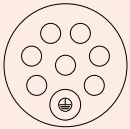
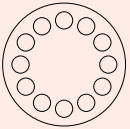
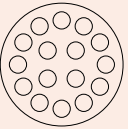
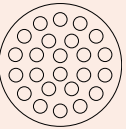
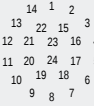
G18, G28 and G42 Series connectors



G57 and GM42 Series connectors

Specifications

Series G18

Series	G18		G28			
Number of contacts ►	8 pole	12 pole	7 pole + PE	12 pole	16 pole	24 pole
Contact arrangement						
Contact identification marked on insert: Pin insert: Rear view Socket insert: Front view						
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	25 V	25 V	230 V/400 V PE contact	42 V	42 V	42 V
Key positions (polarization)	5	2	5	5	5	5
Contacts						
Maximum rated current of individual contact, see also page 44	8x 16 A	12x 7.5 A	7 x 20 A	12 x 16 A	16 x 16 A	24 x 7.5 A
Outer diameter of contact/ Contact type/size (crimp contacts)	Ø 1.58 mm A	Ø 1.58 mm ---	Ø 2.3 mm B	Ø 1.58 mm ---	Ø 1.58 mm ---	Ø 1.58 mm ---
PE contact *						
Diameter solder contacts	---	---	Ø 3 mm	---	---	---
Diameter screw-type contacts	---	---	---	---	---	---
Contact type/size (crimp contacts)	---	---	H	---	---	---
Anschlussquerschnitt und Bemessungsstrom der Einzelkontakte						
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 .. 17	---	7.5 A (pin)	---	---	---	7.5 A (pin)
1.50 mm ² /AWG 15	---	---	---	---	---	---
2.50 mm ² /AWG 13	---	---	---	27.5 A	27.5 A	---
4 mm ² /AWG 11	---	---	---	---	---	---
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	---	---	---
0.75 mm ² .. 1.00 mm ² /AWG 18 ... 17	10 A	---	10 A	---	---	---
1.50 mm ² /AWG 15	16 A	---	16 A	---	---	---
2.50 mm ² /AWG 13	---	---	27.5 A	---	---	---
4 mm ² /AWG 11	---	---	35 A	---	---	---
6 mm ² /AWG 9	---	---	35 A	---	---	---
Contact resistance (IEC 60512-2)	< 10 mΩ		< 10 mΩ			
Insulation resistance (IEC 60512-2)	> 500 MΩ		> 500 MΩ			
Range of operating temperature **	-25° C ... 100° C		-25° C ... 100° C			
Degree of protection when mated or coupled (IEC 60529)	IP54		IP54			
Test standard (IEC 60068-1) (t _{min} [°C]/t _{max} [°C]/t _{testing} time[days])	-25/100/21		-25/100/21			
Mechanical endurance (mating cycles) (IEC 60512-5, test 9a)	5,000		5,000			
Contact retention (crimp contacts)	> 75 N	--- ***	> 75 N	--- ***	--- ***	--- ***
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	Perbunane, neoprene		Perbunane, neoprene			
Contacts						
Solder contacts	Brass		Brass			
Crimp contacts	Copper wrought alloy		Copper wrought alloy			
Plating:	Ag		Ag			
Solder contacts	Ag (Au on request)		Ag			
Crimp contacts						

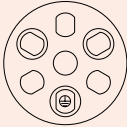
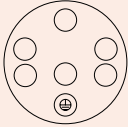
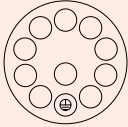
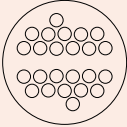
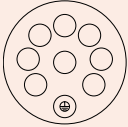
* PE = Protective conductor terminal

** Operating temperatures exceeding 25° C account for lower rated current values, see derating diagrams on page 39.

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

Specifications

Series G28

Series	G42 Fortsetzung				G42/GM42
Number of contacts ►	6 pole + PE	6 pole + PE	8 pole + PE	24 pole	6+2 pole + PE
Contact arrangement					
Contact identification marked on insert: Pin insert: Rear view Socket insert: Front view	5 4 1 6 3 2 PE	9 7 2 6 11 3 PE	8 9 1 7 2 6 11 3 PE	2 5 6 7 8 9 10 11 12 13 14 15 22 23 24 25 26 27 28 29 30 31 32 35	2 3 4 1 9 5 P1 P2 PE
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	500 V PE contact
Key positions (polarization)	5	5	5	5	5
Contacts Maximum rated current of individual contact, see also page 44 Outer diameter of contact/ Contact type/size (crimp contacts)	6 x 63 A Ø 6 mm	6 x 20 A Ø 3 mm	8 x 20 A Ø 3 mm	24 x 10 A Ø 1.58 mm	8 x 25 A Ø 3 mm H
PE contact * Diameter solder contacts Diameter screw-type contacts Contact type/size (crimp contacts)	Ø 6 mm --- ---	Ø 3 mm --- ---	Ø 3 mm --- ---	--- --- ---	--- --- H
Anschlussquerschnitt und Bemessungsstrom der Einzelkontakte Solder contacts: 0.50 mm ² /AWG 20 0.75 mm ² .. 1.00 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 16 mm ² /AWG 5 35 mm ² /AWG 1 Crimp contacts: 0.50 mm ² /AWG 20 0.75 mm ² .. 1.00 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	--- --- --- --- --- 80 A	--- --- --- --- 35 A ---	--- --- --- --- 35 A ---	--- --- --- 16 A --- ---	--- --- --- 10 A 16 A 27.5 A 35 A 50 A
Contact resistance (IEC 60512-2)	< 10 mΩ				< 10 mΩ
Insulation resistance (IEC 60512-2)	> 500 MΩ				> 500 MΩ
Range of operating temperature **	-25° C ... 100° C				-25° C ... 100° C
Degree of protection when mated or coupled (IEC 60529)	IP54 / IP67				IP67
Test standard (IEC 60068-1) (t _{min} [°C]/t _{max} [°C]/t _{testing} time[days])	-25/100/21				-25/100/21
Mechanical endurance (mating cycles) (IEC 60512-5, test 9a)	5,000				5,000
Contact retention (crimp contacts)	--- ***	> 75 N	> 75 N	> 75 N	> 40 N
Materials Shells Inserts Flammability rating Seals	Aluminium die-cast alloy Polyamide-6 / thermoset UL 94-V0 Perbunane, neoprene				
Contacts Solder contacts Crimp contacts Plating:	Brass Copper wrought alloy Ag Ag				
Solder contacts Crimp contacts					

* PE = Protective conductor terminal

** Operating temperatures exceeding 25° C account for lower rated current values, see derating diagrams on page 39.

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

Specifications

Series G42, GM42

Baureihe	G42/GM42				GM42
Number of contacts ►	10 pole + PE	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) at pollution degree 3 (IEC 60512)	500 V PE contact	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	5
Contacts Maximum rated current of individual contact, see also page 44 Outer diameter of contact/ Contact type/size (crimp contacts)	10 x 25 A Ø 2.3 mm	12 x 25 A Ø 3 mm H	14 x 16 A Ø 2.3 mm B	20 x 10 A Ø 1.58 mm A	64 x 10 A Ø 1.6 mm G
PE contact * Diameter solder contacts Diameter screw-type contacts Contact type/size (crimp contacts)	Ø 3 mm --- H	Ø 3 mm --- H	Ø 3 mm --- H	Ø 3 mm --- H	Ø 1.6 mm --- G
Anschlussquerschnitt und Bemessungsstrom der Einzelkontakte Solder contacts: 0.50 mm ² /AWG 20 0.75 mm ² .. 1.00 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 16 mm ² /AWG 5 35 mm ² /AWG 1 Crimp contacts: 0.50 mm ² /AWG 20 0.75 mm ² .. 1.00 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	--- --- --- 27.5 A --- --- --- --- ---	--- --- --- 35 A --- --- --- --- ---	--- --- 27.5 A --- --- --- --- ---	--- --- 16 A --- --- --- --- ---	
Contact resistance (IEC 60512-2)	< 10 mΩ				< 10 mΩ
Insulation resistance (IEC 60512-2)	> 500 MΩ				> 500 MΩ
Range of operating temperature **	-25° C ... 100° C				-25° C ... 100° C
Degree of protection when mated or coupled (IEC 60529)	IP54 / IP67				IP67
Test standard (IEC 60068-1) (t _{min} [°C]/t _{max} [°C]/t _{testing} time[days])	-25/100/21				-25/100/21
Mechanical endurance (mating cycles) (IEC 60512-5, test 9a)	5,000				500
Contact retention (crimp contacts)	--- ***	> 75 N	> 75 N	> 75 N	> 40 N
Materials Shells Inserts Flammability rating Seals	Aluminium die-cast alloy Polyamide-6 / thermoset UL 94-V0 Perbunane, neoprene				
Contacts Solder contacts Crimp contacts Plating:	Brass Copper wrought alloy Ag Ag				

 **SCHALTBAU**

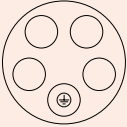
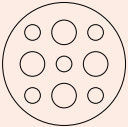
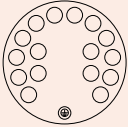
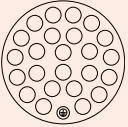
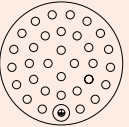
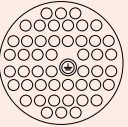
* PE = Protective conductor terminal

** Operating temperatures exceeding 25° C account for lower rated current values, see derating diagrams on page 39.

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

Specifications

Series G57, GM57

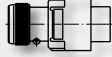
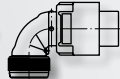
Baureihe	G57					
Number of contacts ►	4 pole + PE	4+5 pole	16 pole + PE	24 pole + PE	32 pole + PE	48 pole + PE
Contact arrangement						
Contact identification marked on insert: Pin insert: Rear view Socket insert: Front view	4 1 3 2 PE	8 1 5 4 9 2 7 3 6	13 14 1 2 3 12 21 16 4 10 20 17 5 9 6 PE	13 14 1 2 3 12 22 15 4 11 21 23 16 4 10 20 24 17 5 9 19 18 6 8 PE 7	15 16 1 2 3 14 27 28 17 4 13 26 32 18 4 12 25 31 29 19 5 11 24 30 20 6 10 23 22 21 7 9 PE 8	36 37 38 39 35 18 5 6 7 8 23 41 34 17 4 1 9 24 42 33 16 3 2 PE 10 25 43 32 15 14 13 12 11 26 44 31 30 29 28 27 45 48 47 46
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 Maximum rated current of individual contact, see also page 44 Outer diameter of contact/ Contact type/size (crimp contacts)	4 x 100 A Ø 10 mm	4 x 50 A 5 x 35 A Ø 8 mm Ø 3 mm	16 x 20 A Ø 3 mm	24 x 20 A Ø 3 mm	32 x 16 A Ø 1.58 mm A	48 x 7.5 A Ø 2.3 mm B
PE contact * Diameter solder contacts Diameter screw-type contacts Contact type/size (crimp contacts)	Ø 10 mm --- ---	--- --- ---	Ø 3 mm --- ---	Ø 3 mm --- ---	Ø 3 mm --- H	Ø 3 mm --- H
Anschlussquerschnitt und Bemessungsstrom der Einzelkontakte Solder contacts: 0.50 mm ² /AWG 20 0.75 mm ² .. 1.00 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 16 mm ² /AWG 5 35 mm ² /AWG 1 Crimp contacts: 0.50 mm ² /AWG 20 0.75 mm ² .. 1.00 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	--- --- --- --- 50 A 80 A 110 A	--- --- --- 35 A 50 A --- ---	--- --- --- 35 A --- --- ---	--- --- --- 35 A --- --- ---	--- --- 27.5 A --- --- --- ---	--- --- --- --- --- --- ---
Contact resistance (IEC 60512-2)	< 10 mΩ					
Insulation resistance (IEC 60512-2)	> 500 MΩ					
Range of operating temperature **	-25° C ... 100° C					
Degree of protection when mated or coupled (IEC 60529)	IP54					
Test standard (IEC 60068-1) (t _{min} [°C]/t _{max} [°C]/t _{testing} time[days])	-25/100/21					
Mechanical endurance (mating cycles) (IEC 60512-5, test 9a)	5,000					
Contact retention (crimp contacts)	--- ***	--- ***	--- ***	--- ***	> 75 N	> 75 N
Materials Shells Inserts Flammability rating Seals	Aluminium die-cast alloy Polyamide-6 / thermoset UL 94-V0 Perbunane, neoprene					
Contacts Solder contacts Crimp contacts Plating:	Brass Copper wrought alloy Ag Ag					
Solder contacts Crimp contacts	Solder contacts Crimp contacts					

* PE = Protective conductor terminal

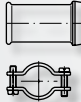
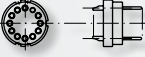
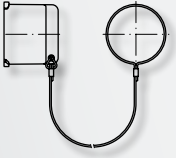
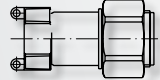
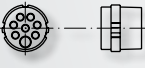
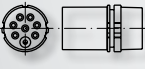
** Operating temperatures exceeding 25° C account for lower rated current values, see derating diagrams on page 39.

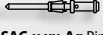
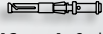
*** Soldering and screw type contacts are permanently mounted in the insert

G18 Plug

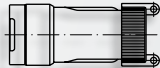
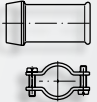
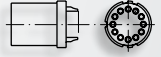
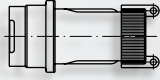
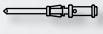
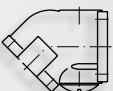
Shell part 2	Shell part 1	Contact	Insert	Protection
 T18-x Cable support sleeve (Page 14)	 G18 ST Plug (Page 14)		 G18 E-xP/L Pin inserts (Page 17)	 G18VK Protection cap, plug (Page 16)
	 G18 STK Plug, short (Page 14)		 G18 E-xS/L Socket inserts (Page 17)	
	 G18 WS 90° plug (Page 14)	 SAC-x,xx-Ag Pin (Page 38)	 G18 E-8P/C Pin insert (Page 17)	
		 BAC-x,xx-Ag Socket (Page 38)	 G18 E-8S/C Socket insert (Page 17)	
		 BS-A Filler plug (Page 38)		

G28 Plug

Shell part 2	Shell part 1	Contact	Insert	Protection
 T28-x Cable support sleeve + G28 SH Cable clamp (Page 19)	 G28 ST Plug (Page 18)		 G28 E-xP/L Pin insert (Page 22)	 G28VK Protection cap, plug (Page 22)
	 G28 ST M42 Plug (Page 18)		 G28 E-xS/L Socket insert (Page 22)	
 G28 AD Pg21 Adapter (Page 21)	 G28 WS 90° plug (Page 18)	 SBC-x,xx-Ag Pin SHC x,xx-Ag Pin (Page 38)	 G28 E-7P/C Pin insert (Page 22)	
		 BBC-x,xx-Ag Socket BHC x,xx-Ag Socket (Page 38)	 G28 E-7S/C Socket insert (Page 22)	
		 BS-B Filler plug (Page 38)		

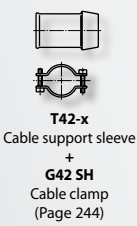
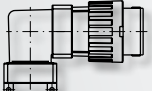
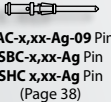
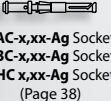
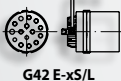
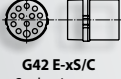
Protection	Insert	Contact	Shell part 1	Shell part 2
	 G18 E-xP/L Pin inserts (Page 17)		 G18 KD Cable-connecting receptacle (Page 15)	 T18-x Cable support sleeve (Page 16)
	 G18 E-xS/L Socket inserts (Page 17)		 G18 DF Flange mount receptacle (Page 15)	 G18 DU Wi Pg9 Backshell 45° for surface mounting (Page 16)
	 G18 E-8P/C Pin insert (Page 17)	 SAC-x,xx-Ag Pin (Page 38)	 G18 DD Receptacle with hinged lid (Page 15)	
	 G18 E-8S/C Socket insert (Page 17)	 BAC-x,xx-Ag Socket (Page 38)		
		 BS-A Filler plug (Page 38)		

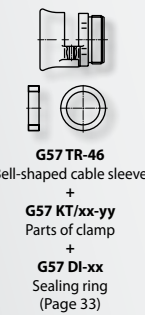
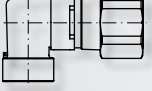
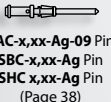
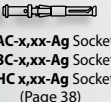
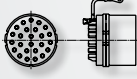
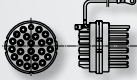
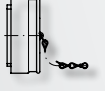
G18 Receptacle

Protection	Insert	Contact	Shell part 1	Shell part 2
 G28 VD Protection cap, receptacle (Page 22)	 G28 E-xP/L Pin inserts (Page 22)		 G28 KD Cable-connecting receptacle (Page 19)	 T28-x Cable support sleeve + G28 SH Cable clamp (Page 19)
	 G28 E-xS/L Socket inserts (Page 22)		 G28 KF Cable-connecting receptacle with flange (Page 19)	
	 G28 E-7P/C Pin insert (Page 22)	 SBC-x,xx-Ag Pin SHC x,xx-Ag Pin (Page 38)	 G28 DF Flange mount receptacle (Page 20)	 G28 DU Pg16 Backshell for surface mounting (Page 21)
	 G28 E-7S/C Socket insert (Page 22)	 BBC-x,xx-Ag Socket BHC x,xx-Ag Socket (Page 38)	 G28 DK M42 Flange mount receptacle (Page 20)	 G28 DU Wi Pg16 Backshell 45° for surface mounting (Page 21)
		 BS-B Filler plug (Page 38)	 G28 DD Receptacle with hinged lid (Page 20)	

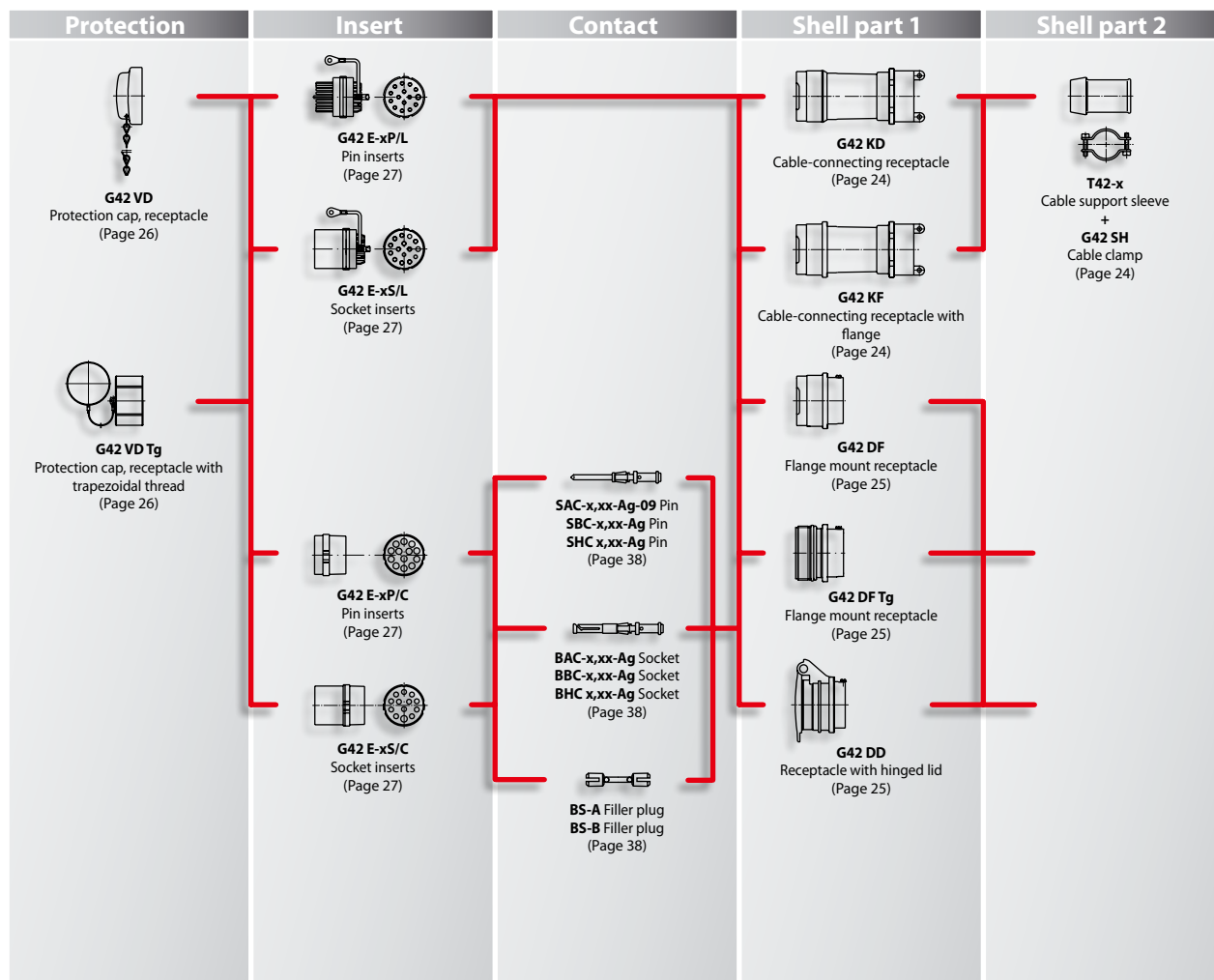
G28 Receptacle

G42 Plug

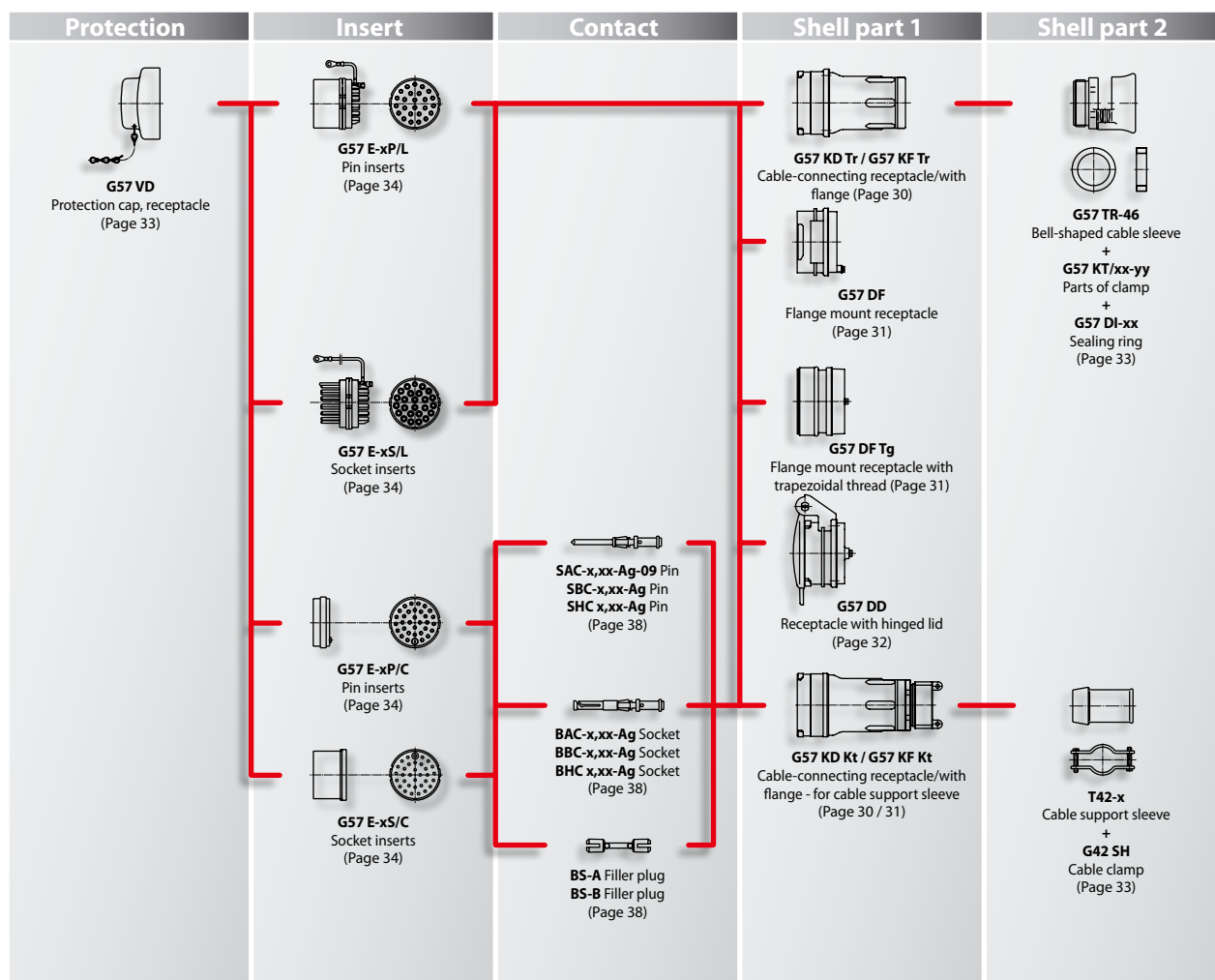
Shell part 2	Shell part 1	Contact	Insert	Protection
 T42-x Cable support sleeve + G42 SH Cable clamp (Page 244)	 G42 ST Plug (Page 23)  G42 WS 90° plug (Page 23)  G42 WS Tg 90° plug (Page 23)	 SAC-x,xx-Ag-09 Pin SBC-x,xx-Ag Pin SHC x,xx-Ag Pin (Page 38)  BAC-x,xx-Ag Socket BBC-x,xx-Ag Socket BHC x,xx-Ag Socket (Page 38)  BS-A Filler plug BS-B Filler plug (Page 38)	 G42 E-xP/L Pin inserts (Page 27)  G42 E-xS/L Socket inserts (Page 27)  G42 E-xP/C Pin inserts (Page 27)  G42 E-xS/C Socket inserts (Page 27)	 G42 VK Protection cap, plug (Page 26)  G42 VK Ke Protection cap, plug (Page 26)  G42 GK Protection cap, plug (Page 26)

Shell part 2	Shell part 1	Contact	Insert	Protection
 G57 TR-46 Bell-shaped cable sleeve + G57 KT/xx-yy Parts of clamp + G57 DI-xx Sealing ring (Page 33)  T42-x Cable support sleeve + G57 SH Cable clamp (Page 33)	 G57 ST Tr Plug (Page 28)  G57 WS Tr 90° plug (Page 28)  G57 ST Tg Plug (Page 28)  G57 WS Tg 90° plug (Page 29)  G57 ST Kt Plug (Page 29)  G57 WS Kt 90° plug (Page 29)	 SAC-x,xx-Ag-09 Pin SBC-x,xx-Ag Pin SHC x,xx-Ag Pin (Page 38)  BAC-x,xx-Ag Socket BBC-x,xx-Ag Socket BHC x,xx-Ag Socket (Page 38)  BS-A Filler plug BS-B Filler plug (Page 38)	 G57 E-xP/L Pin inserts (Page 34)  G57 E-xS/L Socket inserts (Page 34)  G57 E-xP/C Pin inserts (Page 34)  G57 E-xS/C Socket inserts (Page 34)	 G57 VK Protection cap, plug (Page 32)  G57 VK Rubber cap, plug (Page 32)

G57 Plug

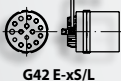


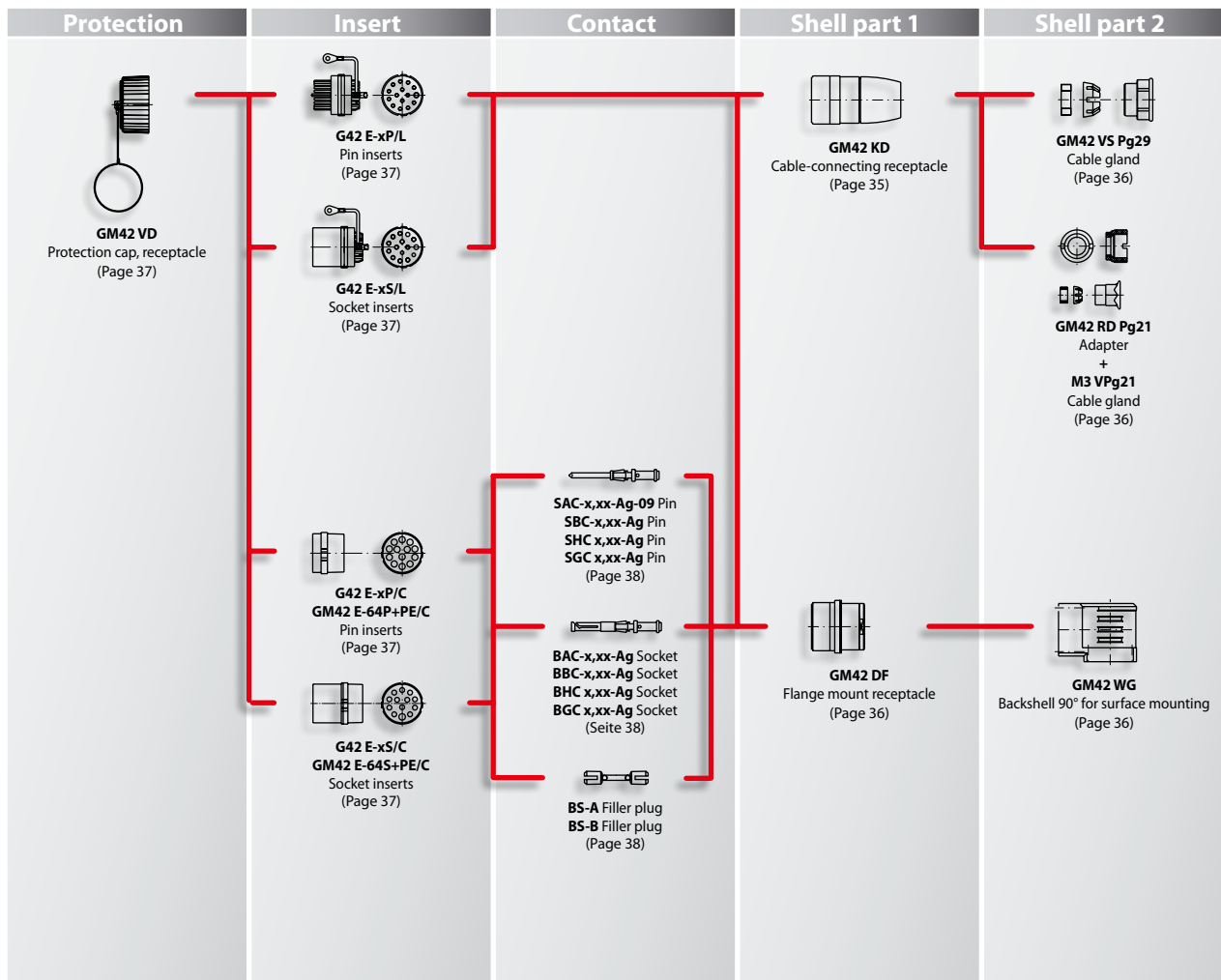
G42 Receptacle



G57 Receptacle

GM42 Plug

Shell part 2	Shell part 1	Contact	Insert	Protection
 GM42 VS Pg29 Cable gland (Page 36)  GM42 RD Pg21 Adapter + M3 VPg21 Cable gland (Page 36)	 GM42 ST Pg29 Plug (Page 35)  GM42 SF Plug (Page 35)	 SAC-x,xx-Ag-09 Pin SBC-x,xx-Ag Pin SHC x,xx-Ag Pin SGC x,xx-Ag Pin (Page 38)  BAC-x,xx-Ag Socket BBC-x,xx-Ag Socket BHC x,xx-Ag Socket BGC x,xx-Ag Socket (Page 38)  BS-A Filler plug BS-B Filler plug (Page 38)	 G42 E-xP/L Pin inserts (Page 38)  G42 E-xS/L Socket inserts (Page 37)  G42 E-xP/C GM42 E-64P+PE/C Pin inserts (Page 37)  G42 E-xS/C GM42 E-64S+PE/C Socket inserts (Page 37)	 GM42 VK Protection cap, plug (Page 37)



GM42 Receptacle

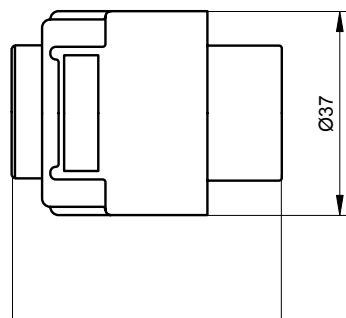
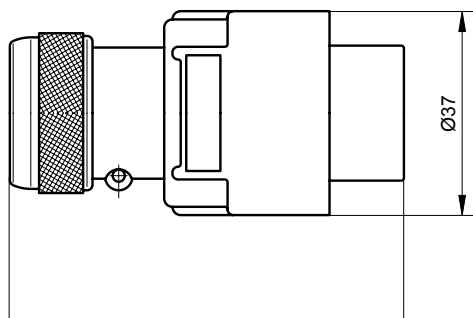
G18 ST Plug

Series G18

G18 ST Plug

G18 STK Plug short

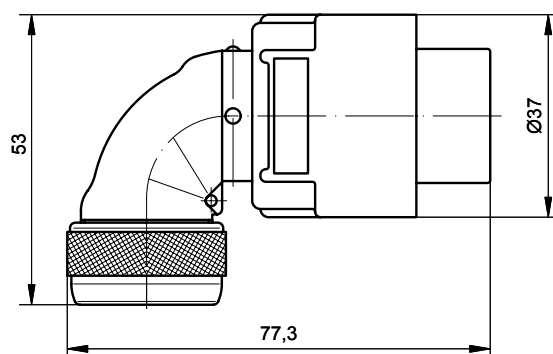
Shell part 1



G18 WS 90° plug

Series G18

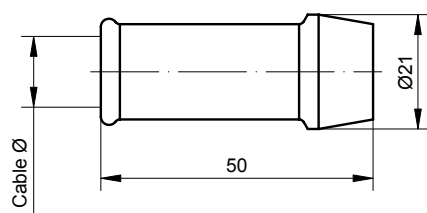
Shell part 1



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
T18-11,5	11.5
T18-14,5	14.5

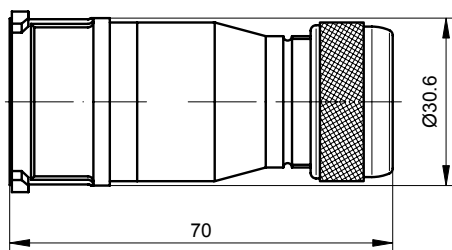
Note:

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

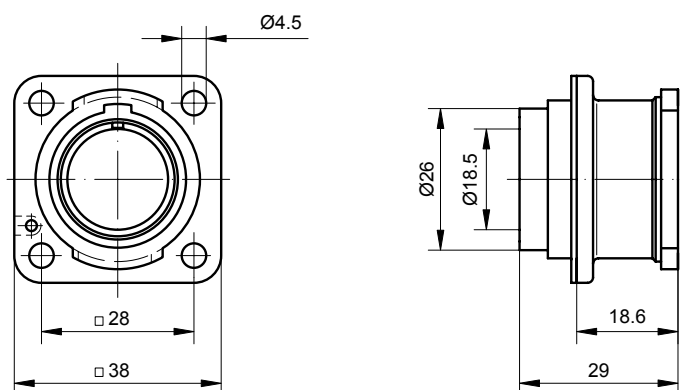
Series G18

Shell part 1

**G18 DF Flange mount receptacle**

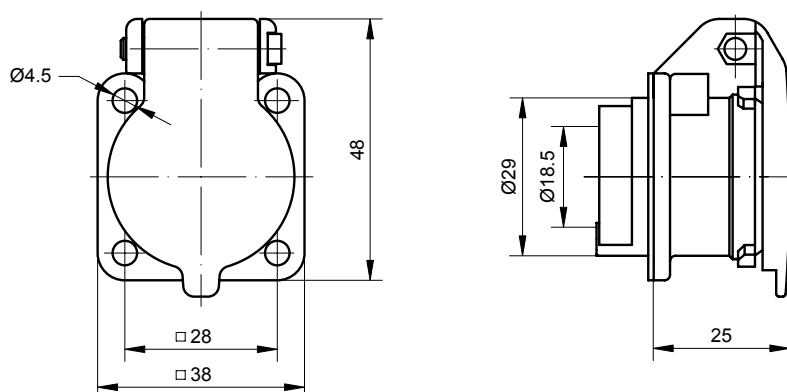
Series G18

Shell part 1

**G18 DD Receptacle with hinged lid**

Series G18

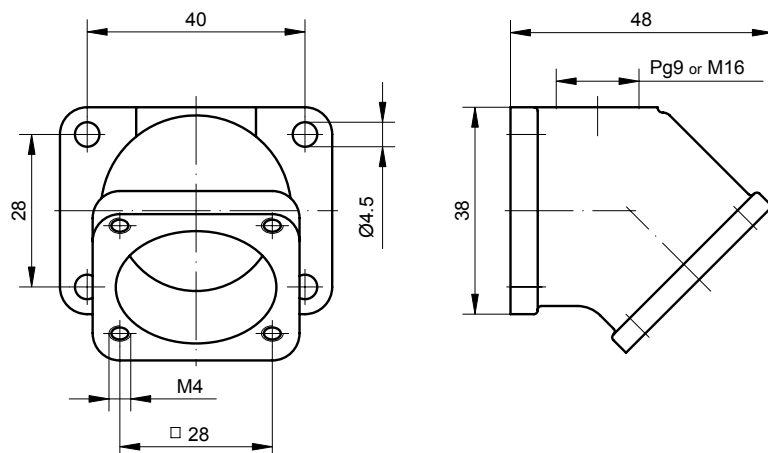
Shell part 1



G18 DU Wi Pg9 Backshell 45° for surface mounting

Series G18

Shell part 2



Ordering code	Thread
G18 DU Wi Pg9	Pg size Pg9

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 wire the rear of the receptacle.

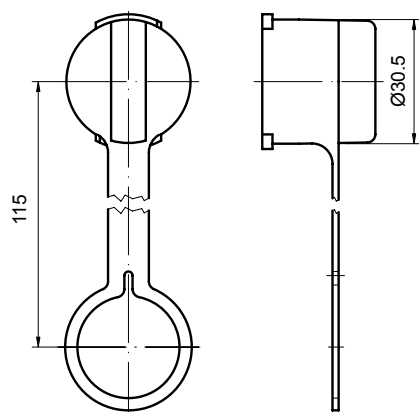
The flange mounted receptacle and 45° backshell are sealed to IP54..

G18 VK Protection cap for plugs

Series G18

G18 VK Protection cap for plugs

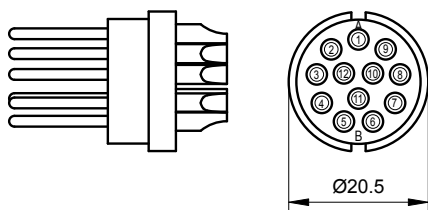
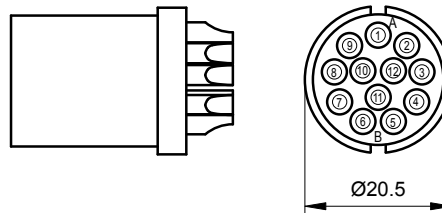
Protection

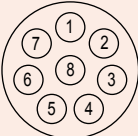
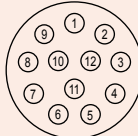


G18 E-8P/12P Pin inserts 8/12 pole
G18 E-8S/12S Socket inserts 8/12 pole

Series G18

Inserts

Pin insert **G18 E-12P/L**Socket insert **G18 E-12S/L**

Connector type	G18 Series	
	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 Socket inserts - solder contacts Pin inserts - crimp contacts Socket inserts - crimp contacts	--- --- G18 E-8P/C* G18 E-8S/C*	G18 E-12P/L G18 E-12S/L --- ---
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	25 V	25 V
Key positions (polarization)	5	2
Contacts ** Maximum rated current of individual contact Outer diameter of contact Contact type/size (crimp contacts)	8x 16 A Ø 1.58 mm Type A	12x 7.5 A Ø 1.58 mm ---

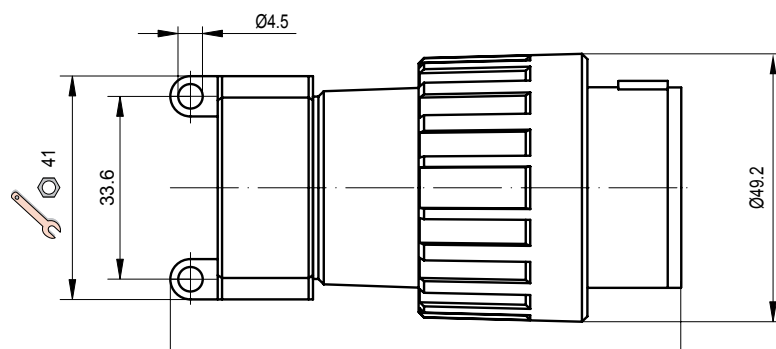
* If implemented accordingly, the 8 pole insert for crimp contacts is interchangeable with the 3 pole and 4 pole insert for solder contacts

** For detailed information on individual contacts see page 38. Note that as pin contacts the 4 mm longer ones, viz. SAC-1,00-Ag-09 or SAC-1,50-Ag-09, are here required.

G28 ST Plug

Series G28

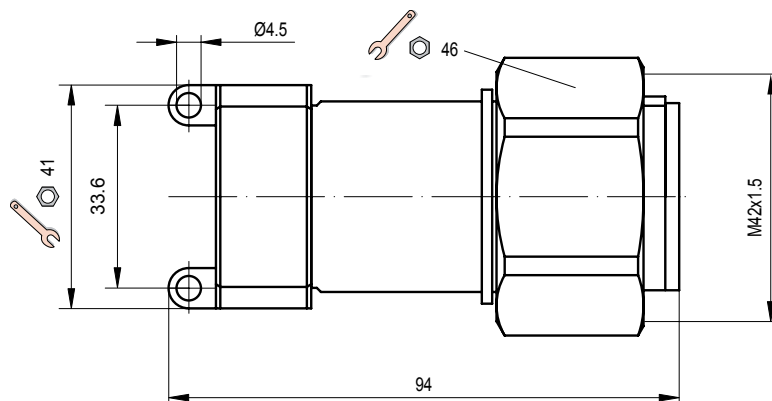
Shell part 1



G28 ST M42 Plug with thread M42x1.5

Series G28

Shell part 1



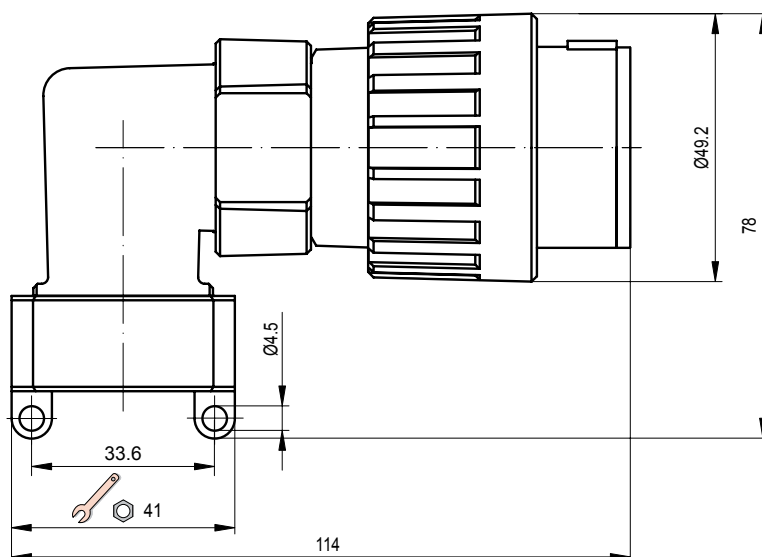
Note:

*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

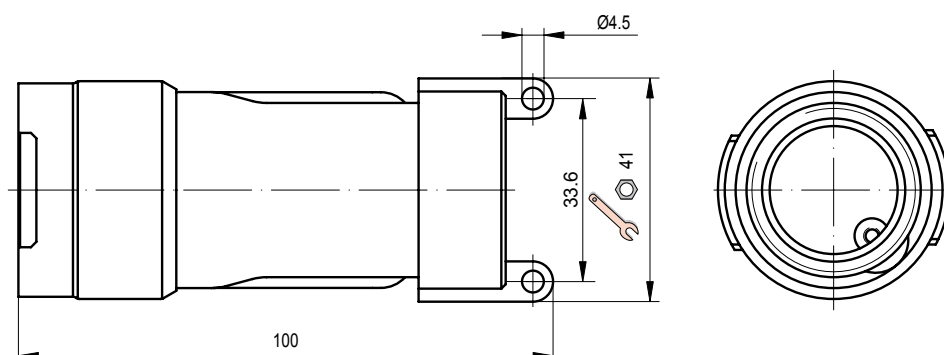
Shell part 1



G28 KD Cable-connecting receptacle

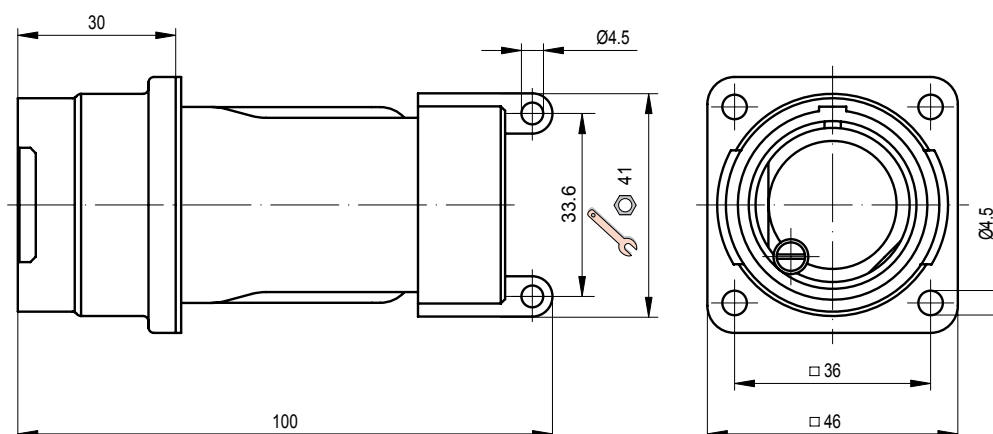
Series G28

Shell part 1

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

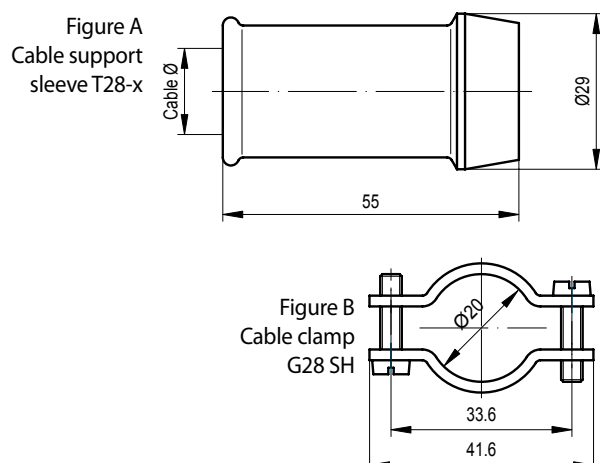
Series G28

Shell part 1

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

Series G28

Shell part 2



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	20	Fig. B

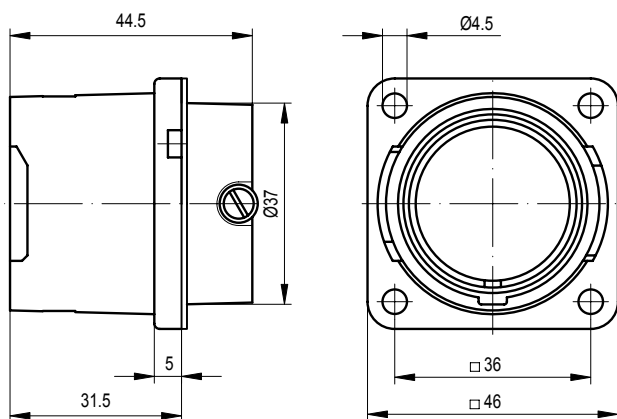
Note:

Cable support sleeve and cable clamp are for use with the plugs **G28 ST**, **G28 ST M42**, **G28 WS** and **G28 WS M42** as well as the receptacles **G28 KD** and **G28 KF**.

G28 DF Flange mount receptacle

Series G28

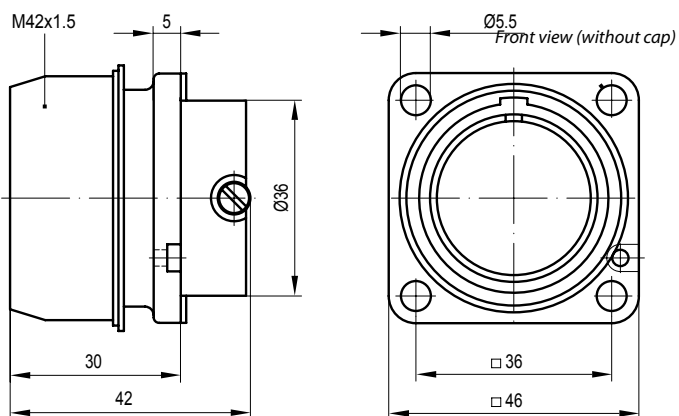
Shell part 1



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

Series G28

Shell part 1

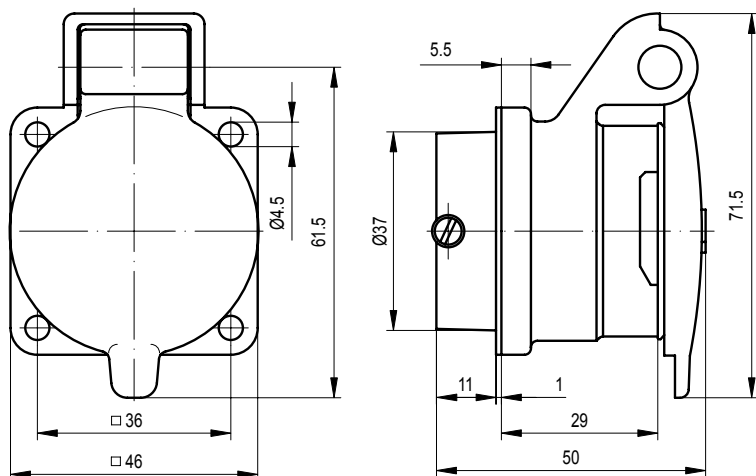


Note: This receptacle can only be used with the corresponding plug **G28 ST M42** or **G28 WS M42**. The mated connector is sealed to **IP67**.

G28 DD Receptacle with hinged lid

Series G28

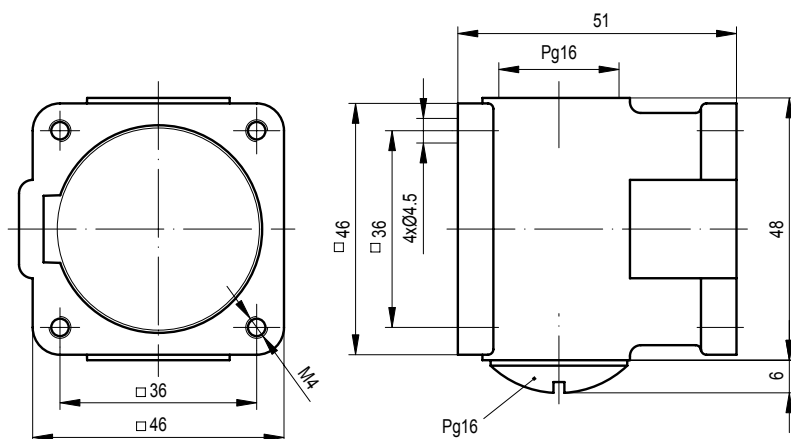
Shell part 1



G28 DU Pg16 Backshell for surface mounting

Series G28

Shell part 2

**Note:**

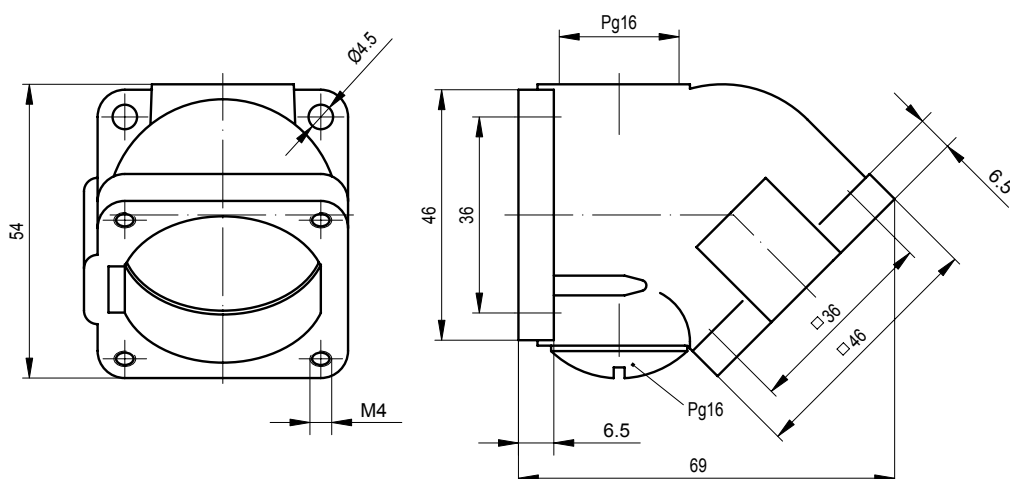
Backshells for surface mounting come in handy when there is not enough space for the receptacle to be panel mounted. The knockout entry of the backshell allows to enter a cable from the side in front of the panel and wire the rear of the receptacle. Backshells with two cable entries can also be used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

The knockout entries are designed for steel conduit thread (Pg) termination and high-strength cable glands. The flange mounted receptacle and backshell are sealed to IP54.

G28 DU Wi Pg16 Backshell 45° for surface mounting

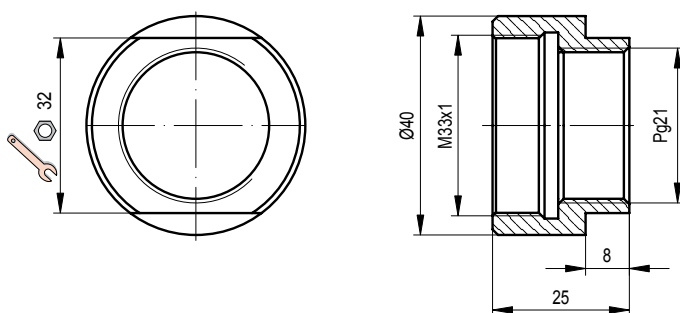
Series G28

Shell part 2


G28 AD Pg21 Adapter

Series G28

Shell part 2

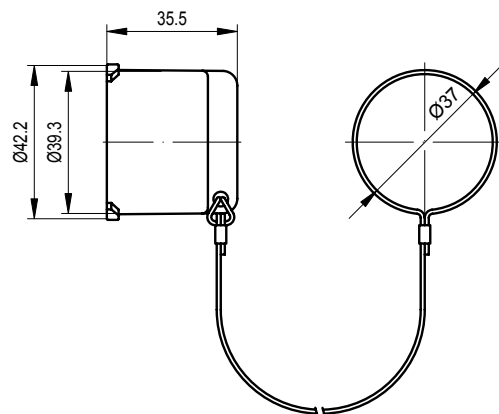
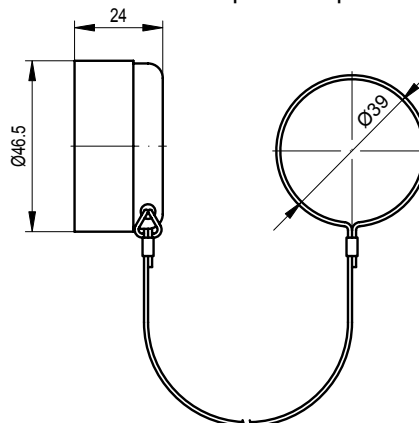
**Note:**

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

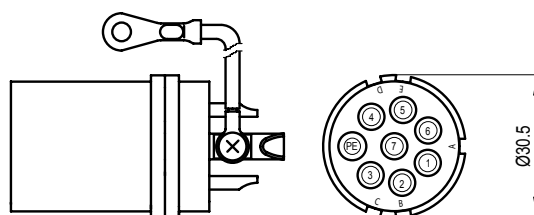
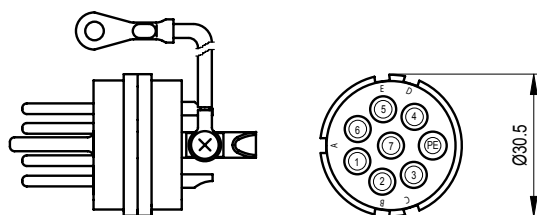
G28 VK Protection cap for plugs

G28 VD Protection cap for receptacles


Protection

G28 Pin insert 7+PE/12/16/24 pole

G28 Socket insert 7+PE/12/16/24 pole

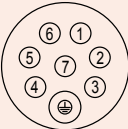
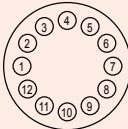
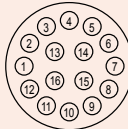
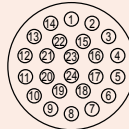
Series G28



Inserts

Pin insert **G28 E-7P/L**

Socket insert **G28 E-7S/L**

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

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

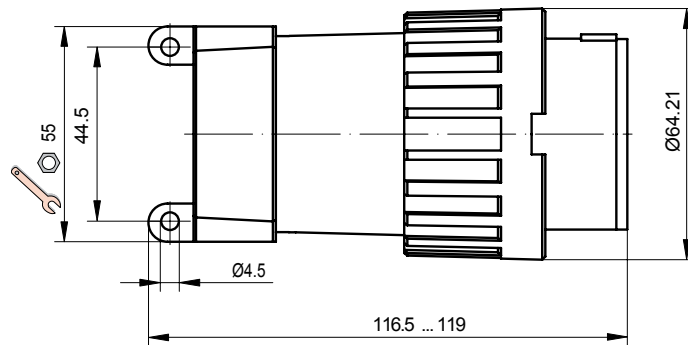
** For detailed information on individual contacts see page 38

*** PE = Protective conductor terminal, for details about PE contacts refer to page 38

G42 ST Plug

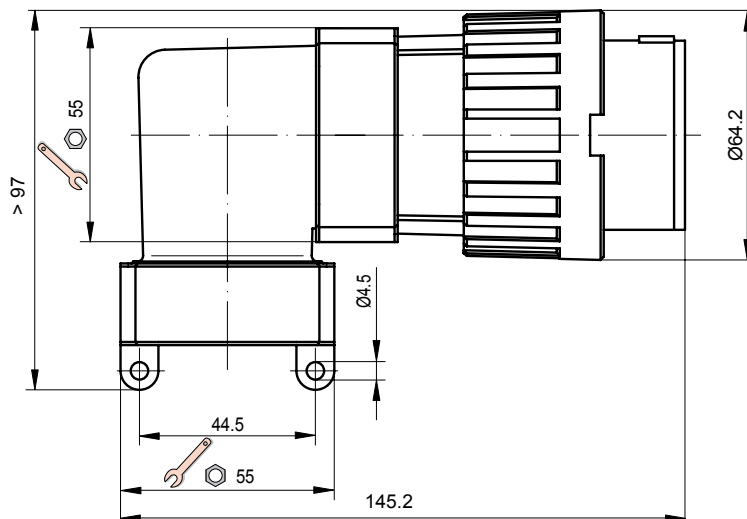
Series G42

Shell part 1

**G42 WS** 90° plug

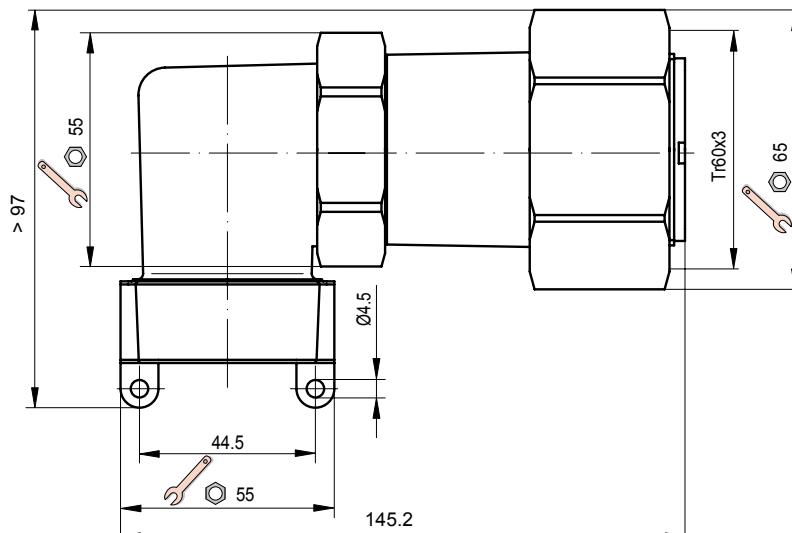
Series G42

Shell part 1

**G42 WS Tg** 90° plug with trapezoidal thread

Series G42

Shell part 1

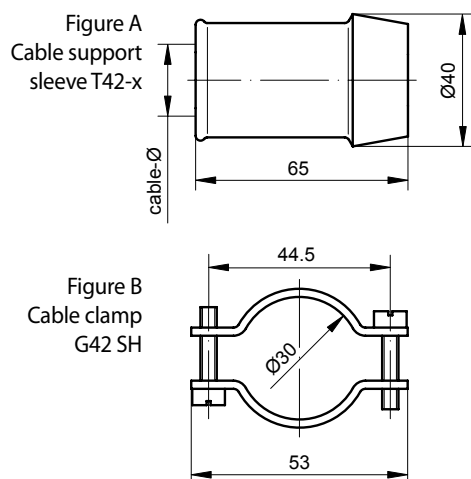
**Note:**

This plug can only be used with the corresponding receptacle **G42 DF Tg**. The mated connector is sealed to **IP67**.

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

Series G42

Shell part 2



Ordering code	Cable diameter [mm]	Figure
T42-14/18	14 ... 18	Fig. A
T42-18/22	18 ... 22	Fig. A
T42-22/26,5	22 ... 26.5	Fig. A
T42-26,5/31	26.5 ... 31	Fig. A
G42 SH	30	Fig. B

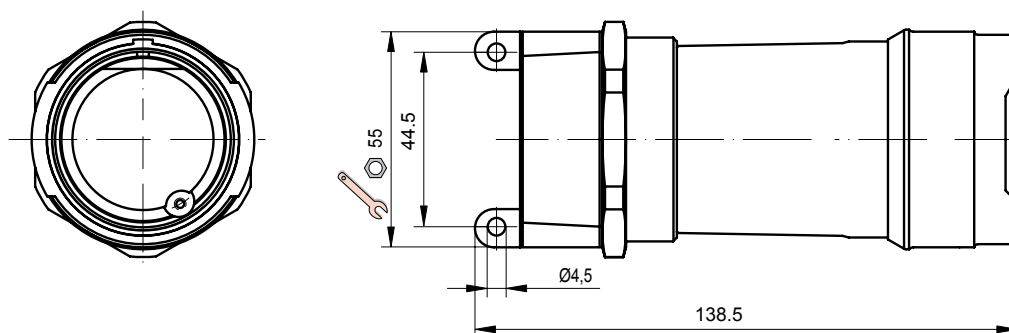
Note:

Cable support sleeve 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 **G57 KD Kt** and **G57 KF Kt**.

G42 KD Cable-connecting receptacle

Series G42

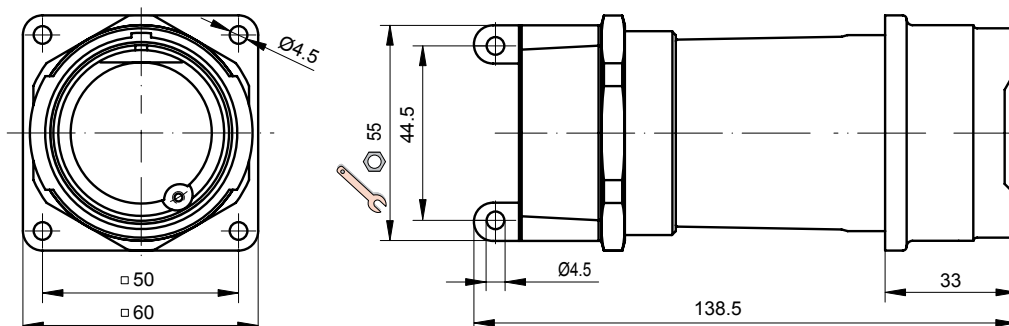
Shell part 1



G42 KF Cable-connecting receptacle with flange

Series G42

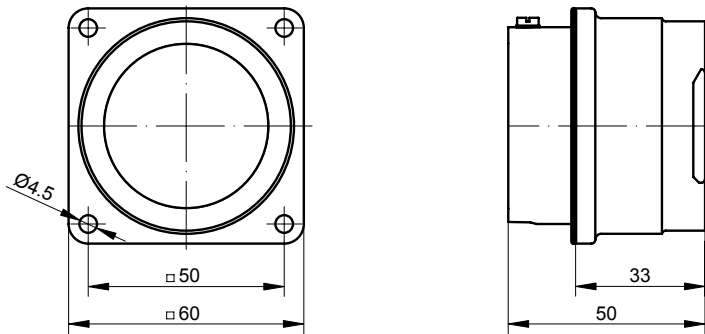
Shell part 1



G42 DF Flange mount receptacle

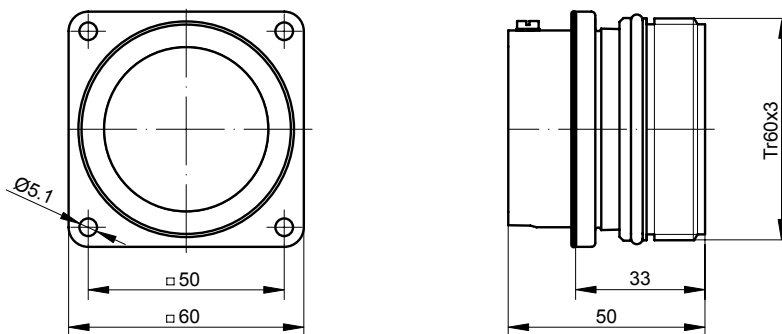
Series G42

Shell part 1

**G42 DF Tg** Flange mount receptacle with trapezoidal thread

Series G42

Shell part 1

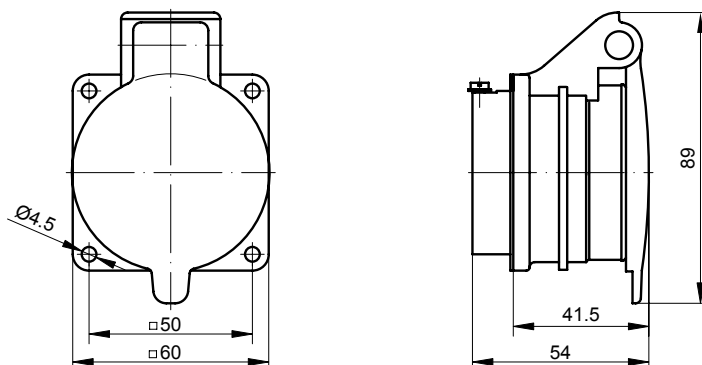


Note:
This receptacle can only be used with the corresponding plug **G42 WS Tg**. The mated connector is sealed to IP67.

G42 DD Receptacle with hinged lid

Series G42

Shell part 1

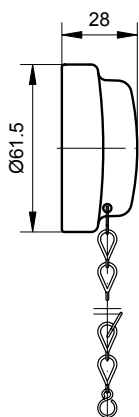


G42 VD, G42 VD Tg Protection caps for receptacles

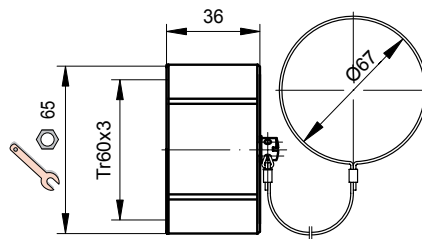
Series G42

G42 VD Protection cap for receptacles

Protection



G42 VD Tg Protection cap for receptacles with trapezoidal thread

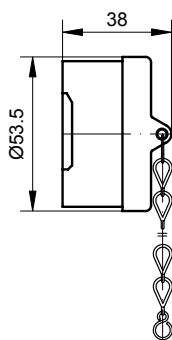


G42 VK Ke, G42 VK Protection caps for plugs

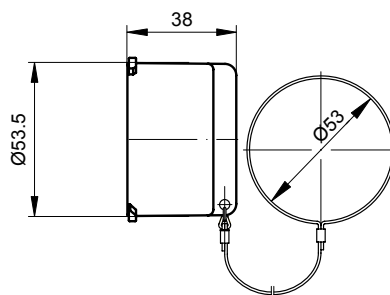
Series G42

G42 VK Ke Protection cap with chain for plugs

Protection



G42 VK Protection cap for plugs

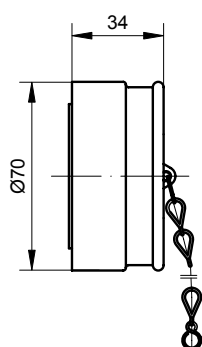


G42 GK Rubber cap for plugs

Series G42

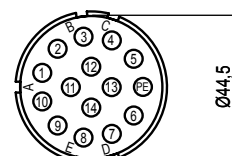
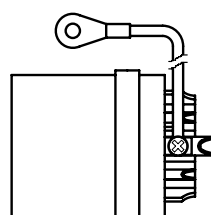
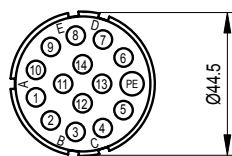
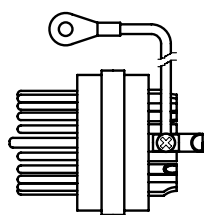
G42 GK Rubber cap for plugs

Protection



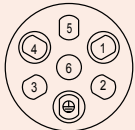
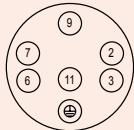
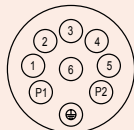
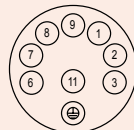
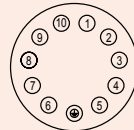
G42 Pin inserts 6+PE/6+2+PE/8+PE/10+PE/12+PE/ 14+PE/ 20+PE/24 pole
G42 Socket inserts 6+PE/6+2+PE/8+PE/10+PE/12+PE/ 14+PE/ 20+PE/24 pole

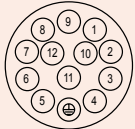
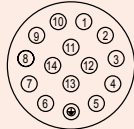
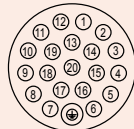
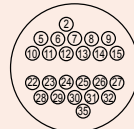
Series G42



Inserts

Pin insert **G42 E-14P+PE/L**Socket insert **G42 E-14S+PE/L**

Connector type	G42 Series				
Number of contacts	6 pole + PE	6 pole + PE	6+2 pole + PE	8 pole + PE	10 pole + PE
Contact arrangement Contact identification marked on insert: Pin insert: Rear view Socket insert: Front view					
Ordering code Pin inserts, solder contacts Socket inserts, solder contacts Pin inserts, crimp contacts Socket inserts, crimp contacts	G42 E-6P+PE/L-2 G42 E-6S+PE/L-2 --- ---	G42 E-6P+PE/L G42 E-6S+PE/L --- ---	--- --- G42 E-6+2P+PE/C G42 E-6+2S+PE/C	G42 E-8P+PE/L G42 E-8S+PE/L --- ---	G42 E-10P+PE/L G42 E-10S+PE/L --- ---
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	230 V / 400 V PE contact	230 V / 400 V PE contact	500 V PE contact	230 V / 400 V PE contact	500 V PE contact
Key positions (polarization)	5	5	5	5	5
Contacts ** Max. rated current of individual contact Outer diameter of contact Contact type/size (crimp contacts)	6x 63 A Ø 6 mm ---	6x 20 A Ø 3 mm ---	8x 25 A Ø 3 mm Type H	8x 20 A Ø 3 mm ---	10x 25 A Ø 2.3 mm ---
PE contact *** Diameter solder contacts Contact type/size (crimp contacts)	Ø 6 mm ---	Ø 3 mm ---	--- Type H	Ø 3 mm ---	Ø 3 mm ---

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

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

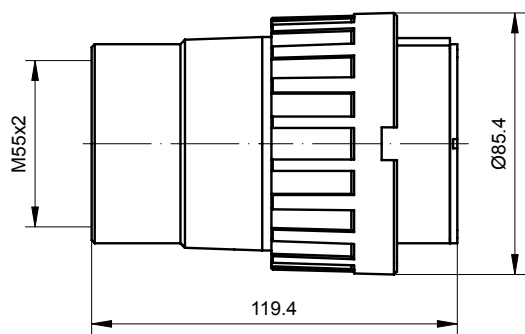
** For detailed information on individual contacts see page 38

*** PE = Protective conductor terminal, for details about PE contacts refer to page 38

G57 ST Tr Plug

Series G57

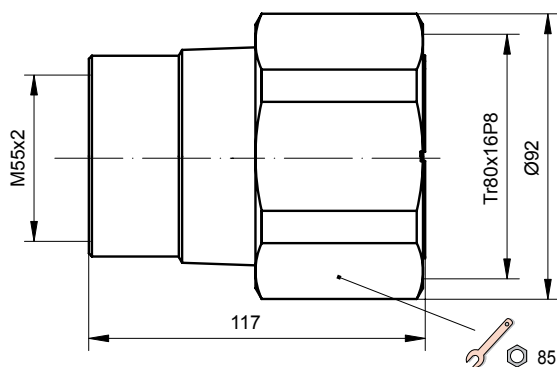
Shell part 1



G57 ST Tg Plug with trapezoidal thread

Series G57

Shell part 1

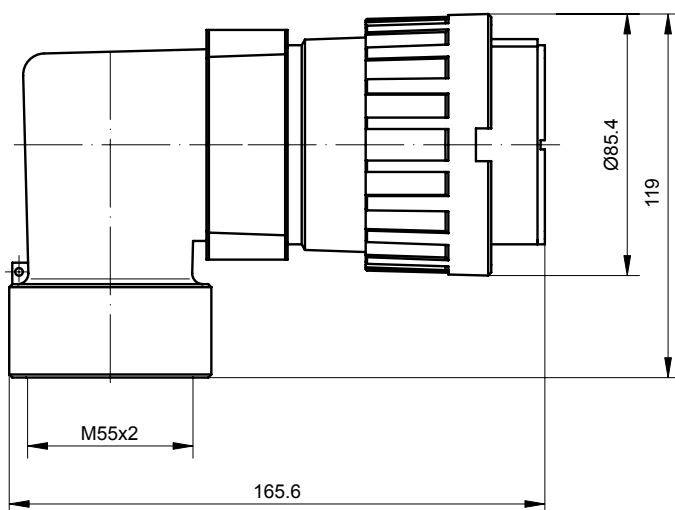


Note:
This plug can only be used with the corresponding receptacle **G57 DF Tg**. The mated connector is sealed to **IP67**.

G57 WS Tr 90° plug

Series G57

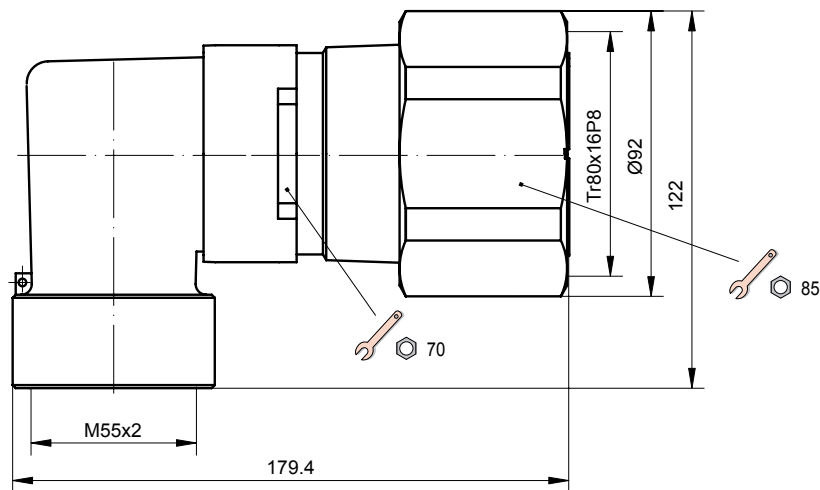
Shell part 1



G57 WS Tg 90° plug with trapezoidal thread

Series G57

Shell part 1

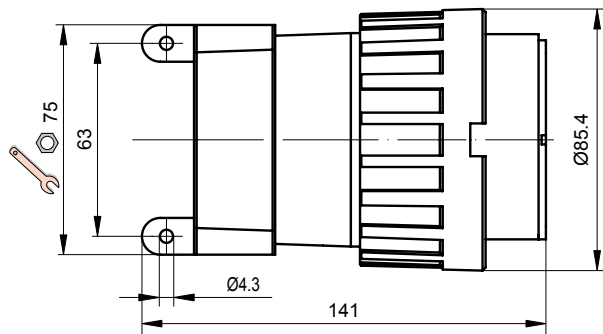


Note:
This plug can only be used with
the corresponding receptacle
G57 DF Tg. The mated connector is
sealed to **IP67**.

G57 ST Kt Plug

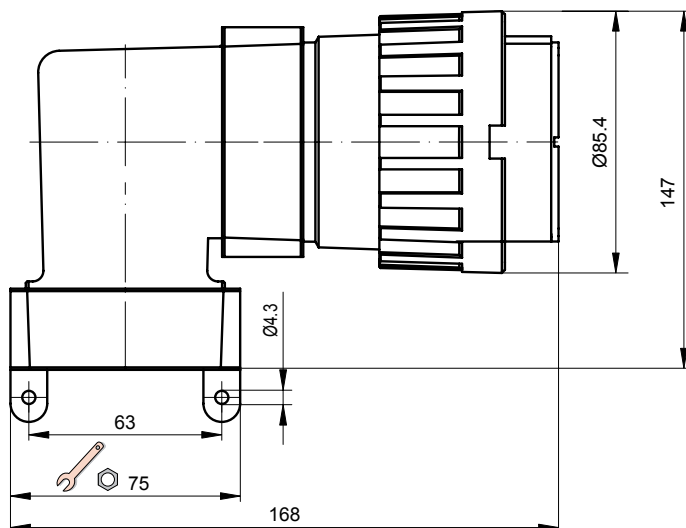
Series G57

Shell part 1


G57 WS Kt 90° plug

Series G57

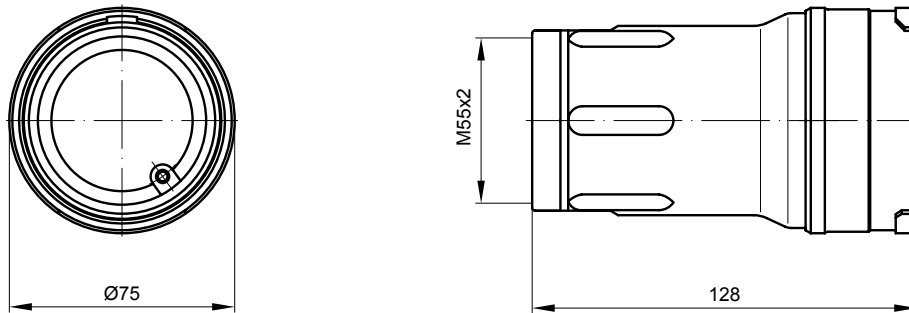
Shell part 1



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

Series G57

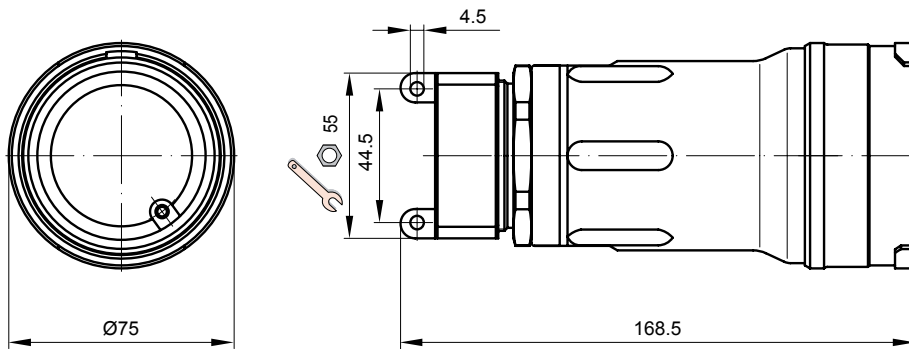
Shell part 1



G57 KD Kt Cable-connecting receptacle for cable support sleeve

Series G57

Shell part 1

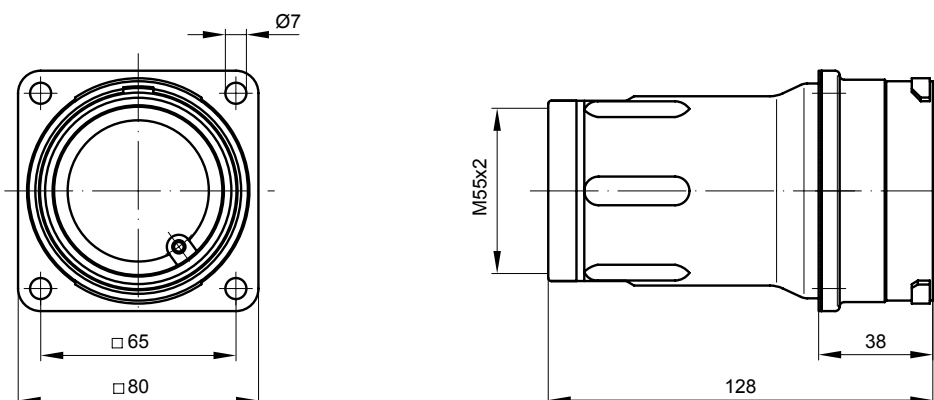


Note:
Use cable clamp **G42 SH** and cable support sleeve **T42-x** with this type of connector.

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

Series G57

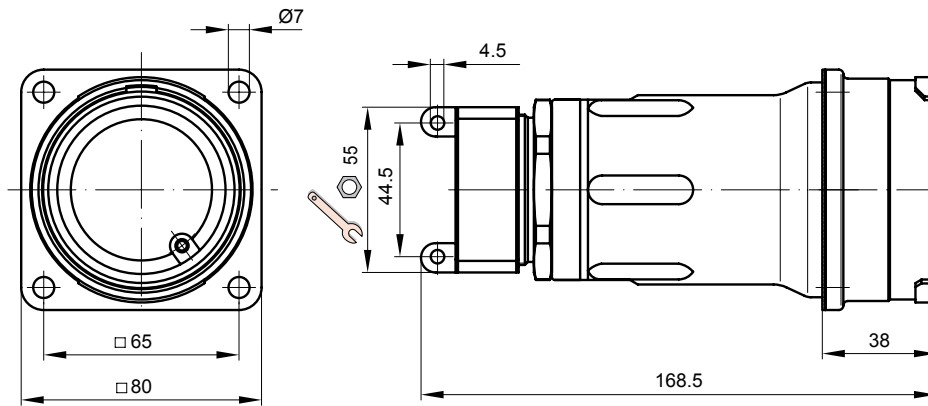
Shell part 1



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

Series G57

Shell part 1

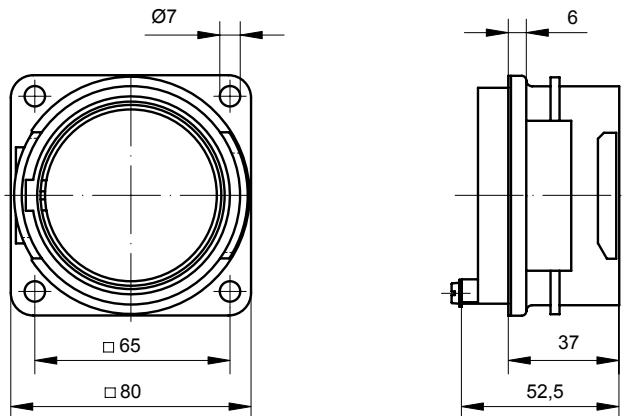


Note:
Use cable clamp **G42 SH** and cable support sleeve **T42-x** with this type of connector.

G57 DF Flange mount receptacle

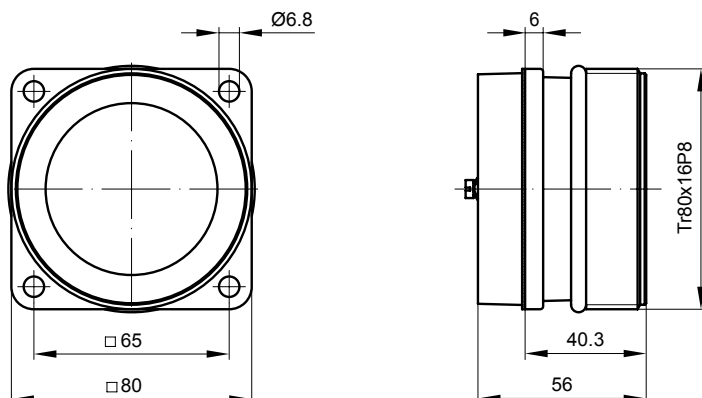
Series G57

Shell part 1


G57 DF Tg Flange mount receptacle with trapezoidal thread

Series G57

Shell part 1

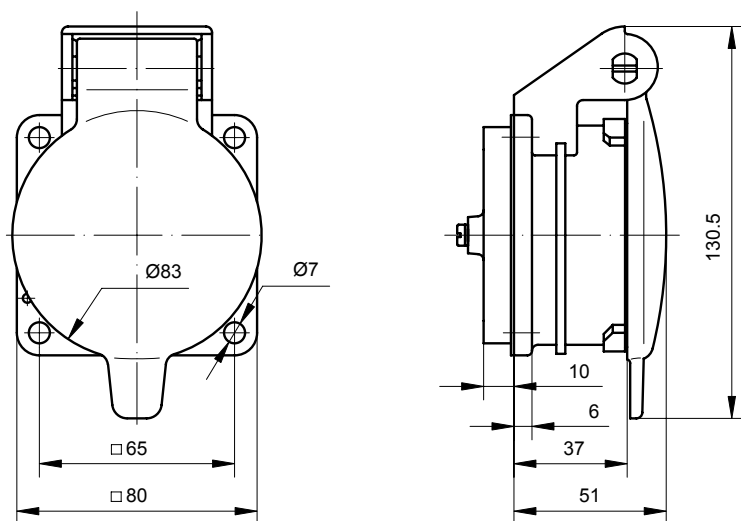


Note:
This receptacle can only be used with the corresponding plug **G57 ST Tg**. The mated connector is sealed to **IP67**.

G57 DD Receptacle with hinged lid

Series G57

Shell part 1

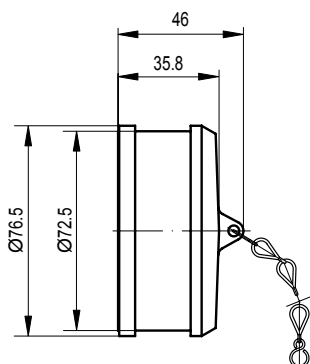


G57 VK Protection cap

Series G57

G57 VK Protection cap for plugs

Protection

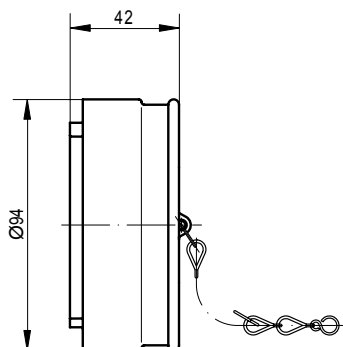


G57 GK Rubber cap for plugs

Series G57

G57 GK Rubber cap for plugs

Protection

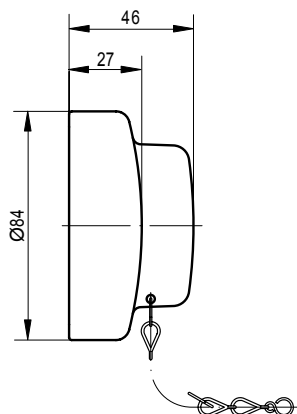


G57 GD Protection cap for receptacles

Series G57

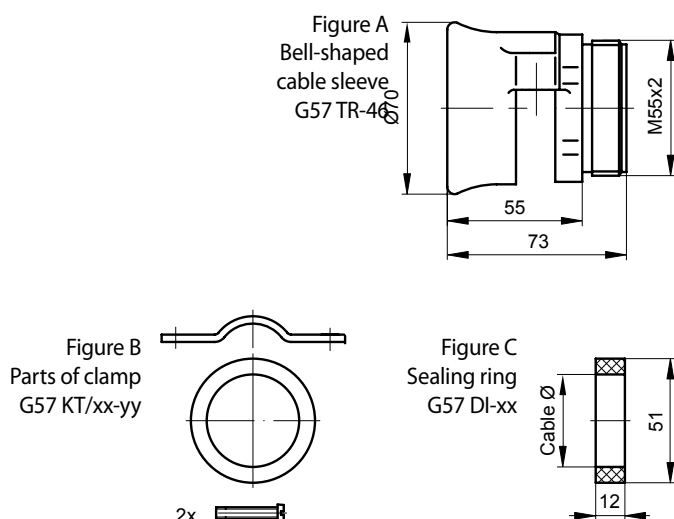
G57 VD Protection cap for receptacles

Protection


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

Series G57

Shell part 2



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

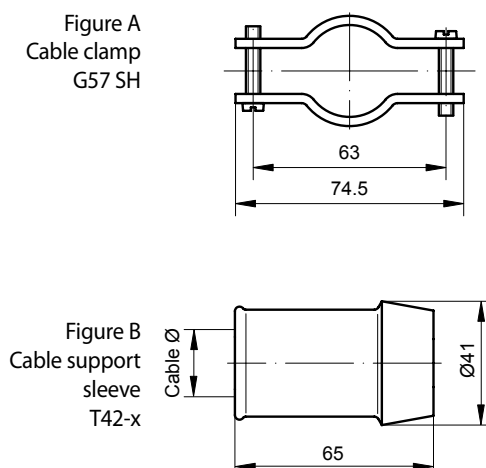
Note:

The bell-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

Shell part 2



Cable Ø [mm]	Ordering code	
	Figure A Cable clamp	Figure B Cable support sleeve
14 ... 18	G57 SH	T42-14/18
18 ... 22		T42-18/22
22 ... 26.5		T42-22/26,5
26.5 ... 31		T42-26,5/31

Note:

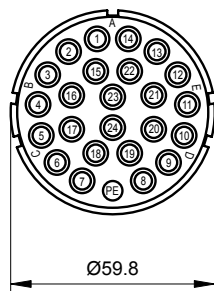
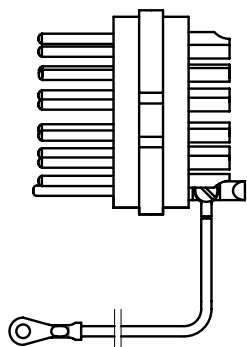
Cable support sleeve and cable clamp are for use with the plugs **G57 ST Kt** and **G57 WS Kt**. For the receptacles **G57 KD Kt** and **G57 KF Kt** use cable clamp **G42 SH** along with the cable support sleeve **T42-x** (see page 27).

G57 Pin inserts 4+PE/4+5/16+PE/24+PE/32+PE/48+PE pole

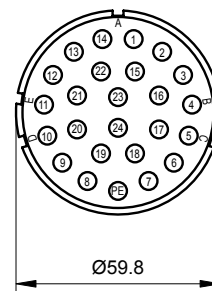
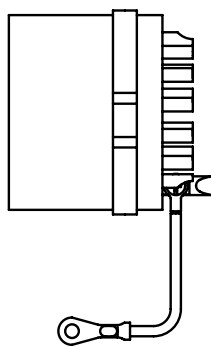
G57 Socket inserts 4+PE/4+5/16+PE/24+PE/32+PE/48+PE pole

Series G57

Inserts



Pin insert **G57 E-24P+PE/L**



Socket insert **G57 E-24S+PE/L**

Connector type	G57 Series					
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 Socket inserts, solder contacts Pin inserts, crimp contacts Socket inserts, crimp contacts	G57 E-4P+PE/L G57 E-4S+PE/L --- ---	G57 E-4P+5/L G57 E-4S+5/L --- ---	G57 E-16P+PE/L G57 E-16S+PE/L --- ---	G57 E-24P+PE/L G57 E-24S+PE/L --- ---	G57 E-32P+PE/L G57 E-32S+PE/L G57 E-32P+PE/C G57 E-32S+PE/C	--- --- G57 E-48P+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 Outer diameter of contact Contact type/size (crimp contacts)	4x 100 A Ø 10 mm ---	4x 50 A 5x 35 A Ø 8 mm Ø 3 mm ---	16x 20 A Ø 3 mm ---	24x 20 A Ø 3 mm ---	32x 16 A Ø 1.58 mm Type A	48x 7.5 A Ø 2.3 mm Type B
PE contact ** Diameter solder contacts Contact type/size (crimp contacts)	Ø 10 mm ---	--- ---	Ø 3 mm ---	Ø 3 mm ---	Ø 3 mm Type H	Ø 3 mm Type H

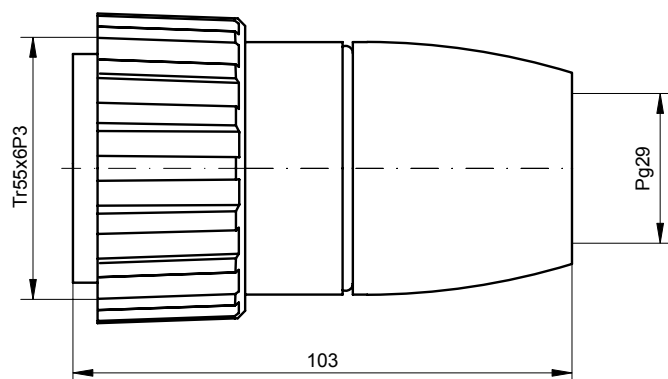
* For detailed information on individual contacts see page 38

** PE = Protective conductor terminal, for details about PE contacts refer to page 38

GM42 ST Pg29 Plug

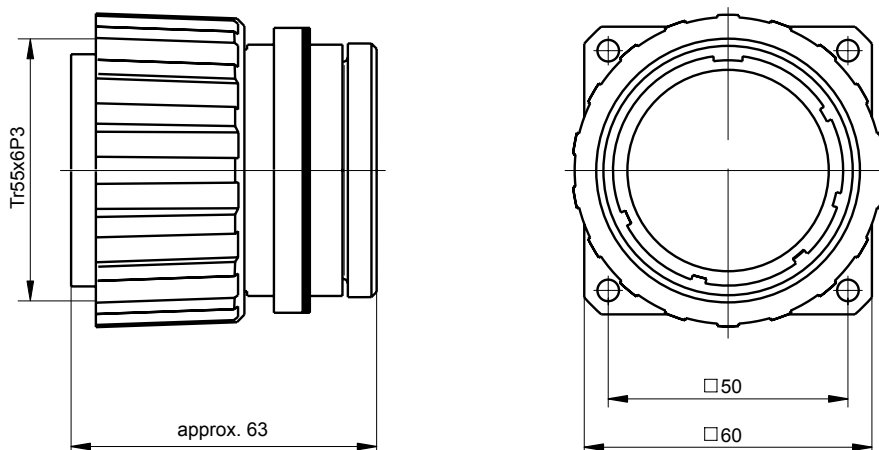
Series GM42

Shell part 1

**GM42 SF** Flange plug

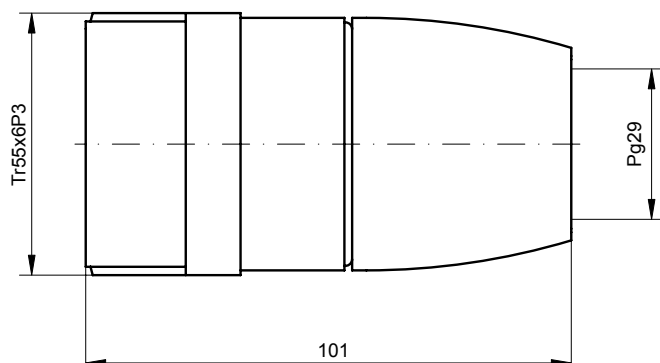
Series GM42

Shell part 1

**GM42 KD** Cable-connecting receptacle

Series GM42

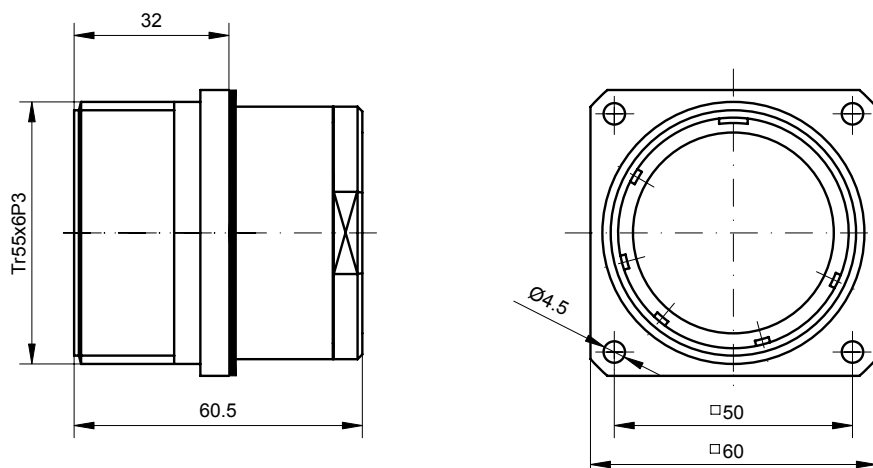
Shell part 1



GM42 DF Flange mount receptacle

Series GM42

Shell part 1

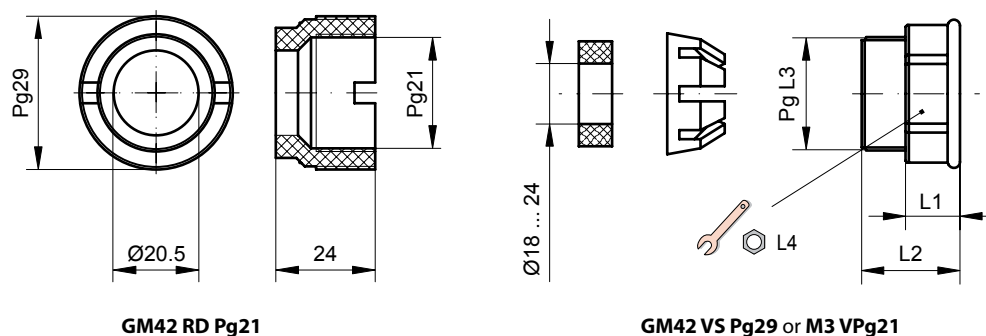


GM42 VS Pg29 Cable gland for cables Ø 18 ... 24 mm

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

Series GM42

Series part 2



GM42 RD Pg21

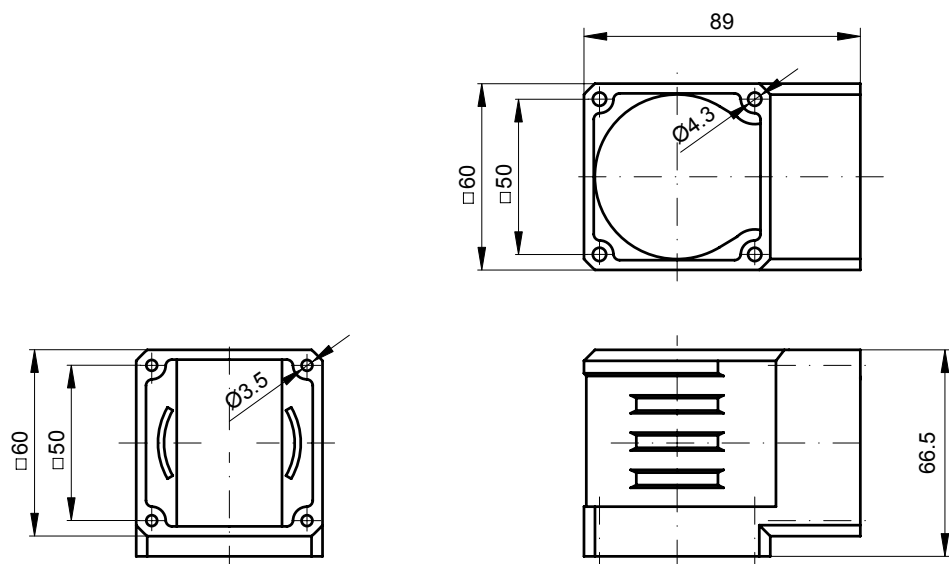
GM42 VS Pg29 or M3 VPg21

Cable Ø	Adapter	Cable gland	L1	L2	L3	L4
14 ... 18	GM42 RD Pg21	M3 VPg21	16	28.5	Pg21	30
18 ... 24	---	GM42 VS Pg29	18	32.5	Pg29	41

GM42 WG Backshell 90°

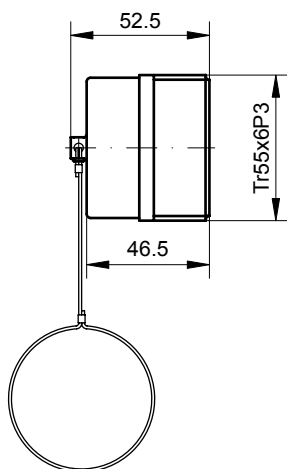
Series GM42

Shell part 2

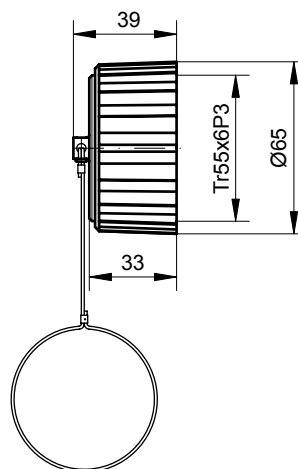


GM42 VK, GM42 VD Protection caps

Series GM42

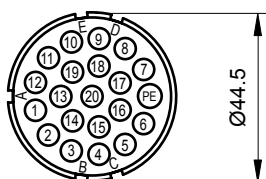
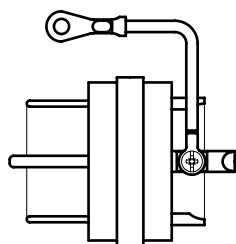
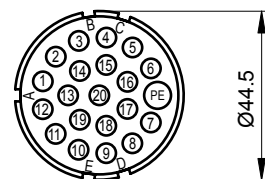
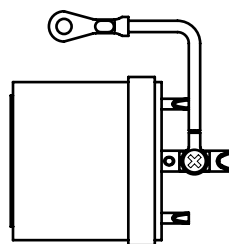
GM42 VK Protection cap for plugs

GM42 VD Protection cap for receptacles

Protection

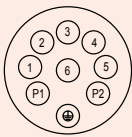
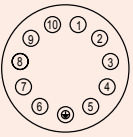
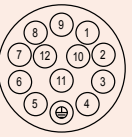
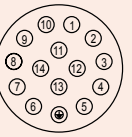
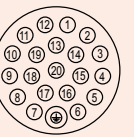
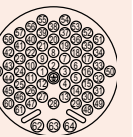

G42 Pin inserts 6+2+PE/10+PE/12+PE/14+PE/20+PE/64+PE pole

G42 Socket inserts 6+2+PE/10+PE/12+PE/14+PE/20+PE/64+PE pole

Series GM42

Pin insert **G42 E-20P+PE/L**Socket insert **G42 E-20S+PE/L**

Inserts

Connector type	GM42 Series					
Number of contacts	6+2 pole + PE	10 pole + PE	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						
Ordering code Pin inserts, solder contacts Socket inserts, solder contacts Pin inserts, crimp contacts Socket inserts, crimp contacts	--- --- G42 E-6+2P+PE/C G42 E-6+2S+PE/C	G42 E-10P+PE/L G42 E-10S+PE/L --- ---	G42 E-12P+PE/L G42 E-12S+PE/L G42 E-12P+PE/C G42 E-12S+PE/C	G42 E-14P+PE/L G42 E-14S+PE/L G42 E-14P+PE/C* G42 E-14S+PE/C*	G42 E-20P+PE/L G42 E-20S+PE/L G42 E-20P+PE/C G42 E-20S+PE/C	--- --- GM42 E-64P+PE/C GM42 E-64S+PE/C
Rated voltage (IEC 60038) at pollution degree 3 (IEC 60512)	500 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	61x 25 V 3x 230 V / 400 V PE contact
Key positions (polarization)	5	5	5	5	5	5
Contacts ** Max. rated current of individual contact Outer diameter of contact Contact type/size (crimp contacts)	8x 25 A Ø 3 mm Type H	10x 25 A Ø 2.3 mm ---	12x 25 A Ø 3 mm Type H	14x 16 A Ø 2.3 mm Type B	20x 10 A Ø 1.58 mm Type A	64x 10 A Ø 1.6 mm Type G
PE contact *** Diameter solder contacts Contact type/size (crimp contacts)	--- Type H	Ø 3 mm ---	Ø 3 mm Type H	Ø 3 mm Type H	Ø 3 mm Type H	Ø 1.6 mm Type G

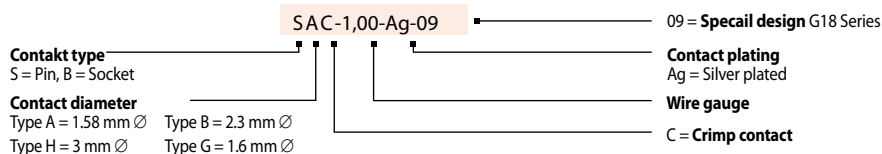
* If implemented accordingly, the 14 pole insert for crimp contacts is interchangeable with the 10 pole insert for solder contacts

** For detailed information on individual contacts see page 38

*** PE = Protective conductor terminal, for details about PE contacts refer to page 38

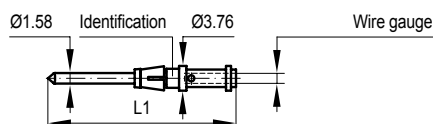
Contacts Crimp contacts (pin/socket) and filler plugs

Ordering code, contacts



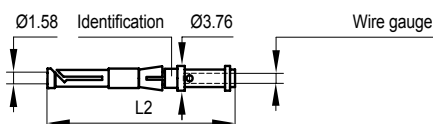
Contacts

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



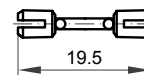
Pin contact

Ordering code	L1	Identification
SAC-0,50-Ag	28.6	No groove
SAC-1,00-Ag	28.6	1 groove
SAC-1,50-Ag	28.6	2 grooves
SAC-2,50-Ag	28.6	3 grooves
SAC-1,00-Ag-09	32.6	1 groove
SAC-1,50-Ag-09	32.6	2 grooves



Socket contact

Ordering code	L2	Identification
BAC-0,50-Ag	28.6	No groove
BAC-1,00-Ag	28.6	1 groove
BAC-1,50-Ag	28.6	2 grooves
BAC-2,50-Ag	28.6	3 grooves



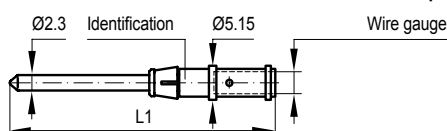
Filler plug:

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

Termination

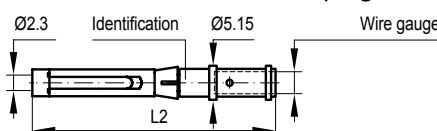
Wire gauge	Rated current
AWG 20	7.5 A
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A
AWG 18 ... 16	10 A
AWG 14	16 A

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



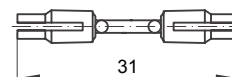
Pin contact

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	35.6	3 grooves
BBC-4,00-Ag	35.6	1 wide groove
BBC-6,00-Ag	35.6	2 wide grooves



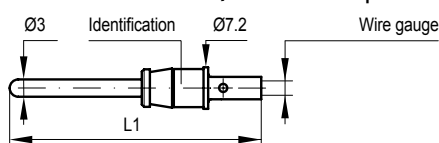
Filler plug:

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

Termination

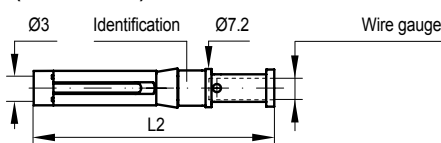
Wire gauge	Rated current
AWG 20	7.5 A
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A
AWG 10	35 A
AWG 9	35 A

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



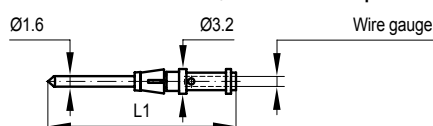
Socket contact

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	45.4	1 wide groove
BHC-6,00-Ag	45.4	2 wide grooves

Termination

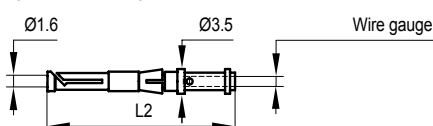
Wire gauge	Rated current
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A
AWG 10	35 A
AWG 9	35 A

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	21,6	---
BGC-0,50-Ag	21,6	---
BGC-1,00-Ag	21,6	---
BGC-1,50-Ag	21,6	---
BGC-2,50-Ag	21,6	---

Termination

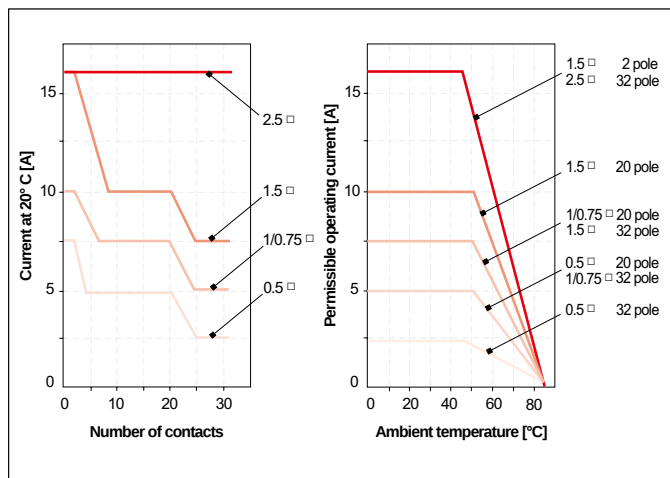
Wire gauge	Rated current
AWG 25 ... 21	5 A
AWG 20	7.5 A
AWG 18 ... 16	10 A
AWG 14	16 A
AWG 12	27.5 A

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

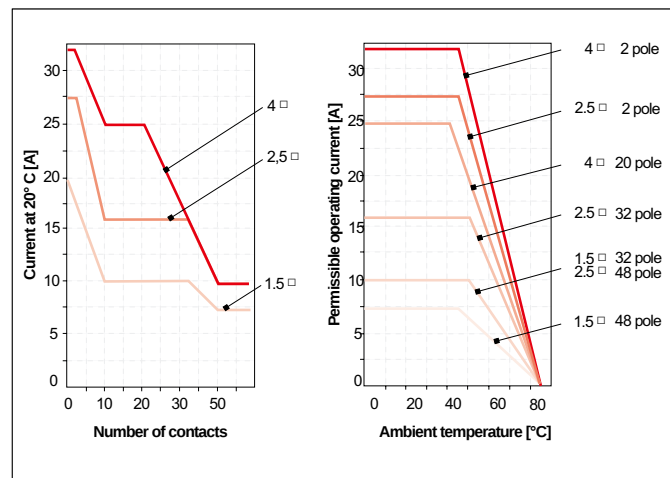
Reduced scale diagrams / dimensions in mm

Derating curves

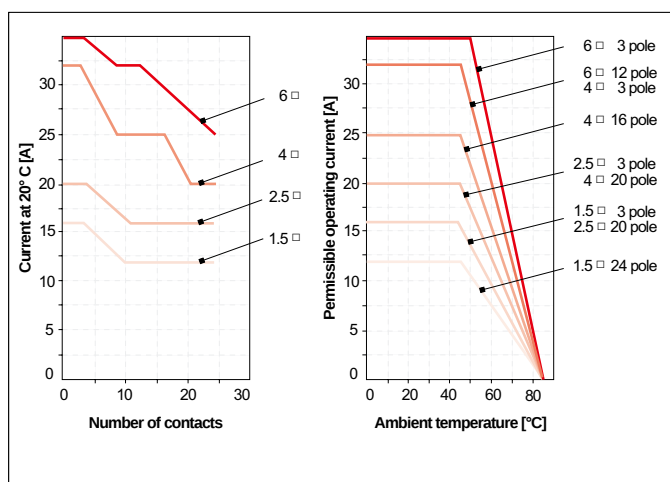
Outer diameter of contact 1.58 mm (pin, front view)
Outer diameter of contact 1.6 mm (pin, front view)



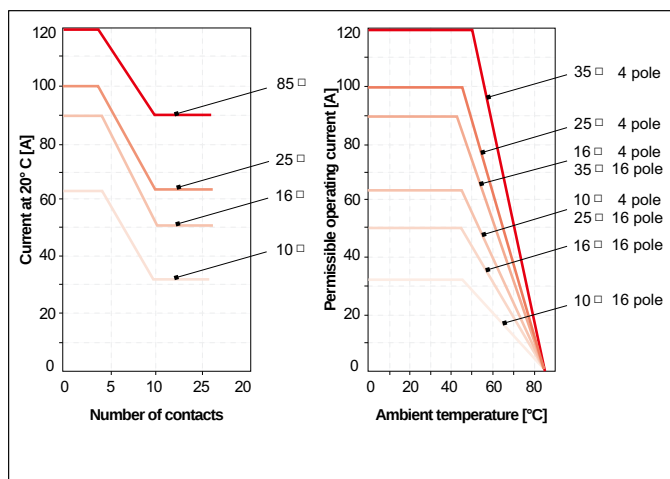
Outer diameter of contact 2.3 mm (pin, front view)



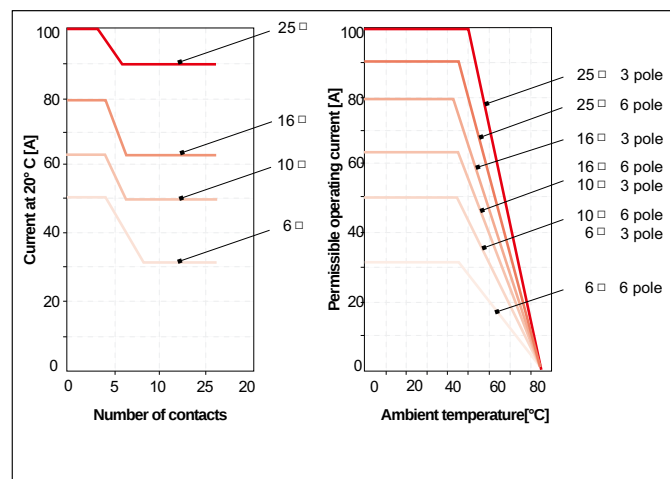
Outer diameter of contact 3 mm (pin, front view)



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)



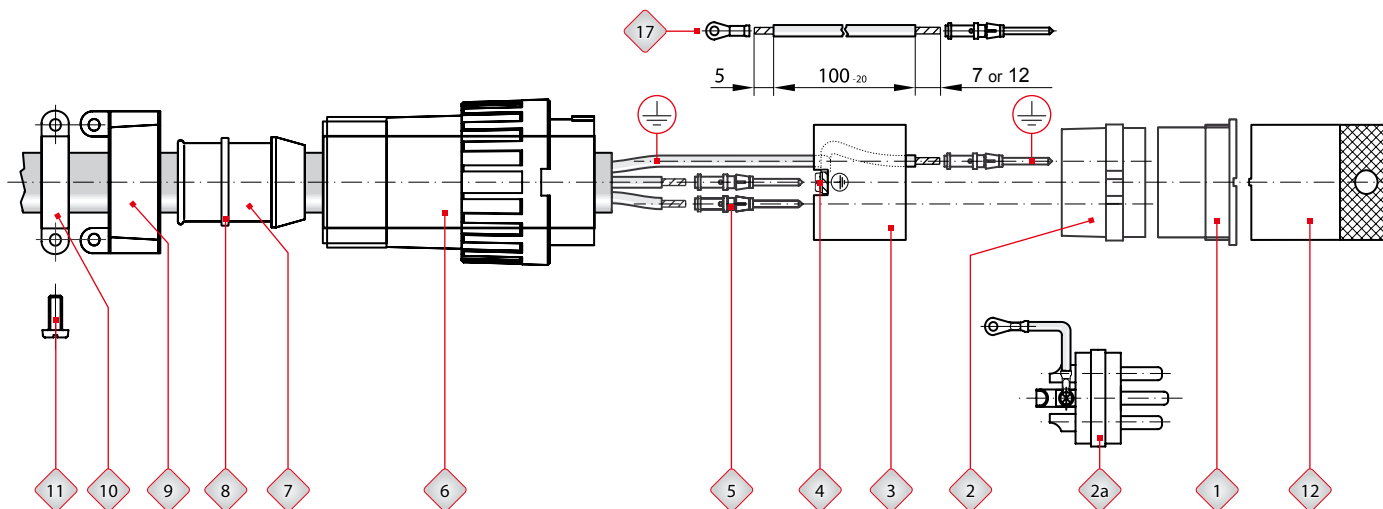
Assembly instructions G Series

Series G

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 'Assembly instructions contacts'!

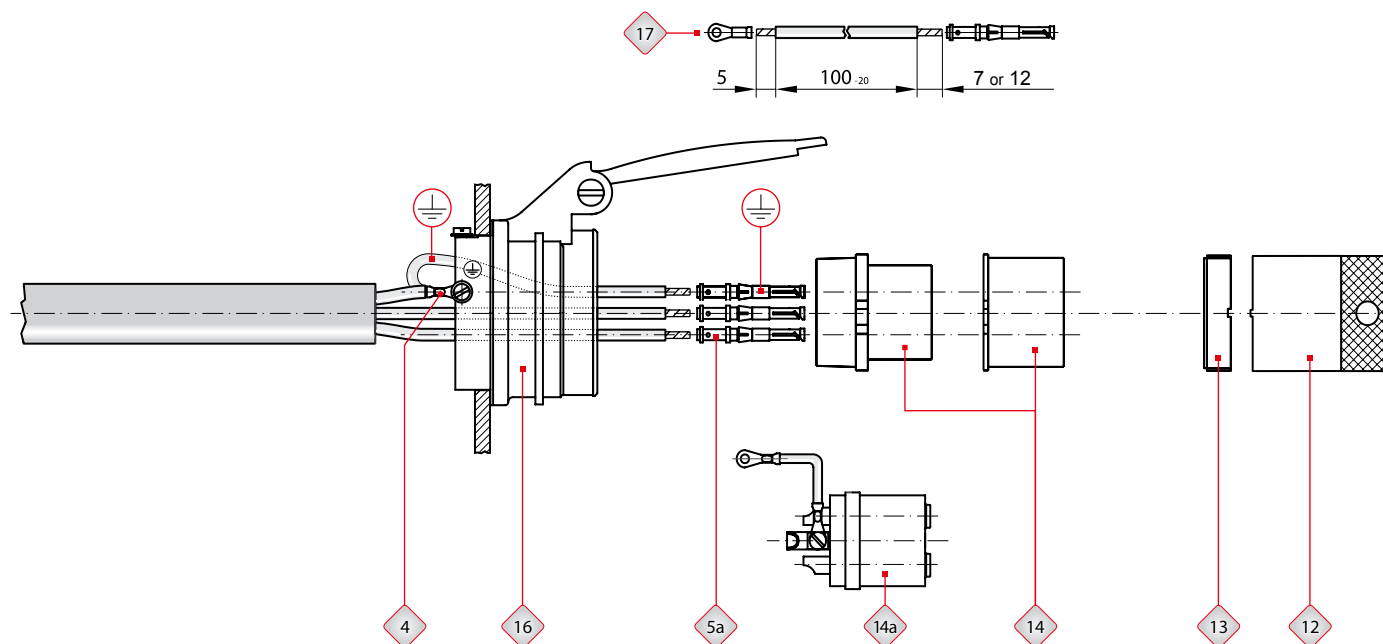


Assembly of contact insert in plug:

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 (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

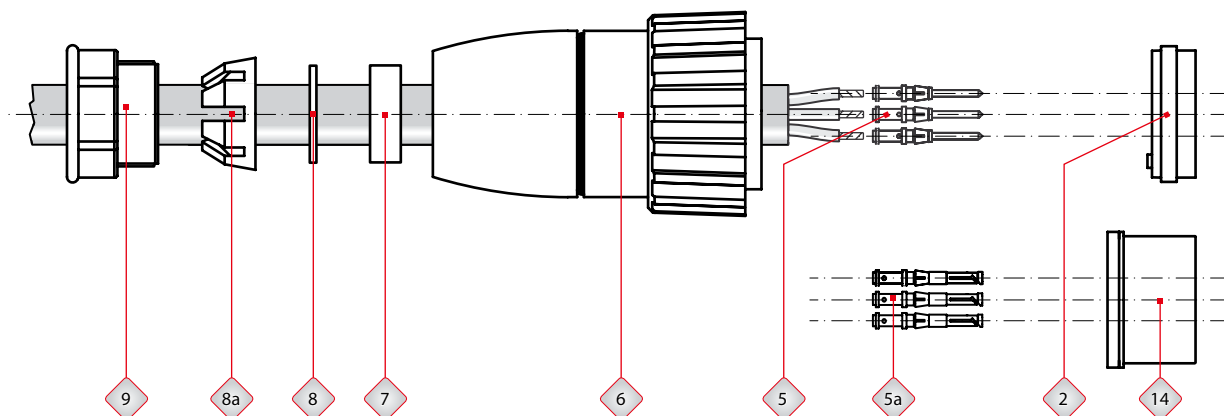
Series GM

Assembly of plugs:

Place components 9, 8 or 8a, 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 6. 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 ... 1.5 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 ... 9	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. 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 16.

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):

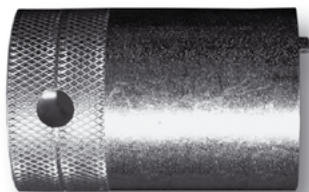
- Solder contacts are pre-assembled in the factory and cannot be disassembled from the inserts by the user.
- Choose soldering iron and kind of accessories which ensure that only a short time is needed for soldering.
- The intended use of crimp contacts is that of a solderless connection. So do not use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

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

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

AWZ-x, EWZ-E Extraction tool, 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-600-1 Crimp tool

Series G/GM

CWZ-600-1 Crimp tool

Accessories



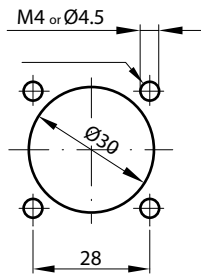
Ordering code	Crimp tool for
CWZ-600-1	Contacts SAC-x*, BAC-x*, SBC-x, BBC-x, SCC-x, BCC-x * Do not use for contacts SAC-2.50-xx, BAC-2.50-xx
Tool frame M22520/1-01 and Turret M22520/1-02 (No fig.)	For contacts SAC-2.50-xx, BAC-2.50-xx only! Crimp tool and turret from DMC or Buchanan. Order direct from OEM.

Mounting holes

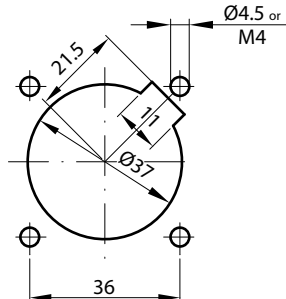
Series G/GM

Mounting holes for panel mount receptacles:

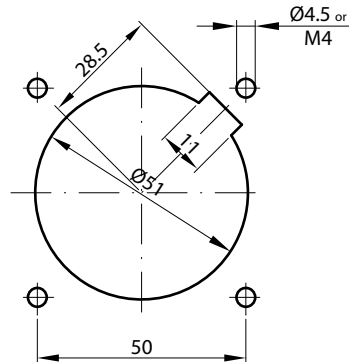
G18 Series



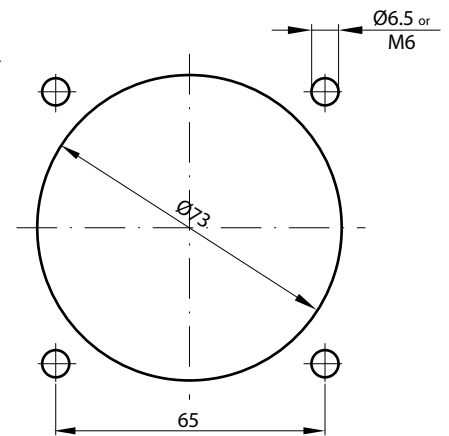
G28 Series



G42 Series



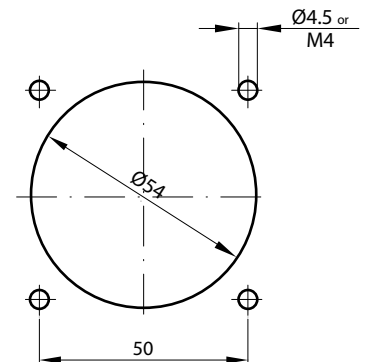
G57 Series



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





Schaltbau GmbH
manufactures in
compliance
with RoHS.



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our website.



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since 1994. For the most
recent certificate visit
our website.

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
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- 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

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- 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

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

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