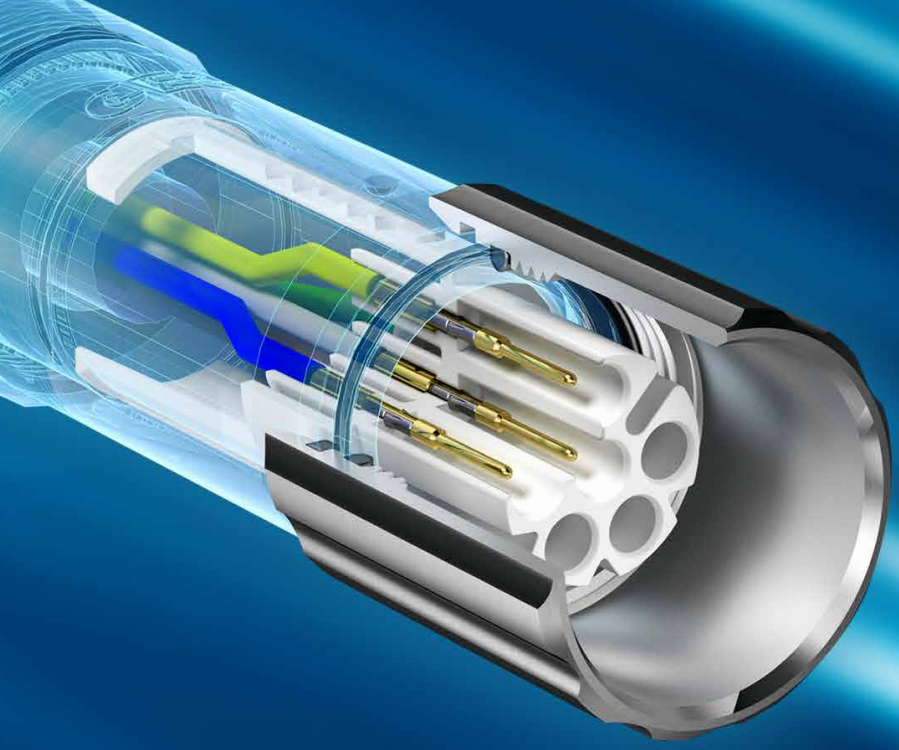

Catalogue
High Voltage Connectors

Connect with GES

GES

We connect High Voltage

Your Partner for customized
High Voltage Connectors

S 100 200 VP MC MCS M MOD

DIN EN ISO 9001
DIN EN ISO 14001

GES High Voltage GmbH has a certified quality management system according to ISO 9001.

The implemented quality control measures are described in a quality management manual.

Since December 2015 GES has a certified environmental management system according to ISO 14001.

All GES products are in compliance with EU directives 2002/95/EG (RoHS), 2002/96/EG, 2003/11/EG and 2011/65/EU.

General information

For the use of high voltage connectors, please see the specific equipment regulations and standards with its particular requirements.

It is the users responsibility to check whether the components illustrated in this catalogue comply with different regulations from those stated in special fields of application which we are unable to foresee.

We reserve the right to modify designs in order to improve quality, keep pace with technological advancement or meet particular requirements in production. All technical data, dimensions or characteristics are stated with the provisio of error or modification. With the data given in this catalogue the components are specified but no properties are guaranteed.

High voltage connectors are under no EU-Directive and therefore must not bear the CE marking.

Safety Instructions

Do not mate or unmate High Voltage Connectors under load. Protection against electric shock has to be ensured by correct mounting according to the mounting type of the connector. The connectors shall be used only within the technical ratings. Please be aware that the design, installation, and inspection of energized high voltage equipment strongly require appropriately trained and qualified personnel. Improper handling of high voltage can cause severe injuries or even death and may cause serious collateral damage!

Testing advice

Ratings listed in this catalogue apply to clean connector pairs (pollution degree 1) in standard athmospheric conditions. No warranty or merchantability or fitness for a particular purpose is made, and all customers must test each component to determine that it meets their operating and reliability requirements. The connectors should be derated when used in adverse environment other than the stated one, such as higher temperatures, humidity, pollution, or other extreme physical exposure.

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The indicated dimensions with the panel cut-outs represent reference values and are in the concrete application with products to be co-ordinated. This catalogue must not be used in any form or manner without our prior approval in writing (Copyright Law, Fair Trade Law, Civil Code).

Catalogue Vers.: 24.05

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Index

S Series

Single pin: 10 - 40 kV DC ..... **Page 10**

100 Series

Single pin: 10 - 100 kV DC ..... **Page 27**

200 Series

Single pin: 60 - 100 kV DC ..... **Page 52**

VP Series

Full plastic: 1 - 3 pins, 8 - 13 kV DC ..... **Page 60**

MCS Series

Multi pin: 2 - 6 pins up to 5 kV DC ..... **Page 85**

MC Series

Multi pin: 2 - 5 pins up to 10 (15) kV DC ..... **Page 95**

M Series

Multi pin: 2 - 9 pins up to 12 kV DC ..... **Page 125**

MOD Series

Multi pin: 2 - 14 pins up to 12 kV DC ..... **Page 160**

Glossary ..... **Page 200**

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ABOUT GES

GES stands for top quality and reliability in the world of high-voltage connectors. As a specialised manufacturer, we offer innovative connection solutions for operating voltages of up to 100 kV DC - indispensable in demanding high-tech markets such as the semiconductor industry and particle physics.

Our products are characterised by their quality, versatility and the possibility of application-specific adaptations. Our high standards, expertise and flexibility make GES the preferred partner of leading international companies that rely on our sophisticated solutions for their critical applications in industry and science. We combine high voltage - with innovation and precision.

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MAKE
or ***BUY?***

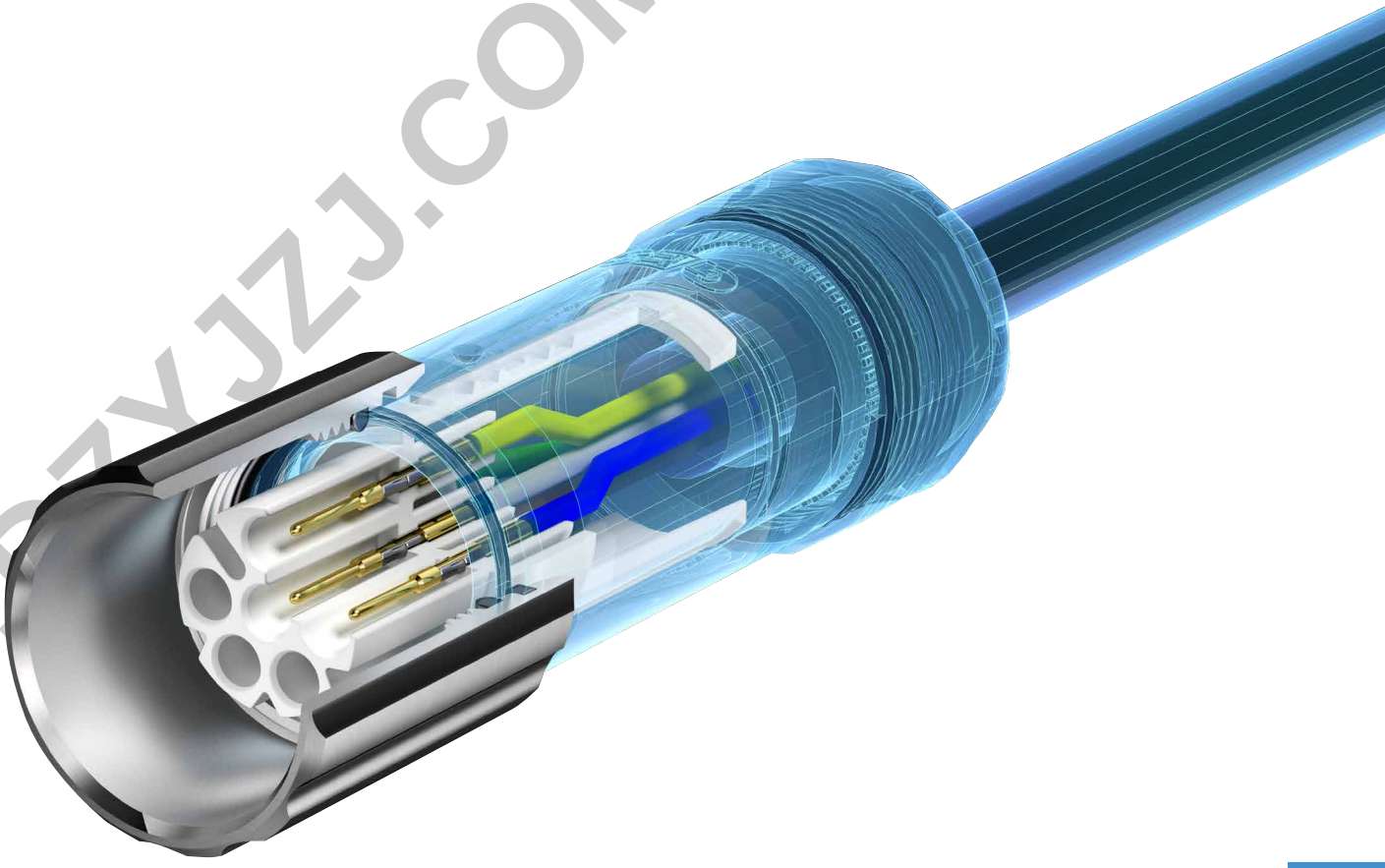
Growing competitive pressure and accelerated innovation cycles demand flexibility and cost optimization at increased market dynamics. Many companies must ask themselves the question: shall we produce it, or have it produced?

- **STRENGTHENED INNOVATION DYNAMICS AND INCREASE SOLUTION COMPETENCE**

  As a specialized company, we have a high innovation momentum, from which you can get direct profit/s. State-of-the-art construction IT, 3D prototyping, and the latest measurement technology enable us to keep pace with the growing demands of our customers and to realize customized development projects in a timely manner. In addition, our standard products are continually being improved to provide our customers with an optimal and solid solution.

- **VALUE CREATION AND COST REDUCTION**

  Bundle your resources and focus on your core competencies. Costs for development, production, assembly, testing, warehousing, quality management and administration of high voltage connectors are obstacles to your lean production and can be handled by us more efficiently due to composite effects. With short and reliable delivery times (even for small quantities) and blanked orders, we can also supply you just-in-time.



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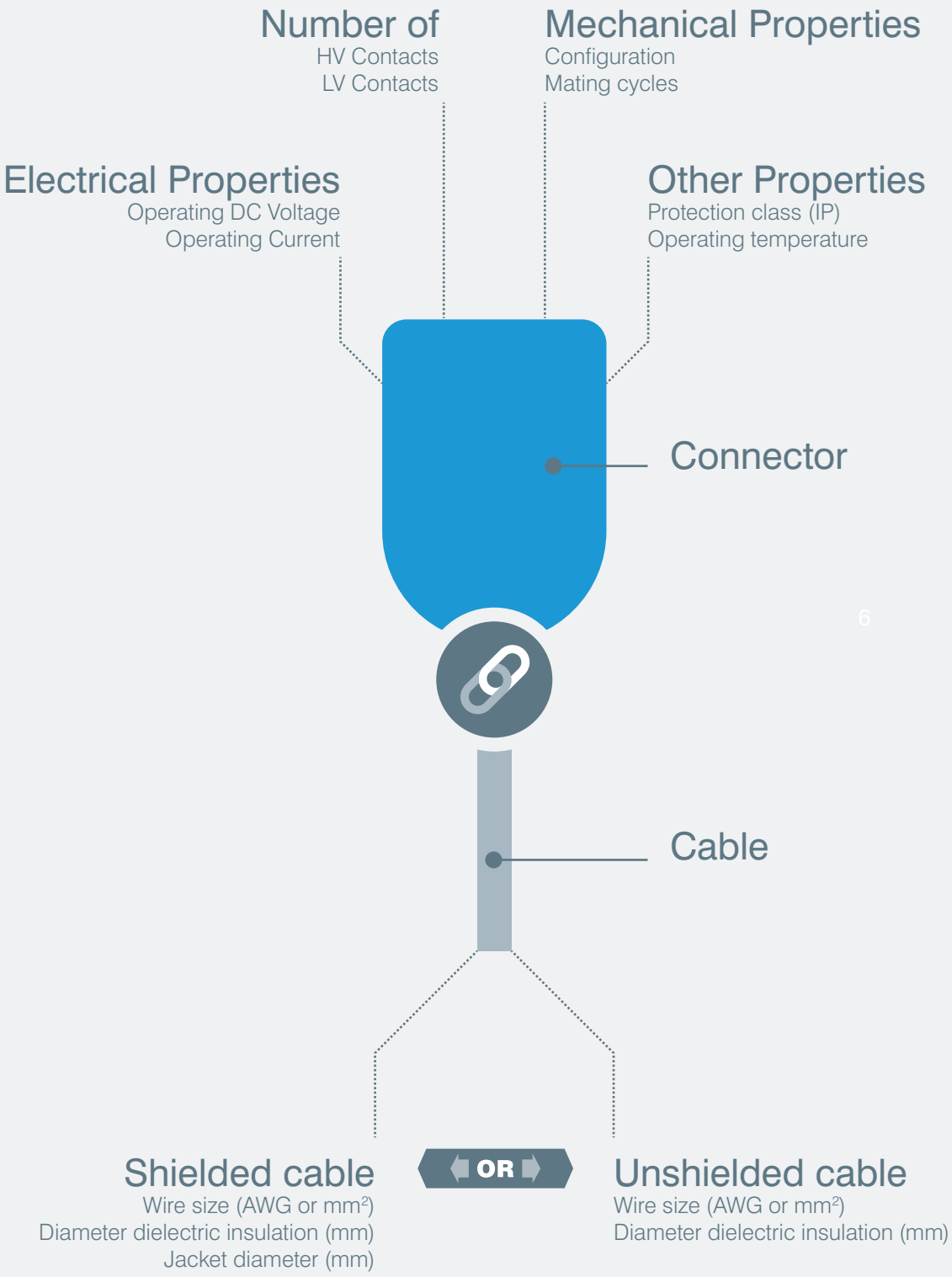
Product Finder – Check List



Single pin connectors

	Series S	Series 100	Series 200
Operating voltage	10 - 40 kV DC	10 - 100 kV DC	10 - 100 kV DC
Operating current	30 A	30 / 80 A	30 / 80 A
Max. diameter of dielectric cable insulation	5.0 mm	10.0 mm	see data sheet
Max. jacket diameter of cable	6.5 mm	14.0 mm	see data sheet
Wire sizes	22-14 AWG	22-8 AWG	22-14 AWG

VarioPro full plastic connectors

	VarioPro CL	VarioPro CL-B	VarioPro Basic	VarioPro SB10
Operating voltage	13 kV DC	13 kV DC	8 kV DC	10 kV DC
Operating current	13 A	13 A	13 A	30 A
Number of pins	1 - 3	1 - 3	1 - 2	1
Max. diameter of dielectric cable insulation	4.0 mm	4.0 mm	4.0 mm	7.2 mm
Wire sizes	26-14 AWG	20-12 AWG	26-14 AWG	14 AWG

Multi pin circular connectors

	Series MCS	Series MC	Series M
Operating voltage	5 kV DC	10 – 15 kV DC	12 kV DC
Operating current	4.5 A	13 A	30 A
Number of pins	2 - 6	2 - 5	2 - 9
Max. diameter of dielectric cable insulation	1.6 mm	4.0 mm	7.0 mm
Wire sizes	26-22 AWG	26-14 AWG	22-14 AWG

Multi pin modular connectors

	MOD-HP	MOD-T
Operating voltage	12 kV DC	12 kV DC
Operating current	25 A	30 A
Number of pins	2 - 14	2 - 14
Max. diameter of dielectric cable insulation	6.2 mm	7.0 mm
Wire sizes	20-12 AWG	22-14 AWG

Hardwired *or* **plugged?**

The decision whether to design a high voltage connection hardwired or plugged primarily depends on the application. Hardwired connections certainly have their advantages: they transfer (power at high voltage) more efficiently, are cheaper to implement, have lower production costs, and can, therefore, initially have an edge over price.

However, because of the anticipated maintenance cycles, it is crucial to consider service and application friendliness. When dealing with high-voltage equipment and systems, efficient decoupling during repair and maintenance is essential. Service costs can escalate significantly if the decoupling is not straightforward. Expenses may easily surpass the initial savings made during the purchase.

Devices and systems with plugged solutions do not need to be disconnected or even rewired in the field. One hand is enough, and the maintenance or system engineer can continue with their actual task. System components can be exchanged or replaced quickly, and no after-sales costs are transferred to the device manufacturer or even to the end customer/user.

”Relocated over the entire lifecycle, HV connectors are often the cheaper solution.“

”Significantly shortening downtimes, your customers will apreciate it.“

Modification *or* **development?**

Modifications are individual problem solutions that can be implemented relatively quick, even with small quantities, since they are based on standard products and components. By modifying suitable existing types, we can implement application-specific adaptations to unusual requirements. In consultation with you, we work out the optimal configuration for your application.

Exclusive developments are not only functionally advantageous but also a real competitive advantage! We implement an optimal and tailor-made solution for your problem. Together, we work out specifications, feasibility study and preliminary costing, and assist you throughout your project. Due to high complexity, difficult environmental and operating conditions or special properties, a new development might just be your step ahead…

”Whether modification or development, a solution tailored to the problem guarantees the best possible functionality and economic viability.“

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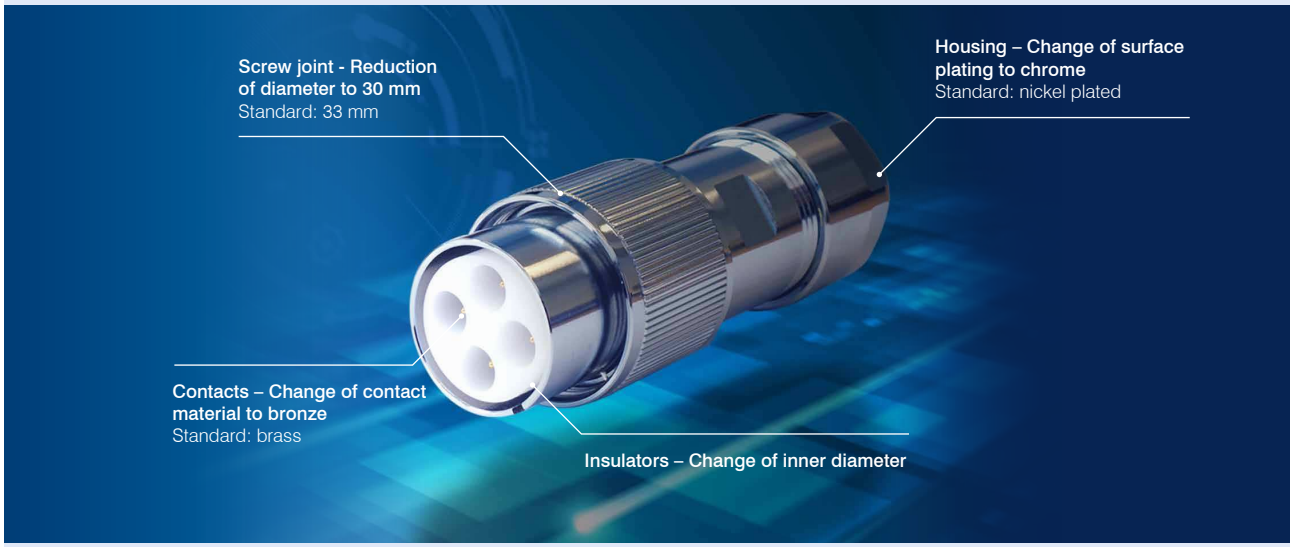
Perfect-fit** or **wangled?

Even with our wide range of high-voltage connectors, we cannot always fulfill all the desired functions. The "suit off the rack" doesn't always fit. Especially in high-voltage applications, the unusual is the everyday. Over the years, we have implemented several customer-specific projects for industry and research, from exclusive developments to application-specific modifications. Customized solutions often are not as effortful and expensive as presumed, and there are a variety of solutions! Let us help to create your perfect-fit high voltage connector and a solid solution to your problem.

"The best and most functional solution is usually also the most cost-effective and sustainable in the long term."

Modification example (CERN):
4-pin, 10 kV DC | *Power Trigger Units for Large Hadron Collider (LHC)*



Exclusive development example (IMS Messsysteme):
2-pin, 1,6 kV pulsed voltage | *NDT in steel industry*

Environmental requirements:
Lubricant, Gamma Ray & UV resistance

Development:
Custom made insulator PFA

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S Series

- Operating voltages up to 40 kV DC
- Operating current up to 30 Amps
- Advanced contact technology
- Silver plated and gold plated contacts available
- High performance insulation material

www.bzy

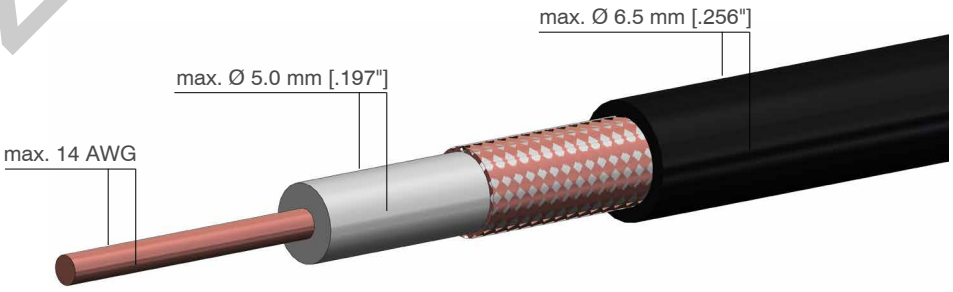
General characteristics and technical data Series S

Housing	
Locking system	Threaded coupling
Mounting type (panel mount connector)	Round flange / 4-hole flange
Housing material	Brass (CuZn)
Surface plating	Nickel (Ni)
Protection class (mated connector)	IP50
Operating temperature	-30°C to +80°C [-22°F to +176°F]

Contacts	
Termination method	Solder / screw
Rated current	30 A
Max. operating current	40 A
Pulse current	3000 A
Contact resistance	300 $\mu\Omega$
Contact diameter	2.5 mm [.098"]
Max. wire size	2.5 mm² [14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag) / gold (Au)
Insertion / Withdrawal force	5.5 N / 4.0 N
Mating cycles	100 k
Rated temperature	+120°C [+248°F]

Insulator	
Number of contacts	1
Insulation material	PTFE or POM
Flammability class PTFE	UL94 V-0
Flammability class POM	UL94 HB
CTI value	600
Operating temperature PTFE	-50°C to +200°C [-58°F to +392°F]
Operating temperature POM	-30°C to +120°C [-22°F to +248°F]
Insulating material group PTFE / POM	I (DIN IEC 60664)

Suitable cable dimensions



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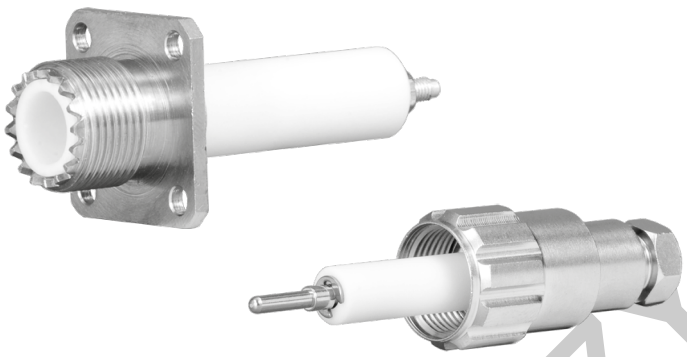
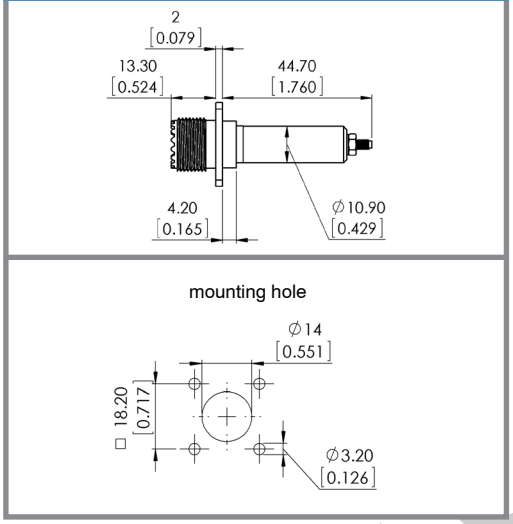
Type HSB10 **10 kV DC**

Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE
Mounting type receptacle	4-hole flange
Contact plating	Silver (Ag) or gold (Au)

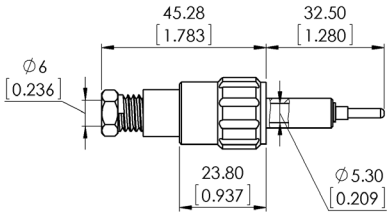


HB10 receptacle, panel mount HS10 plug, cable mount

HB10 receptacle, panel mount



HS10 plug, cable mount



drawing - dimensions in mm [inch]

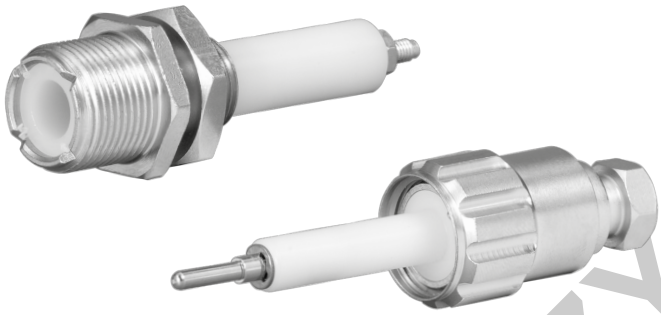
Part No.	Description	Plug, cable mount	Receptacle, panel mount	Contact silver plated	Contact gold plated
7310001	HS10 PTFE	•		•	
7310003	HS10/Au PTFE	•			•
7311001	HB10 PTFE		•	•	
7311003	HB10/Au PTFE		•		•

Suitable HV cable, shielded

Part No.	Operating Voltage	Wire size	Outer diameter	Min. bend radius	Temperature range
3330007	30 kV DC	0.35 mm² [22 AWG]	5.40 mm [.213"]	54 mm [2.126"]	-25 °C to +90 °C [-13°F to +194°F]

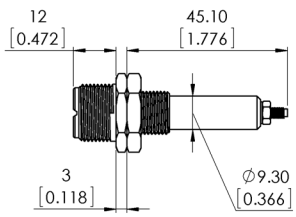
More information: Page 26

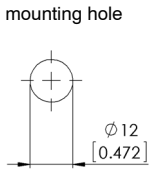
Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE
Mounting type receptacle	Round flange
Contact plating	Silver (Ag) or gold (Au)



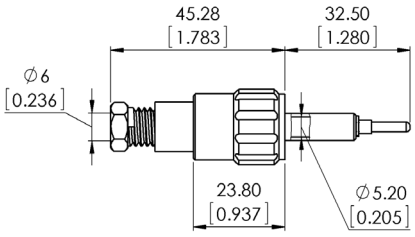
HB11 receptacle, panel mount HS11 plug, cable mount

HB11 receptacle, panel mount





HS11 plug, cable mount



drawing - dimensions in mm [inch]

Part No.	Description	Plug, cable mount	Receptacle, panel mount	Contact silver plated	Contact gold plated
7310020	HS11 PTFE	•		•	
7310021	HS11/Au PTFE	•			•
7311020	HB11 PTFE		•	•	
7311021	HB11/Au PTFE		•		•

Suitable HV cable, shielded

Part No.	Operating Voltage	Wire size	Outer diameter	Min. bend radius	Temperature range
3330007	30 kV DC	0.35 mm² [22 AWG]	5.40 mm [.213"]	54 mm [2.126"]	-25 °C to +90 °C [-13°F to +194°F]

More information: Page 26

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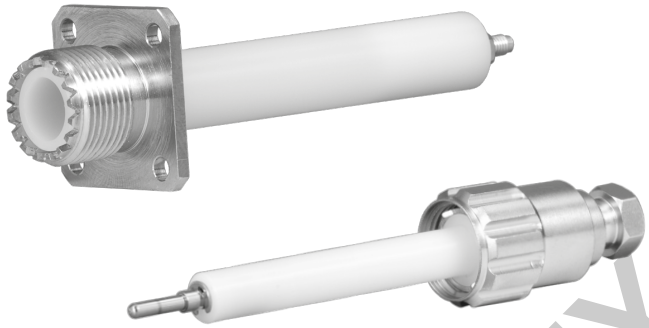
Type HSB20 20 kV DC

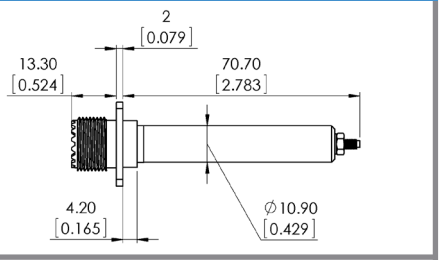
Electrical values	
Operating voltage	20 kV DC
Test voltage	30 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE
Mounting type receptacle	4-hole flange
Contact plating	Silver (Ag) or gold (Au)

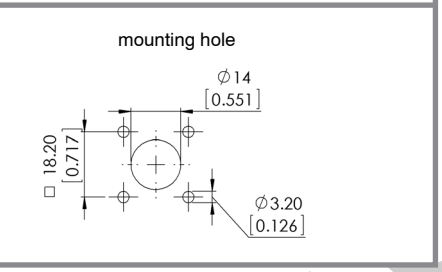


HB20 receptacle, panel mount

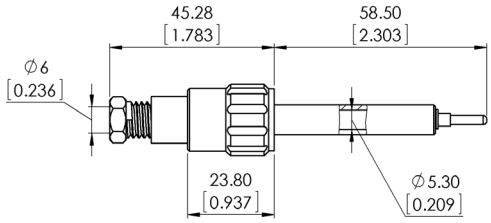
HS20 plug, cable mount

HB20 receptacle, panel mount





HS20 plug, cable mount



drawing - dimensions in mm [inch]

Part No.	Description	Plug, cable mount	Receptacle, panel mount	Contact silver plated	Contact gold plated
7320005	HS20 PTFE	•		•	
7320006	HS20/Au PTFE	•			•
7321005	HB20 PTFE		•	•	
7321006	HB20/Au PTFE		•		•

Suitable HV cable, shielded

Part No.	Operating Voltage	Wire size	Outer diameter	Min. bend radius	Temperature range
3330007	30 kV DC	0.35 mm² [22 AWG]	5.40 mm [.213"]	54 mm [2.126"]	-25 °C to +90 °C [-13°F to +194°F]

More information: Page 26

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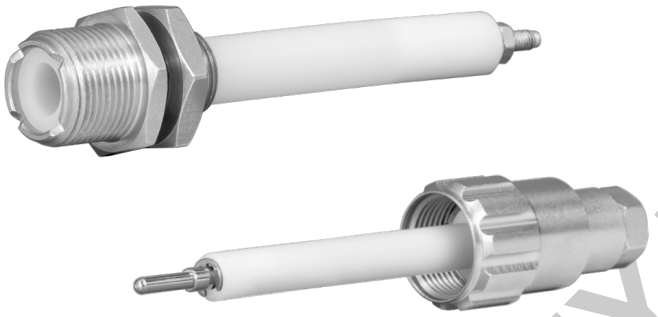
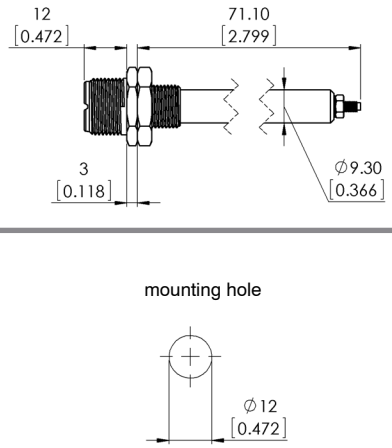
Type HSB21 **20 kV DC**

Electrical values	
Operating voltage	20 kV DC
Test voltage	30 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE or POM
Mounting type receptacle	Round flange
Contact plating	Silver (Ag) or gold (Au)

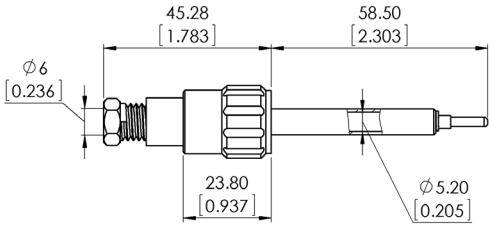


HB21 receptacle, panel mount HS21 plug, cable mount

HB21 receptacle, panel mount



HS21 plug, cable mount



drawing - dimensions in mm [inch]

Part No.	Description	Plug, cable mount	Receptacle, panel mount	Insulation PTFE	Insulation POM	Contact silver plated	Contact gold plated
7320010	HS21 POM	•			•	•	
7320013	HS21/Au POM	•			•		•
7320020	HS21 PTFE	•		•		•	
7320023	HS21/Au PTFE	•		•			•
7321010	HB21 POM		•		•	•	
7321013	HB21/Au POM		•		•		•
7321020	HB21 PTFE		•	•		•	
7321022	HB21/Au PTFE		•	•			•

Suitable HV cable, shielded

Part No.	Operating Voltage	Wire size	Outer diameter	Min. bend radius	Temperature range
3330007	30 kV DC	0.35 mm² [22 AWG]	5.40 mm [.213"]	54 mm [2.126"]	-25 °C to +90 °C [-13°F to +194°F]

More information: Page 26

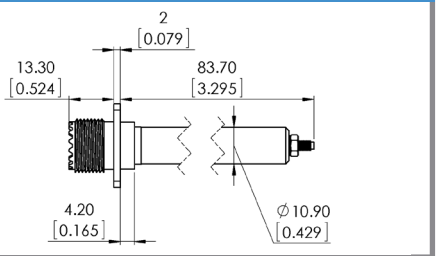
Type HSB30 30 kV DC

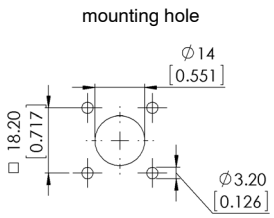
Electrical values	
Operating voltage	30 kV DC
Test voltage	45 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE
Mounting type receptacle	4-hole flange
Contact plating	Silver (Ag) or gold (Au)

HB30 receptacle, panel mount

HS30 plug, cable mount

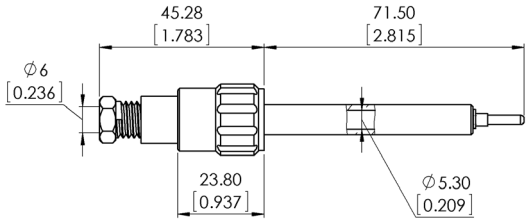
HB30 receptacle, panel mount





HS30 plug, cable mount

screwed cable gland



drawing - dimensions in mm [inch]

Part No.	Description	Plug, cable mount	Receptacle, panel mount	Contact silver plated	Contact gold plated
7331050	HS30 PTFE	•		•	
7331051	HB30 PTFE		•	•	
7331150	HS30/Au PTFE	•			•
7331151	HB30/Au PTFE		•		•

Suitable HV cable, shielded

Part No.	Operating Voltage	Wire size	Outer diameter	Min. bend radius	Temperature range
3330007	30 kV DC	0.35 mm² [22 AWG]	5.40 mm [.213"]	54 mm [2.126"]	-25 °C to +90 °C [-13°F to +194°F]

More information: Page 26

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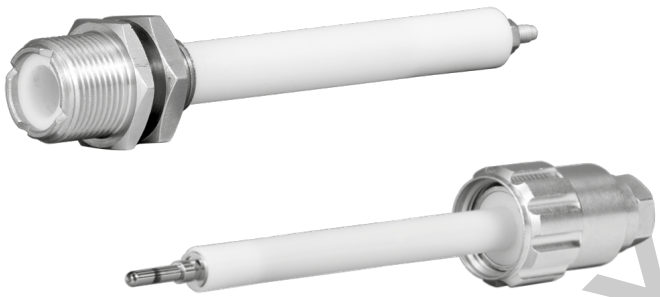
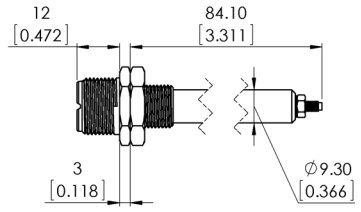
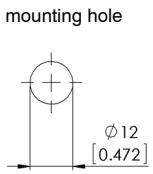
Electrical values	
Operating voltage	30 kV DC
Test voltage	45 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE
Mounting type receptacle	Round flange
Contact plating	Silver (Ag) or gold (Au)



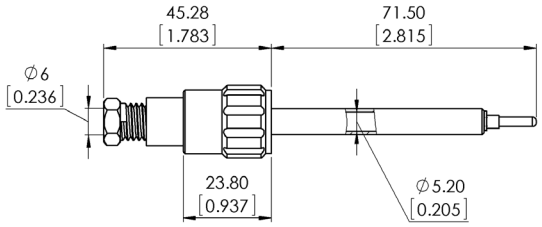
HB31 receptacle, panel mount HS31 plug, cable mount

HB31 receptacle, panel mount





HS31 plug, cable mount



drawing - dimensions in mm [inch]

Part No.	Description	Plug, cable mount	Receptacle, panel mount	Contact silver plated	Contact gold plated
7331052	HS31 PTFE	•		•	
7331053	HB31 PTFE		•	•	
7331152	HS31/Au PTFE	•			•
7331153	HB31/Au PTFE		•		•

Suitable HV cable, shielded

Part No.	Operating Voltage	Wire size	Outer diameter	Min. bend radius	Temperature range
3330007	30 kV DC	0.35 mm² [22 AWG]	5.40 mm [.213"]	54 mm [2.126"]	-25 °C to +90 °C [-13°F to +194°F]

More information: Page 26

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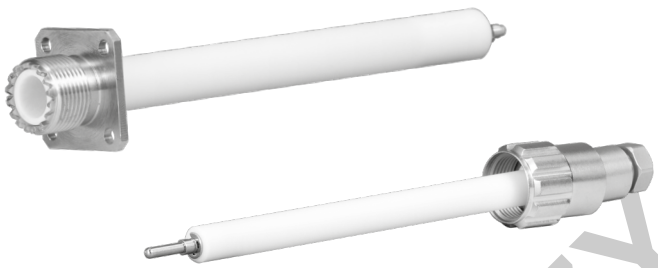
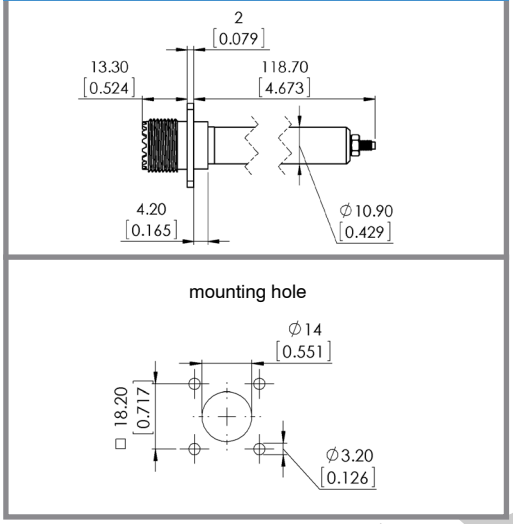
Type HSB40 40 kV DC

Electrical values	
Operating voltage	40 kV DC
Test voltage	60 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE
Mounting type receptacle	4-hole flange
Contact plating	Silver (Ag) or gold (Au)

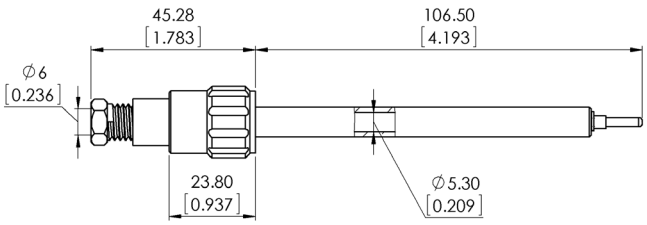


HB40 receptacle, panel mount HS40 plug, cable mount

HB40 receptacle, panel mount



HS40 plug, cable mount



drawing - dimensions in mm [inch]

Part No.	Description	Plug, cable mount	Receptacle, panel mount	Contact silver plated	Contact gold plated
7332020	HS40 PTFE	•		•	
7332021	HS40/Au PTFE	•			•
7332030	HB40 PTFE		•	•	
7332031	HB40/Au PTFE		•		•

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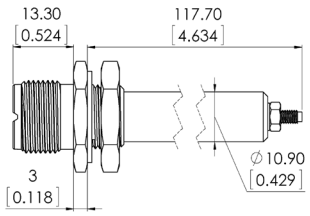
Electrical values	
Operating voltage	40 kV DC
Test voltage	60 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Insulation material	PTFE
Mounting type receptacle	Round flange
Contact plating	Silver (Ag) or gold (Au)

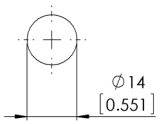
HB41 receptacle, panel mount

HS41 plug, cable mount

HB41 receptacle, panel mount

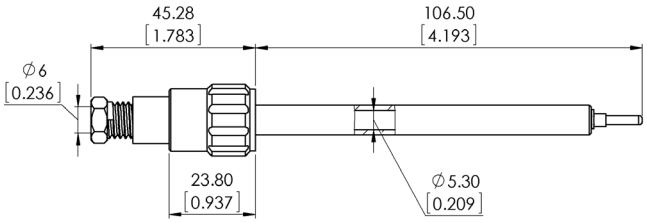


mounting hole



HS41 plug, cable mount

screwed cable gland



drawing - dimensions in mm [inch]

Part No.	Description	Plug, cable mount	Receptacle, panel mount	Contact silver plated	Contact gold plated
7332050	HS41 PTFE	•		•	
7332051	HS41/Au PTFE	•			•
7332040	HB41 PTFE		•	•	
7332041	HB41/Au PTFE		•		•

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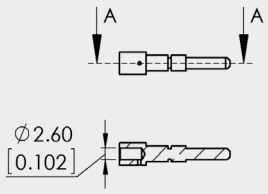
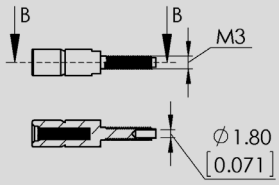
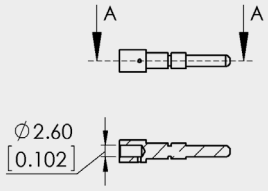
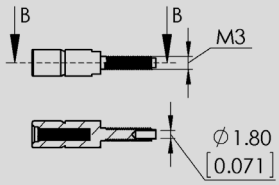
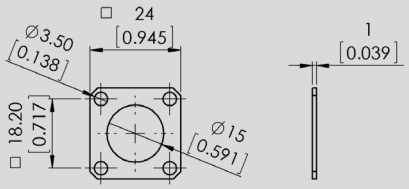
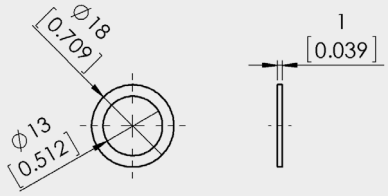
Contacts

Part No.	Description	Drawing
6572001	Male contact 2.5 mm silver plated (Ag)	
6572005	Female contact 2.5 mm silver plated (Ag)	
6571025	Male contact 2.5 mm gold plated (Au)	
6571027	Female contact 2.5 mm gold plated (Au)	

drawing - dimensions in mm [inch]

Gaskets

Part No.	Description	Drawing
6572092	Flat gasket, 4-hole mount, NBR, black, for receptacle types HBx0	
6572093	Flat gasket, round flange, NBR, black, for receptacle types HBx1	

drawing - dimensions in mm [inch]

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Assembly instructions HS (plug, cable mount)

1.

Part as supplied.

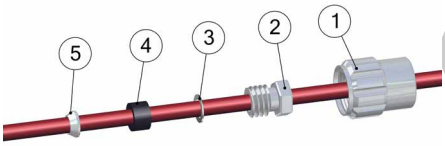
2.

Parts included.
Screw joint (1), screw (2), washer (3), clamping rubber (4), outer cone (5), basic part (6), snap ring (7), male contact (8).

3.

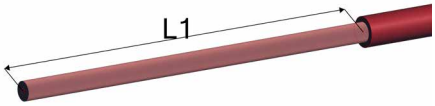
Remove male contact.
Loosen snap ring (7) and take out male contact (8).

4.



Place screw joint (1), screw (2), washer (3), clamping rubber (4), outer cone (5) on cable.
⚠ Respect correct order of parts (see picture).

5.



Remove cable jacket.

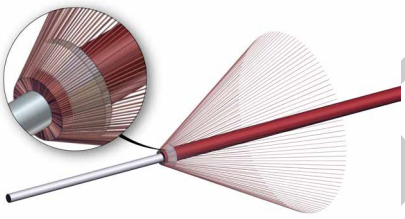
Type	L1 mm [inch]
HS 10/11	31 [1.220"]
HS 20/21	56 [2.205"]
HS 30/31	69 [2.717"]
HS 40	104 [4.094"]

⚠ Do not damage the metal shield. Do not damage the dielectric insulation. Respect the correct order of parts (see picture).

6.

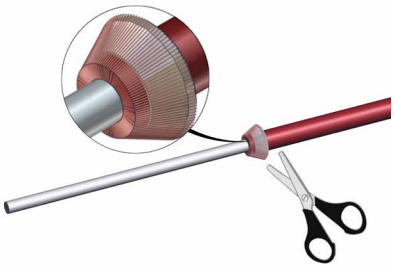
Fold back shield braid over jacket.

7.



Prepare shield braid for cutting.
Completely widen braid. Push outer cone (5) completely under shield braid.

8.



Cut overlapping shield.
⚠ Carefully remove shield parts. Loose shield parts can cause electrical breakdown.

9.

Remove dielectric insulation (L2 = 5mm [.197"]).

10.

Solder contact (8) on conductor.
⚠ Tin-solder must not remain on contact surface.

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Assembly instructions HS (plug, cable mount)

11.

Completely insert cable in basic part (6).

12.

Completely slide clamping rubber (4) and washer (3) into basic part (6). Close housing with screw (2) (tightening torque = 3 Nm).

13.

Fix male contact (8) with snap ring (7).

14.

Put screw joint (1) on basic part (6).

15.

Assembly finished.

Note – important!

1. Please read the assembly instructions carefully before assembling the cable.
2. Cable assemble must be done by trained and qualified personnel only.

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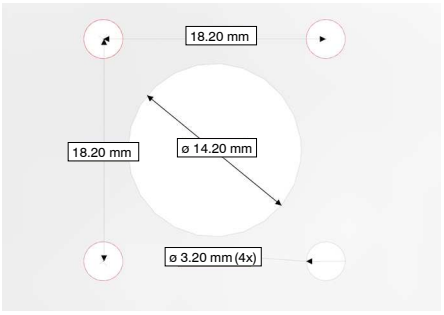
Assembly instructions GB (plug, cable mount)

1.

Part as supplied.

2.



Panel cut out.

3.

⚠ For shielded cables: Fold back shield and make sure shield is insulated from solder point (conductor to contact - see step 5.).

4.

Remove dielectric insulation.

5.

Solder contact (8) on conductor.
⚠ Tin-solder must not remain on contact surface.

6.

It is recommended to protect solder point with a shrinking tube (shrinking tube not included).

⚠

Note – important!

1. Please read the assembly instructions carefully before assembling the cable.
2. Cable assemble must be done by trained and qualified personnel only.

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Series S

Cable assemblies - plugs

Cable characteristics:	Value
Operating voltage	30 kV DC
Wire size	0.35 mm² [22 AWG]
Conductor construction	Tinned copper
Shield construction	Tinned copper braid
Operating temperature	-25 °C to +90 °C [-13°F to +194°F]
Outer diameter	5.40 mm [.213"]
Color	RED

How to order (Example):		
7310001	007	01000
|_____|	|_|	|____|
P/N plug	Cable code	Cable length in mm

Plug cable assemblies type HS10

P/N	Description	Cable length in mm	Contact silver plated	Contact gold plated
7310001.007.xxxxx	HSC10-007 PTFE (*length*) mm	(xxxxx)	•	
7310003.007.xxxxx	HSC10-007/Au PTFE (*length*) mm	(xxxxx)		•

Plug cable assemblies type HS11

P/N	Description	Cable length in mm	Contact silver plated	Contact gold plated
7310020.007.xxxxx	HSC11-007 PTFE (*length*) mm	(xxxxx)	•	
7310021.007.xxxxx	HSC11-007/Au PTFE (*length*) mm	(xxxxx)		•

Plug cable assemblies type HS20

P/N	Description	Cable length in mm	Contact silver plated	Contact gold plated
7320005.007.xxxxx	HSC20-007 PTFE (*length*) mm	(xxxxx)	•	
7320006.007.xxxxx	HSC20-007/Au PTFE (*length*) mm	(xxxxx)		•

Plug cable assemblies type HS21

P/N	Description	Cable length in mm	Contact silver plated	Contact gold plated
7320010.007.xxxxx	HSC21-007 POM (*length*) mm	(xxxxx)	•	
7320013.007.xxxxx	HSC21-007/Au POM (*length*) mm	(xxxxx)		•
7320020.007.xxxxx	HSC21-007 PTFE (*length*) mm	(xxxxx)	•	
7320023.007.xxxxx	HSC21-007/Au PTFE (*length*) mm	(xxxxx)		•

Plug cable assemblies type HS30

P/N	Description	Cable length in mm	Contact silver plated	Contact gold plated
7331050.007.xxxxx	HSC30-007 PTFE (*length*) mm	(xxxxx)	•	
7331150.007.xxxxx	HSC30-007/Au PTFE (*length*) mm	(xxxxx)		•

Plug cable assemblies type HS31

P/N	Description	Cable length in mm	Contact silver plated	Contact gold plated
7331052.007.xxxxx	HSC31-007 PTFE (*length*) mm	(xxxxx)	•	
7331152.007.xxxxx	HSC31-007/Au PTFE (*length*) mm	(xxxxx)		•

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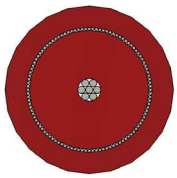
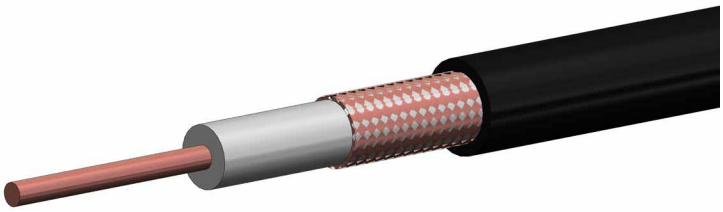


Cross section



Cable construction

HV cable for connector types HSB10 – HSB31 (10 – 30 kV DC)

Part No. 3330007	
Description	HV cable 30 kV DC, coaxial cable
Operating voltage	30 kV DC
Test voltage	60 kV DC
Capacitance	82.7 pF/m
Conductor resistance	58.7 Ω/km
Insulation resistance	5.000 MΩ x km
Temperature	-25°C to +90°C [-13°F to +194°F]

Dimensions	
Wire size	0.35 mm² [22 AWG]
Wire material	CuSn
Wire structure	7 x 0.25 mm [.010"]
Dielectric insulation material	PE, red
- diameter	3.9 mm [.154"]
Screen material	CuSn
- diameter	4.4 mm [.173"]
Jacket material	PVC, red
- diameter	5.4 mm [.213"]

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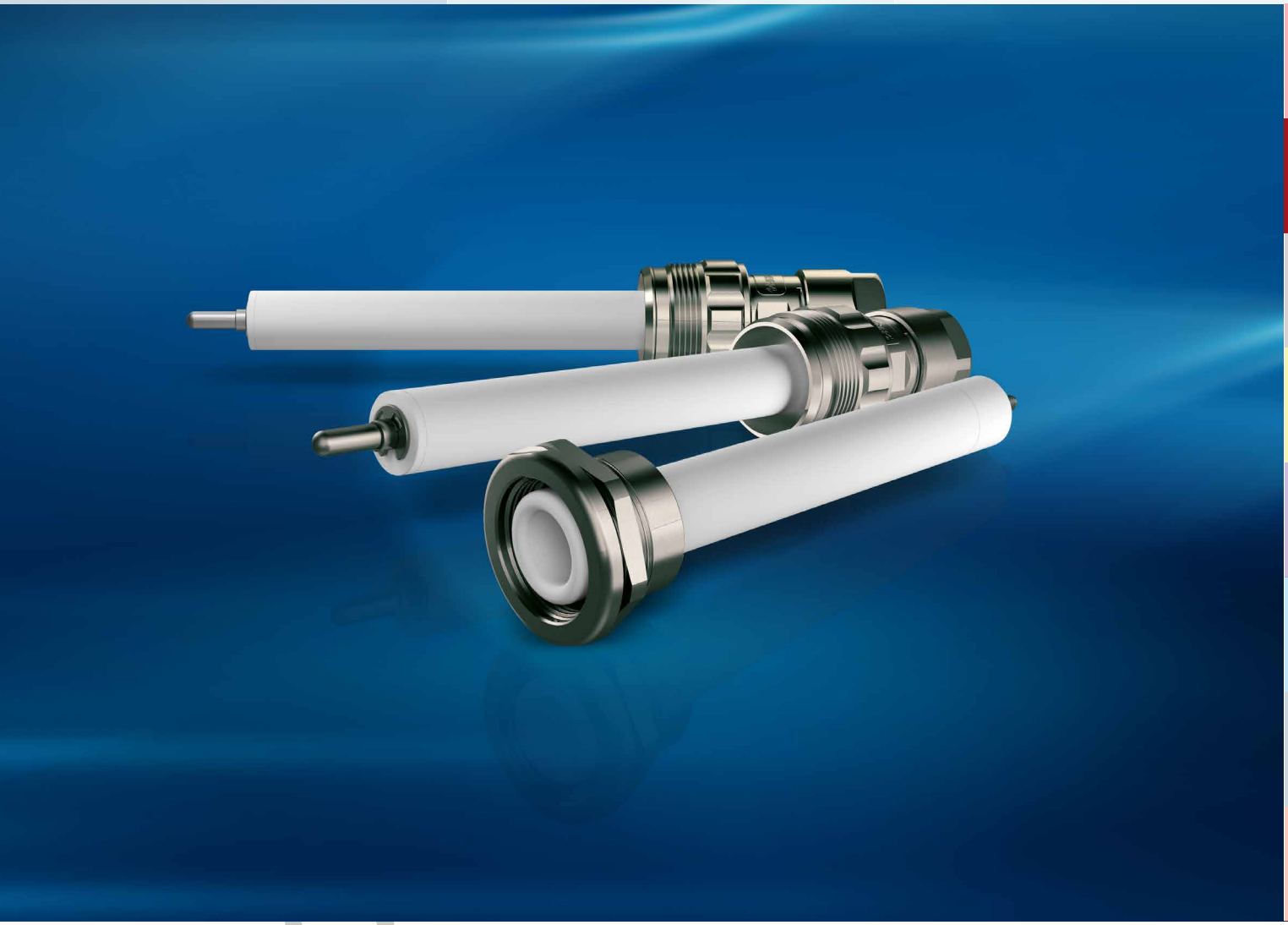
100 Series



- Operating voltage up to 100 kV DC
- Operating current up to 80 Amps
- Advanced contact technology
- Oil tight receptacles available
- High performance insulation materials thermoplastic

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General characteristics and technical data Series 100

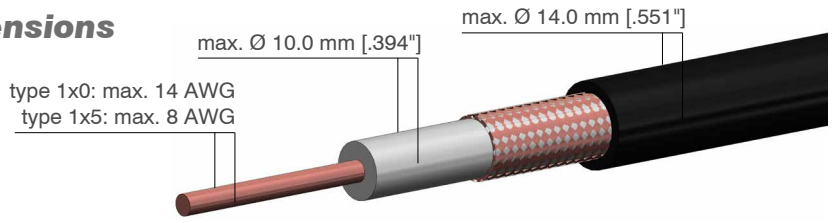
Housing	
Locking system	Threaded coupling
Mounting type (panel mount connector)	Round flange
Housing material	Brass (CuZn)
Surface plating	Nickel (Ni)
Protection class (mated connector)	IP67
Operating temperature	-30°C to +80°C [-22°F to +176°F]

Contacts 2.5 mm (connector types SB1x0)	
Termination method	Solder (male contact), solder / screw (female contact)
Rated current	30 A
Max. operating current	40 A
Pulse current	3000 A
Contact resistance	300 $\mu\Omega$
Contact diameter	2.5 mm [.173"]
Contact diameter	2.5 mm² [14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Insertion / Withdrawal force	5.5 N / 4.0 N
Mating cycles	100000
Rated temperature	+120°C [+248°F]

Contacts 5 mm (connector types SB1x5)	
Termination method	Solder (male contact), solder / screw (female contact)
Rated current	80 A
Max. operating current	110 A
Pulse current	10000 A
Contact resistance	150 $\mu\Omega$
Contact diameter	5 mm [.197"]
Max. wire size	10 mm² [8 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Insertion / Withdrawal force	15 N / 10 N
Mating cycles	100000
Rated temperature	+120°C [+248°F]

Insulator	
Number of contacts	1
Insulation material	Thermoplastic
CTI value	600
Flammability class thermoplastic	UL94 V-0
Operating temperature thermoplastic	-50°C to +200°C [-58°F to +392°F]
Insulating material group thermoplastic / POM	I (DIN IEC 60664)

Suitable cable dimensions

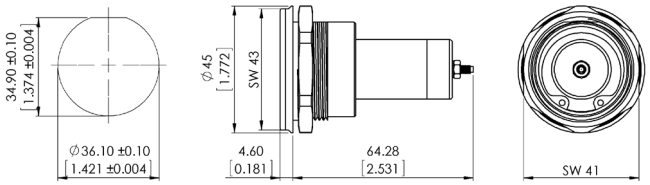


Type SB110 10 kV DC

GB110 receptacle, panel mount

KS110 plug, cable mount

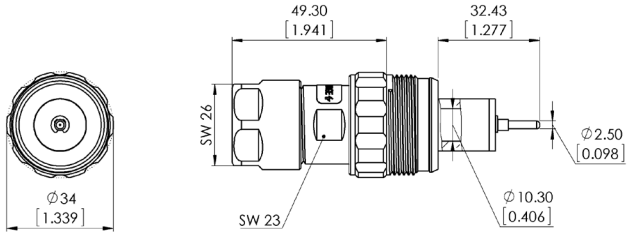
GB110 receptacle, panel mount (standard / oil tight)



panel cut out

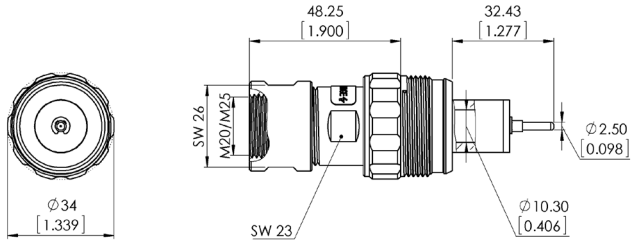
rear view

KS110 plug, cable mount, with integrated cable gland



front view

KS110 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200101	KS110/6.5-8 PTFE	•		•					
7200100	KS110/8-9.5 PTFE	•			•				
7200102	KS110/9.5-11 PTFE	•				•			
7200104	KS110/11-12.5 PTFE	•					•		
7200103	KS110/12.5-14 PTFE	•						•	
7200105	KS110/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200106	KS110/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200107	GB110 PTFE		•						
7200108	GB110/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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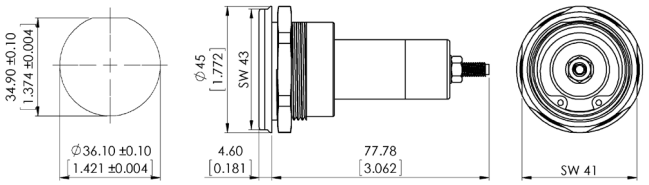
Type SB115 **10 kV DC**

GB115 receptacle, panel mount

KS115 plug, cable mount

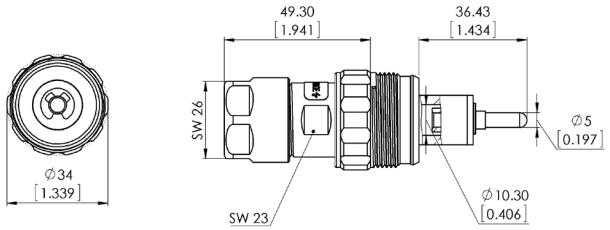
Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

GB115 receptacle, panel mount (standard / oil tight)



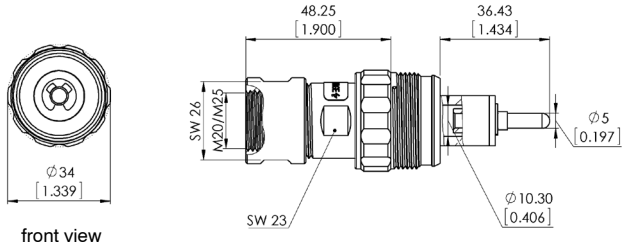
panel cut out — rear view

KS115 plug, cable mount, with integrated cable gland



front view

KS115 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200151	KS115/6.5-8 PTFE	•		•					
7200150	KS115/8-9.5 PTFE	•			•				
7200152	KS115/9.5-11 PTFE	•				•			
7200154	KS115/11-12.5 PTFE	•					•		
7200153	KS115/12.5-14 PTFE	•						•	
7200155	KS115/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200156	KS115/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200157	GB115 PTFE		•						
7200158	GB115/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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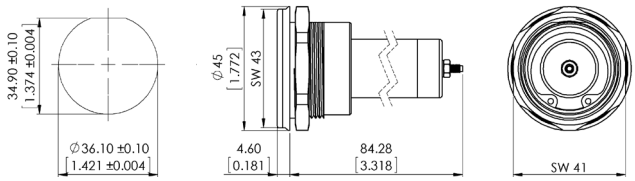
Type SB120 20 kV DC

GB120 receptacle, panel mount

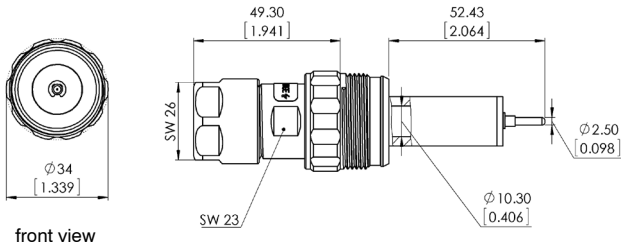
KS120 plug, cable mount

GB120 receptacle, panel mount (standard / oil tight)



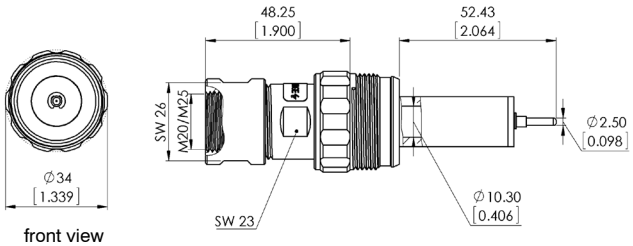
panel cut out — rear view

KS120 plug, cable mount, with integrated cable gland



front view

KS120 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	20 kV DC
Test voltage	30 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200201	KS120/6.5-8 PTFE	•		•					
7200200	KS120/8-9.5 PTFE	•			•				
7200202	KS120/9.5-11 PTFE	•				•			
7200204	KS120/11-12.5 PTFE	•					•		
7200203	KS120/12.5-14 PTFE	•						•	
7200205	KS120/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200206	KS120/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200207	GB120 PTFE		•						
7200208	GB120/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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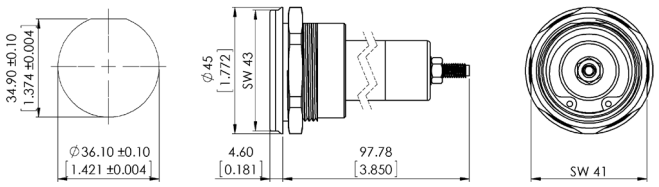
GB125 receptacle, panel mount

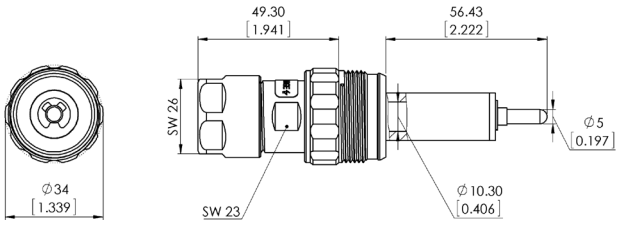
KS125 plug, cable mount

GB125 receptacle, panel mount (standard / oil tight)



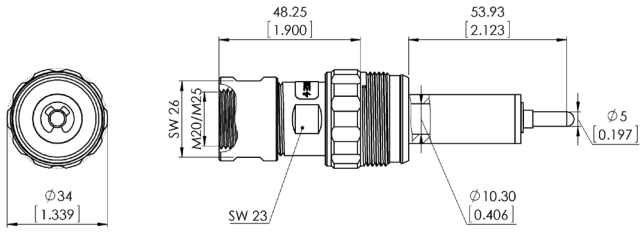
panel cut out — rear view

KS125 plug, cable mount, with integrated cable gland



front view

KS125 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	20 kV DC
Test voltage	30 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200251	KS125/6.5-8 PTFE	•		•					
7200250	KS125/8-9.5 PTFE	•			•				
7200252	KS125/9.5-11 PTFE	•				•			
7200254	KS125/11-12.5 PTFE	•					•		
7200253	KS125/12.5-14 PTFE	•						•	
7200255	KS125/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200256	KS125/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200257	GB125 PTFE		•						
7200258	GB125/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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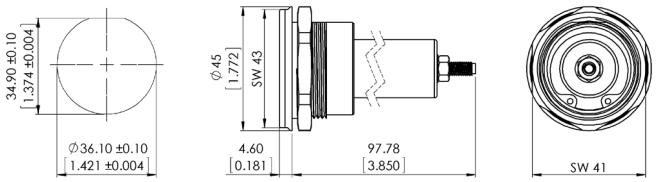
Type SB125 Pro 20 kV DC

GB125 Pro receptacle, panel mount

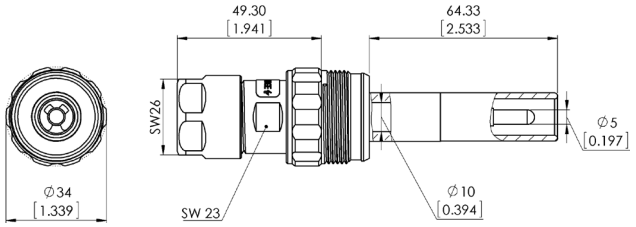
KS125 Pro plug, cable mount

GB125 Pro receptacle, panel mount (standard / oil tight)



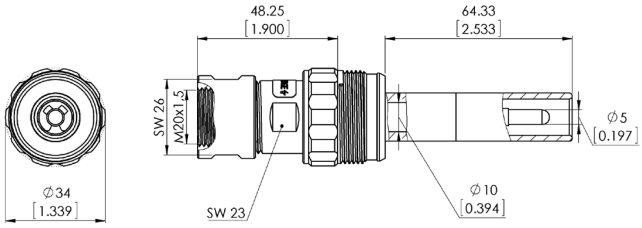
panel cut out — rear view

KS125 Pro plug, cable mount, with integrated cable gland



front view

KS125 Pro plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	20 kV DC
Test voltage	30 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Male contact (plug)	Finger-proof
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200261	KS125Pro/6.5-8 PTFE	•		•					
7200260	KS125Pro/8-9.5 PTFE	•			•				
7200262	KS125Pro/9.5-11 PTFE	•				•			
7200264	KS125Pro/11-12.5 PTFE	•					•		
7200263	KS125Pro/12.5-14 PTFE	•						•	
7200265	KS125Pro/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200266	KS125Pro/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200267	GB125Pro PTFE		•						
7200268	GB125Pro/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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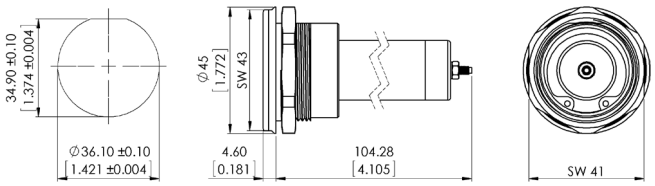
GB130 receptacle, panel mount

KS130 plug, cable mount

Electrical values	
Operating voltage	30 kV DC
Test voltage	45 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

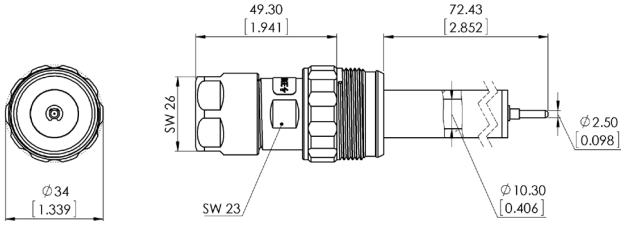
GB130 receptacle, panel mount (standard / oil tight)



panel cut out

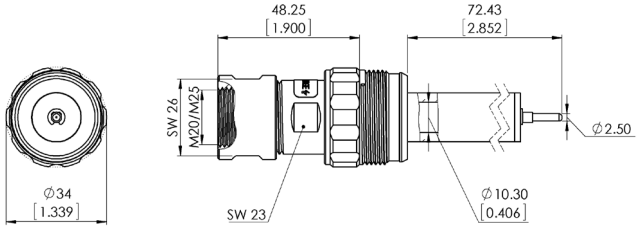
rear view

KS130 plug, cable mount, with integrated cable gland



front view

KS130 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200301	KS130/6.5-8 PTFE	•		•					
7200300	KS130/8-9.5 PTFE	•			•				
7200302	KS130/9.5-11 PTFE	•				•			
7200304	KS130/11-12.5 PTFE	•					•		
7200303	KS130/12.5-14 PTFE	•						•	
7200305	KS130/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200306	KS130/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200307	GB130 PTFE		•						
7200308	GB130/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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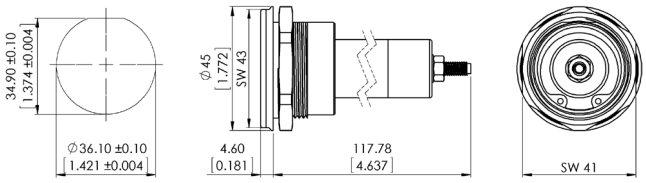
Type SB135 30 kV DC

GB135 receptacle, panel mount

KS135 plug, cable mount

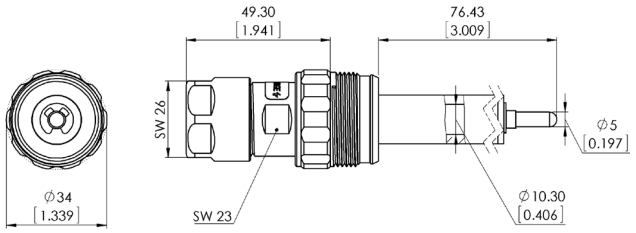
Electrical values	
Operating voltage	30 kV DC
Test voltage	45 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

GB135 receptacle, panel mount (standard / oil tight)



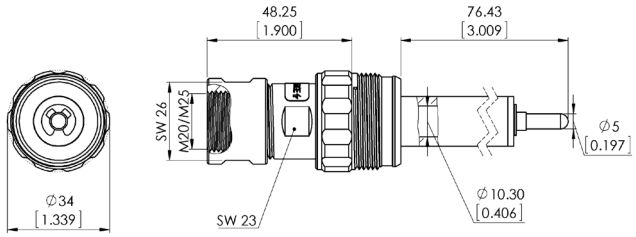
panel cut out — rear view

KS135 plug, cable mount, with integrated cable gland



front view

KS135 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200351	KS135/6.5-8 PTFE	•		•					
7200350	KS135/8-9.5 PTFE	•			•				
7200352	KS135/9.5-11 PTFE	•				•			
7200354	KS135/11-12.5 PTFE	•					•		
7200353	KS135/12.5-14 PTFE	•						•	
7200355	KS135/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200356	KS135/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200357	GB135 PTFE		•						
7200358	GB135/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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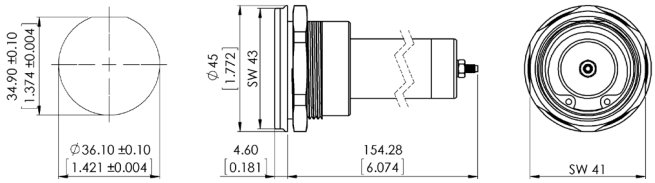
Type SB150 **50 kV DC**

GB150 receptacle,
panel mount

KS150 plug,
cable mount

Electrical values	
Operating voltage	50 kV DC
Test voltage	75 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

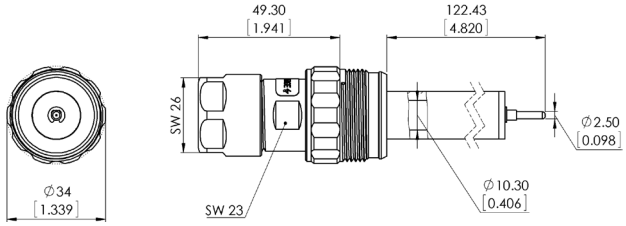
GB150 receptacle, panel mount (standard / oil tight)



panel cut out

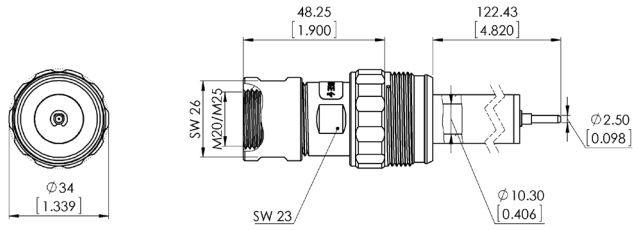
rear view

KS150 plug, cable mount, with integrated cable gland



front view

KS150 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200501	KS150/6.5-8 PTFE	•		•					
7200500	KS150/8-9.5 PTFE	•			•				
7200502	KS150/9.5-11 PTFE	•				•			
7200504	KS150/11-12.5 PTFE	•					•		
7200503	KS150/12.5-14 PTFE	•						•	
7200505	KS150/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200506	KS150/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200507	GB150 PTFE		•						
7200508	GB150/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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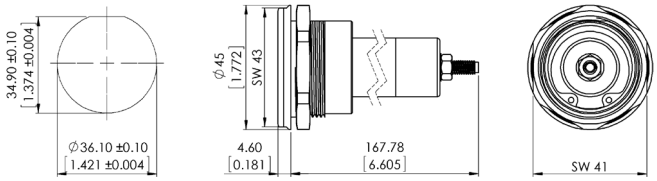
Type SB155 50 kV DC

GB155 receptacle, panel mount

KS155 plug, cable mount

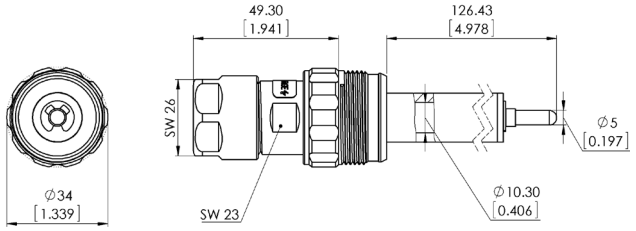
GB155 receptacle, panel mount (standard / oil tight)



panel cut out

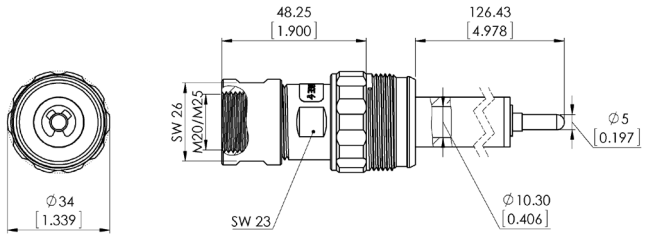
rear view

KS155 plug, cable mount, with integrated cable gland



front view

KS155 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	50 kV DC
Test voltage	75 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200551	KS155/6.5-8 PTFE	•		•					
7200550	KS155/8-9.5 PTFE	•			•				
7200552	KS155/9.5-11 PTFE	•				•			
7200554	KS155/11-12.5 PTFE	•					•		
7200553	KS155/12.5-14 PTFE	•						•	
7200555	KS155/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200556	KS155/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200557	GB155 PTFE		•						
7200558	GB155/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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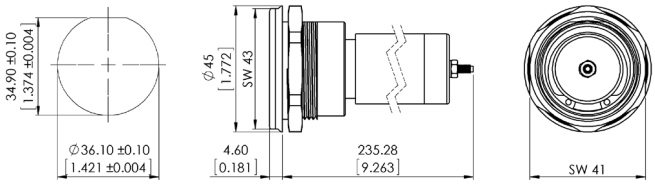
GB160 receptacle,
panel mount

KS160 plug,
cable mount

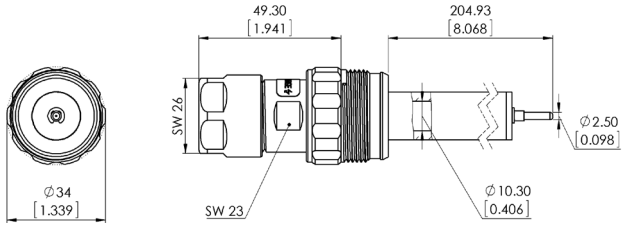
GB160 receptacle, panel mount (standard / oil tight)



panel cut out

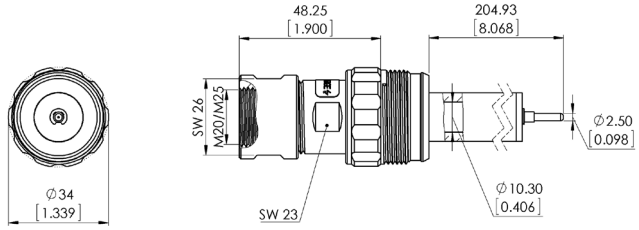
rear view

KS160 plug, cable mount, with integrated cable gland



front view

KS160 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	60 kV DC
Test voltage	90 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200601	KS160/6.5-8 PTFE	•		•					
7200600	KS160/8-9.5 PTFE	•			•				
7200602	KS160/9.5-11 PTFE	•				•			
7200604	KS160/11-12.5 PTFE	•					•		
7200603	KS160/12.5-14 PTFE	•						•	
7200605	KS160/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200609	KS160/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200607	GB160 PTFE		•						
7200608	GB160/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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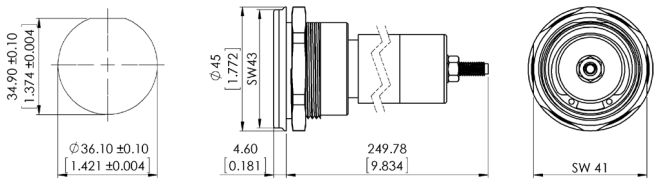
Type SB165 60 kV DC

GB165 receptacle,
panel mount

KS165 plug,
cable mount

Electrical values	
Operating voltage	60 kV DC
Test voltage	90 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

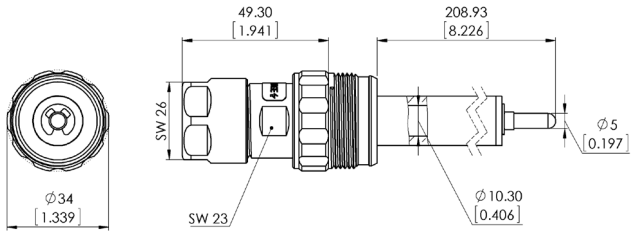
GB165 receptacle, panel mount (standard / oil tight)



panel cut out

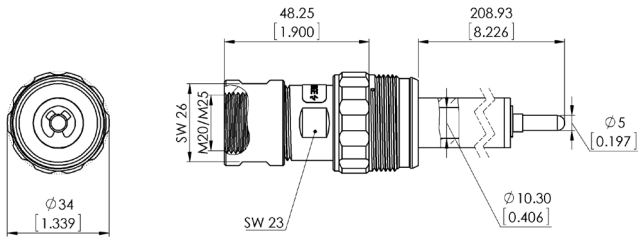
rear view

KS165 plug, cable mount, with integrated cable gland



front view

KS165 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200651	KS165/6.5-8 PTFE	•		•					
7200650	KS165/8-9.5 PTFE	•			•				
7200652	KS165/9.5-11 PTFE	•				•			
7200654	KS165/11-12.5 PTFE	•					•		
7200653	KS165/12.5-14 PTFE	•						•	
7200655	KS165/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200656	KS165/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200657	GB165 PTFE		•						
7200658	GB165/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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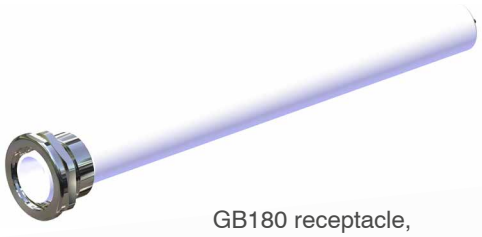
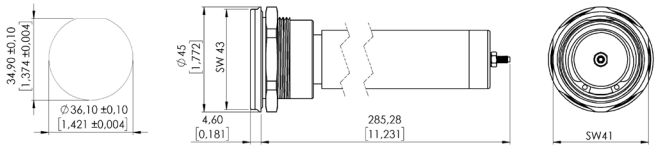


GB180 receptacle, panel mount

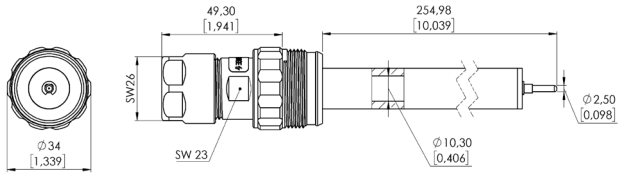
KS180 plug, cable mount

GB180 recaptacle, panel mount (standard / oil tight)



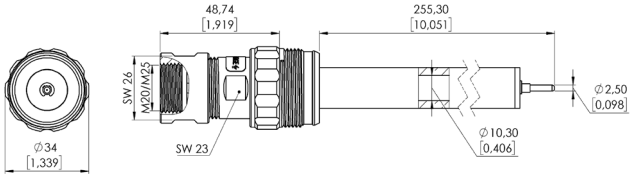
panel cut out rear view

KS180 plug, cable mount, with integrated cable gland



front view

KS180 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	80 kV DC
Test voltage	120 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200800	KS180/6,5-8 PTFE	•		•					
7200801	KS180/8-9,5 PTFE	•			•				
7200802	KS180/9,5-11 PTFE	•				•			
7200803	KS180/11-12,5 PTFE	•					•		
7200804	KS180/12,5-14 PTFE	•						•	
7200805	KS180/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200806	KS180/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200807	GB180 PTFE		•						
7200808	GB180/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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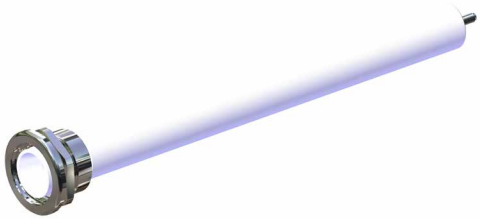
Type SB185 80 kV DC

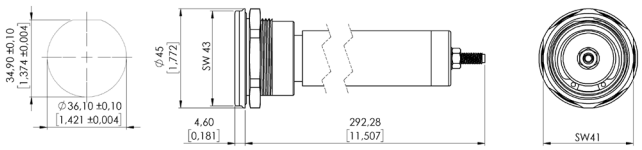


GB185 receptacle, panel mount

KS185 plug, cable mount

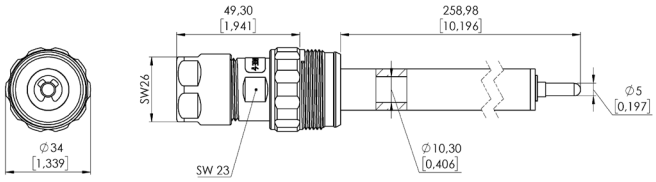
Electrical values	
Operating voltage	80 kV DC
Test voltage	120 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

GB185 recaptacle, panel mount (standard / oil tight)



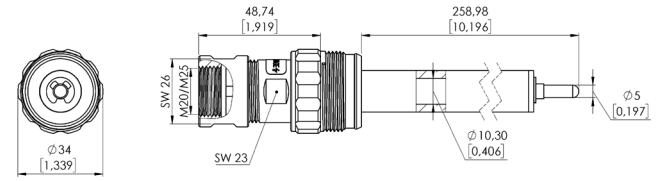
panel cut out rear view

KS185 plug, cable mount, with integrated cable gland



front view

KS185 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7200850	KS185/6,5-8 PTFE	•		•					
7200851	KS185/8-9,5 PTFE	•			•				
7200852	KS185/9,5-11 PTFE	•				•			
7200853	KS185/11-12,5 PTFE	•					•		
7200854	KS185/12,5-14 PTFE	•						•	
7200855	KS185/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7200856	KS185/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7200857	GB185 PTFE		•						
7200858	GB185/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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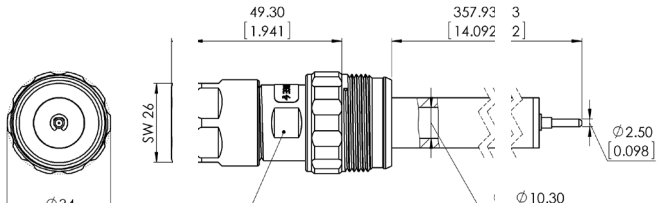
GB1100 receptacle, panel mount

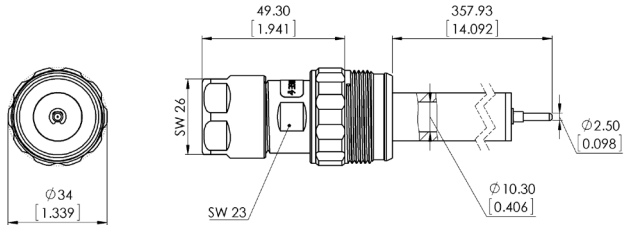
KS1100 plug, cable mount

GB1100 receptacle, panel mount (standard / oil tight)



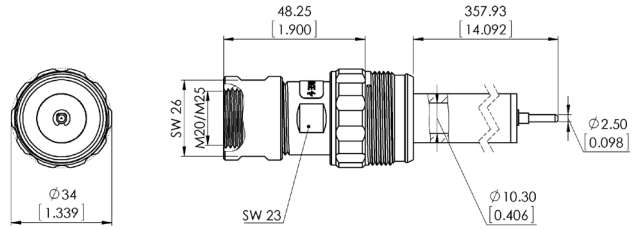
panel cut out rear view

KS1100 plug, cable mount, with integrated cable gland



front view

KS1100 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	100 kV DC
Test voltage	150 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7201001	KS1100/6.5-8 PTFE	•		•					
7201000	KS1100/8-9.5 PTFE	•			•				
7201002	KS1100/9.5-11 PTFE	•				•			
7201004	KS1100/11-12.5 PTFE	•					•		
7201003	KS1100/12.5-14 PTFE	•						•	
7201005	KS1100/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7201006	KS1100/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7201007	GB1100 PTFE		•						
7201008	GB1100/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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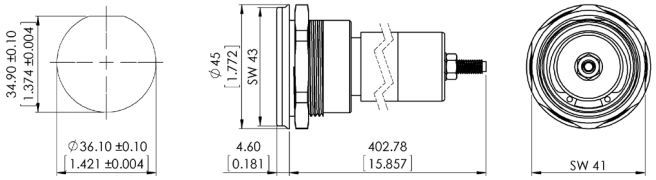
Type SB1105 100 kV DC

GB1105 receptacle, panel mount

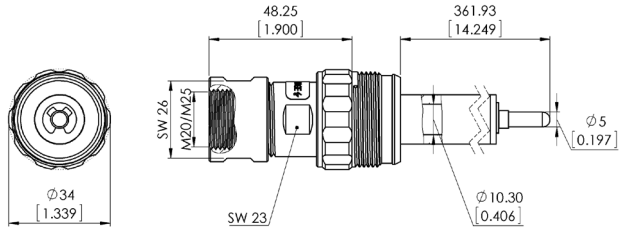
KS1105 plug, cable mount

GB1105 receptacle, panel mount (standard / oil tight)



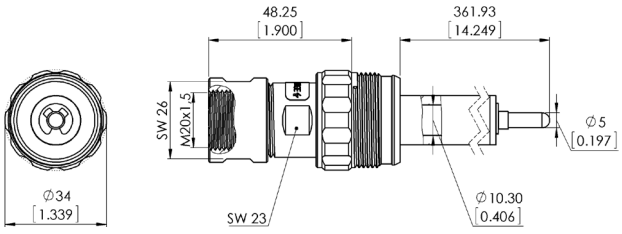
panel cut out — rear view

KS1105 plug, cable mount, with integrated cable gland



front view

KS1105 plug, cable mount, with M20/M25 adapter for external cable gland



front view

drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	100 kV DC
Test voltage	150 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	5.0 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables Ø 6.5 - 8 mm [.256" - .315"]	clamping range for cables Ø 8 - 9.5 mm [.315" - .374"]	clamping range for cables Ø 9.5 - 11 mm [.374" - .433"]	clamping range for cables Ø 11 - 12.5 mm [.433" - .492"]	clamping range for cables Ø 12.5 - 14 mm [.492" - .551"]	oil tight version
7201051	KS1105/6.5-8 PTFE	•		•					
7201050	KS1105/8-9.5 PTFE	•			•				
7201052	KS1105/9.5-11 PTFE	•				•			
7201054	KS1105/11-12.5 PTFE	•					•		
7201053	KS1105/12.5-14 PTFE	•						•	
7201055	KS1105/M20 PTFE	•		with adapter M20x1.5 for external cable gland					
7201056	KS1105/M25 PTFE	•		with adapter M25x1.5 for external cable gland					
7201057	GB1105 PTFE		•						
7201058	GB1105/Ö PTFE		•						•

*KV = screwed cable gland

Accessories: *Page 44*
Mounting instructions: *Pages 46-49*
Cables: *Pages 50-51*

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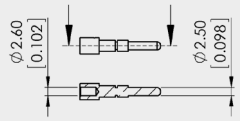
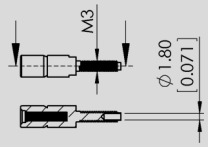
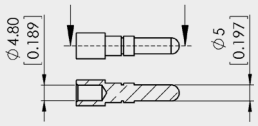
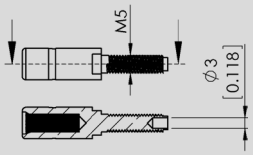
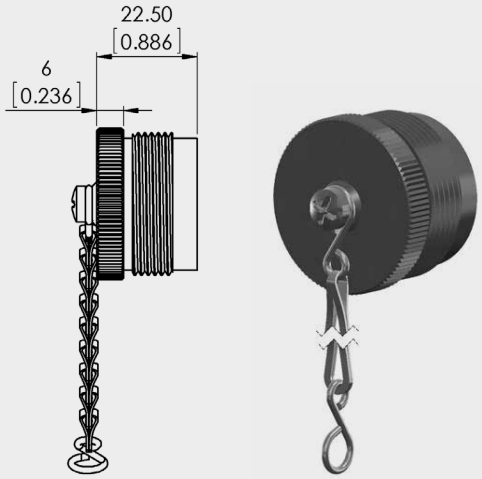
Contacts

P/N	Description	Drawing
6572001	Male contact 2.5 mm silver plated (Ag)	
6572005	Female contact 2.5 mm silver plated (Ag)	
6672050	Male contact 5 mm silver plated (Ag)	
6572177	Female contact 5 mm silver plated (Ag)	

Covering

P/N	Description
6671011	Threaded covering with chain for receptacles Series 100

Drawing



length of chain approx. 135 mm

drawing - dimensions in mm [inch]

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Assembly Instructions Series 100 (plug, cable mount)

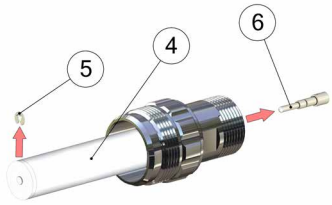
1.

Part as delivered.

2.

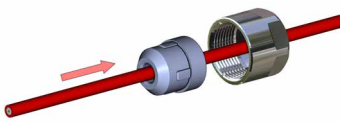
Components.
Cap (1), sealing insert (2), housing (3), insulator (4).

3.



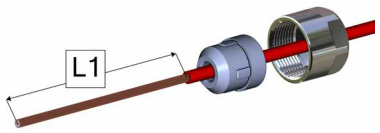
Remove snap ring (5) and take out male contact (6).

4.



Place cap (1) and sealing insert (2) on cable.
⚠ Respect correct order of parts (see picture).

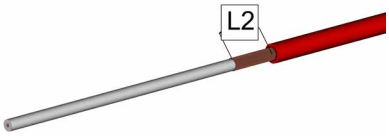
5.



Remove cable jacket.
⚠ Do not damage shield braid.

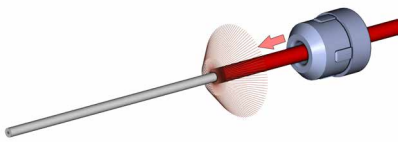
Types	min. L1 mm [inch]
S110 / S115	52 [2.037"]
S120 / S125 / S125 Pro	72 [2.824"]
S130 / S135	92 [3.611"]
S150 / S155	142 [5.580"]
S160 / S165	224 [8.828"]
S1100 / S1105	377 [14.852"]

6.



Cut shield braid roughly about 30 mm [1.181"] (=L2)
⚠ Carefully remove shield parts. Loose shield parts can cause electrical breakdown.

7.



Completely widen shield braid. Push seal insert (2) under shield braid.

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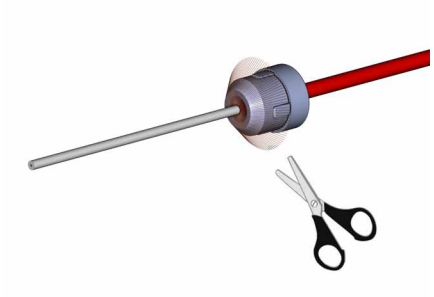
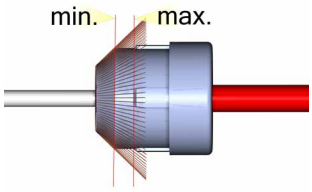
Assembly Instructions Series 100 (plug, cable mount)

8.



Cut shield to length.
⚠ For length see step 9.

9.



Make sure shield length is between min. and max. mark.

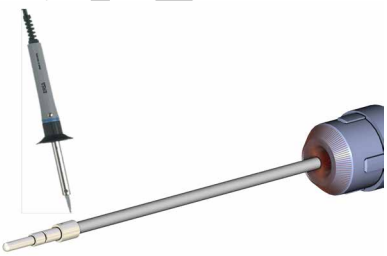
10.

Remove dielectric insulation.

Types	min. L3 mm [inch]
KS 110/120/130/150/160/1100	5 [.197"]
KS 115/125/125 Pro/135/155/165/1105	8 [.315"]

⚠ Do not damage conductor.

11.

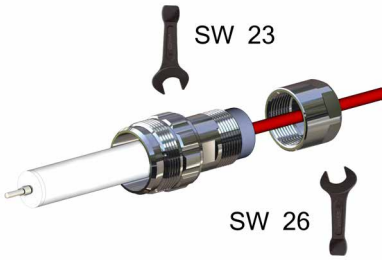


Solder contact (6) on conductor.
⚠ Tin-solder must not remain on contact surface.

12.

Completely insert cable in insulation part (4) until seal insert (2) plugs in housing (3).

13.



Screw cap (1) onto housing (3).
⚠ Wrench size housing SW23, Wrench size cap SW26, tightening torque 10 Nm.

14.

Secure contact (6) with snap ring (5).

15.

Assembly finished.

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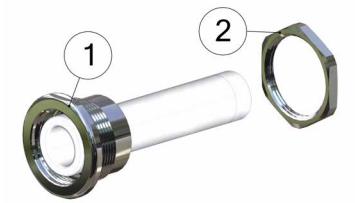
Assembly Instructions Series 100 (receptacle, panel mount)

1.

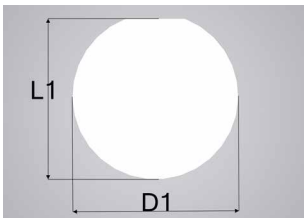
Part as supplied.

2.



Remove counter nut (1) from housing (2).

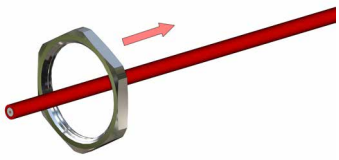
3.



Panel cut out.

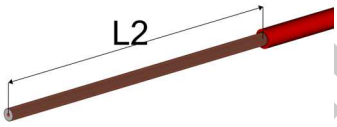
Dimension	Value mm [inch]
D1	36.10 [1.421"]
L1	34.90 [1.374"]

4.



Place counter nut (1) on cable.

5.

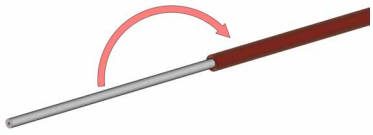


⚠ ONLY when using shielded cable:
Remove cable jacket.

Type	min. L2 mm [inch]
B 110 / 115	40 [1.575"]
B 120 / 125	80 [3.150"]
B 130 / 135	120 [4.724"]
B 150 / 155	200 [7.874"]
B 160 / 165	240 [9.449"]
B 1100 / 1105	400 [15.748"]

⚠ Do not damage shield braid.

6.



Fold back shield braid over jacket.

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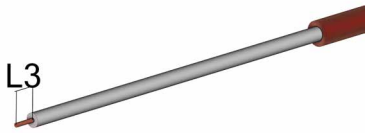
Assembly Instructions Series 100 (receptacle, panel mount)

7.



Remove dielectric insulation.

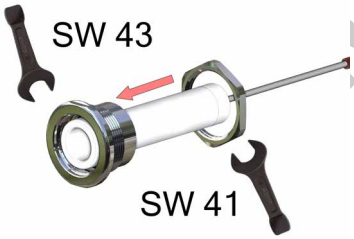
Type	min. L3 mm [inch]
B 110 / 120 / 130 / 150 / 160 / 1100	5 [.197"]
B 115 / 125 / 135 / 155 / 165 / 1105	8 [.315"]

⚠ Do not damage conductor.

8.

Solder conductor on female contact or use a cable lug to connect conductor with contact.
⚠ Tin-solder must not remain on contact surface.

9.



Screw on counter nut and tighten.

10.

Assembly finished.

Note – important!

1. **Please read the assembly instructions carefully before assembling the cable.**
2. **Cable assemble must be done by trained and qualified personnel only.**

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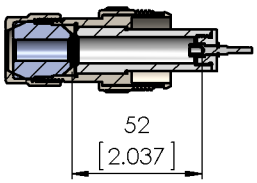
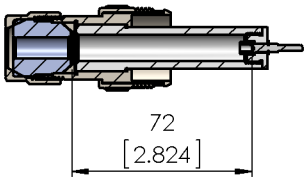
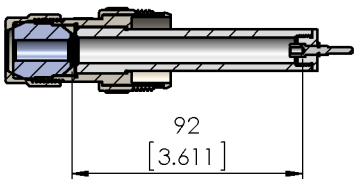
Stripping lengths for shielded cables

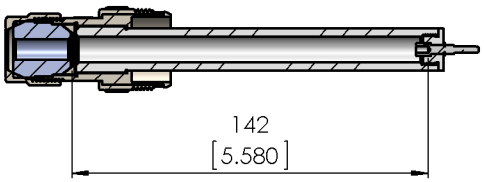
IMPORTANT – PLEASE NOTE:

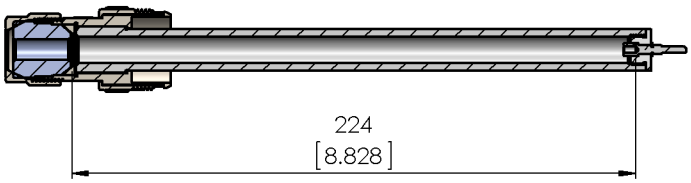
The stated stripping lengths refer ONLY to the jackets of shielded cables!

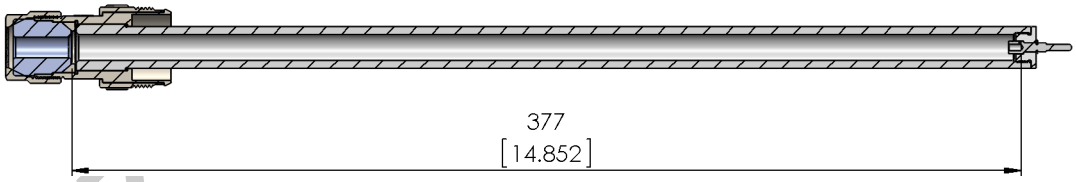












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Suitable cables for Series 100

	Part No. 3330039	Part No. 3330049	Part No. 3330050
Operating voltage	60 kV DC	100 kV DC	100 kV DC
Operating voltage AC rms	20 kV AC	30 kV AC	
Conductor size			
AWG	18 AWG	16 AWG	16 AWG
Strands	19 x 30 AWG	19 x 29 AWG	19 x 29 AWG
Cross section	0.97 mm²	1.2 mm²	1.2 mm²
Diameter	1.24 mm [.049"]	1.25 mm [.049"]	1.25 mm [.049"]
Semicon	YES	YES	YES
Diameter	2.0 mm [.079"]	2.5 mm [.098"]	2.5 mm [.098"]
Material	Semiconductive PE	Semiconductive PE	Semiconductive PE
Dielectric			
Diameter	5.8 mm [.228"] (± 0.25 mm)	9.4 mm [.370"] (± 0.25 mm)	9.4 mm [.370"] (± 0.25 mm)
Material	LDHMW PE	LDHMW PE	LDHMW PE
Screen (Shield)	YES	NO	YES
Diameter	6.9 mm [.272"]	x	9.8 mm [.386"]
Material	Cu/Sn (34 AWG t.p.c.) 85% coverage	x	Cu/Sn (34 AWG t,p,c,) 90% coverage
Jacket			
Diameter	7.7 mm [.303"] (± 0.3 mm)	x	11.2 mm [.441"] (± 0.25 mm)
Material	TPE-U	x	PVC
Impedance	x	x	61 Ω
Capacitance	typ. 121pF/m	x	98 pF/m
Min. bend radius	90 mm [3.543"] (fixed)	127 mm [5"] (fixed)	152 mm [5.984"] (fixed)
Temperature range	-40°C to +60°C [-40°F to +140°F]	-51°C to +60°C [-60°F to +140°F]	-51°C to +60°C [-60°F to +140°F]
Weight	0.077 kg/m	0.075 kg/m	0.149 kg/m
Color	red	transparent	black
Fits connector types	SB110 SB115 SB120 SB125 SB125Pro SB130 SB135 SB150 SB155 SB160 SB165	SB110 SB115 SB120 SB125 SB125Pro SB130 SB135 SB150 SB155 SB160 SB165 SB1100 SB1105	SB110 SB115 SB120 SB125 SB125Pro SB130 SB135 SB150 SB155 SB160 SB165 SB1100 SB1105

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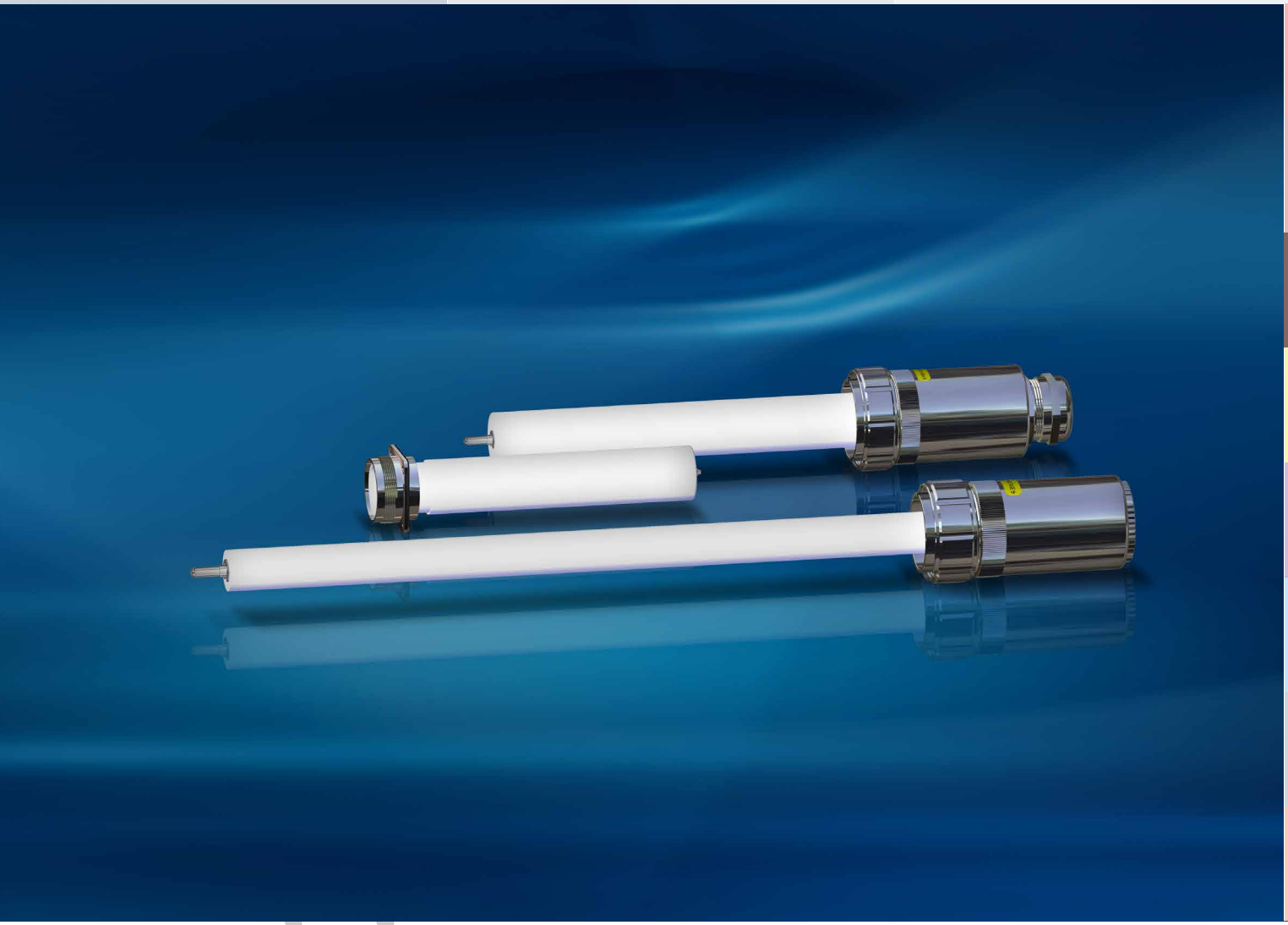
200 Series



- Operating voltage up to 100 kV DC
- Operating current up to 80 Amps
- Advanced contact technology
- Oil tight receptacles
- High performance insulation materials thermoplastic

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General characteristics and technical data Series 200

Housing	
Locking system	Threaded coupling
Mounting type (panel mount connector)	Round flange
Housing material	Brass (CuZn)
Surface plating	Nickel (Ni)
Protection class (mated connector)	IP54
Operating temperature	-30°C to +80°C [-22°F to +176°F]

Contacts 2.5 mm (connector types SB1x0)	
Termination method	Solder (male contact), solder / screw (female contact)
Rated current	30 A
Max. operating current	40 A
Pulse current	3000 A
Contact resistance	300 $\mu\Omega$
Contact diameter	2.5 mm [.173"]
Contact diameter	2.5 mm² [14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Insertion / Withdrawal force	5.5 N / 4.0 N
Mating cycles	100000
Rated temperature	+120°C [+248°F]

Contacts 5 mm (connector types SB1x5)	
Termination method	Solder (male contact), solder / screw (female contact)
Rated current	80 A
Max. operating current	110 A
Pulse current	10000 A
Contact resistance	150 $\mu\Omega$
Contact diameter	5 mm [.197"]
Max. wire size	10 mm² [8 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Insertion / Withdrawal force	15 N / 10 N
Mating cycles	100000
Rated temperature	+120°C [+248°F]

Insulator	
Number of contacts	1
Insulation material	Thermoplastic
CTI value	600
Flammability class thermoplastic	UL94 V-0
Operating temperature thermoplastic	-50°C to +200°C [-58°F to +392°F]
Insulating material group thermoplastic / POM	I (DIN IEC 60664)

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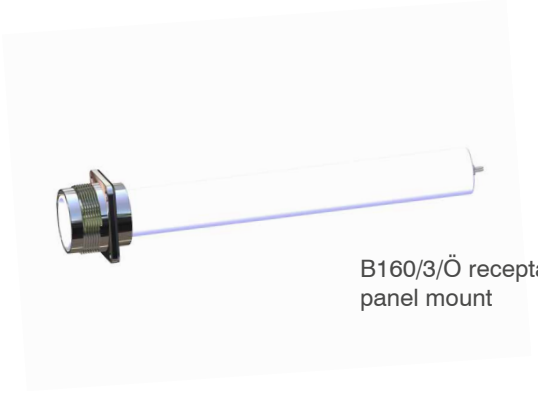
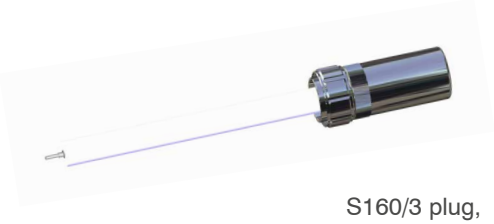
Type SB160/3 60 kV DC

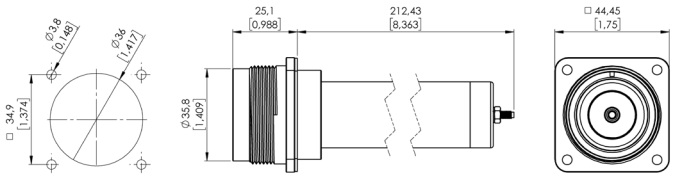


B160/3/Ö receptacle, panel mount



S160/3 plug, cable mount

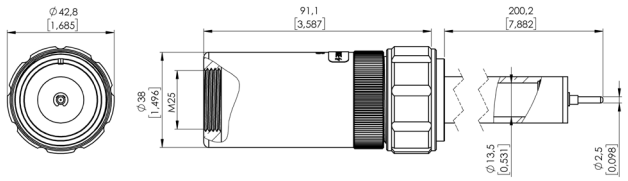
B160/3/Ö recaptacle, panel mount (oil tight)



panel cut out

rear view

S160/3 plug, cable mount. with M25 adapter for external cable gland



front view

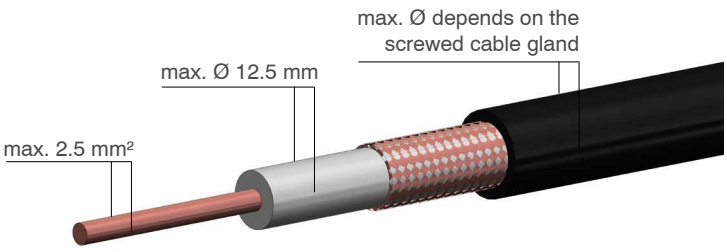
drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	60 kV DC
Test voltage	90 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	Cable entry M25 for ext. KV	Oil tight
7391993	S160/3/PTFE/M25	•		•	
7391991	B160/3/Ö PTFE		•		•

*KV = screwed cable gland

Suitable cable dimensions



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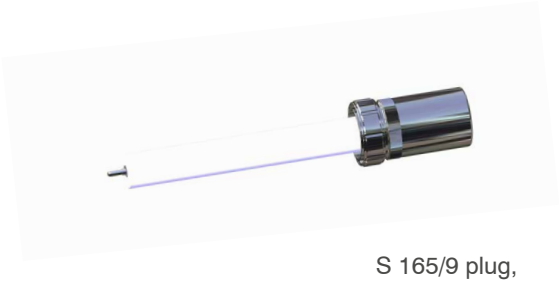
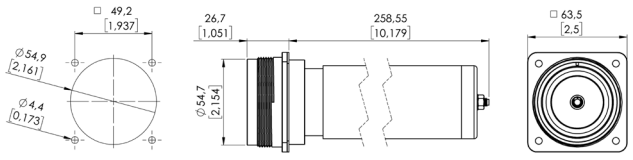
B 165/9 receptacle, panel mount



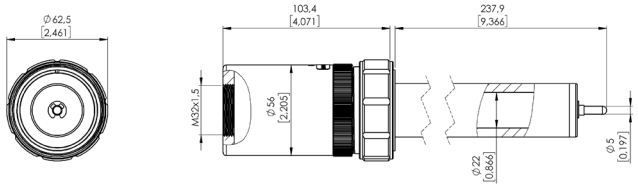
S 165/9 plug, cable mount

B165/9 recaptacle, panel mount (oil tight)



panel cut out rear view

S165/9 plug, cable mount. with M32 adapter for external cable gland



front view

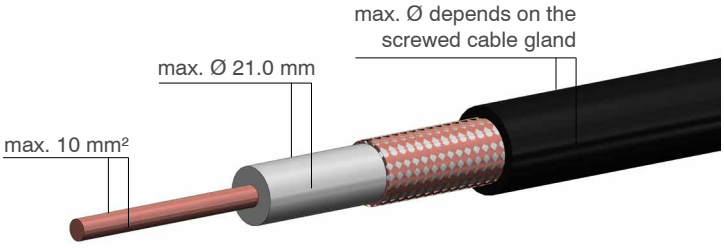
drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	60 kV DC
Test voltage	90 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	Cable entry M25 for ext. KV	Oil tight
7392074	S165/9/PTFE/M32	•		•	
7392028	B165/9/Ö PTFE		•		•

*KV = screwed cable gland

Suitable cable dimensions



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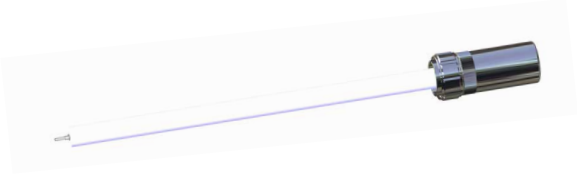
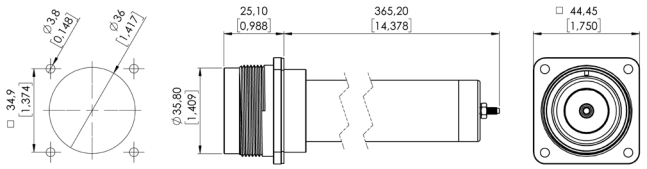
Type SB1100/3 100 kV DC

B1100/3 receptacle, panel mount



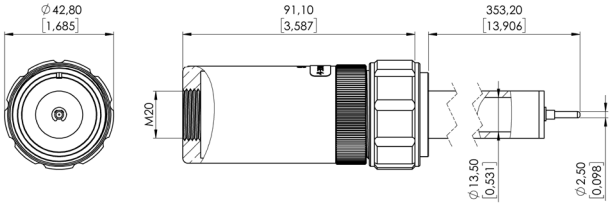
S1100/3 plug, cable mount

B1100/3 recaptacle, panel mount (oil tight)



panel cut out rear view

S1100/3 plug, cable mount. with M20 adapter for external cable gland



front view

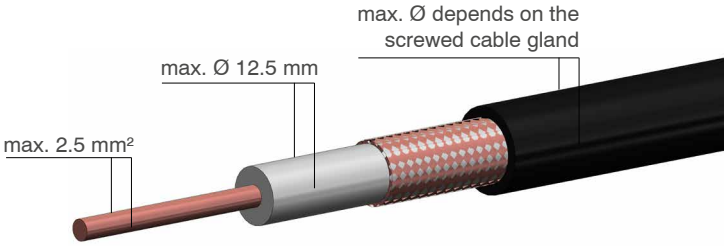
drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	100 kV DC
Test voltage	150 kV DC
Rated current	30 A
Maximum operating current	40 A
Pulse current	3000 A
Characteristics	
Contact size	2.5 mm [.173"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	Cable entry M25 for ext. KV	Oil tight
7392005	S1100/3/PTFE/M20	•		•	
7392006	B1100/3/Ö PTFE		•		•

*KV = screwed cable gland

Suitable cable dimensions



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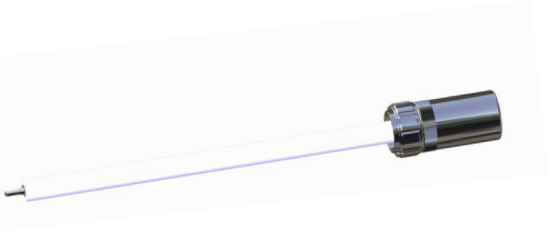
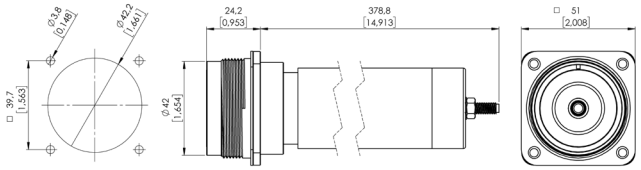
B1105/5 receptacle, panel mount



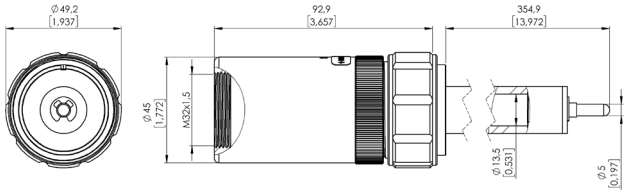
S1105/5 plug, cable mount

GB125 receptacle, panel mount (standard / oil tight)



panel cut out rear view

KS125 plug, cable mount, with integrated cable gland



front view

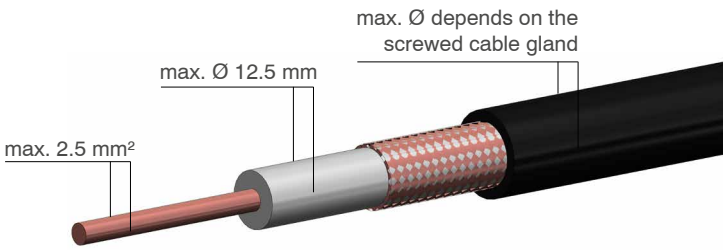
drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	100 kV DC
Test voltage	150 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	Cable entry M32 for ext. KV	Oil tight
7392084	S1105/5/PTFE/M32	•		•	
7392041	B1105/5/Ö PTFE		•		•

*KV = screwed cable gland

Suitable cable dimensions



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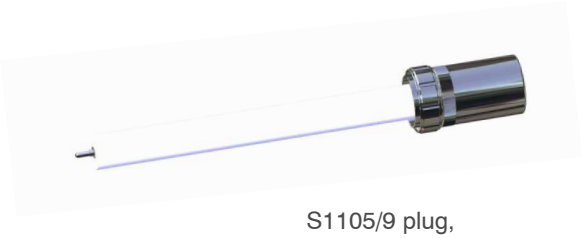
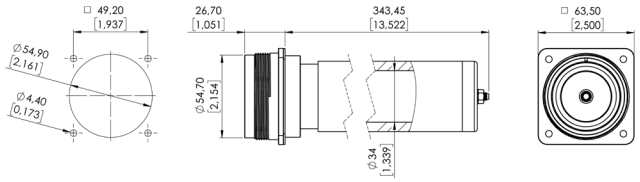
Type SB1105/9 **100 kV DC**

B1105/9 receptacle, panel mount



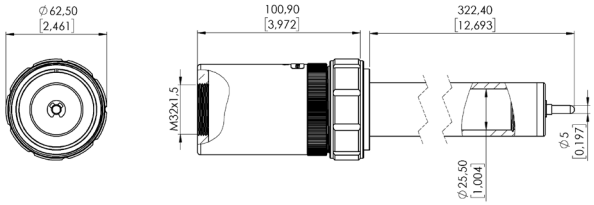
S1105/9 plug, cable mount

B1105/9 recaptacle, panel mount (oil tight)



panel cut out rear view

S1105/9 plug, cable mount, with M32 adapter for external cable gland



front view

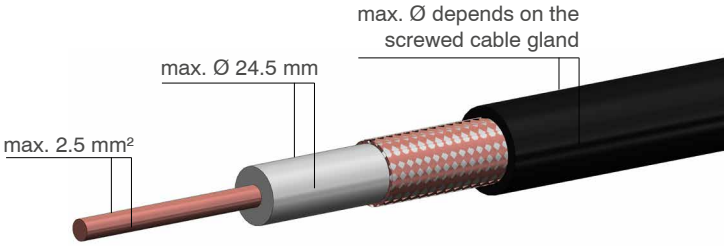
drawing - dimensions in mm [inch]

Electrical values	
Operating voltage	100 kV DC
Test voltage	150 kV DC
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	Thermoplastic
Mounting type receptacle	Round flange
Contact plating	Silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	Cable entry M32 for ext. KV	Oil tight
7392085	S1105/5/PTFE/M32	•		•	
7392039	B1105/5/Ö PTFE		•		•

*KV = screwed cable gland

Suitable cable dimensions



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VP Series

- Operating voltages up to 13 kV DC
- Operating current 13 Amps / 30 Amps
- Ideal for internal cabling
- Quick assembly
- Several mounting options offering enhanced flexibility

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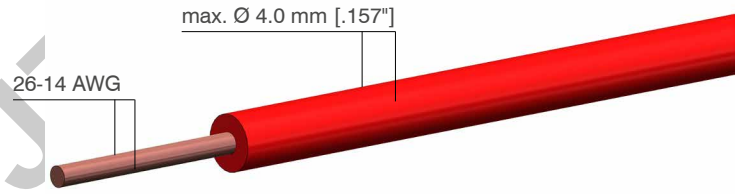
General characteristics and technical data Series VarioPro CL / 1.6 mm contacts

Electrical values	
Operating voltage	13 kV DC
Test voltage	20 kV DC

Housing	
Number of HV contacts	1 - 3
Insulation material	Thermoplastic
Flammability class	UL94 V-0
Operating temperature	-40°C to +150°C [-40°F to +302°F]
Insulating material group	I (DIN IEC 60664)

Contacts 1.6 mm	
Termination method	Crimp
Rated current	13 A
Contact resistance	≤ 5 mΩ
Contact diameter	1.6 mm [.063"]
Wire size	0.14-2.5 mm² [26-14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag), Gold (Au)
Mating cycles	≥ 1,000
Rated temperature	+120°C [+248°F]

Suitable cable dimensions



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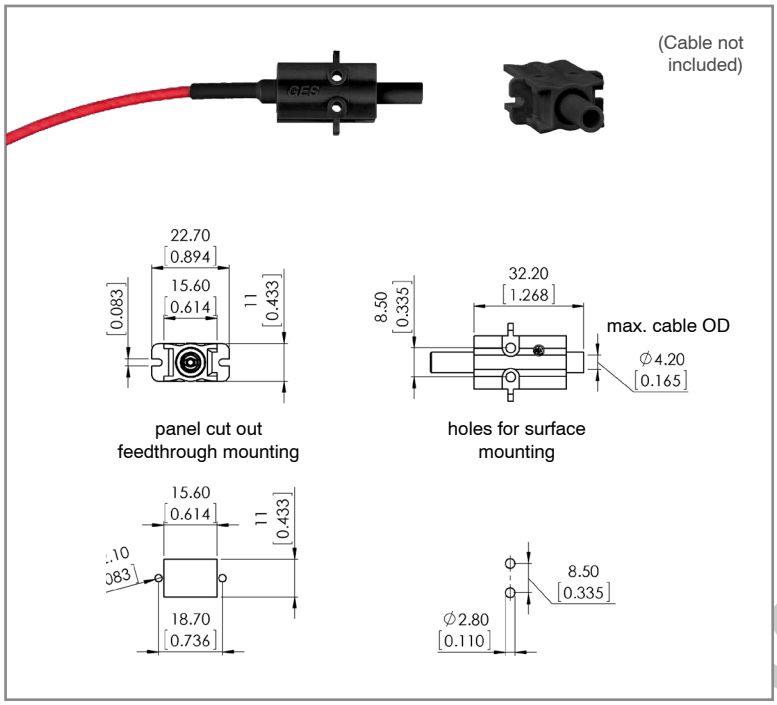
1-pin 13 kV DC/1.6 mm contacts

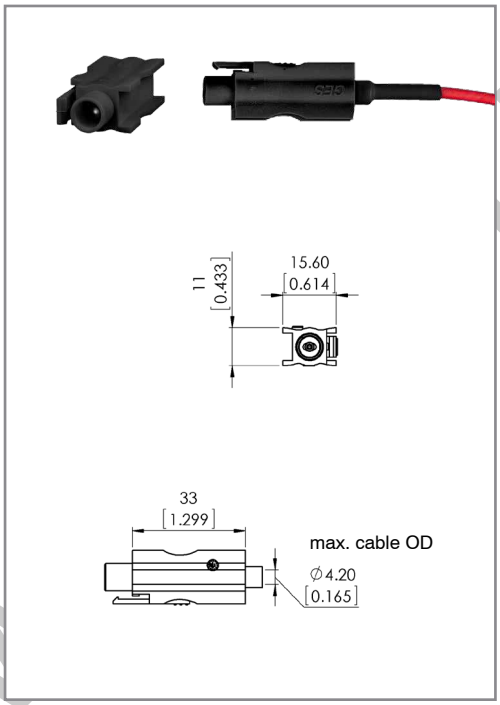
VarioPro CL1 - receptacle

Drawing



VarioPro CL1 - plug

Drawing



drawing - dimensions in mm [inch]

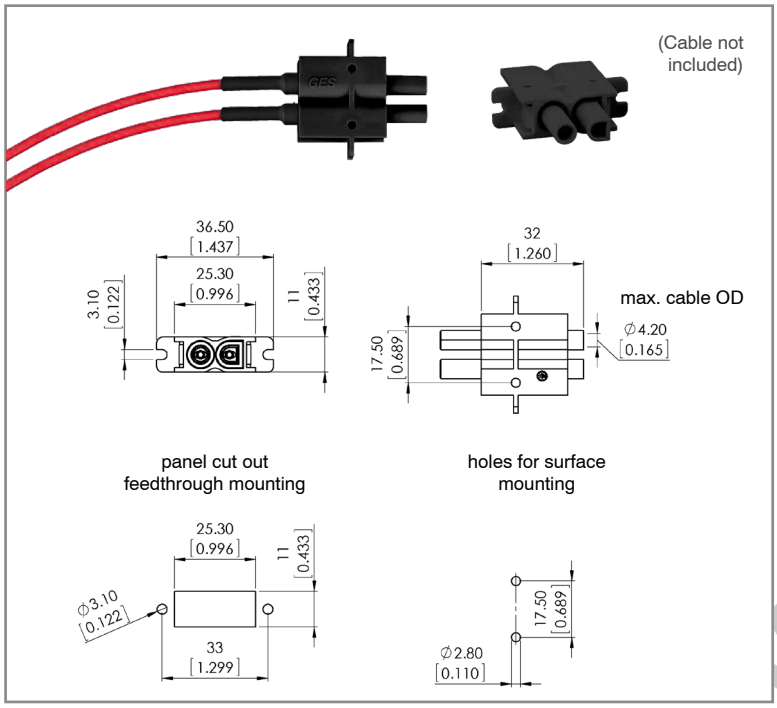
P/N	Description	Plug male contact	Receptacle female contact	Number of contacts	Including contacts	Contacts silver plated	Contacts gold plated
5000440	VP-CL-1HV-BU 26-22 AWG Ag		•	1	•	•	
5000441	VP-CL-1HV-BU 20 AWG Ag		•	1	•	•	
5000442	VP-CL-1HV-BU 20-16 AWG Ag		•	1	•	•	
5000443	VP-CL-1HV-BU 16-15 AWG Ag		•	1	•	•	
5000444	VP-CL-1HV-BU 14 AWG Ag		•	1	•	•	
5000445	VP-CL-1HV-BU 26-22 AWG Au		•	1	•		•
5000446	VP-CL-1HV-BU 20 AWG Au		•	1	•		•
5000447	VP-CL-1HV-BU 20-16 AWG Au		•	1	•		•
5000448	VP-CL-1HV-BU 16-15 AWG Au		•	1	•		•
5000449	VP-CL-1HV-BU 14 AWG Au		•	1	•		•
5000450	VP-CL-1HV-ST 26-22 AWG Ag	•		1	•	•	
5000451	VP-CL-1HV-ST 20 AWG Ag	•		1	•	•	
5000452	VP-CL-1HV-ST 20-16 AWG Ag	•		1	•	•	
5000453	VP-CL-1HV-ST 16-15 AWG Ag	•		1	•	•	
5000454	VP-CL-1HV-ST 14 AWG Ag	•		1	•	•	
5000455	VP-CL-1HV-ST 26-22 AWG Au	•		1	•		•
5000456	VP-CL-1HV-ST 20 AWG Au	•		1	•		•
5000457	VP-CL-1HV-ST 20-16 AWG Au	•		1	•		•
5000458	VP-CL-1HV-ST 16-15 AWG Au	•		1	•		•
5000459	VP-CL-1HV-ST 14 AWG Au	•		1	•		•

Contact pins: Page 82
Cables and tools: Page 84

2-pin 13 kV DC/1.6 mm contacts

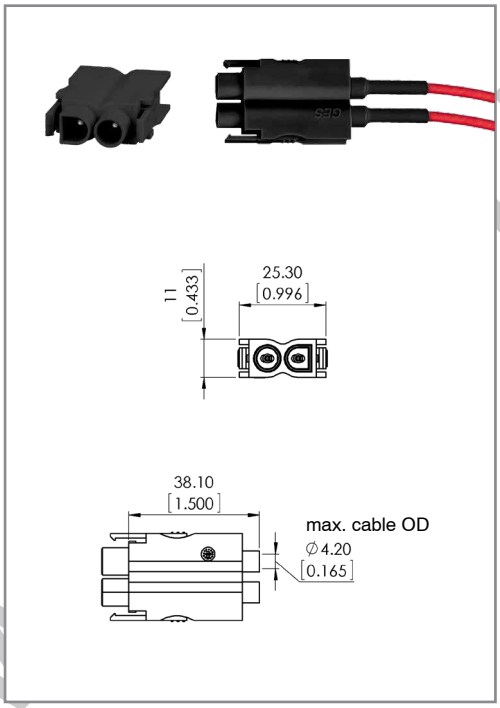
VarioPro CL2 - receptacle

Drawing



VarioPro CL2 - plug

Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug male contact	Receptacle female contact	Number of contacts	Including contacts	Contacts silver plated	Contacts gold plated
5000460	VP-CL-2HV-BU 26-22 AWG Ag		•	2	•	•	
5000461	VP-CL-2HV-BU 20 AWG Ag		•	2	•	•	
5000462	VP-CL-2HV-BU 20-16 AWG Ag		•	2	•	•	
5000463	VP-CL-2HV-BU 16-15 AWG Ag		•	2	•	•	
5000464	VP-CL-2HV-BU 14 AWG Ag		•	2	•	•	
5000465	VP-CL-2HV-BU 26-22 AWG Au		•	2	•		•
5000466	VP-CL-2HV-BU 20 AWG Au		•	2	•		•
5000467	VP-CL-2HV-BU 20-16 AWG Au		•	2	•		•
5000468	VP-CL-2HV-BU 16-15 AWG Au		•	2	•		•
5000469	VP-CL-2HV-BU 14 AWG Au		•	2	•		•
5000470	VP-CL-2HV-ST 26-22 AWG Ag	•		2	•	•	
5000471	VP-CL-2HV-ST 20 AWG Ag	•		2	•	•	
5000472	VP-CL-2HV-ST 20-16 AWG Ag	•		2	•	•	
5000473	VP-CL-2HV-ST 16-15 AWG Ag	•		2	•	•	
5000474	VP-CL-2HV-ST 14 AWG Ag	•		2	•	•	
5000475	VP-CL-2HV-ST 26-22 AWG Au	•		2	•		•
5000476	VP-CL-2HV-ST 20 AWG Au	•		2	•		•
5000477	VP-CL-2HV-ST 20-16 AWG Au	•		2	•		•
5000478	VP-CL-2HV-ST 16-15 AWG Au	•		2	•		•
5000479	VP-CL-2HV-ST 14 AWG Au	•		2	•		•

Contact pins: Page 82
Cables and tools: Page 84

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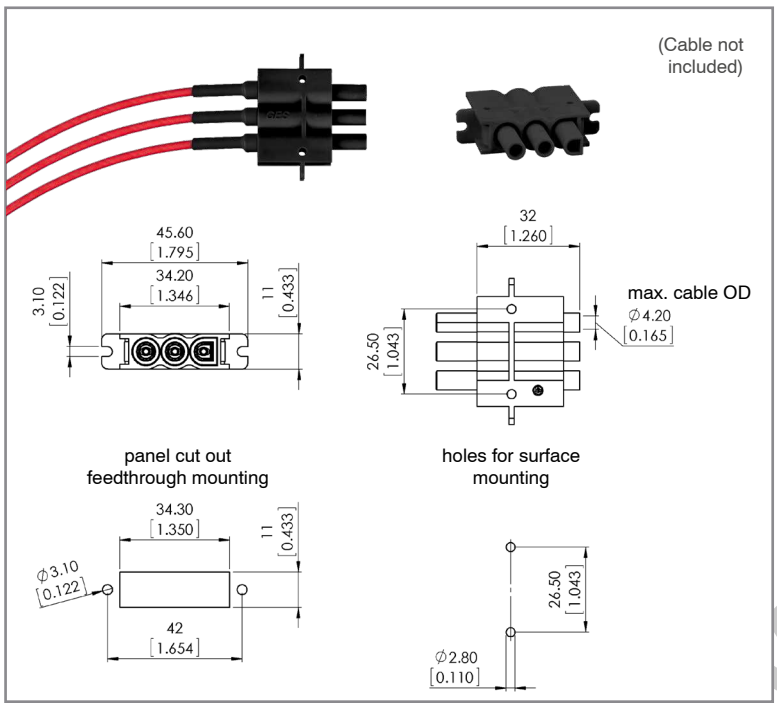
3-pin 13 kV DC/1.6 mm contacts

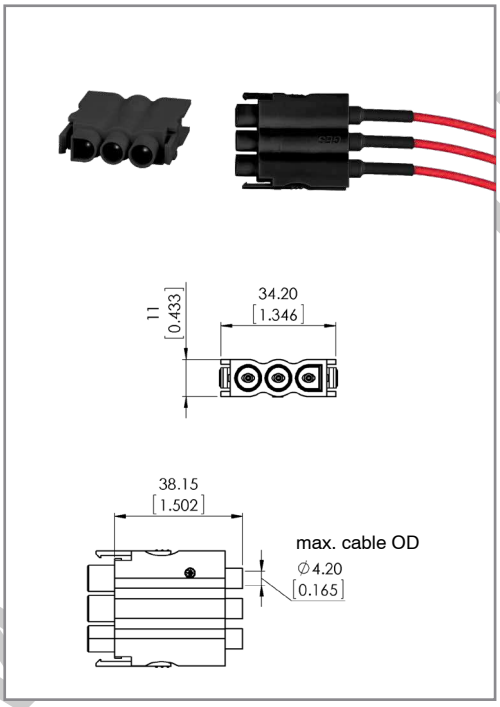
VarioPro CL3 - receptacle

Drawing



VarioPro CL3 - plug

Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug male contact	Receptacle female contact	Number of contacts	Including contacts	Contacts silver plated	Contacts gold plated
5000480	VP-CL-3HV-BU 26-22 AWG Ag		•	3	•	•	
5000481	VP-CL-3HV-BU 20 AWG Ag		•	3	•	•	
5000482	VP-CL-3HV-BU 20-16 AWG Ag		•	3	•	•	
5000483	VP-CL-3HV-BU 16-15 AWG Ag		•	3	•	•	
5000484	VP-CL-3HV-BU 14 AWG Ag		•	3	•	•	
5000485	VP-CL-3HV-BU 26-22 AWG Au		•	3	•		•
5000486	VP-CL-3HV-BU 20 AWG Au		•	3	•		•
5000487	VP-CL-3HV-BU 20-16 AWG Au		•	3	•		•
5000488	VP-CL-3HV-BU 16-15 AWG Au		•	3	•		•
5000489	VP-CL-3HV-BU 14 AWG Au		•	3	•		•
5000490	VP-CL-3HV-ST 26-22 AWG Ag	•		3	•	•	
5000491	VP-CL-3HV-ST 20 AWG Ag	•		3	•	•	
5000492	VP-CL-3HV-ST 20-16 AWG Ag	•		3	•	•	
5000493	VP-CL-3HV-ST 16-15 AWG Ag	•		3	•	•	
5000494	VP-CL-3HV-ST 14 AWG Ag	•		3	•	•	
5000495	VP-CL-3HV-ST 26-22 AWG Au	•		3	•		•
5000496	VP-CL-3HV-ST 20 AWG Au	•		3	•		•
5000497	VP-CL-3HV-ST 20-16 AWG Au	•		3	•		•
5000498	VP-CL-3HV-ST 16-15 AWG Au	•		3	•		•
5000499	VP-CL-3HV-ST 14 AWG Au	•		3	•		•

Contact pins: Page 82
Cables and tools: Page 84

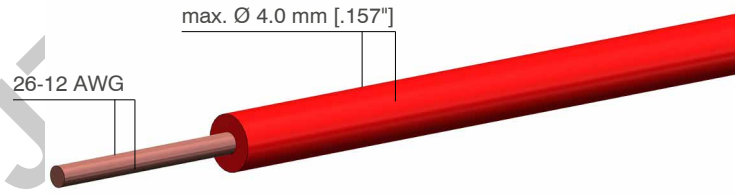
General characteristics and technical data Series VarioPro CL / 2.5 mm contacts

Electrical values	
Operating voltage	13 kV DC
Test voltage	20 kV DC

Housing	
Number of HV contacts	1 - 3
Insulation material	Thermoplastic
Flammability class	UL94 V-0
Operating temperature	-40°C to +150°C [-40°F to +302°F]
Insulating material group	I (DIN IEC 60664)

Contacts 1.6 mm	
Termination method	Crimp
Rated current	20 A
Contact resistance	≤ 5 mΩ
Contact diameter	2.5 mm [.063"]
Wire size	0.5-4 mm² [26-12 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Mating cycles	≥ 1,000
Rated temperature	+120°C [+248°F]

Suitable cable dimensions



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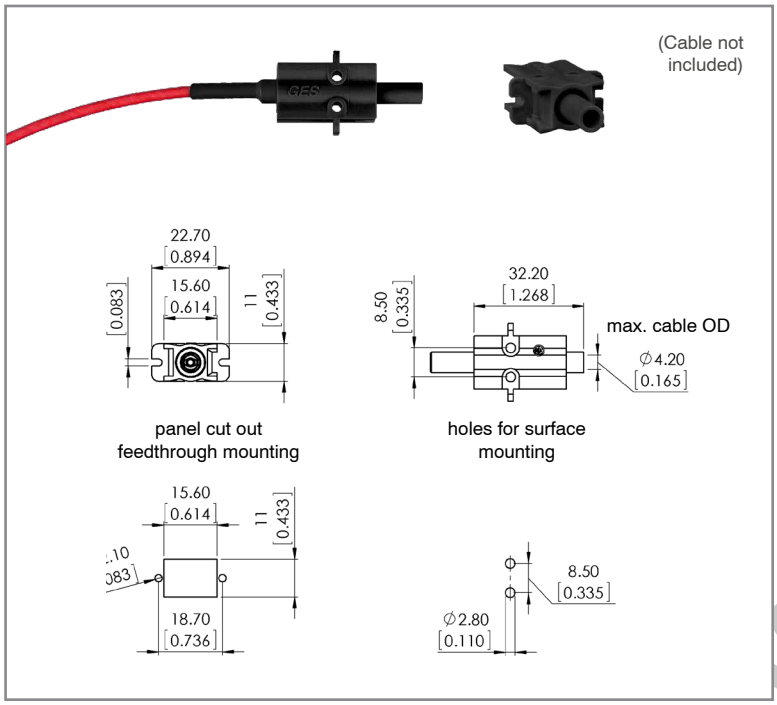
1-pin 13 kV DC/2.5 mm contacts

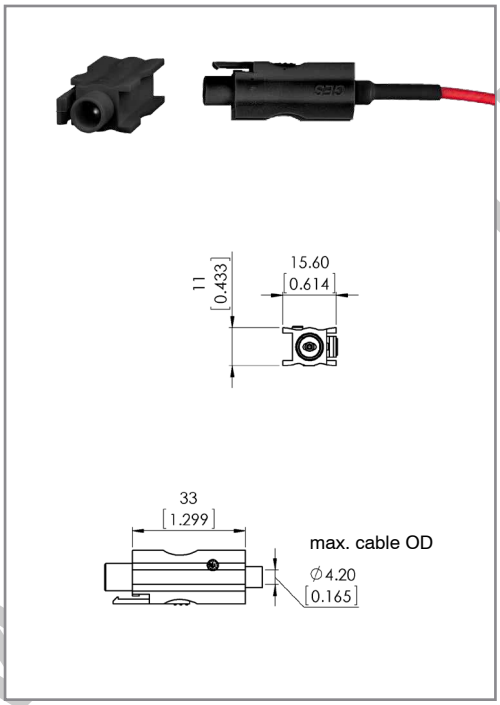
VarioPro CL1-B - receptacle

Drawing



VarioPro CL1-B - plug

Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug male contact	Receptacle female contact	Number of contacts	Including contacts	Contacts silver plated	Contacts gold plated
5000540	VP-CL-B-1HV-BU 0,5 mm²		•	1	•	•	
5000541	VP-CL-B-1HV-BU 0,75-1 mm²		•	1	•	•	
5000542	VP-CL-B-1HV-BU 1,5 mm²		•	1	•	•	
5000543	VP-CL-B-1HV-BU 2,5 mm²		•	1	•	•	
5000544	VP-CL-B-1HV-BU 4 mm²		•	1	•	•	
5000550	VP-CL-B-1HV-ST 0,5 mm²	•		1	•	•	
5000551	VP-CL-B-1HV-ST 0,75-1 mm²	•		1	•	•	
5000552	VP-CL-B-1HV-ST 1,5 mm²	•		1	•	•	
5000553	VP-CL-B-1HV-ST 2,5 mm²	•		1	•	•	
5000554	VP-CL-B-1HV-ST 4 mm²	•		1	•	•	

Contact pins: Page 82
Cables and tools: Page 84

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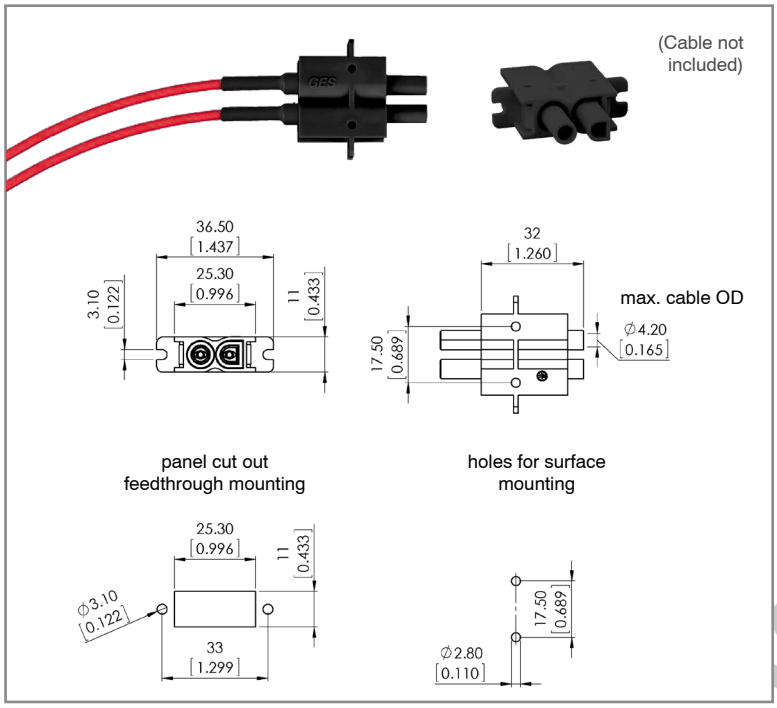
2-pin 13 kV DC/2.5 mm contacts

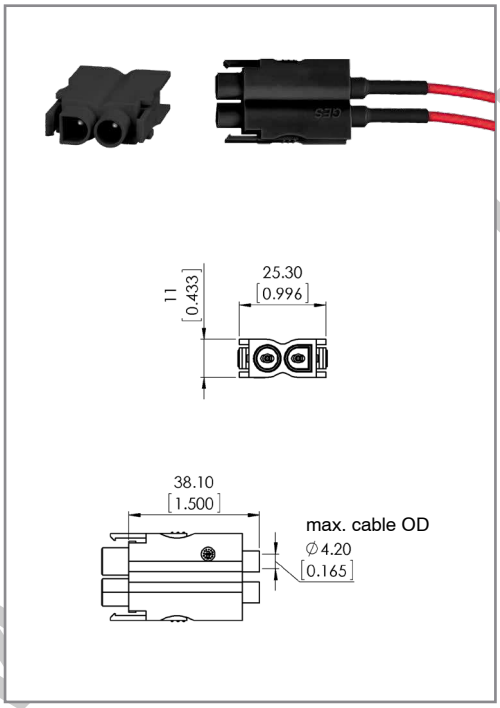
VarioPro CL2-B - receptacle

Drawing



VarioPro CL2-B - plug

Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug male contact	Receptacle female contact	Number of contacts	Including contacts	Contacts silver plated	Contacts gold plated
5000560	VP-CL-B-2HV-BU 0,5 mm²		•	2	•	•	
5000561	VP-CL-B-2HV-BU 0,75-1 mm²		•	2	•	•	
5000562	VP-CL-B-2HV-BU 1,5 mm²		•	2	•	•	
5000563	VP-CL-B-2HV-BU 2,5 mm²		•	2	•	•	
5000564	VP-CL-B-2HV-BU 4 mm²		•	2	•	•	
5000570	VP-CL-B-2HV-ST 0,5 mm²	•		2	•	•	
5000571	VP-CL-B-2HV-ST 0,75-1 mm²	•		2	•	•	
5000572	VP-CL-B-2HV-ST 1,5 mm²	•		2	•	•	
5000573	VP-CL-B-2HV-ST 2,5 mm²	•		2	•	•	
5000574	VP-CL-B-2HV-ST 4 mm²	•		2	•	•	

Contact pins: Page 82
Cables and tools: Page 84

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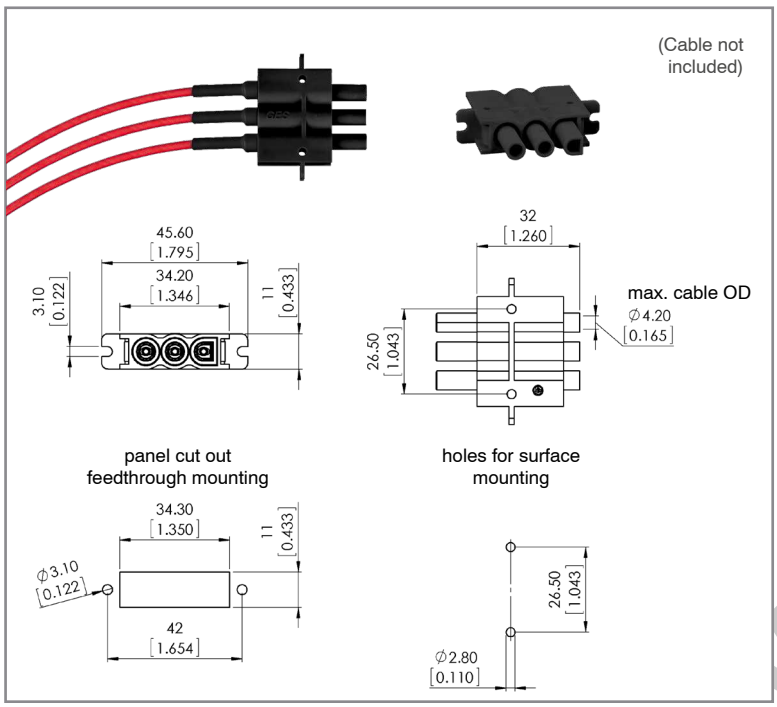
3-pin 13 kV DC/2.5 mm contacts

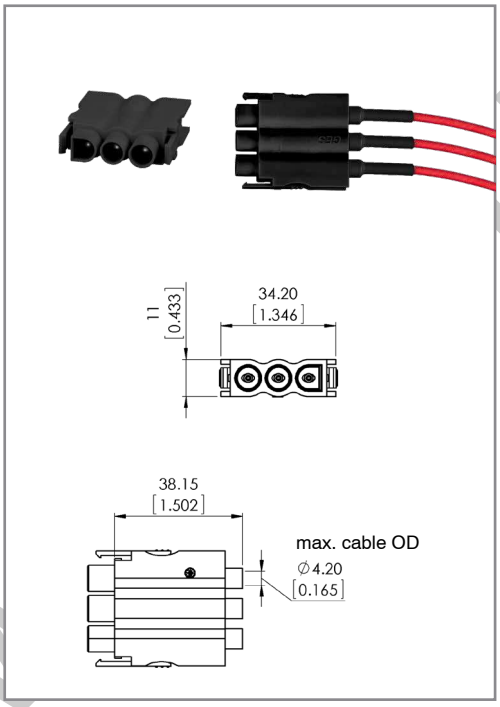
VarioPro CL3-B - receptacle

Drawing



VarioPro CL3-B - plug

Drawing



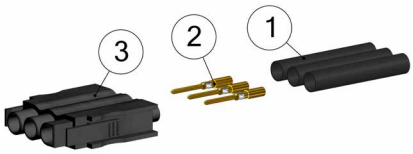
drawing - dimensions in mm [inch]

P/N	Description	Plug male contact	Receptacle female contact	Number of contacts	Including contacts	Contacts silver plated	Contacts gold plated
5000580	VP-CL-B-3HV-BU 0,5 mm²		•	3	•	•	
5000581	VP-CL-B-3HV-BU 0,75-1 mm²		•	3	•	•	
5000582	VP-CL-B-3HV-BU 1,5 mm²		•	3	•	•	
5000583	VP-CL-B-3HV-BU 2,5 mm²		•	3	•	•	
5000584	VP-CL-B-3HV-BU 4 mm²		•	3	•	•	
5000590	VP-CL-B-3HV-ST 0,5 mm²	•		3	•	•	
5000591	VP-CL-B-3HV-ST 0,75-1 mm²	•		3	•	•	
5000592	VP-CL-B-3HV-ST 1,5 mm²	•		3	•	•	
5000593	VP-CL-B-3HV-ST 2,5 mm²	•		3	•	•	
5000594	VP-CL-B-3HV-ST 4 mm²	•		3	•	•	

Contact pins: Page 82
Cables and tools: Page 84

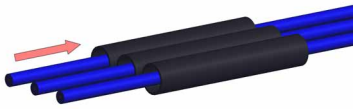
Assembly Instructions Series VP
ClipLock - plug

1.



Part as supplied.
Shrinking tube (1), male contact (2), connector shell (3).

2.

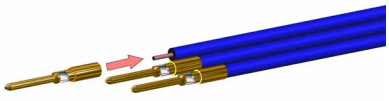


Place shrinking tube (1) on cable.

3.

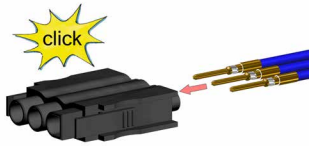
Remove dielectric insulation (L1 = 5-8 mm).

4.



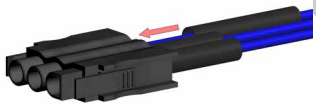
Solder or crimp contact (2) on conductor.
⚠ Please notice for soldering: Tin-solder must not remain on contact surface.

5.



Slide contact (2) completely into connector shell (3) until contact snaps.
Pull gently to check if the contacts are correctly fixed to their positions.

6.



Slide shrinking tube (1) on connector shell (3).

7.

Shrink tube - shrinking temperature 110°C [+230°F].

8.

Assembly finished.

Note – important!

1. **Please read the assembly instructions carefully before assembling the cable.**
2. **Cable assemble must be done by trained and qualified personnel only.**

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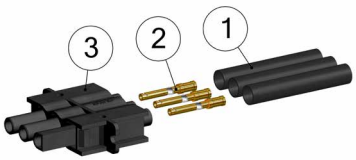
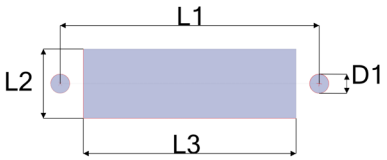
Assembly Instructions Series VP
ClipLock - receptacle

1.



Part as supplied.
Shrinking tube (1), female contact (2), connector shell (3).

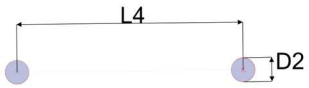
2.



Panel cut out – feedthrough mounting

Type	D1 mm [inch]	L1 mm [inch]	L2 mm [inch]	L3 mm [inch]
VP-CL-1HV-BU	2.10 [.083"]	18.70 [.736"]	11.20 [.441"]	15.80 [.622"]
VP-CL-2HV-BU	3.10 [.122"]	33.00 [1.299"]	11.20 [.441"]	25.50 [1.004"]
VP-CL-3HV-BU	3.10 [.122"]	42.00 [1.654"]	11.20 [.441"]	34.50 [1.358"]

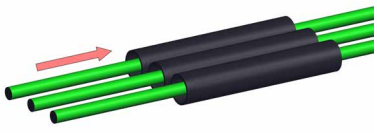
3.



Panel cut out – surface mounting

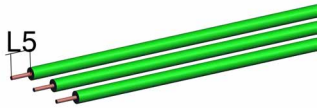
Type	D2 mm [inch]	L4 mm [inch]
VP-CL-1HV-BU	2.80 [.110"]	8.50 [.335"]
VP-CL-2HV-BU	2.80 [.110"]	17.50 [.689"]
VP-CL-3HV-BU	2.80[.110"]	26.50 [1.043"]

4.



Place shrinking tube (1) on cable.

5.

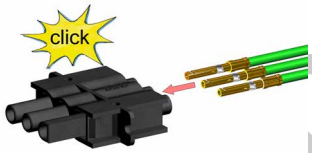


Remove dielectric insulation (L5 = 5-8 mm [.197" - .315"]).

6.

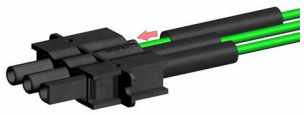
Solder or crimp contact (2) on conductor.
⚠ Please notice for soldering: Tin-solder must not remain on contact surface.

7.



Slide contact (2) completely into connector shell (3) until contact snaps.
💬 Pull gently to check if the contacts are correctly fixed to their positions.

8.



Slide shrinking tube (1) on connector shell (3).

9.

Shrink tubes - shrinking temperature 110°C [+230°F].

10.

Assembly finished.

Note – important!

1. **Please read the assembly instructions carefully before assembling the cable.**
2. **Cable assemble must be done by trained and qualified personnel only.**

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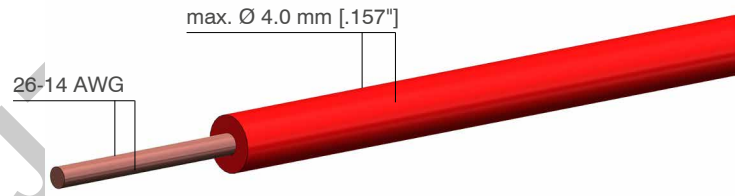
General characteristics and technical data Series VarioPro Basic

Electrical values	
Operating voltage	8 kV DC
Test voltage	12 kV DC

Housing	
Number of HV-contacts	1 - 2
Insulation material	POM
Flammability class	UL94 HB
Operating temperature	-30°C to +120°C [-22°F to +248°F]
Insulating material group	I (DIN IEC 60664)

Contacts 1.6 mm	
Termination method	Crimp
Rated current	13 A
Contact resistance	≤ 5 mΩ
Contact diameter	1.6 mm [.063"]
Wire size	0.14-2.5 mm² [26-14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Mating cycles	≥ 1,000
Rated temperature	+120°C [+248°F]

Suitable cable dimensions



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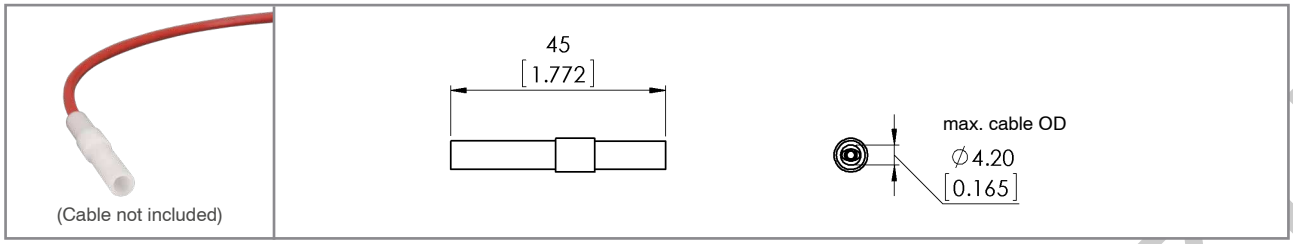
VarioPro Basic - receptacle, single pin (VP-1HV-BU)

Picture / Drawing

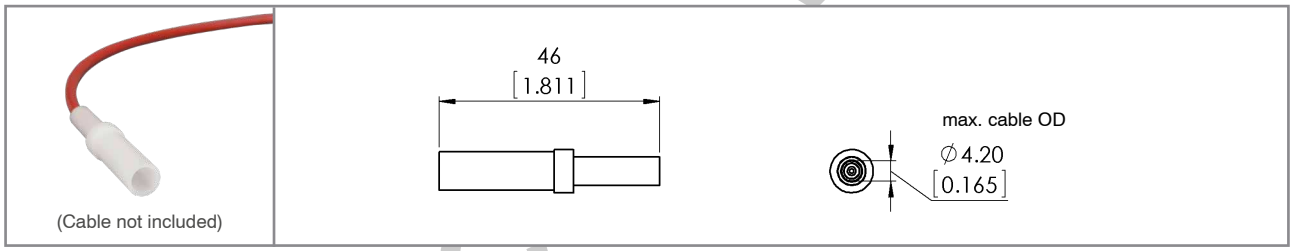


drawing - dimensions in mm [inch]

P/N	Description	Receptacle	Number of contacts	Including contacts	Panel mount
5000010	VP-1HV-BU POM 26-22 AWG	•	1	•	•
5000011	VP-1HV-BU POM 20 AWG	•	1	•	•
5000012	VP-1HV-BU POM 20-16 AWG	•	1	•	•
5000013	VP-1HV-BU POM 16-15 AWG	•	1	•	•
5000014	VP-1HV-BU POM 14 AWG	•	1	•	•

VarioPro Basic - plug, single pin (VP-1HV-ST)

Picture / Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug	Number of contacts	Including contacts	Panel mount
5000020	VP-1HV-ST POM 26-22 AWG	•	1	•	•
5000021	VP-1HV-ST POM 20 AWG	•	1	•	•
5000022	VP-1HV-ST POM 20-16 AWG	•	1	•	•
5000023	VP-1HV-ST POM 16-15 AWG	•	1	•	•
5000024	VP-1HV-ST POM 14 AWG	•	1	•	•

Contact pins: Page 82
Cables and tools: Page 84

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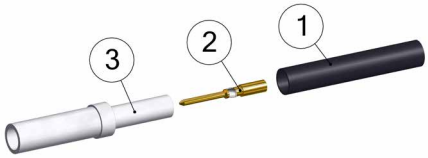
Assembly Instructions Series VP
Basic - plug

1.



Part as supplied.
Shrinking tube (1), male contact (2), connector shell (3).

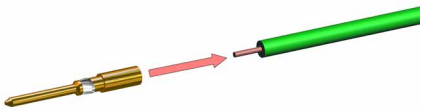
2.

Place shrinking tube (1) on cable.

3.

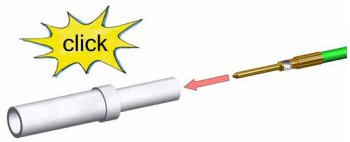
Remove dielectric insulation (L1 = 5-8 mm [.197" - .315"]).

4.



Solder or crimp contact (2) on conductor.
⚠ Please notice for soldering: Tin-solder must not remain on contact surface.

5.



Slide contact (2) completely into connector shell (3) until contact snaps.
Pull gently to check if the contacts are correctly fixed to their positions.

6.

Slide shrinking tube (1) on connector shell (3).

7.

Shrink tube - shrinking temperature 110°C [+230°F].

8.

Assembly finished.

Note – important!

1. **Please read the assembly instructions carefully before assembling the cable.**
2. **Cable assemble must be done by trained and qualified personnel only.**

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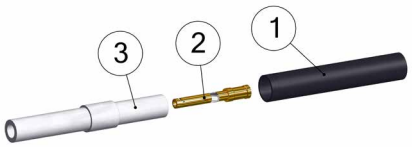
Assembly Instructions Series-VP
Basic - receptacle

1.



Part as supplied.
Shrinking tube (1), female contact (2), connector shell (3).

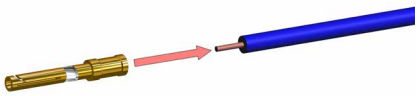
2.

Place shrinking tube (1) on cable.

3.

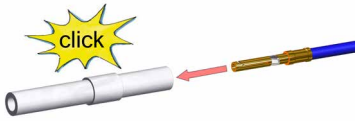
Remove dielectric insulation (L1 = 5-8 mm) [.197" - .315"].

4.



Solder or crimp contact (2) on conductor.
⚠ Please notice for soldering: Tin-solder must not remain on contact surface.

5.



Slide contact (2) completely into connector shell (3) until contact snaps.
Pull gently to check if the contacts are correctly fixed to their positions.

6.

Slide shrinking tube (1) on connector shell (3).

7.

Shrink tube - shrinking temperature 110°C [+230°F].

8.

Assembly finished.

Note – important!

1. **Please read the assembly instructions carefully before assembling the cable.**
2. **Cable assemble must be done by trained and qualified personnel only.**

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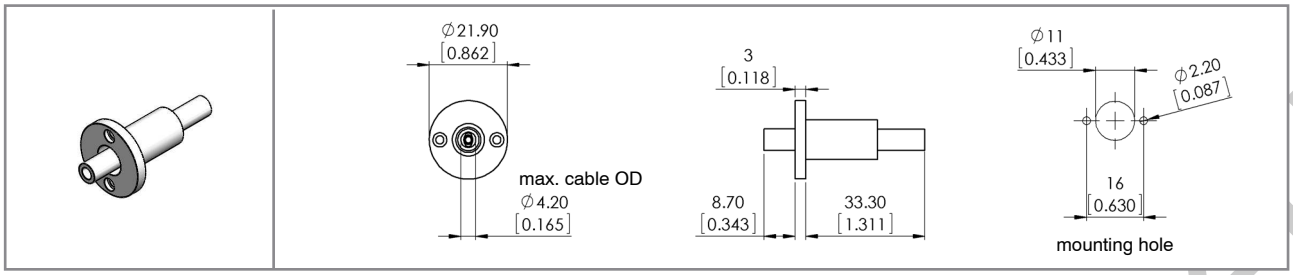
VarioPro Basic DF (feedthrough) - receptacle, single pin (VP-DF-1HV-BU)

Drawing

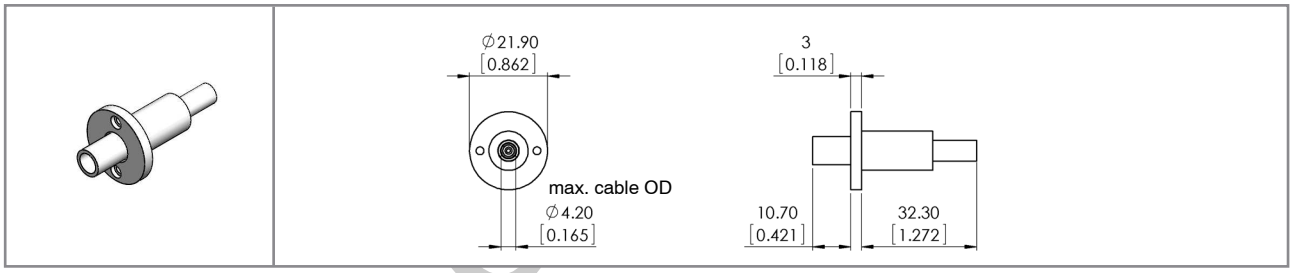


drawing - dimensions in mm [inch]

P/N	Description	Receptacle	Number of contacts	Including contacts	Panel mount
5000200	VP-DF-1HV-BU POM 20 AWG Ag	•	1	•	•
5000201	VP-DF-1HV-BU POM 20-16 AWG Ag	•	1	•	•
5000202	VP-DF-1HV-BU POM 26-22 AWG Ag	•	1	•	•
5000203	VP-DF-1HV-BU POM 16-15 AWG Ag	•	1	•	•
5000204	VP-DF-1HV-BU POM 14 AWG Ag	•	1	•	•

VarioPro Basic DF (feedthrough) - plug, single pin (VP-DF-1HV-ST)

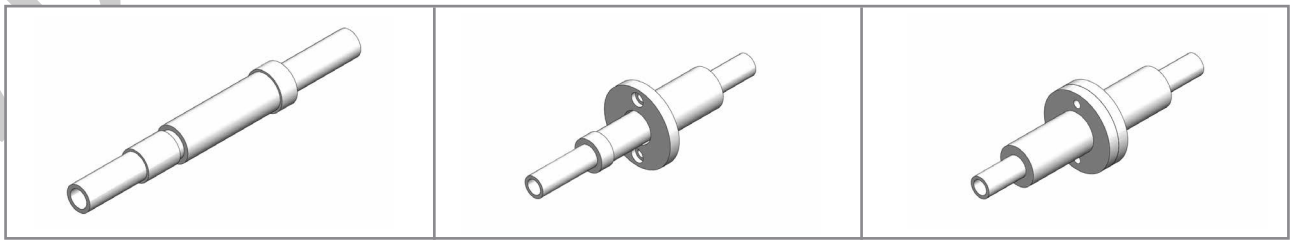
Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug	Number of contacts	Including contacts	Panel mount
5000210	VP-DF-1HV-ST POM 20 AWG Ag	•	1	•	•
5000211	VP-DF-1HV-ST POM 20-16 AWG Ag	•	1	•	•
5000212	VP-DF-1HV-ST POM 26-22 AWG Ag	•	1	•	•
5000213	VP-DF-1HV-ST POM 16-15 AWG Ag	•	1	•	•
5000214	VP-DF-1HV-ST POM 14 AWG Ag	•	1	•	•

Possible combinations



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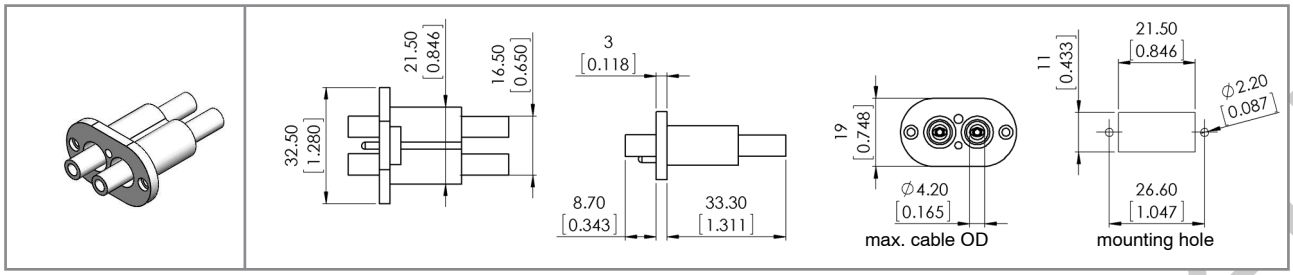
2-pin 8 kV DC

VarioPro Basic DF (feedthrough) - receptacle, 2-pin (VP-DF-2HV-BU)

Drawing

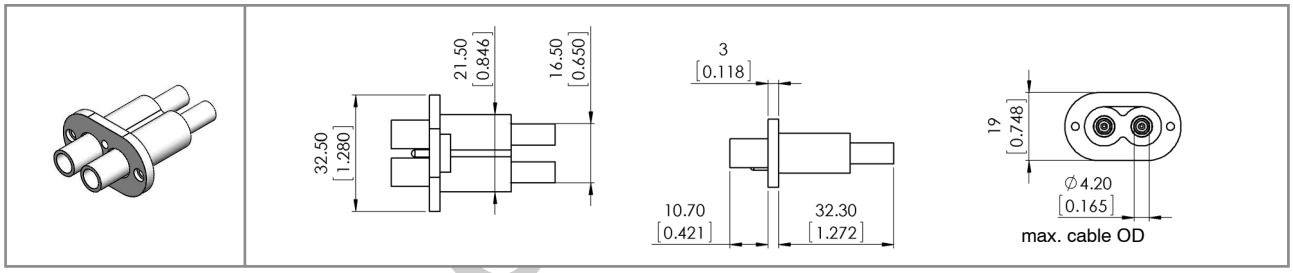


drawing - dimensions in mm [inch]

P/N	Description	Receptacle	Number of contacts	Including contacts	Panel mount
5000220	VP-DF-2HV-BU POM 26-22 AWG Ag	•	2	•	•
5000221	VP-DF-2HV-BU POM 20 AWG Ag	•	2	•	•
5000222	VP-DF-2HV-BU POM 20-16 AWG Ag	•	2	•	•
5000223	VP-DF-2HV-BU POM 16-15 AWG Ag	•	2	•	•
5000224	VP-DF-2HV-BU POM 14 AWG Ag	•	2	•	•

VarioPro Basic DF (feedthrough) - plug, 2-pin (VP-DF-2HV-ST)

Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug	Number of contacts	Including contacts	Panel mount
5000230	VP-DF-2HV-ST POM 26-22 AWG Ag	•	2	•	•
5000231	VP-DF-2HV-ST POM 20 AWG Ag	•	2	•	•
5000232	VP-DF-2HV-ST POM 20-16 AWG Ag	•	2	•	•
5000233	VP-DF-2HV-ST POM 16-15 AWG Ag	•	2	•	•
5000234	VP-DF-2HV-ST POM 14 AWG Ag	•	2	•	•

Contact pins: Page 82
Cables and tools: Page 84

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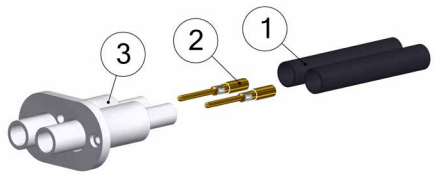
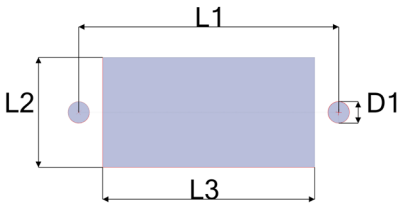
Assembly Instructions Series-VP
Basic Feedthrough - plug

1.



Part as supplied.
Shrinking tube (1), male contact (2), connector shell (3).

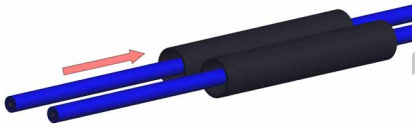
2.



Panel cut out

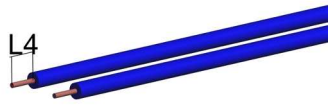
Type	D1 mm [inch]	L1 mm [inch]	L2 mm [inch]	L3 mm [inch]
VP-DF-2HV-ST	2.20 [.087"]	26.60 [1.047"]	11.20 [.441"]	21.70 [.854"]

3.



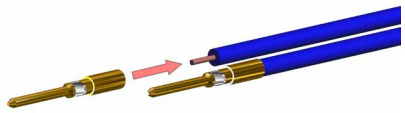
Place shrinking tube (1) on cable.

4.



Remove dielectric insulation (L4 = 5-8 mm) [.197" - .315"].

5.

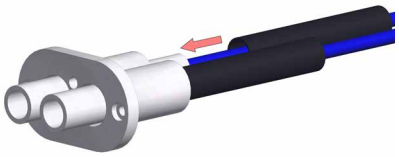


Solder or crimp contact (2) on conductor.
⚠ Please notice for soldering: Tin-solder must not remain on contact surface.

6.

Slide contact (2) completely into connector shell (3) until contact snaps.
Pull gently to check if the contacts are correctly fixed to their positions.

7.



Slide shrinking tube (1) on connector shell (3).

8.

Shrink tubes - shrinking temperature 110°C [+230°F].

9.

Assembly finished.

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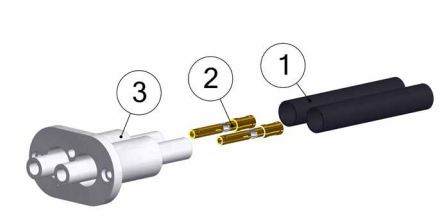
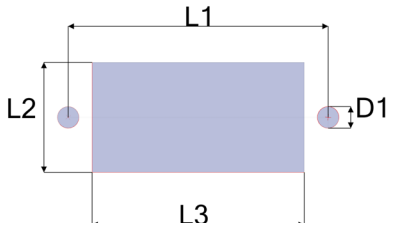
Assembly Instructions Series-VP
Basic Feedthrough - receptacle

1.



Part as supplied.
Shrinking tube (1), female contact (2), connector shell (3).

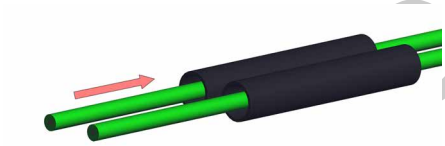
2.



Panel cut out

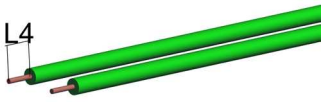
Type	D1 mm [inch]	L1 mm [inch]	L2 mm [inch]	L3 mm [inch]
VP-DF-2HV-BU	2.20 [.087"]	26.60 [1.047"]	11.20 [.441"]	21.70 [.854"]

3.



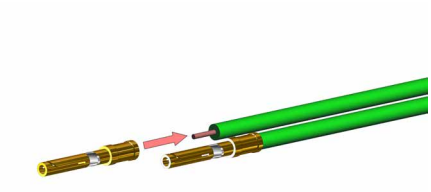
Place shrinking tube (1) on cable.

4.



Remove dielectric insulation (L4 = 5-8 mm) [.197" - .315"].

5.

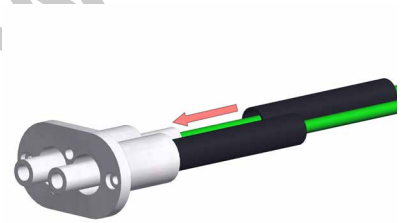


Solder or crimp contact (2) on conductor.
⚠ Please notice for soldering: Tin-solder must not remain on contact surface.

6.

Slide contact (2) completely into connector shell (3) until contact snaps.
Pull gently to check if the contacts are correctly fixed to their positions.

7.



Slide shrinking tube (1) on connector shell (3).

8.

Shrink tubes - shrinking temperature 110°C [+230°F].

9.

Assembly finished.

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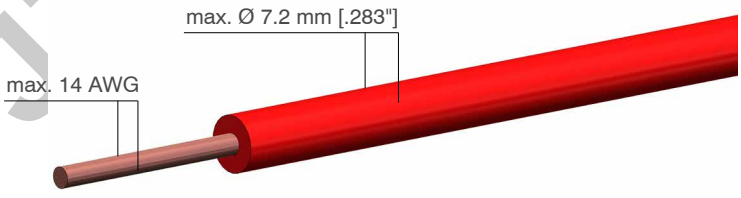
General characteristics and technical data Series VarioPro SB10

Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC

Housing	
Number of HV-contacts	1
Insulation material	POM / PTFE
Flammability class POM	UL94 HB
Flammability class PTFE	UL94 V-0
Operating temperature POM	-30°C to +120°C [-22°F to +248°F]
Operating temperature PTFE	-50°C to +200°C [-58°F to +392°F]
Insulating material group	I (DIN IEC 60664)

Contacts 2.7 mm	
Termination method	Solder
Rated current	30 A
Contact resistance	≤ 300 mΩ
Contact diameter	2.7 mm [.106"]
Wire size	2.5 mm² [14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Mating cycles	≥ 100,000
Rated temperature	+120°C [+248°F]

Suitable cable dimensions



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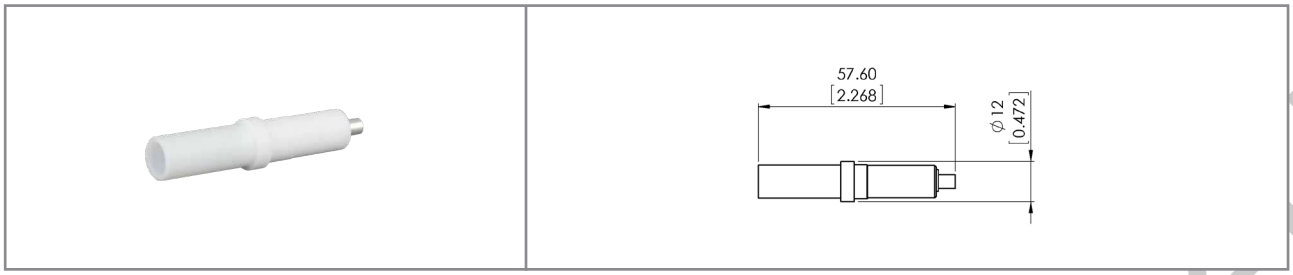
Type VarioPro SB10
1-pin 10 kV DC

VarioPro Basic B10 - receptacle

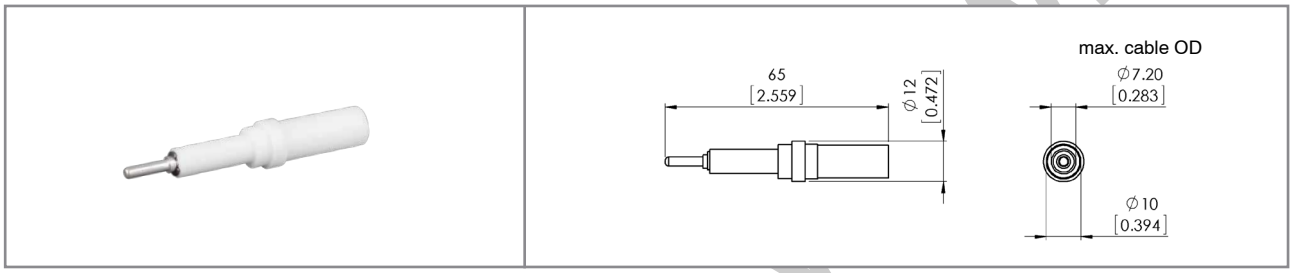
Picture / Drawing



drawing - dimensions in mm [inch]

VarioPro Basic S10 - plug

Picture / Drawing



drawing - dimensions in mm [inch]

P/N	Description	Plug	Receptacle	Number of contacts	Including contacts	Contacts, silver plated
7100000	S10 POM	•		1	•	•
7101000	B10 POM		•	1	•	•
7102000	S10 PTFE	•		1	•	•
7103000	B10 PTFE		•	1	•	•

Contact pins: Page 82
Cables and tools: Page 84

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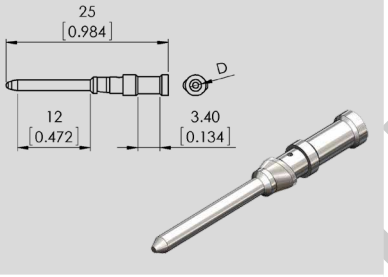
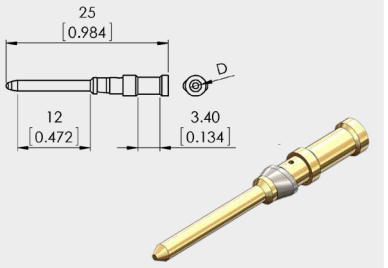
Single parts / Contacts for types VarioPro Clip Lock, Basic and Basic Feedthrough

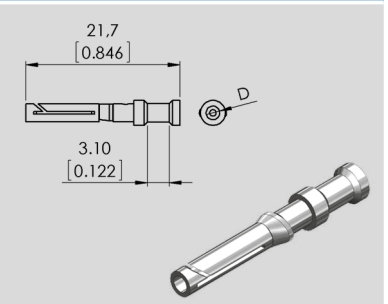
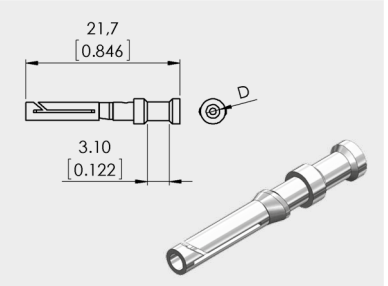
VP Series

Male contacts 1.6 mm

P/N	Description	Cross section in mm² (D)	AWG (D)	Silver plated	Gold plated	Drawing
6575085	Male contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575086	Male contact 1.6 mm / 20 AWG	0.5	20	•		
6575088	Male contact 1.6 mm / 20-16 AWG	0.75 -1.0	20-16	•		
6575090	Male contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575083	Male contact 1.6 mm / 14 AWG	2.5	14	•		
6575118	Male contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575121	Male contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575116	Male contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575124	Male contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575125	Male contact AU 1.6 mm / 14 AWG	2.5	14		•	

drawing - dimensions in mm [inch]

Female contacts 1.6 mm

P/N	Description	Cross section in mm² (D)	AWG (D)	Silver plated	Gold plated	Drawing
6575095	Female contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575107	Female contact 1.6 mm / 20 AWG	0.5	20	•		
6575098	Female contact 1.6 mm / 20-16 AWG	0.75-1.0	20-16	•		
6575100	Female contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575084	Female contact 1.6 mm / 14 AWG	2.5	14	•		
6575127	Female contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575131	Female contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575117	Female contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575132	Female contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575133	Female contact AU 1.6 mm / 14 AWG	2.5	14		•	

drawing - dimensions in mm [inch]

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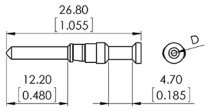
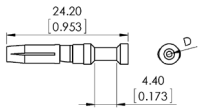
Male contacts 2.5 mm

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575087	Male contact 2.5 mm / 20 AWG	0.5	20	
6575089	Male contact 2.5 mm / 18 AWG	0.75-1.0	18	
6575092	Male contact 2.5 mm / 16 AWG	1.5	16	
6575094	Male contact 2.5 mm / 14 AWG	2.5	14	
6575091	Male contact 2.5 mm / 12 AWG	4.0	12	

Female contacts 2.5 mm

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575108	Female contact 2.5 mm / 20 AWG	0.5	20	
6575111	Female contact 2.5 mm / 18 AWG	0.75-1.0	18	
6575102	Female contact 2.5 mm / 16 AWG	1.5	16	
6575104	Female contact 2.5 mm / 14 AWG	2.5	14	
6575113	Female contact 2.5 mm / 12 AWG	4.0	12	

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Suitable cables for Series VP

Part No.	3330090	3330091	3330092	3330093	3330094	3330095	3330020
Operating voltage DC	15 kV DC						10 kV DC
Operating voltage AC rms	-						-
Conductor size							
AWG	24 AWG	22 AWG	20 AWG	18 AWG	16 AWG	14 AWG	14 AWG
Strands	19 x 36 AWG	7 x 30 AWG	10 x 30 AWG	16 x 30 AWG	26 x 30 AWG	41 x 30 AWG	50 x 0.25 mm
Cross section	0.24 mm²	0.36 mm²	0.51 mm²	0.81 mm²	1.32 mm²	2.08 mm²	2.5 mm²
Diameter	0.55 mm	0.68 mm	0.81 mm	1.02 mm	1.30 mm	1.63 mm	1.78 mm
Dielectric insulation							
Diameter	2.7 mm	2.9 mm	3.0 mm	3.3 mm	3.5 mm	3.9 mm	3.8 mm
Material	Silicone						Silicone
Ozone and corona resistant	YES						-
UL	AWM Style 3239						-
Temperature rating	max. 150°C [+302°F]						-20°C to +180°C [-4°F to +356°F]
Color	red*						black
Fits connector types	VarioPro Clip Lock 1-, 2-, and 3-pin VarioPro Basic VarioPro Basic Feedthroughs 1-, and 2-pin						

*Different colors available on request

Tools

Part No.	Description	Connector types
3000001	Extracting tool for contacts 1.6 mm - male and female	VP ClipLock, VP Basic
3000015	Crimping tool for contacts 1.6 mm - male and female incl. pliers, contact holder and crimping cheeks	VP ClipLock, VP Basic

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MCS Series

- Operating voltage up to 5 kV DC
- Operating current up to 4.5 A
- 2 - 6 high voltage contacts
- Quick and easy assembling
- Protection class IP68 acc. DIN EN 60529

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General characteristics and technical data Series MCS

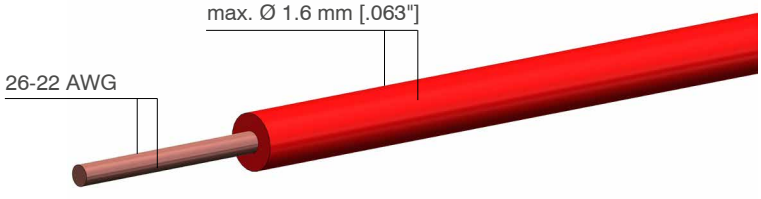
Housing	
Locking system	Threaded coupling
Panel mount type	Round flange
Housing material	Brass (CuZn)
Surface plating	Nickel (Ni)
Protection class acc. DIN EN 60529 (mated connector)	IP68
Operating temperature	-30°C to +80°C [-22°F to +176°F]

Contacts 0.7 mm	
Termination method	Solder / crimp
Rated current	4.5 A
Contact resistance	< 0,7 mΩ
Contact diameter	0.7 mm [.028"]
Wire size	0.15-0.38 mm² [26-22 AWG]
Contact material	Brass (CuZn)
Contact plating	Gold (Au)
Mating cycles	≥ 5000

Insulation inserts	
Number of contacts	2, 4, 6
Insulation material	PBT
Flammability class	UL94 V-0
Operating temperature	-40°C to +150°C [-40°F to +302°F]
CTI value	600
Insulation material group	I (DIN IEC 60664)
Max. diameter of dielectric cable insulation	1.6 mm

Configurations			
Type	205	405	605
Receptacle			
Plug			

Suitable cable dimensions (single wire)



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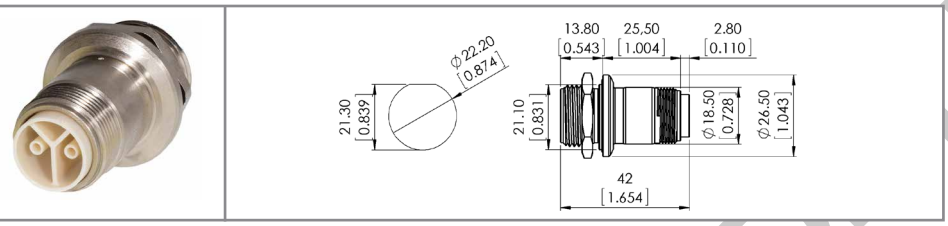
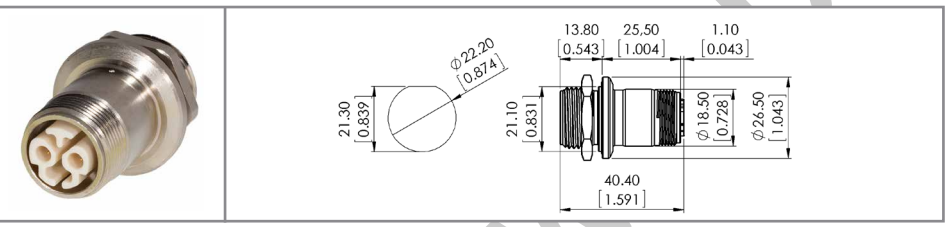
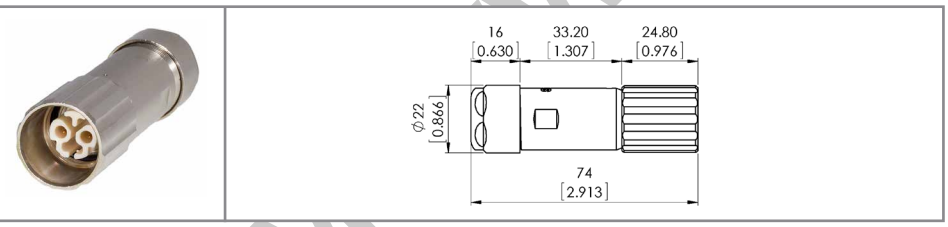
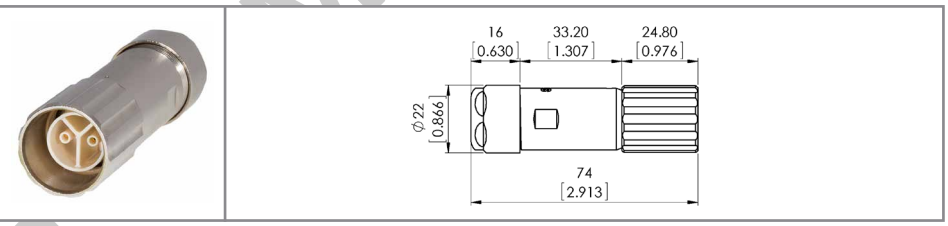
Type MCS205 2-pin 5 kV DC

Electrical values	
Operating voltage	5 kV DC
Test voltage	8 kV DC
Rated current	4.5 A

Characteristics	
Number of pins	2
Insulation material	PBT

Type / Version / Description	Picture / Drawing
GB-MCS205 **Receptacle, panel mount incl. female contacts 0.7 mm**	
GS-MCS205 **Plug, panel mount incl. male contacts 0.7 mm**	
KS-MCS205 **Plug, cable mount incl. male contacts 0.7 mm**	
KB-MCS205 **Receptacle, cable mount incl. female contacts 0.7 mm**	

drawing - dimensions in mm [inch]

Part no.	Description	Plug	Receptacle	Cable mount	Panel mount	Clamping range (in mm [inch]) Screwed cable gland
5001200	GB-MCS205		•		•	
5001205	GS-MCS205	•			•	
5001210	KS-MCS205 6.5 – 4.0	•		•		6.5 – 4.0 [.256" - .157"]
5001211	KS-MCS205 8.0 – 5.0	•		•		8.0 – 5.0 [.315" - .197"]
5001212	KS-MCS205 9.5 – 6.5	•		•		9.5 – 6.5 [.374" - .256"]
5001213	KS-MCS205 10.5 – 7.0	•		•		10.5 – 7.0 [.413" - .276"]
5001220	KB-MCS205 6.5 – 4.0		•	•		6.5 – 4.0 [.256" - .157"]
5001221	KB-MCS205 8.0 – 5.0		•	•		8.0 – 5.0 [.315" - .197"]
5001222	KB-MCS205 9.5 – 6.5		•	•		9.5 – 6.5 [.374" - .256"]
5001223	KB-MCS205 10.5 – 7.0		•	•		10.5 – 7.0 [.413" - .276"]

Accessories: *Page 90*
2-core cable: *Page 94*

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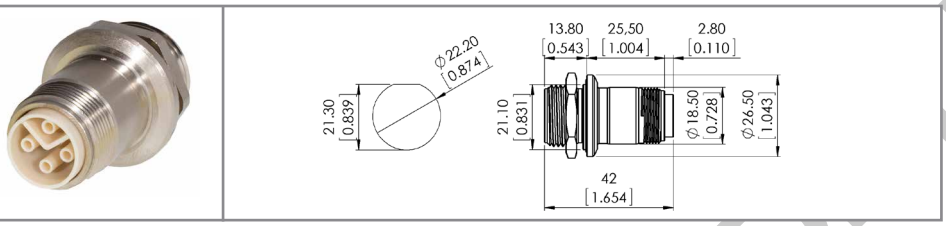
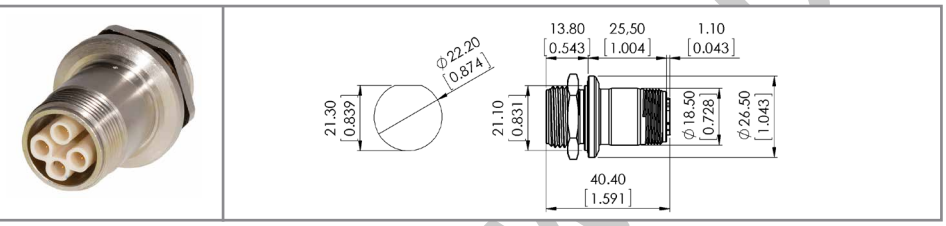
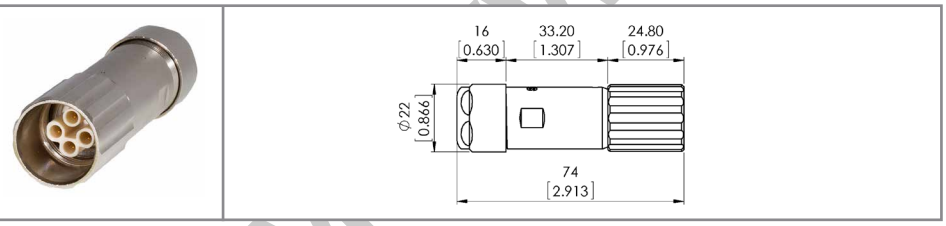
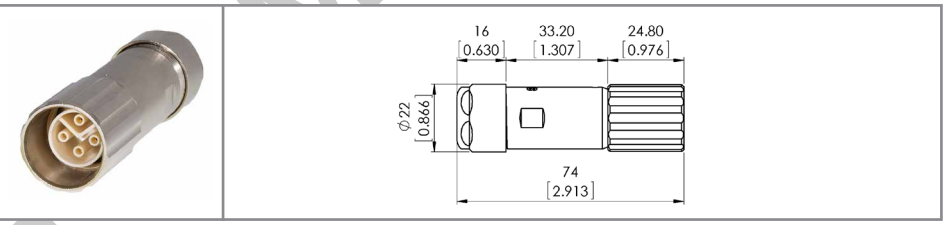
Type MCS405 **4-pin 5 kV DC**

Electrical values	
Operating voltage	5 kV DC
Test voltage	8 kV DC
Rated current	4.5 A

Characteristics	
Number of pins	4
Insulation material	PBT

Type / Version / Description	Picture / Drawing
GB-MCS405 **Receptacle, panel mount incl. female contacts 0.7 mm**	
GS-MCS405 **Plug, panel mount incl. male contacts 0.7 mm**	
KS-MCS405 **Plug, cable mount incl. male contacts 0.7 mm**	
KB-MCS405 **Receptacle, cable mount incl. female contacts 0.7 mm**	

drawing - dimensions in mm [inch]

Part no.	Description	Plug	Receptacle	Cable mount	Panel mount	Clamping range (in mm [inch]) Screwed cable gland
5001400	GB-MCS405		•		•	
5001405	GS-MCS405	•			•	
5001410	KS-MCS405 6.5 – 4.0	•		•		6.5 – 4.0 [.256" - .157"]
5001411	KS-MCS405 8.0 – 5.0	•		•		8.0 – 5.0 [.315" - .197"]
5001412	KS-MCS405 9.5 – 6.5	•		•		9.5 – 6.5 [.374" - .256"]
5001413	KS-MCS405 10.5 – 7.0	•		•		10.5 – 7.0 [.413" - .276"]
5001420	KB-MCS405 6.5 – 4.0		•	•		6.5 – 4.0 [.256" - .157"]
5001421	KB-MCS405 8.0 – 5.0		•	•		8.0 – 5.0 [.315" - .197"]
5001422	KB-MCS405 9.5 – 6.5		•	•		9.5 – 6.5 [.374" - .256"]
5001423	KB-MCS405 10.5 – 7.0		•	•		10.5 – 7.0 [.413" - .276"]

Accessories: Page 90
4-core cable: Page 94

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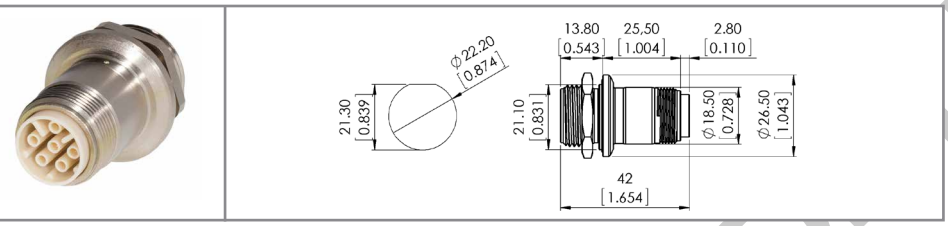
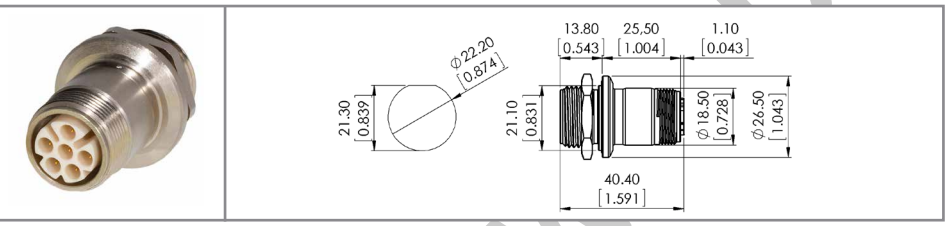
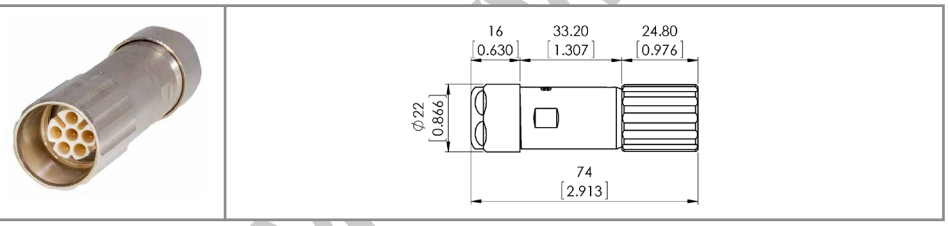
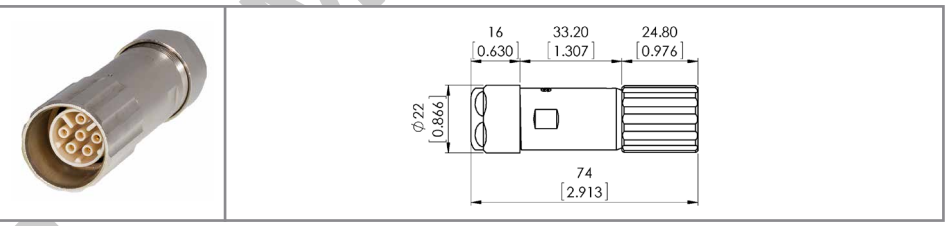
Type MCS605 6-pin 5 kV DC

Electrical values	
Operating voltage	5 kV DC
Test voltage	8 kV DC
Rated current	4.5 A

Characteristics	
Number of pins	6
Insulation material	PBT

Type / Version / Description	Picture / Drawing
GB-MCS605 **Receptacle, panel mount incl. female contacts 0.7 mm**	
GS-MCS605 **Plug, panel mount incl. male contacts 0.7 mm**	
KS-MCS605 **Plug, cable mount incl. male contacts 0.7 mm**	
KB-MCS605 **Receptacle, cable mount incl. female contacts 0.7 mm**	

drawing - dimensions in mm [inch]

Part no.	Description	Plug	Receptacle	Cable mount	Panel mount	Clamping range (in mm [inch]) Screwed cable gland
5001600	GB-MCS605		•		•	
5001605	GS-MCS605	•			•	
5001610	KS-MCS605 6.5 – 4.0	•		•		6.5 – 4.0 [.256" - .157"]
5001611	KS-MCS605 8.0 – 5.0	•		•		8.0 – 5.0 [.315" - .197"]
5001612	KS-MCS605 9.5 – 6.5	•		•		9.5 – 6.5 [.374" - .256"]
5001613	KS-MCS605 10.5 – 7.0	•		•		10.5 – 7.0 [.413" - .276"]
5001620	KB-MCS605 6.5 – 4.0		•	•		6.5 – 4.0 [.256" - .157"]
5001621	KB-MCS605 8.0 – 5.0		•	•		8.0 – 5.0 [.315" - .197"]
5001622	KB-MCS605 9.5 – 6.5		•	•		9.5 – 6.5 [.374" - .256"]
5001623	KB-MCS605 10.5 – 7.0		•	•		10.5 – 7.0 [.413" - .276"]

Accessories: *Page 90*
6-core cable: *Page 94*

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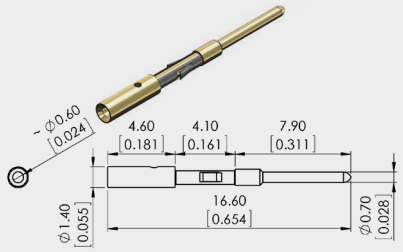
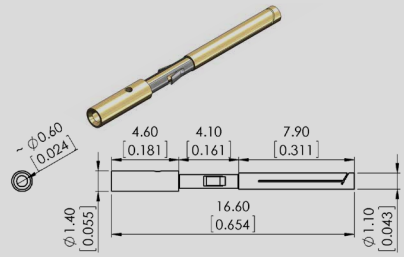
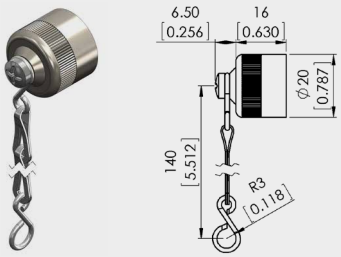
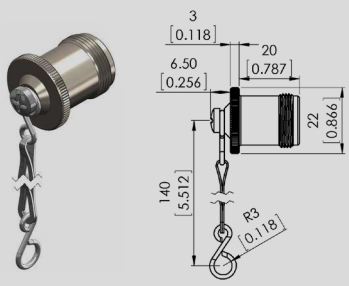
Contacts

Part no.	Description	Cross section In mm² (D)	AWG (D)	Mechanical drawing
6575150	Male contact 0.7 mm	0.15 – 0.38	26-22	
6575160	Female contact 0.7 mm	0.15 – 0.38	26-22	

drawing - dimensions in mm [inch]

Coverings with thread

Part no.	Description	Mechanical drawing
1672118	Covering (inside thread) for types GS / GB 205 - 605	
1672119	Covering (outside thread) for types KS / KB 205 - 605	

drawing - dimensions in mm [inch]

Ejector tool / Crimping tool

Part no.	Description
3000016	Extracting tool for 0.7 mm crimping contacts
3000024	Crimping tool fro 0.7 mm crimping contacts incl. pliers, contact holder and crimping cheeks

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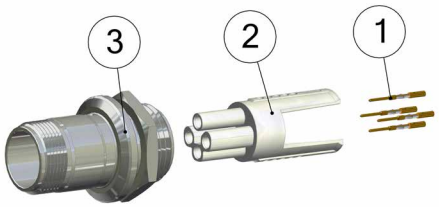
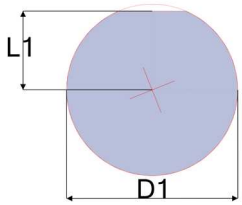
Assembly instructions (GB/GS)

1.



Part as delivered.
contacts (1), insulation part (2), housing (3).

2.



Panel cut out	
D1 mm [inch]	L1 mm [inch]
22.20 [.874"]	10.10 [.398"]

3.

Carefully remove cable jacket (L2 = min. 30 mm [1.181"]).
⚠ Do not damage metal shield.

4.

Fold back shield.

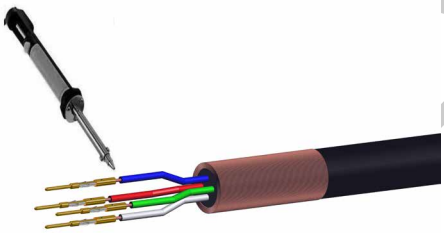
5.

Remove any filling elements from cable.

6.

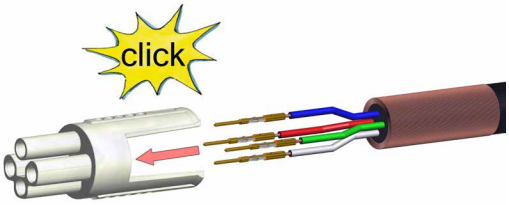
Remove dielectric insulation of single wires (L3 = 4 mm [.157"]).
⚠ Do not damage conductor.

7.



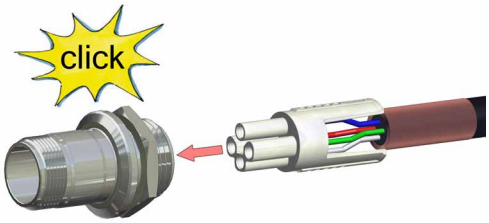
Crimp or solder one contact (1) each on every conductor.
⚠ Tin-solder must not remain on contact surface!

8.



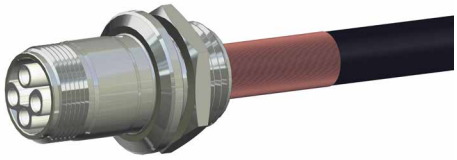
Slide contacts (1) completely into insulation part (2) until contacts snap.
💬 Insert all contacts at once.

9.



Put insulation part (2) into housing (3)
💬 Pay attention to notches.

10.



Assembly finished.

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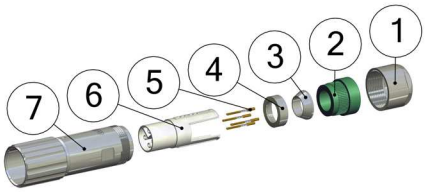
1.

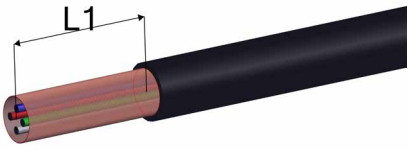


Part as delivered.
cap (1), clamping rubber (2), outer cone (3), inner cone (4), contacts (5), insulation part (6), housing (7).

2.

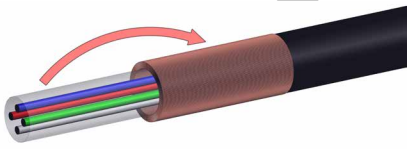
Place cap (1), clamping rubber (2) and outer cone (3) on cable.
⚠ Respect correct order of parts (see picture).

3.



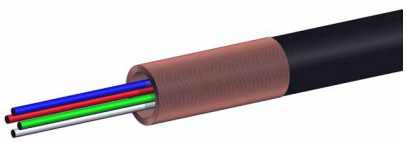
Carefully remove cable jacket (L1 = 28 mm [1.102"]).
⚠ Do not damage metal shield.
Do not damage dielectric insulation.

4.



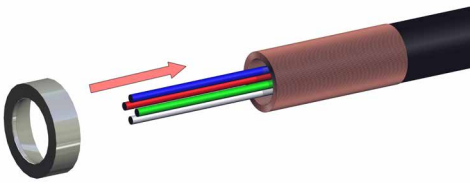
Fold back shield braid over jacket.

5.



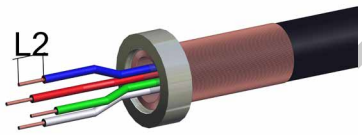
Remove any filling elements from cable.

6.



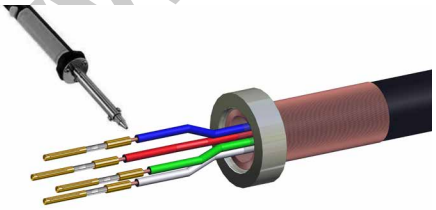
Place inner cone (4) on cable.

7.



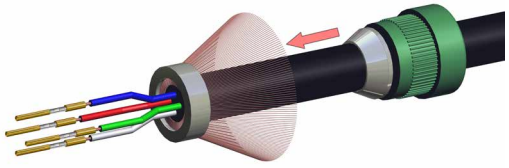
Remove dielectric insulation of single wires (L2 = 4 mm [.157"]).
⚠ Do not damage conductor.

8.



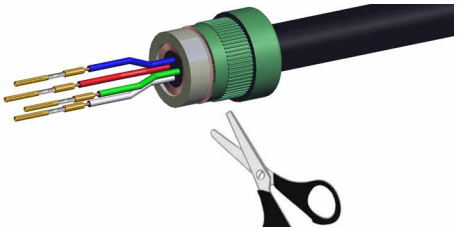
Crimp or solder one contact (5) each on every conductor.
⚠ Tin-solder must not remain on contact surface!

9.



Completely widen shield braid. Push outer cone (3) and clamping rubber (2) under shield braid against inner cone (4) until shield braid clamps between outer cone (3) and inner cone (4).

10.



Cut overlapping shield braid.
⚠ Carefully remove loose shield parts. Loose shield parts can cause electrical breakdown.

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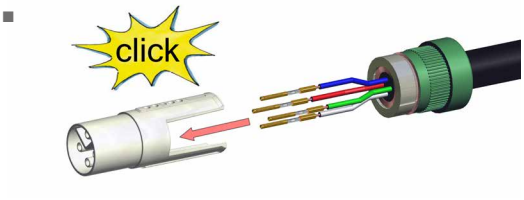
Assembly instructions (KB/KS)

11.



Slide contacts (5) completely into insulation part (6) until contacts snap.

Insert all contacts at the same time. Pull gently to check if the contacts are correctly fixed to their positions.

12.

Slide insulation part (6) into housing (7) until insulation part snap in.

Use notches for correct positioning of the insulation part.

13.

Put on cap.

Wrench size cap	Wrench size housing	Tightening torque [Nm]
20	19	5

14.

Assembly finished.

Note – important!

1. **Please read the assembly instructions carefully before assembling the cable.**
2. **Cable assemble must be done by trained and qualified personnel only.**

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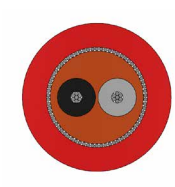
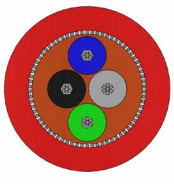
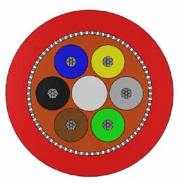
Suitable cables for Series MCS

	Part No. 3330082	Part No. 3330084	Part No. 3330086
			
Operating voltage	5 kV DC		
Test voltage	7.5 kV DC		
Number of wires	2	4	6
Construction	2 wires stranded	4 wires stranded	6 wires stranded
Conductor			
AWG	26 AWG		
Strands	7 x 0.16 mm		
Cross section	0.14 mm²		
Conductor diameter	0.42 mm		
Conductor material	Tinned copper		
Dielectric			
Diameter	1.6 mm [.063"] (± 0.1 mm)		
Material	FEP		
Encoding	grey, black	grey, black, blue, green	grey, black, blue, green, yellow, brown
Screen (Shield)	YES		
Coverage	about 85 %		
Material	Tinned copper		
Jacket			
Diameter	6.2 mm [.244"] (± 0.3 mm)	6.9 mm [.272"] (± 0.3 mm)	7.9 mm [.311"] (± 0.3 mm)
Material	Silicone		
Color	red		
Temperature range	-30°C to +180°C [-22°F to 356°F]		
Fits connector types	MCS205	MCS405	MCS605

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MC Series

- Operating voltage from 10 kV DC to 15 kV DC
- Operating current up to 13 A
- 2 - 5 HV contacts
- For cable sizes 26-14 AWG

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P/N	Description	Plug	Receptacle	Cable mount	Panel mount	Coupling	Adapter	HV-pins
5002010R	GB-MC207 POM		•		•			2
5002020R	GS-MC207 POM	•			•			2
5002030A	KS-MC207/6.5-8 POM	•		•				2
5002030B	KS-MC207/8-9.5 POM	•		•				2
5002030C	KS-MC207/9.5-11 POM	•		•				2
5002030D	KS-MC207/11-12.5 POM	•		•				2
5002030E	KS-MC207/12.5-14 POM	•		•				2
5002030M	KS-MC207/M20 POM	•		•			•	2
5002030N	KS-MC207/M25 POM	•		•			•	2
5002040A	KB-MC207/6.5-8 POM		•	•				2
5002040B	KB-MC207/8-9.5 POM		•	•				2
5002040C	KB-MC207/9.5-11 POM		•	•				2
5002040D	KB-MC207/11-12.5 POM		•	•				2
5002040E	KB-MC207/12.5-14 POM		•	•				2
5002040M	KB-MC207/M20 POM		•	•			•	2
5002040N	KB-MC207/M25 POM		•	•			•	2
5002041A	KBI-MC207/6.5-8 POM		•	•		•		2
5002041B	KBI-MC207/8-9.5 POM		•	•		•		2
5002041C	KBI-MC207/9.5-11 POM		•	•		•		2
5002041D	KBI-MC207/11-12.5 POM		•	•		•		2
5002041E	KBI-MC207/12.5-14 POM		•	•		•		2
5002041M	KBI-MC207/M20 POM		•	•		•	•	2
5002041N	KBI-MC207/M25 POM		•	•		•	•	2
5003010R	GB-MC307 POM		•		•			3
5003020R	GS-MC307 POM				•			3
5003030A	KS-MC307/6.5-8 POM	•		•				3
5003030B	KS-MC307/8-9.5 POM	•		•				3
5003030C	KS-MC307/9.5-11 POM	•		•				3
5003030D	KS-MC307/11-12.5 POM	•		•				3
5003030E	KS-MC307/12.5-14 POM	•		•				3
5003030M	KS-MC307/M20 POM	•		•			•	3
5003030N	KS-MC307/M25 POM	•		•			•	3
5003040A	KB-MC307/6.5-8 POM	•	•	•				3
5003040B	KB-MC307/8-9.5 POM		•	•				3
5003040C	KB-MC307/9.5-11 POM		•	•				3
5003040D	KB-MC307/11-12.5 POM		•	•				3
5003040E	KB-MC307/12.5-14 POM		•	•				3
5003040M	KB-MC307/M20 POM		•	•			•	3
5003040N	KB-MC307/M25 POM		•	•			•	3
5003041A	KBI-MC307/6.5-8 POM		•	•		•		3
5003041B	KBI-MC307/8-9.5 POM		•	•		•		3
5003041C	KBI-MC307/9.5-11 POM		•	•		•		3
5003041D	KBI-MC307/11-12.5 POM		•	•		•		3
5003041E	KBI-MC307/12.5-14 POM		•	•		•		3
5003041M	KBI-MC307/M20 POM		•	•		•	•	3
5003041N	KBI-MC307/M25 POM		•	•		•	•	3
5004010R	GB-MC407 POM		•		•			4
5004020R	GS-MC407 POM	•			•			4
5004030A	KS-MC407/6.5-8 POM	•		•				4
5004030B	KS-MC407/8-9.5 POM	•		•				4
5004030C	KS-MC407/9.5-11 POM	•		•				4
5004030D	KS-MC407/11-12.5 POM	•		•				4
5004030E	KS-MC407/12.5-14 POM	•		•				4
5004030M	KS-MC407/M20 POM	•		•			•	4
5004030N	KS-MC407/M25 POM	•		•			•	4
5004040A	KB-MC407/6.5-8 POM		•	•				4
5004040B	KB-MC407/8-9.5 POM		•	•				4
5004040C	KB-MC407/9.5-11 POM		•	•				4
5004040D	KB-MC407/11-12.5 POM		•	•				4
5004040E	KB-MC407/12.5-14 POM		•	•				4
5004040M	KB-MC407/M20 POM		•	•			•	4
5004040N	KB-MC407/M25 POM		•	•			•	4
5004042A	KBI-MC407/6.5-8 POM		•	•		•		4
5004042B	KBI-MC407/8-9.5 POM		•	•		•		4
5004042C	KBI-MC407/9.5-11 POM		•	•		•		4
5004042D	KBI-MC407/11-12.5 POM		•	•		•		4
5004042E	KBI-MC407/12.5-14 POM		•	•		•		4
5004042M	KBI-MC407/M20 POM		•	•		•	•	4
5004042N	KBI-MC407/M25 POM		•	•		•	•	4

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P/N	Description	Plug	Receptacle	Cable mount	Panel mount	Coupling	Adapter	HV-pins
5005010R	GB-MC507 POM		•		•			5
5005020R	GS-MC507 POM	•			•			5
5005030A	KS-MC507/6.5-8 POM	•		•				5
5005030B	KS-MC507/8-9.5 POM	•		•				5
5005030C	KS-MC507/9.5-11 POM	•		•				5
5005030D	KS-MC507/11-12.5 POM	•		•				5
5005030E	KS-MC507/12.5-14 POM	•		•				5
5005030M	KS-MC507/M20 POM	•		•			•	5
5005030N	KS-MC507/M25 POM	•		•			•	5
5005040A	KB-MC507/6.5-8 POM		•	•				5
5005040B	KB-MC507/8-9.5 POM		•	•				5
5005040C	KB-MC507/9.5-11 POM		•	•				5
5005040D	KB-MC507/11-12.5 POM		•	•				5
5005040E	KB-MC507/12.5-14 POM		•	•				5
5005040M	KB-MC507/M20 POM		•	•			•	5
5005040N	KB-MC507/M25 POM		•	•			•	5
5005042A	KBI-MC507/6.5-8 POM		•	•		•		5
5005042B	KBI-MC507/8-9.5 POM		•	•		•		5
5005042C	KBI-MC507/9.5-11 POM		•	•		•		5
5005042D	KBI-MC507/11-12.5 POM		•	•		•		5
5005042E	KBI-MC507/12.5-14 POM		•	•		•		5
5005042M	KBI-MC507/M20 POM		•	•		•	•	5
5005042N	KBI-MC507/M25 POM		•	•		•	•	5
5005115R	GB-MC520 PTFE		•		•			5
5005125R	GS-MC520 PTFE	•			•			5
5005135A	KS-MC520/6.5-8 PTFE	•		•				5
5005135B	KS-MC520/8-9.5 PTFE	•		•				5
5005135C	KS-MC520/9.5-11 PTFE	•		•				5
5005135D	KS-MC520/11-12.5 PTFE	•		•				5
5005135E	KS-MC520/12.5-14 PTFE	•		•				5
5005135M	KS-MC520/M20 PTFE	•		•			•	5
5005135N	KS-MC520/M25 PTFE	•		•			•	5
5005145A	KB-MC520/6.5-8 PTFE		•	•				5
5005145B	KB-MC520/8-9.5 PTFE		•	•				5
5005145C	KB-MC520/9.5-11 PTFE		•	•				5
5005145D	KB-MC520/11-12.5 PTFE		•	•				5
5005145E	KB-MC520/12.5-14 PTFE		•	•				5
5005145M	KB-MC520/M20 PTFE		•	•			•	5
5005145N	KB-MC520/M25 PTFE		•	•			•	5
5005146A	KBI-MC520/6.5-8 PTFE		•	•		•		5
5005146B	KBI-MC520/8-9.5 PTFE		•	•		•		5
5005146C	KBI-MC520/9.5-11 PTFE		•	•		•		5
5005146D	KBI-MC520/11-12.5 PTFE		•	•		•		5
5005146E	KBI-MC520/12.5-14 PTFE		•	•		•		5
5005146M	KBI-MC520/M20 PTFE		•	•		•	•	5
5005146N	KBI-MC520/M25 PTFE		•	•		•	•	5

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Steps	Parts				
1 Choose connector type Example: 2-pin *(page 100-109)*	Receptacle, panel mount	Plug, panel mount	Receptacle, cable mount	Plug, cable mount	Coupling, cable mount
2 Choose contacts *(page 110)*	Female contact	Male contact	Female contact	Male contact	Female contact
3 Choose accessories (optional) *(page 111-112)*	Gaskets Coverings				

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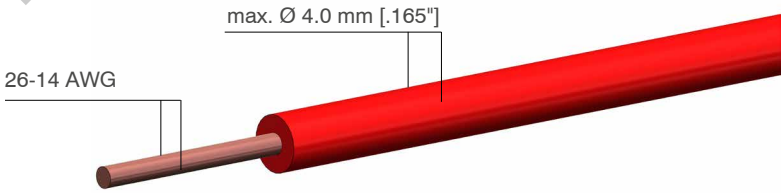
General characteristics and technical data Series MC

Housing	
Locking system	Threaded coupling
Mounting type (panel mount connector)	4-hole flange
Housing material basis / adapter	Brass (CuZn)
Surface plating	Nickel (Ni)
Protection class (mated connector)	IP60 (IP65 on request)
Operating temperature	-30°C to +80°C [-22°F to +176°F]

Contacts 1.6 mm	
Termination method	Solder / crimp
Rated current	13 A
Contact resistance	≤ 5 mΩ
Contact diameter	1.6 mm [.063"]
Wire size	0.14 mm²-2.5 mm² [26-14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag) / gold (Au)
Mating cycles	≥ 1,000

Insulator	
Number of contacts	2, 3, 4, 5
Insulation material	PTFE / POM
CTI value	600
Flammability class PTFE	UL94 V-0
Flammability class POM	UL94 HB
Operating temperature PTFE	-50°C to +200°C [-58°F to +392°F]
Operating temperature POM	-30°C to +120°C [-22°F to +248°F]
Insulating material group PTFE / POM	I (DIN IEC 60664)

Suitable cable dimensions (single wire)



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Type MC207 **2-pin 10 kV DC**

Plug, cable mount / Receptacle, panel mount / Receptacle, coupling, cable mount

Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	13 A

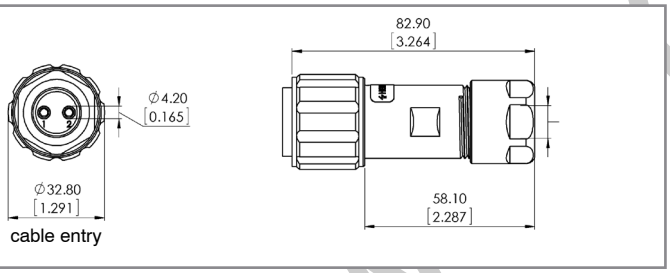
Characteristics	
Number of pins	2
Insulation material	POM

Type / Version / Part number	Picture / Drawing

KS-MC207

Plug, cable mount with integrated cable gland

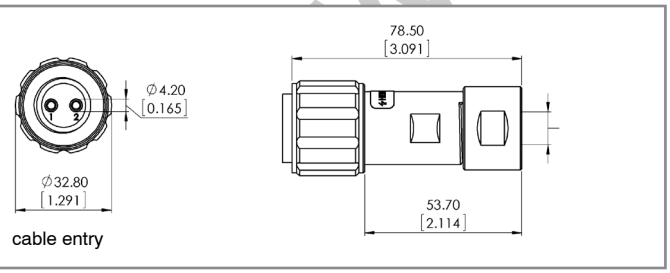
Part no.	Clamping range
5002030A	6.5 - 8 mm [.256" - .315"]
5002030B	8 - 9.5 mm [.315" - .374"]
5002030C	9.5 - 11 mm [.374" - .433"]
5002030D	11 - 12.5 mm [.433" - .492"]
5002030E	12.5 - 14 mm [.492" - .551"]



KS-MC207

Plug, cable mount with adapter M20/M25 for external cable gland

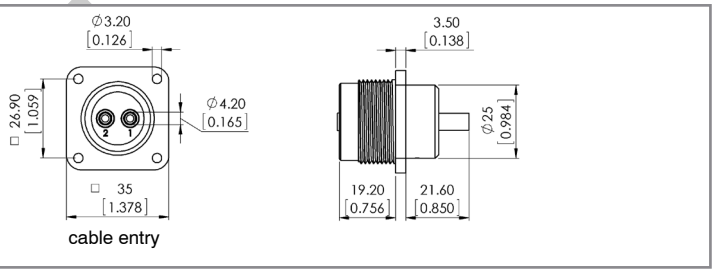
Part no.	Connecting thread
5002030M	M20 x 1.5
5002030N	M25 x 1.5



GB-MC207

Receptacle, panel mount

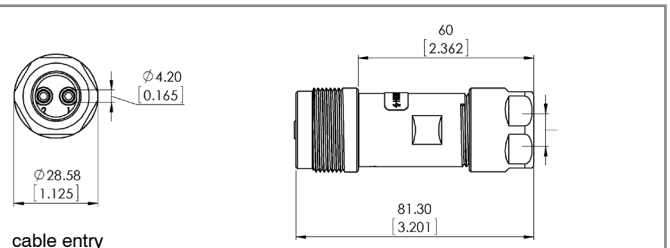
Part no. 5002010R



KBI-MC207

Receptacle, coupling, cable mount with integrated cable gland

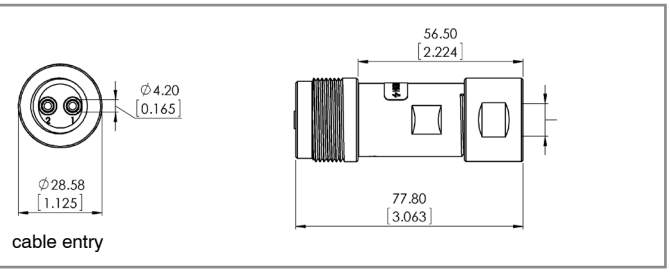
Part no.	Clamping range
5002041A	6.5 - 8 mm [.256" - .315"]
5002041B	8 - 9.5 mm [.315" - .374"]
5002041C	9.5 - 11 mm [.374" - .433"]
5002041D	11 - 12.5 mm [.433" - .492"]
5002041E	12.5 - 14 mm [.492" - .551"]



KBI-MC207

Receptacle, coupling, cable mount with adapter M20/M25 for external cable gland

Part no.	Connecting thread
5002041M	M20 x 1.5
5002041N	M25 x 1.5



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC207 **2-pin 10 kV DC**

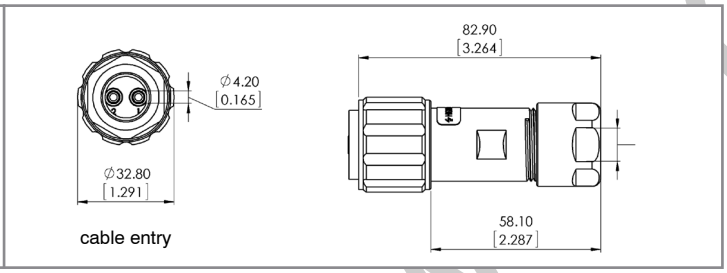
Receptacle, cable mount / Plug, panel mount

Type / Version / Part number	Picture / Drawing

KB-MC207

Receptacle, cable mount with integrated cable gland

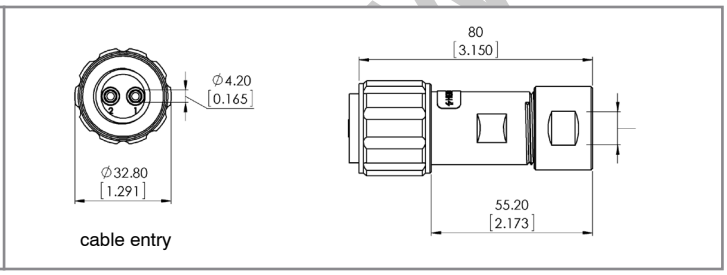
Part no.	Clamping range
5002040A	6.5 - 8 mm [.256" - .315"]
5002040B	8 - 9.5 mm [.315" - .374"]
5002040C	9.5 - 11 mm [.374" - .433"]
5002040D	11 - 12.5 mm [.433" - .492"]
5002040E	12.5 - 14 mm [.492" - .551"]



KB-MC207

Receptacle, cable mount with adapter M20/M25 for external cable gland

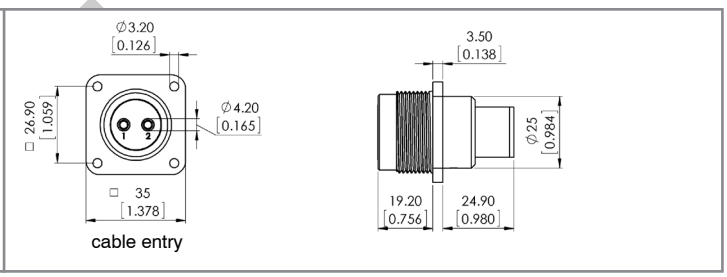
Part no.	Connecting thread
5002040M	M20 x 1.5
5002040N	M25 x 1.5



GS-MC207

Plug, panel mount

Part no. 5002020R



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC307 **3-pin 10 kV DC**

Plug, cable mount / Receptacle, panel mount / Receptacle, coupling, cable mount

Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	13 A

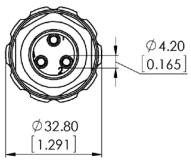
Characteristics	
Number of pins	3
Insulation material	POM

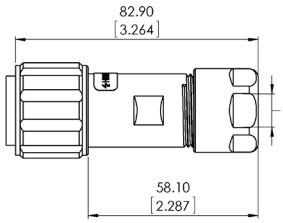
Type / Version / Part number	Picture / Drawing

KS-MC307

Plug, cable mount with integrated cable gland

Part no.	Clamping range
5003030A	6.5 - 8 mm [.256" - .315"]
5003030B	8 - 9.5 mm [.315" - .374"]
5003030C	9.5 - 11 mm [.374" - .433"]
5003030D	11 - 12.5 mm [.433" - .492"]
5003030E	12.5 - 14 mm [.492" - .551"]

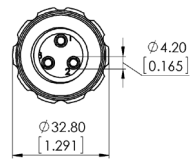


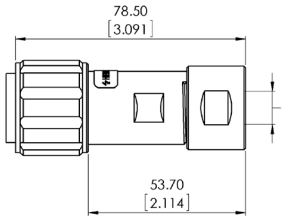


KS-MC307

Plug, cable mount with adapter M20/M25 for external cable gland

Part no.	Connecting thread
5003030M	M20 x 1.5
5003030N	M25 x 1.5

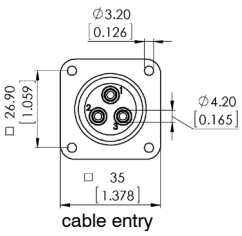


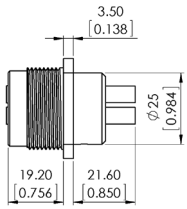


GB-MC307

Receptacle, panel mount

Part no. 5003010R

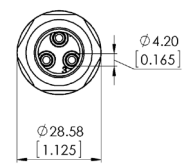


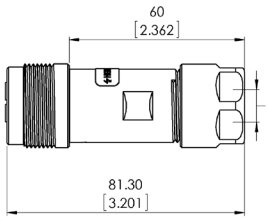


KBI-MC307

Receptacle, coupling, cable mount with integrated cable gland

Part no.	Clamping range
5003041A	6.5 - 8 mm [.256" - .315"]
5003041B	8 - 9.5 mm [.315" - .374"]
5003041C	9.5 - 11 mm [.374" - .433"]
5003041D	11 - 12.5 mm [.433" - .492"]
5003041E	12.5 - 14 mm [.492" - .551"]

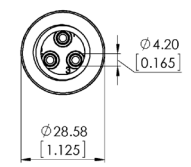


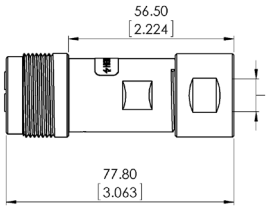


KBI-MC307

Receptacle, coupling, cable mount with adapter M20/M25 for external cable gland

Part no.	Connecting thread
5003041M	M20 x 1.5
5003041N	M25 x 1.5





drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC307 **3-pin 10 kV DC**

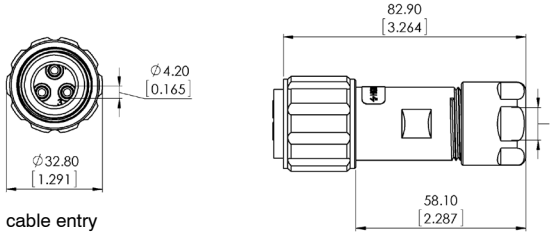
Receptacle, cable mount / Plug, panel mount

Type / Version / Part number	Picture / Drawing

KB-MC307

Receptacle, cable mount with integrated cable gland

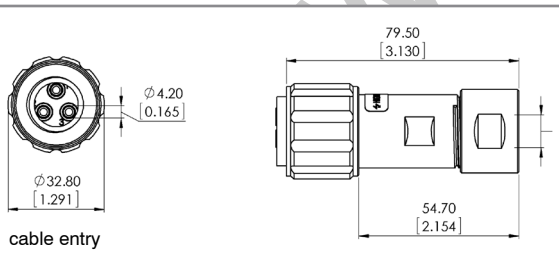
Part no.	Clamping range
5003040A	6.5 - 8 mm [.256" - .315"]
5003040B	8 - 9.5 mm [.315" - .374"]
5003040C	9.5 - 11 mm [.374" - .433"]
5003040D	11 - 12.5 mm [.433" - .492"]
5003040E	12.5 - 14 mm [.492" - .551"]



KB-MC307

Receptacle, cable mount with adapter M20/M25 for external cable gland

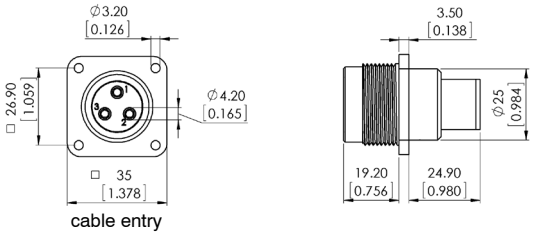
Part no.	Connecting thread
5003040M	M20 x 1.5
5003040N	M25 x 1.5



GS-MC307

Plug, panel mount

Part no. 5003020R



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC407 **4-pin 10 kV DC**

Plug, cable mount / Receptacle, panel mount / Receptacle, coupling, cable mount

Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	13 A

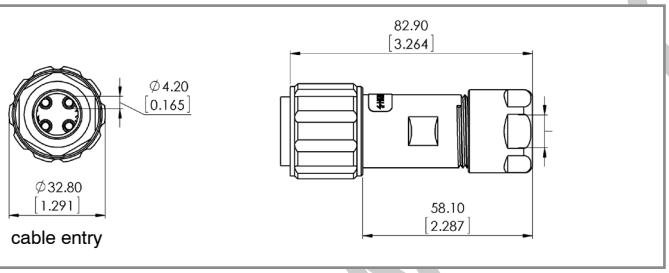
Characteristics	
Number of pins	4
Insulation material	POM

Type / Version / Part number	Picture / Drawing

KS-MC407

Plug, cable mount with integrated cable gland

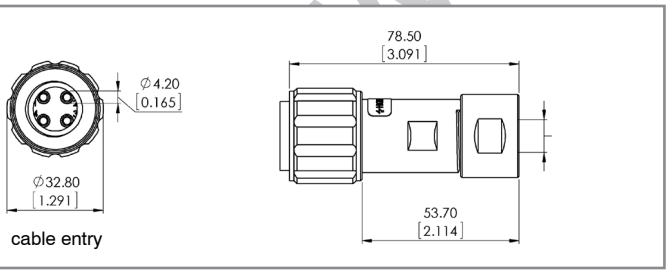
Part no.	Clamping range
5004030A	6.5 - 8 mm [.256" - .315"]
5004030B	8 - 9.5 mm [.315" - .374"]
5004030C	9.5 - 11 mm [.374" - .433"]
5004030D	11 - 12.5 mm [.433" - .492"]
5004030E	12.5 - 14 mm [.492" - .551"]



KS-MC407

Plug, cable mount with adapter M20/M25 for external cable gland

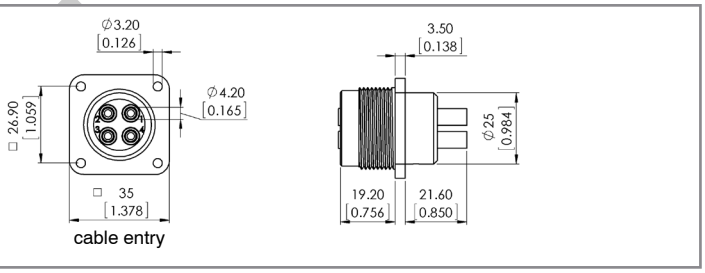
Part no.	Connecting thread
5004030M	M20 x 1.5
5004030N	M25 x 1.5



GB-MC407

Receptacle, panel mount

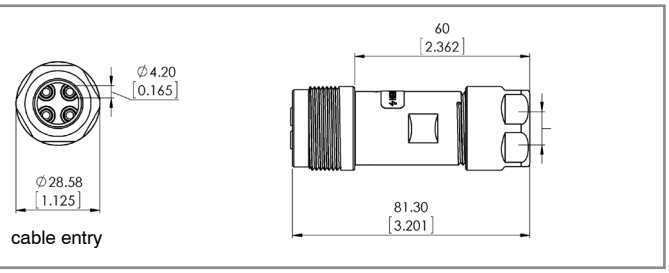
Part no. 5004010R



KBI-MC407

Receptacle, coupling, cable mount with integrated cable gland

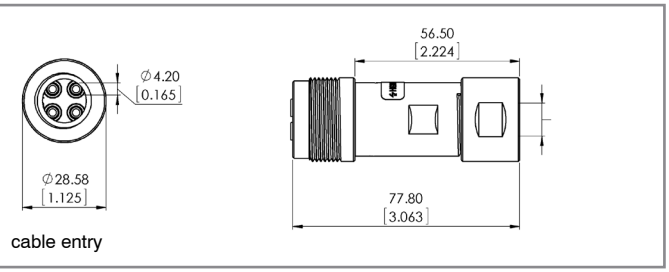
Part no.	Clamping range
5004042A	6.5 - 8 mm [.256" - .315"]
5004042B	8 - 9.5 mm [.315" - .374"]
5004042C	9.5 - 11 mm [.374" - .433"]
5004042D	11 - 12.5 mm [.433" - .492"]
5004042E	12.5 - 14 mm [.492" - .551"]



KBI-MC407

Receptacle, coupling, cable mount with adapter M20/M25 for external cable gland

Part no.	Connecting thread
5004042M	M20 x 1.5
5004042N	M25 x 1.5



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC407 **4-pin 10 kV DC**

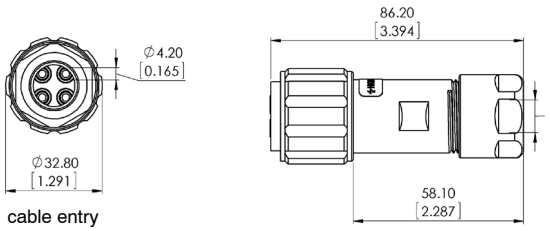
Receptacle, cable mount / Plug, panel mount

Type / Version / Part number	Picture / Drawing

KB-MC407

Receptacle, cable mount with integrated cable gland

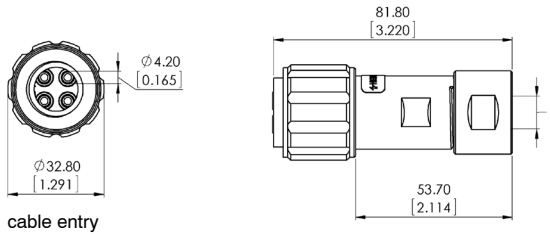
Part no.	Clamping range
5004040A	6.5 - 8 mm [.256" - .315"]
5004040B	8 - 9.5 mm [.315" - .374"]
5004040C	9.5 - 11 mm [.374" - .433"]
5004040D	11 - 12.5 mm [.433" - .492"]
5004040E	12.5 - 14 mm [.492" - .551"]



KB-MC407

Receptacle, cable mount with adapter M20/M25 for external cable gland

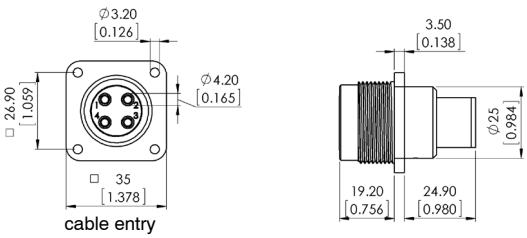
Part no.	Connecting thread
5004040M	M20 x 1.5
5004040N	M25 x 1.5



GS-MC407

Plug, panel mount

Part no. 5004020R



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC507 **5-pin 10 kV DC**

Plug, cable mount / Receptacle, panel mount / Receptacle, coupling, cable mount

Electrical values	
Operating voltage	10 kV DC
Test voltage	15 kV DC
Rated current	13 A

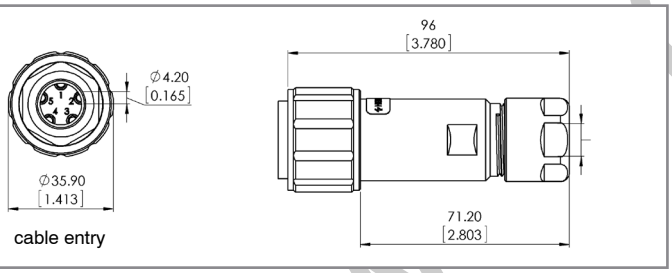
Characteristics	
Number of pins	5
Insulation material	POM

Type / Version / Part number	Picture / Drawing

KS-MC507

Plug, cable mount with integrated cable gland

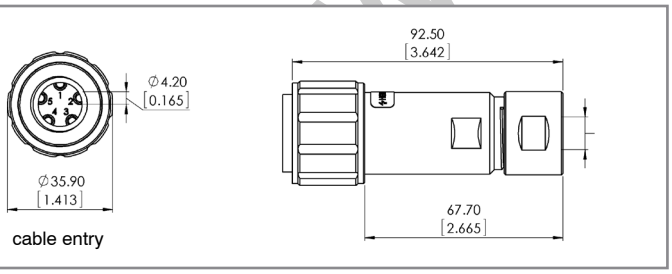
Part no.	Clamping range
5005030A	6.5 - 8 mm [.256" - .315"]
5005030B	8 - 9.5 mm [.315" - .374"]
5005030C	9.5 - 11 mm [.374" - .433"]
5005030D	11 - 12.5 mm [.433" - .492"]
5005030E	12.5 - 14 mm [.492" - .551"]



KS-MC507

Plug, cable mount with adapter M20/M25 for external cable gland

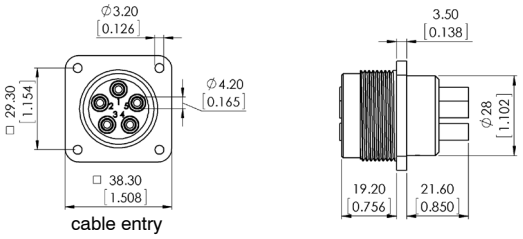
Part no.	Connecting thread
5005030M	M20 x 1.5
5005030N	M25 x 1.5



GB-MC507

Receptacle, panel mount

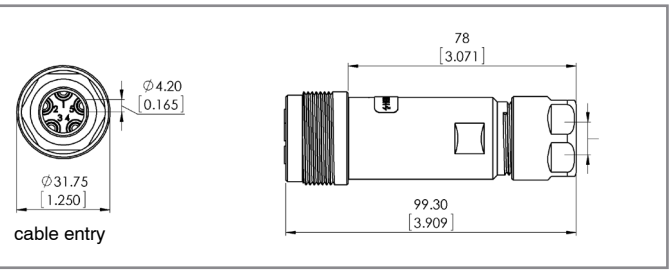
Part no. 5005010R



KBI-MC507

Receptacle, coupling, cable mount with integrated cable gland

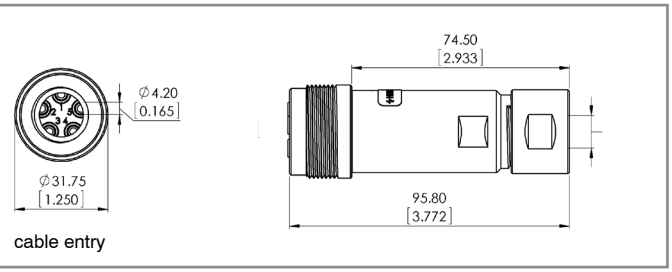
Part no.	Clamping range
5005042A	6.5 - 8 mm [.256" - .315"]
5005042B	8 - 9.5 mm [.315" - .374"]
5005042C	9.5 - 11 mm [.374" - .433"]
5005042D	11 - 12.5 mm [.433" - .492"]
5005042E	12.5 - 14 mm [.492" - .551"]



KBI-MC507

Receptacle, coupling, cable mount with adapter M20/M25 for external cable gland

Part no.	Connecting thread
5005042M	M20 x 1.5
5005042N	M25 x 1.5



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC507 **5-pin 10 kV DC**

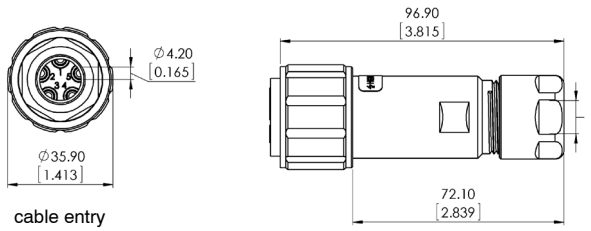
Receptacle, cable mount / Plug, panel mount

Type / Version / Part number	Picture / Drawing

KB-MC507

Receptacle, cable mount with integrated cable gland

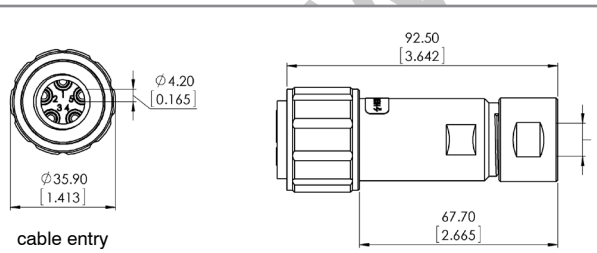
Part no.	Clamping range
5005040A	6.5 - 8 mm [.256" - .315"]
5005040B	8 - 9.5 mm [.315" - .374"]
5005040C	9.5 - 11 mm [.374" - .433"]
5005040D	11 - 12.5 mm [.433" - .492"]
5005040E	12.5 - 14 mm [.492" - .551"]



KB-MC507

Receptacle, cable mount with adapter M20/M25 for external cable gland

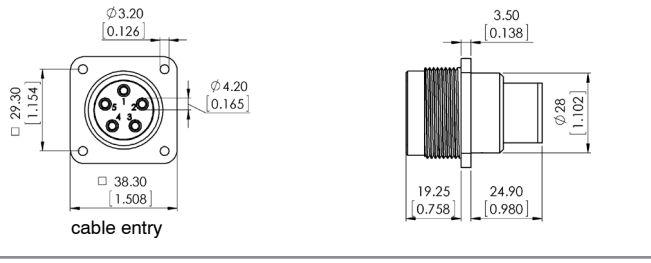
Part no.	Connecting thread
5005040M	M20 x 1.5
5005040N	M25 x 1.5



GS-MC507

Plug, panel mount

Part no. 5005020R



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC520 **5-pin 15 kV DC**

Plug, cable mount / Receptacle, panel mount / Receptacle, coupling, cable mount

Electrical values	
Operating voltage	15 kV DC
Test voltage	23 kV DC
Rated current	13 A

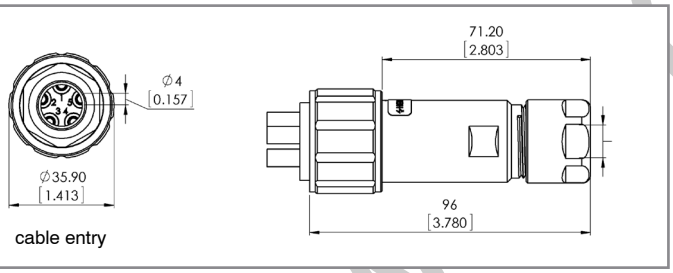
Characteristics	
Number of pins	5
Insulation material	PTFE

Type / Version / Part number	Picture / Drawing

KS-MC520

Plug, cable mount with integrated cable gland

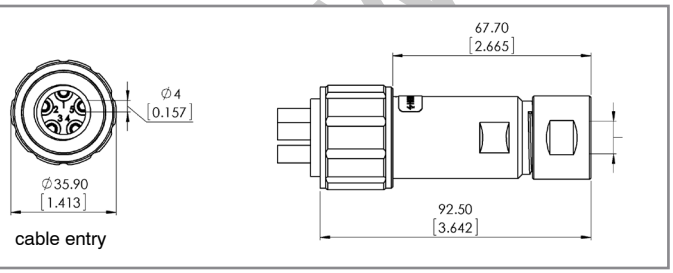
Part no.	Clamping range
5005135A	6.5 - 8 mm [.256" - .315"]
5005135B	8 - 9.5 mm [.315" - .374"]
5005135C	9.5 - 11 mm [.374" - .433"]
5005135D	11 - 12.5 mm [.433" - .492"]
5005135E	12.5 - 14 mm [.492" - .551"]



KS-MC520

Plug, cable mount with adapter M20/M25 for external cable gland

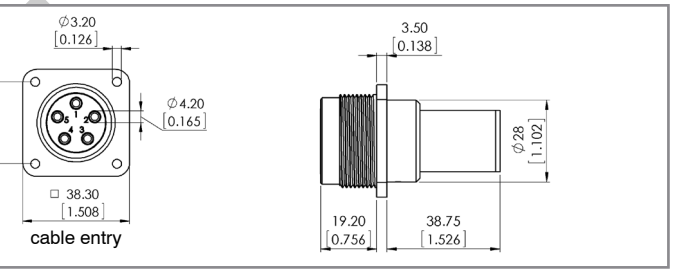
Part no.	Connecting thread
5005135M	M20 x 1.5
5005135N	M25 x 1.5



GB-MC520

Receptacle, panel mount

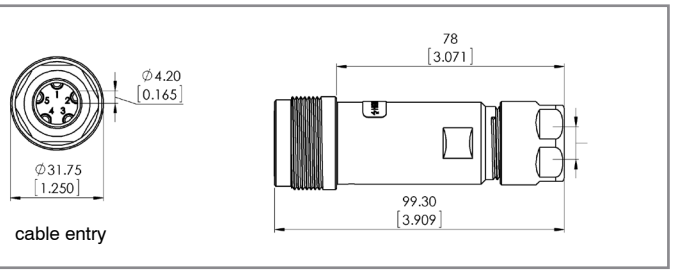
Part no. 5005115R



KBI-MC520

Receptacle, coupling, cable mount with integrated cable gland

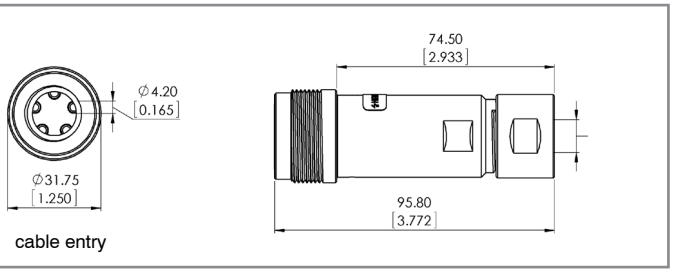
Part no.	Clamping range
5005146A	6.5 - 8 mm [.256" - .315"]
5005146B	8 - 9.5 mm [.315" - .374"]
5005146C	9.5 - 11 mm [.374" - .433"]
5005146D	11 - 12.5 mm [.433" - .492"]
5005146E	12.5 - 14 mm [.492" - .551"]



KBI-MC520

Receptacle, coupling, cable mount with adapter M20/M25 for external cable gland

Part no.	Connecting thread
5005146M	M20 x 1.5
5005146N	M25 x 1.5



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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Type MC520 **5-pin 15 kV DC**

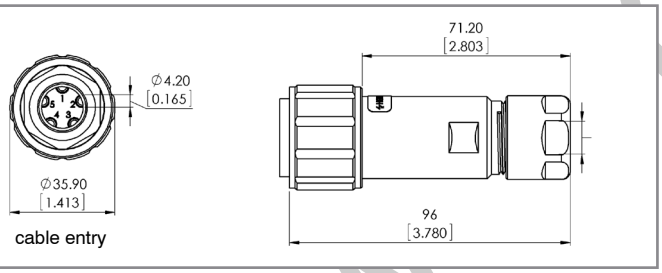
Receptacle, cable mount / Plug, panel mount

Type / Version / Part number	Picture / Drawing

KB-MC520

Receptacle, cable mount with integrated cable gland

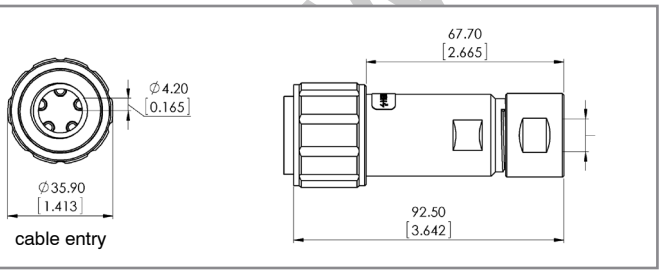
Part no.	Clamping range
5005145A	6.5 - 8 mm [.256" - .315"]
5005145B	8 - 9.5 mm [.315" - .374"]
5005145C	9.5 - 11 mm [.374" - .433"]
5005145D	11 - 12.5 mm [.433" - .492"]
5005145E	12.5 - 14 mm [.492" - .551"]



KB-MC520

Receptacle, cable mount with adapter M20/M25 for external cable gland

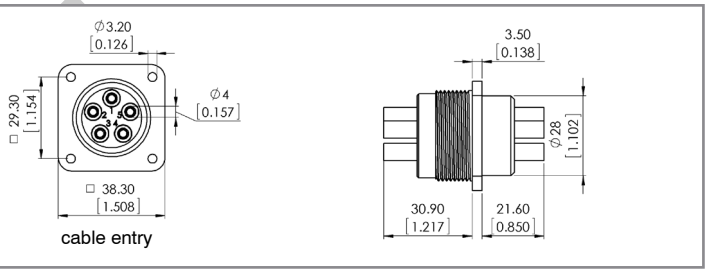
Part no.	Connecting thread
5005145M	M20 x 1.5
5005145N	M25 x 1.5



GS-MC520

Plug, panel mount

Part no. 5005125R



drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 110-112*
Mounting instructions: *Pages 113-124*

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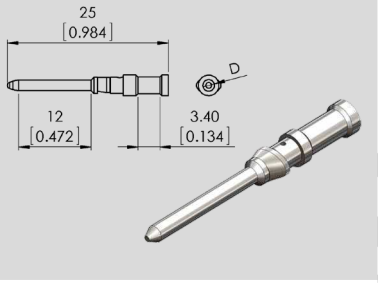
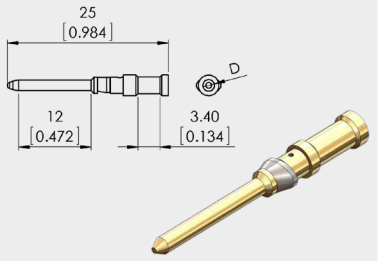
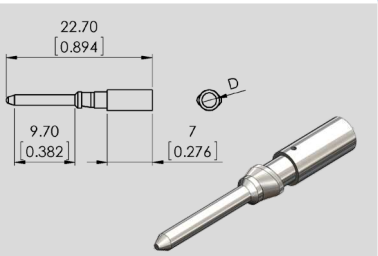
Male contacts 1.6 mm

Part no.	Description	Cross section in mm² (D)	AWG	Silver plated	Gold plated	Drawing
6575085	Male contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575086	Male contact 1.6 mm / 20 AWG	0.5	20	•		
6575088	Male contact 1.6 mm / 20-16 AWG	0.75-1.0	20-16	•		
6575090	Male contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575083	Male contact 1.6 mm / 14 AWG	2.5	14	•		
6575118	Male contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575121	Male contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575116	Male contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575124	Male contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575125	Male contact AU 1.6 mm / 14 AWG	2.5	14		•	

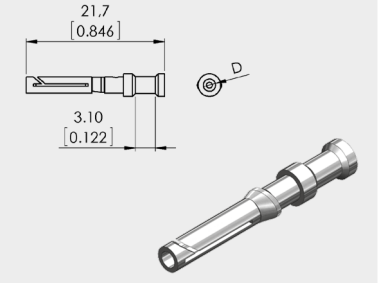
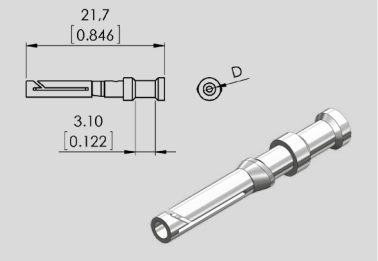
drawing - dimensions in mm [inch]

Male contact 1.6 mm interlock
for safety interlock circle

Part no.	Description	Cross section in mm² (D)	AWG	Silver plated	Gold plated	Drawing
6575079	Male contact interlock 1.6 mm / 14 AWG *Short version for safety interlock circle*	2.5	14	•		

drawing - dimensions in mm [inch]

Female contacts 1.6 mm

Part no.	Description	Cross section in mm² (D)	AWG	Silver plated	Gold plated	Drawing
6575095	Female contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575107	Female contact 1.6 mm / 20 AWG	0.5	20	•		
6575098	Female contact 1.6 mm / 20-16 AWG	0.75-1.0	20-16	•		
6575100	Female contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575084	Female contact 1.6 mm / 14 AWG	2.5	14	•		
6575127	Female contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575131	Female contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575117	Female contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575132	Female contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575133	Female contact AU 1.6 mm / 14 AWG	2.5	14		•	

drawing - dimensions in mm [inch]

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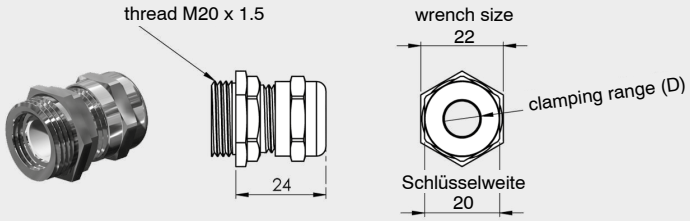
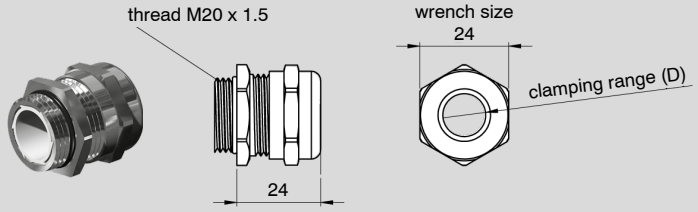
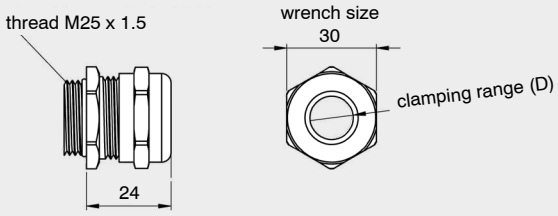
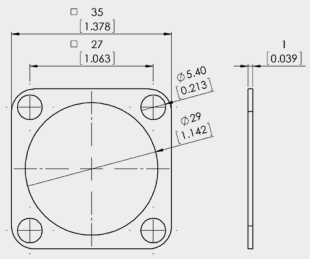
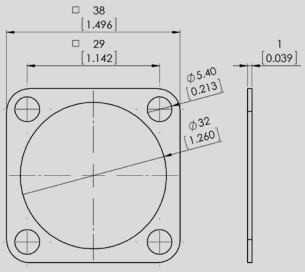
Screwed cable glands / Gaskets

For adapter versions: Screwed cable glands M20 / M25

Part no.	Description	Clamping range in mm (D)	Drawing
1674058	Screwed cable gland M20x1.5, 5-10 mm	5-10	
1674110	Screwed cable gland M20x1.5, 10-14 mm	10-14	
1674111	Screwed cable gland M20x1.5, 7-12 mm	7-12	
1674117	Screwed cable gland M25 x 1.5, 13-18 mm	13-18	
1674119	Screwed cable gland M25 x 1.5, 9-16 mm	9-16	

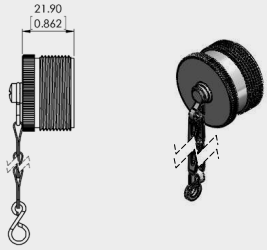
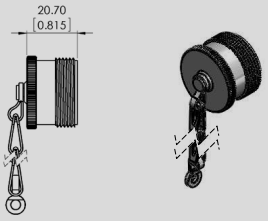
drawing - dimensions in mm [inch]

Gaskets

Part no.	Description	Drawing
6572081	Flat gasket for types GS/GB 207 - 407 (Size 18)	
6572054	Flat gasket for types GS/GB 507/520 (Size 20)	

drawing - dimensions in mm [inch]

Coverings with thread

P/N	Description	Mechanical drawing
1672070	Covering for types KS/KB 507	 chain length min. 120 mm
1672072	Covering for types KS/KB 207 - 407	 chain length min. 120 mm

drawing - dimensions in mm [inch]

Tools

Part No.	Description	Connector types
3000001	Extracting tool for contacts 1.6 mm - male and female	MC 207 - 507
3000015	Crimping tool for contacts 1.6 mm - male and female incl. pliers, contact holder and crimping cheeks	MC 207 - 507, MC 520
3000050	Screwdriver for threaded pin size M3	MC 207 - 507, MC 520

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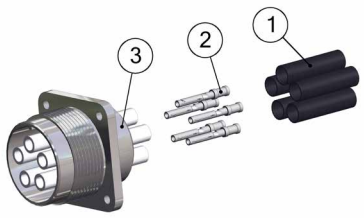
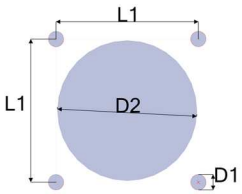
Assembly Instructions Series MC - type 207-507 receptacle, panel mount

1.



Part as supplied.
Shrinking tubes (1), female contacts (2), connector housing (3).

2.



Panel cut out

Type	L1 mm [inch]	D1 mm [inch]	D2 mm [inch]
GB 207 / 307 / 407	26.90 [1.059"]	3.00 [.118"]	26.00 [1.024"]
GB 507	29.30 [1.154"]	3.00 [.118"]	29.00 [1.142"]

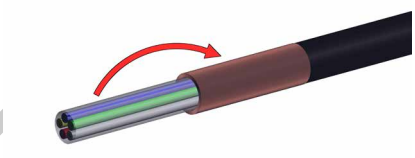
3.

Carefully remove cable jacket.

Type	L2 mm [inch]
GB 207 / 307 / 407 / 507	min. 45 [1.772"]

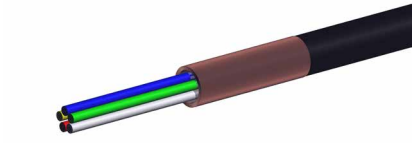
⚠ Do not damage metal shield braid.

4.



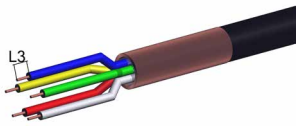
Fold the shield braid back.

5.



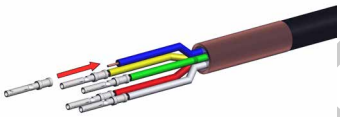
Remove any filling elements from cable.

6.



Remove dielectric insulation of single wires (L3 = 5 - 8 mm [.197" - .315"]).

7.



Crimp or solder one female contact (2) on each conductor.
⚠ For soldering: Tin-solder must not remain on contact surface!

8.

Put shrinking tubes (1) on insulation tubes on rear side of connector housing (3).

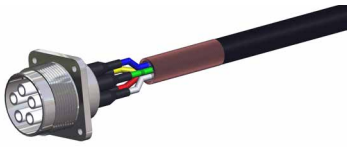
9.

Slide contacts (2) completely into insulation tubes until contacts snap into place.
💬 Pull gently to check if the contacts are correctly fixed to their positions.

10.

Shrink tubes - shrinking temperature 110°C [+230°F].

11.



Assembly finished.

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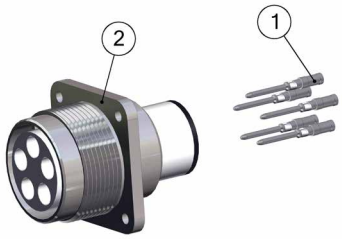
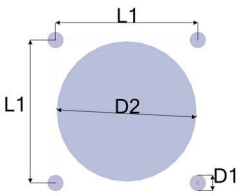
Assembly Instructions Series MC - type 207-507 plug, panel mount

1.



Part as supplied.
Male contacts (1), connector housing (2).

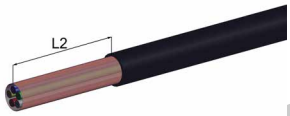
2.



Panel cut out

Type	L1 mm [inch]	D1 mm [inch]	D2 mm [inch]
GS 207 / 307 / 407	26.90 [1.059"]	3.00 [.118"]	26.00 [1.024"]
GS 507	29.30 [1.154"]	3.00 [.118"]	29.00 [1.142"]

3.

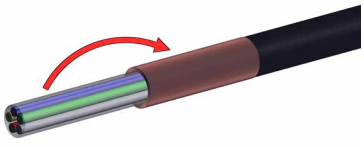


Carefully remove cable jacket.

Type	L2 mm [inch]
GS 207 / 307 / 407 / 507	min. 45 [1.772"]

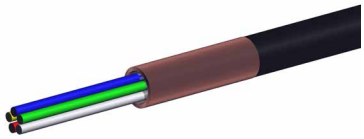
⚠ Do not damage metal shield braid.

4.



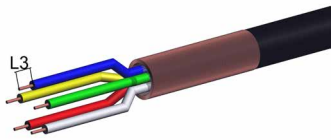
Fold back shield braid.

5.



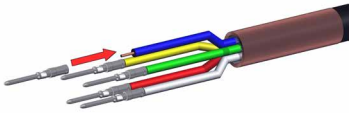
Remove any filling elements from cable.

6.



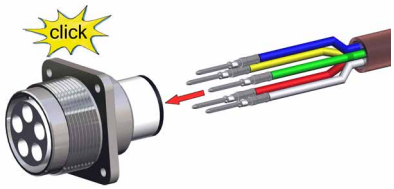
Remove dielectric insulation of single wires (L3 = 5 - 8 mm [.197" - .315"]).

7.



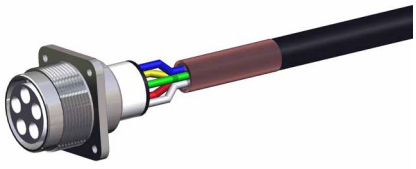
Crimp or solder one male contact (1) on each conductor.
⚠ For soldering: Tin-solder must not remain on contact surface!

8.



Slide contacts (1) completely into connector shell (2) until contacts snap into place.
Pull gently to check if the contacts are correctly fixed to their positions.

9.



Assembly finished.

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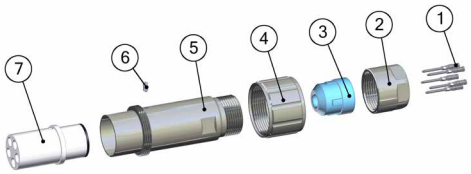
Assembly Instructions Series MC - type 207-507 plug, cable mount

1.

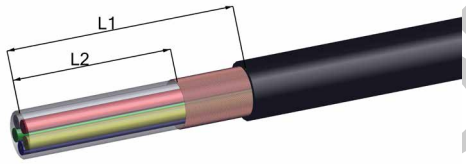


Part as supplied
Male contacts (1), cap (2), sealing insert (3), screw joint (4), basis (5), threaded pin (6), insulation insert (7).

2.

Place cap (2), sealing insert (3), screw joint (4) and basis (5) onto cable.

3.

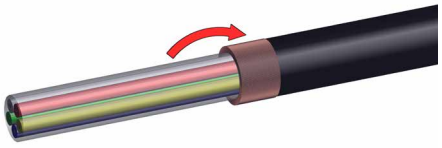


Remove cable jacket.

Type	L1 mm [inch]	L2 mm [inch]
KS 207 / 307 / 407 / 507	50 [1.968"]	35 [1.377"]

⚠ Do not damage metal shield braid.

4.



Fold back shield braid over jacket.

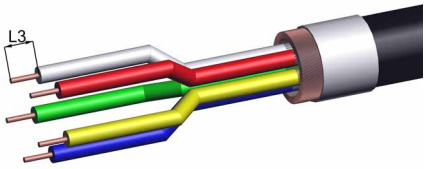
5.

Fix shield braid with tape.

6.

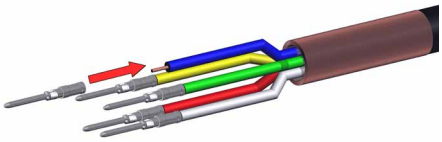
Remove any filling elements from cable.

7.



Remove dielectric insulation (L3 = 5-8 mm [.197" - .315"]).

8.



Crimp or solder male contacts (1) on conductor.
⚠ For soldering: Tin-solder must not remain on contact surface.

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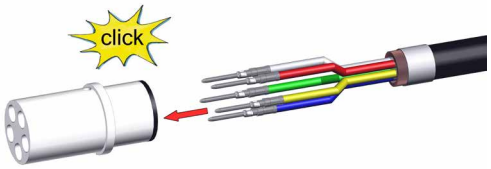
Assembly Instructions Series MC - type 207-507 plug, cable mount

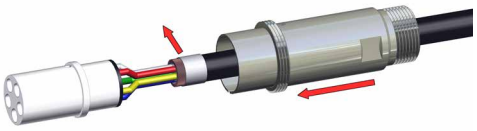
9.



Slide contacts completely into insulation insert (7) until contacts snap into place.

Pull gently to check if the contacts are correctly fixed to their positions.

10.



Remove tape and place basis (5) onto insulation insert (7).

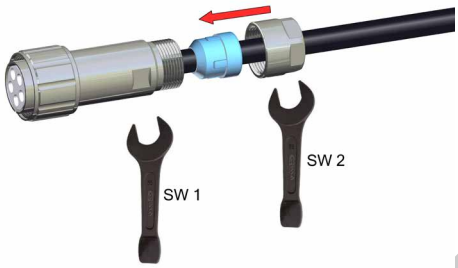
11.

Secure insulation insert (7) with threaded pin (6), then screw joint (4) onto basis (5).

12.

Widen shield braid.

13.



Insert sealing (3) completely and screw cap (2) onto basis (5).

Cable gland type	SW 1	SW 2
KS 207 / 307 / 407	23	26
KS 507	26	26

Tightening torque is 7 Nm.

14.

Assembly finished.

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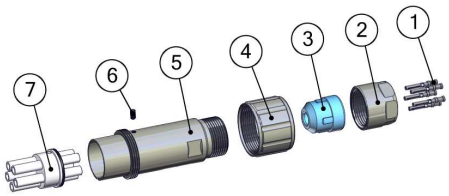
Assembly Instructions
Series MC - type 207-507
receptacle cable mount & coupling

1.

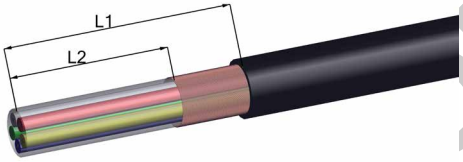


Part as supplied.
Female contacts (1), cap (2), sealing insert (3), screw joint (4), basis (5), threaded pin (6), insulation insert (7).

2.

Place cap (2), sealing insert (3), screw joint (4) and basis (5) onto cable.

3.

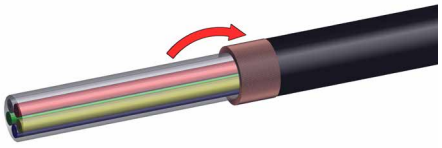


Remove cable jacket.

Type	L1 mm [inch]	L2 mm [inch]
KS 207 / 307 / 407 / 507	50 [1.968"]	35 [1.377"]

⚠ Do not damage metal shield braid.

4.



Fold back shield braid over jacket.

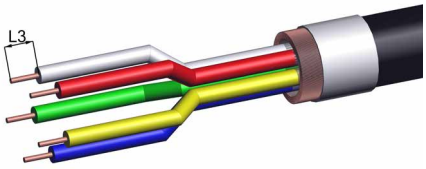
5.

Fix shield braid with tape.

6.

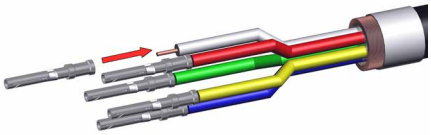
Remove any filling elements from cable.

7.



Remove dielectric insulation (L3 = 5-8 mm [.197" - .315"]).

8.



Crimp or solder female contacts (1) on conductor.
⚠ For soldering: Tin-solder must not remain on contact surface.

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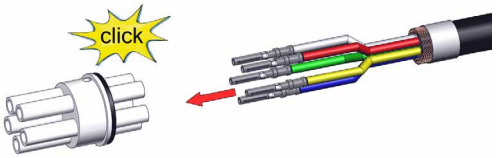
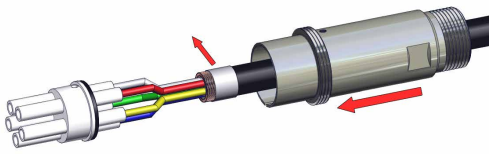
Assembly Instructions
Series MC - type 207-507
receptacle cable mount & coupling

9.



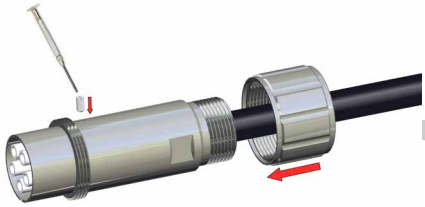
Slide female contacts completely into insulation insert until contacts snap into place.
Pull gently to check if the contacts are correctly fixed to their positions.

10.



Remove tape and place basis (5) onto insulation insert (7).

11.

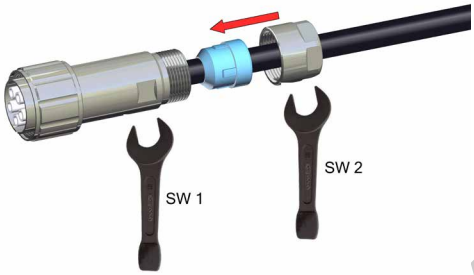


Secure insulation insert (7) with threaded pin (6), then screw joint (4) onto basis (5).

12.

Widen shield braid.

13.



Insert sealing (3) completely and screw cap (2) onto basis (5).

Cable gland type	SW 1	SW 2
KB 207 / 307 / 407	23	26
KB 507	26	26

Tightening torque is 7 Nm.

14.

Assembly finished.

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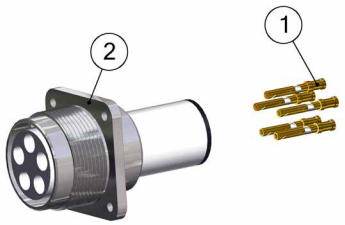
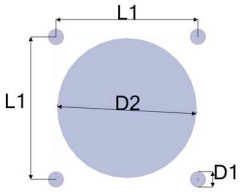
Assembly Instructions Series MC - type 520 receptacle, panel mount

1.



Part as supplied.
Female contacts (1), connector housing (2).

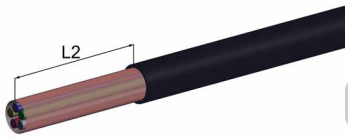
2.



Panel cut out

Type	L1 mm [inch]	D1 mm [inch]	D2 mm [inch]
GB 520	29.30 [1.154"]	3.00 [.118"]	28.70 [1.142"]

3.

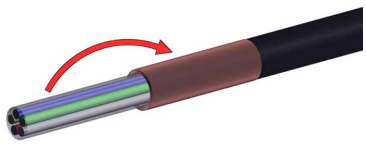


Carefully remove cable jacket.

Type	L2 mm [inch]
GB 520	min. 60 [2.362"]

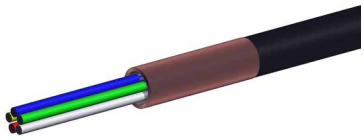
⚠ Do not damage metal shield braid.

4.



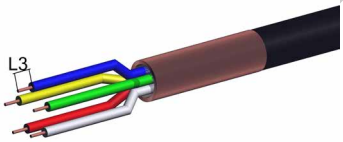
Fold back shield braid.

5.



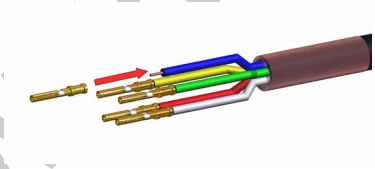
Remove any filling elements from cable.

6.



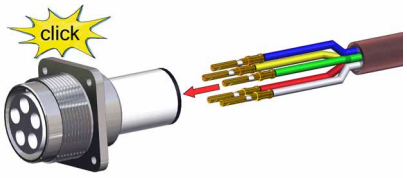
Remove dielectric insulation of single wires (L3 = 5-8 mm [.197" - .315"]).

7.



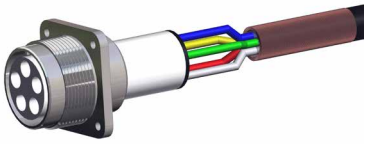
Crimp or solder one female contact (1) each on every conductor.
⚠ For soldering: Tin-solder must not remain on contact surface!

8.



Slide contacts completely into connector shell until contacts snap into place.
Pull gently to check if the contacts are correctly fixed to their positions.

9.



Assembly finished.

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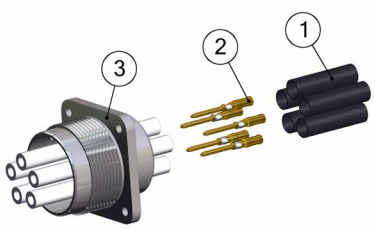
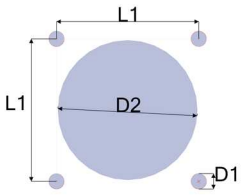
Assembly Instructions Series MC - type 520 plug, panel mount

1.



Part as supplied.
Shrinking tubes (1), male contacts (2), connector housing (3).

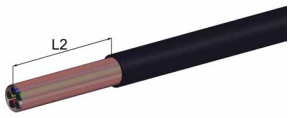
2.



Panel cut out

Type	L1 mm [inch]	D1 mm [inch]	D2 mm [inch]
GS 520	29.30 [1.154"]	3.00 [.118"]	29.00 [1.142"]

3.

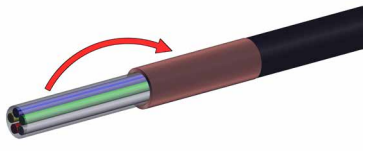


Carefully remove cable jacket.

Type	L2 mm [inch]
GS 520	min. 60 [2.362"]

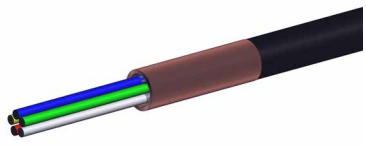
⚠ Do not damage metal shield braid.

4.



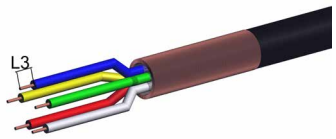
Fold back shield braid.

5.



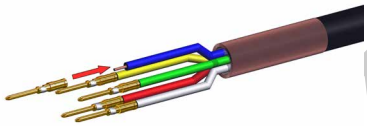
Remove any filling elements from cable.

6.



Remove dielectric insulation of single wires (L3 = 5-8 mm [.197" - .315"]).

7.

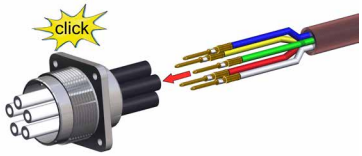


Crimp or solder one male contact (1) each on every conductor.
For soldering: Tin-solder must not remain on contact surface!

8.

Put shrinking tubes on insulation tubes on back of connector housing.

9.

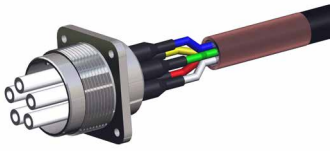


Slide contacts completely into insulation tubes until contacts snap into place.
Pull gently to check if the contacts are correctly fixed to their positions.

10.

Shrink tubes - shrinking temperature 110°C [+230°F].

11.



Assembly finished.

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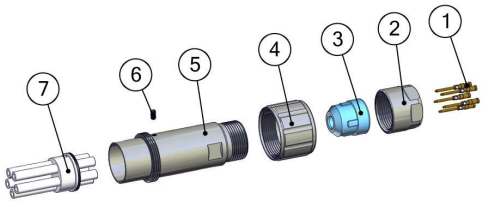
Assembly Instructions Series MC - type 520 plug, cable mount

1.

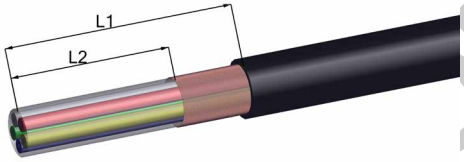


Part as supplied.
Male contacts (1), cap (2), sealing insert (3), screw joint (4), basis (5), threaded pin (6), insulation insert (7).

2.

Place cap (2), sealing insert (3), screw joint (4) and basis (5) onto cable.

3.

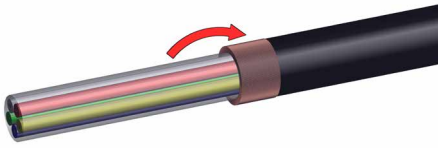


Remove cable jacket.

Type	L1 mm [inch]	L2 mm [inch]
KS 520	60 [2.362"]	45 [1.772"]

⚠ Do not damage metal shield braid.

4.



Fold back shield braid over jacket.

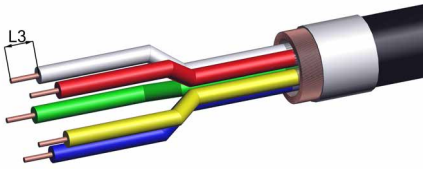
5.

Fix shield braid with tape.

6.

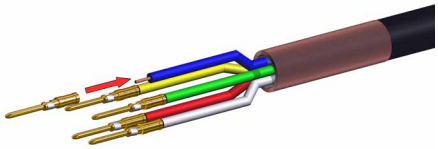
Remove any filling elements from cable.

7.



Remove dielectric insulation (L3 = 5-8 mm [.197" - .315"]).

8.



Crimp or solder male contacts (1) on conductor.
⚠ For soldering: Tin-solder must not remain on contact surface.

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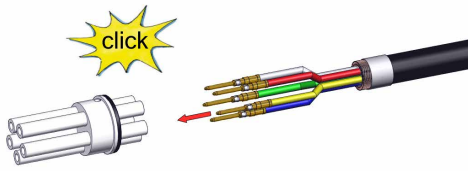
Assembly Instructions Series MC - type 520 plug, cable mount

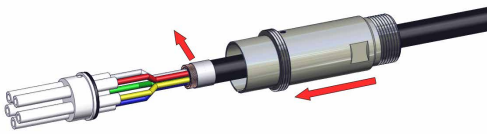
9.



Slide male contacts (1) completely into insulation tubes (7) until contacts snap into place.

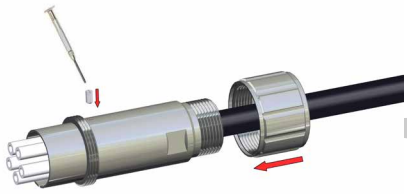
Pull gently to check if the contacts are correctly fixed to their positions.

10.



Remove tape and place basis (5) onto insulation insert (7).

11.

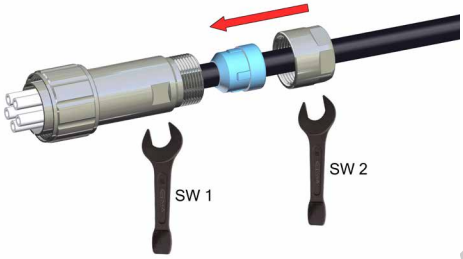


Secure insulation insert (7) with threaded pin (6), then screw joint (4) onto basis (5).

12.

Widen shield braid.

13.



Insert sealing (3) completely and screw cap (2) onto basis (5).

Cable gland type	SW 1	SW 2
KS 520	26	26

Tightening torque is 7 Nm.

14.

Assembly finished.

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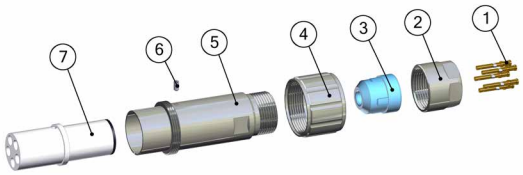
Assembly Instructions
Series MC - type 520
receptacle, cable mount & coupling

1.

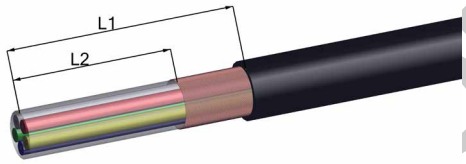


Part as supplied.
Female contacts (1), cap (2), sealing insert (3), screw joint (4), basis (5), threaded pin (6), insulation insert (7).

2.

Place cap (2), sealing insert (3), screw joint (4) and basis (5) onto cable.

3.

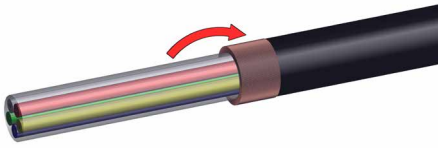


Remove cable jacket.

Type	L1 mm [inch]	L2 mm [inch]
KB 520	50 [1.968"]	35 [1.377"]

⚠ Do not damage metal shield braid.

4.



Fold back shield braid over jacket.

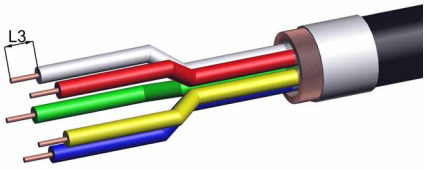
5.

Fix shield braid with tape.

6.

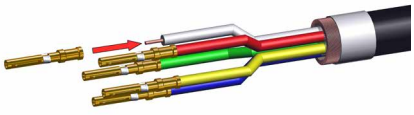
Remove any filling elements from cable.

7.



Remove dielectric insulation (L3 = 5-8 mm [.197" - .315"]).

8.



Crimp or solder female contacts (1) on conductor.
⚠ For soldering: Tin-solder must not remain on contact surface.

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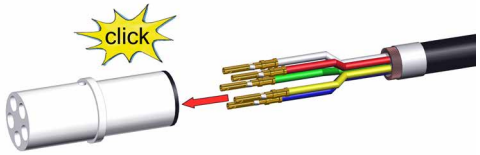
Assembly Instructions
Series MC - type 520
receptacle, cable mount & coupling

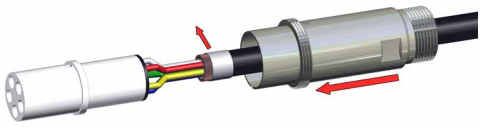
9.



Slide female contacts (1) completely into housing basis (7) until contacts snap into place.

Pull gently to check if the contacts are correctly fixed to their positions.

10.



Remove tape and place basis (5) onto insulation insert (7).

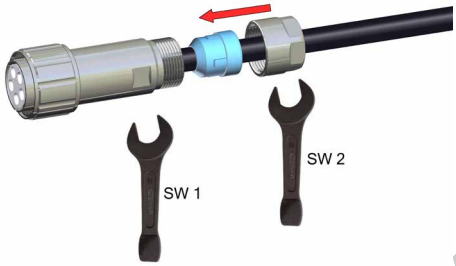
11.

Secure insulation insert (7) with threaded pin (6), then screw joint (4) onto basis (5).

12.

Widen shield braid.

13.



Insert sealing (3) completely and screw cap (2) onto basis (5).

Cable gland type	SW 1	SW 2
KB 520	26	26

Tightening torque is 7 Nm.

14.

Assembly finished.

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M Series

- Operating voltages up to 12 kV DC
- New type for voltages up to 30 kV DC
- Operating current 30 A
- Up to 9 HV contacts
- Configurations with LV contacts available
- Versions available with contacts in lead for safety interlock circles

WWW.DZY

1 *Series-M connectors already include contacts.*

2 *We offer two types of cable mount connectors:*

1) with symmetric cable gland included

2) with an open connecting thread for individual use such as screwed cable glands (not included) et al.

3 *Suitable screwed cable glands and adapters on page 152/153. Customers can also use their own cable glands.*

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General characteristics and technical data Series M

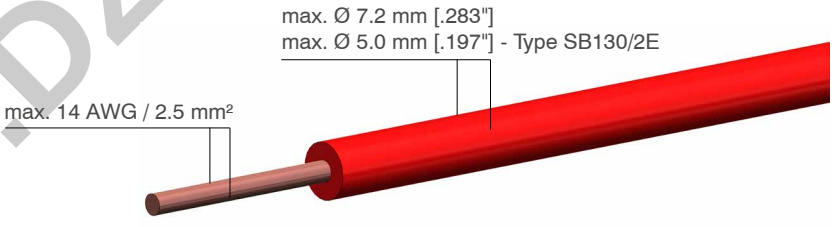
Housing	
Locking system	Threaded coupling
Mounting type (panel mount connector)	4-hole flange
Housing material	Brass (CuZn)
Surface plating	Nickel (Ni)
Protection class (mated connector)	IP54
Operating temperature	-30°C to +80°C [-22°F to +176°F]

HV-Contact 2.7 mm	
Termination method	Solder
Rated current	30 A
Max. operating current	40 A
Pulse current	3000 A
Contact resistance	300 $\mu\Omega$
Contact diameter	2.7 mm [.106"]
Wire size	2.5 mm² [14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Insertion / Withdrawal force	5.5 N / 4.0 N
Mating cycles	≥ 100,000
Rated temperature	+120°C [+248°F]

I-Contact (LV) 1.5 mm	
Termination method	Solder
Rated current	25 A
Max. operating current	35 A
Pulse current	1500 A
Contact resistance	500 $\mu\Omega$
Contact diameter	1.5 mm [.059"]
Wire size	1.5 mm² [16 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Insertion / Withdrawal force	2 N / 1.5 N
Mating cycles	≥ 100,000
Rated temperature	+120°C [+248°F]

Insulator	
Number of HV-contacts	2, 3, 5, 7, 9
Number of LV-contacts 1.5mm (optional)	0, 1, 2
Number of Earthing contacts (optional)	0, 1
Insulation material	PTFE / POM
Flammability class PTFE	UL94 V-0
Flammability class POM	UL94 HB
Operating temperature PTFE	-50°C to +200°C [-58°F to +392°F]
Operating temperature POM	-30°C to +120°C [-22°F to +248°F]
Insulating material group PTFE / POM	I (DIN IEC 60664)

Suitable cable dimensions (single wire)



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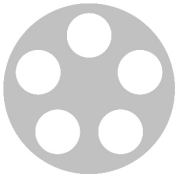
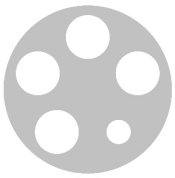
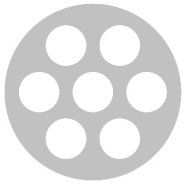
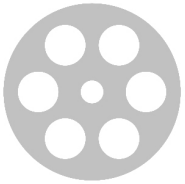
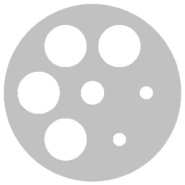
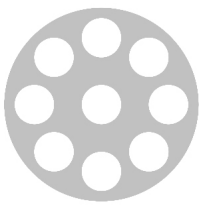
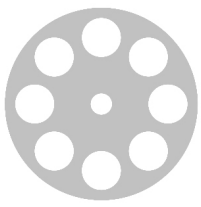
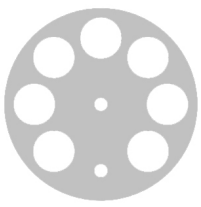
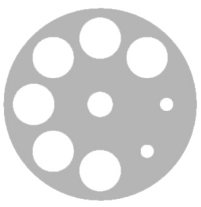
Housing size	Contact arrangements
M2	M130/2E *Page 131*
M3	M215 *Page 132* M215/1E *Page 133* M215/2I/1E *Page 134* M315 *Page 135* M315/2E *Page 136* M315/2I *Page 137*
M5	 M515 *Page 139*  M515/1E *Page 140*
M7	 M715 *Page 142*  M715/1E *Page 143*  M715/1I/1E *Page 144*
M9	 M915 *Page 146*  M915/1E *Page 147*  M915/2I *Page 148*  M915/2I/1E *Page 149*

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M2 / M3

Overview sizes M2 / M3

Size M2

P/N	Type / Description	Plug	Recep-tacle	Cable Mount		Panel mount	Insulation material		Number of contacts		
				Standard housing con-necting thread M20	Symmetric cable gland		POM	PTFE	HV 2.7 mm	LV 1.5 mm	LV 2.5 mm
7743005	S130/2E POM	•		•			•		1		2
7743010	B130/2E M20 POM 5-10 mm		•			•	•		1		2

Size M3

P/N	Type / Description	Plug	Recep-tacle	Cable Mount		Panel mount	Insulation material		Number of contacts		
				Standard housing con-necting thread M20	Symmetric cable gland		POM	PTFE	HV 2.7 mm	LV 1.5 mm	LV 2.5 mm
7743051	GB 215 POM		•			•	•		2		
7743041	GS 215 POM	•				•	•		2		
7743038	KB 215 POM Sym KV		•		•		•		2		
7743072	KB 215/M20 POM		•	•			•		2		
7743021	KS 215 POM Sym KV	•			•		•		2		
7743023	KS 215/M20 POM	•		•			•		2		
7743071	GB 215 PTFE		•			•		•	2		
7743077	GS 215 PTFE	•				•		•	2		
7743078	KB 215 PTFE Sym KV		•		•			•	2		
7743079	KB 215/M20 PTFE		•	•				•	2		
7743022	KS 215 PTFE Sym KV	•			•			•	2		
7743069	KS 215/M20 PTFE	•		•				•	2		
7743053	GB 215/1E POM		•			•	•		2		1
7743055	GS 215/1E POM	•				•	•		2		1
7743056	KB 215/1E POM Sym KV		•		•		•		2		1
7743076	KB 215/1E/M20 POM		•	•			•		2		1
7743054	KS 215/1E POM Sym KV	•			•		•		2		1
7743073	KS 215/1E/M20 POM	•		•			•		2		1
7743094	GB 215/1E PTFE		•			•		•	2		1
7743048	GS 215/1E PTFE	•				•		•	2		1
7743095	KB 215/1E PTFE Sym KV		•		•			•	2		1
7743096	KB 215/1E/M20 PTFE		•	•				•	2		1
7743097	KS 215/1E PTFE Sym KV	•			•			•	2		1
7743064	KS 215/1E/M20PTFE	•		•				•	2		1
7743052	GB 215/2I/1E POM		•			•	•		2	2	1
7743057	GS 215/2I/1E POM	•				•	•		2	2	1
7743098	KB 215/2I/1E POM Sym KV		•		•		•		2	2	1
7743058	KB 215/2I/1E/M20 POM		•	•			•		2	2	1
7743099	KS 215/2I/1E POM Sym KV	•			•		•		2	2	1
7743059	KS 215/2I/1E/M20 POM	•		•			•		2	2	1
7743070	GB 215/2I/1E PTFE		•			•		•	2	2	1
7743075	GS 215/2I/1E PTFE	•				•		•	2	2	1
7743101	KB 215/2I/1E PTFE Sym KV		•		•			•	2	2	1
7743080	KB 215/2I/1E/M20 PTFE		•	•				•	2	2	1
7743100	KS 215/2I/1E PTFE Sym KV	•			•			•	2	2	1
7743085	KS 215/2I/1E/M20 PTFE	•		•				•	2	2	1

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*HV = High Voltage
*LV = Low Voltage

M3

Overview size M3

P/N	Type / Description	Plug	Recep-tacle	Cable Mount		Panel mount	Insulation material		Number of contacts		
				Standard housing connecting thread M20	Symmetric cable gland		POM	PTFE	HV 2.7 mm	LV 1.5 mm	LV 2.5 mm
7430100	GB 315 POM		•			•	•		3		
7430200	GS 315 POM	•				•	•		3		
7430310	KB 315/M20 POM		•	•			•		3		
7430400	KS 315 POM Sym KV	•			•		•		3		
7430410	KS 315/M20 POM	•		•			•		3		
7430600	GB 315 PTFE		•			•		•	3		
7430700	GS 315 PTFE	•				•		•	3		
7430810	KB 315/M20 PTFE		•	•				•	3		
7430900	KS 315 PTFE Sym KV	•			•			•	3		
7430910	KS 315/M20 PTFE	•		•				•	3		
7743060	GB 315/2E POM		•			•	•		3		2
7743061	GS 315/2E POM	•				•	•		3		2
7743033	KB 315/2E/M20 POM		•	•			•		3		2
7743034	KS 315/2E POM Sym KV	•			•		•		3		2
7743102	KS 315/2E/M20 POM	•		•			•		3		2
7743036	GB 315/2I POM		•			•	•		3	2	
7743043	GS 315/2I POM	•				•	•		3	2	
7743042	KB 315/2I/M20 POM		•	•			•		3	2	
7743035	KS 315/2I POM Sym KV	•			•		•		3	2	
7743103	KS 315/2I/M20 POM	•		•			•		3	2	

*HV = High Voltage
*LV = Low Voltage

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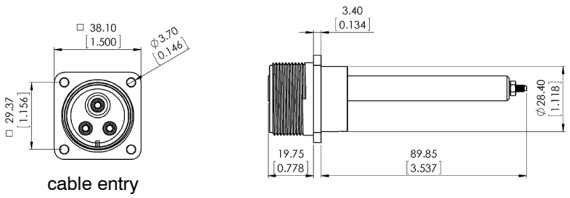
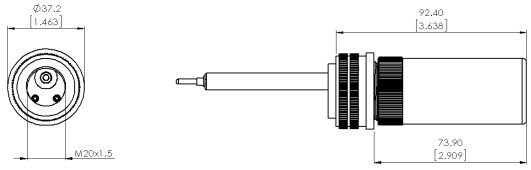
Type M130/2E **1(+2) Pin 30 kV DC**

Electrical values	
Operating voltage	30 kV DC
Test voltage	45 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	1
Number of pins E-contact 2.5 mm (LV)	2
Insulation material	POM

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount female contacts included **GB 130/2E/POM Part no. 7743010**	 cable entry
Type: plug, cable mount male contacts included **KS 130/2E/M20/POM Part no. 7743006**	 cable entry

drawing - dimensions in mm [inch]

E-Contact (LV) 2.5 mm and HV-Contact 2.5 mm for Type M130/2E	
E-Contact (LV) 2.5 mm	Solder
Rated current	30 A
Max. operating current	40 A
Pulse current	3000 A
Contact resistance	300 µΩ
Contact diameter	2.5 mm [.098"]
Wire size	2.5 mm² [14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Insertion / Withdrawal force	5.5 N / 4.0 N
Mating cycles	≥ 100,000
Rated temperature	+120°C [+248°F]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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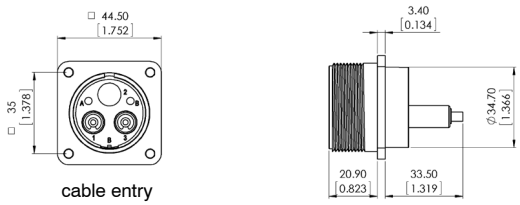
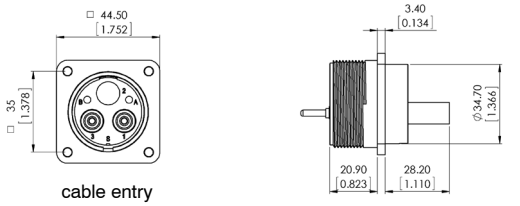
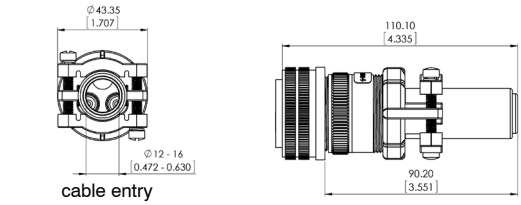
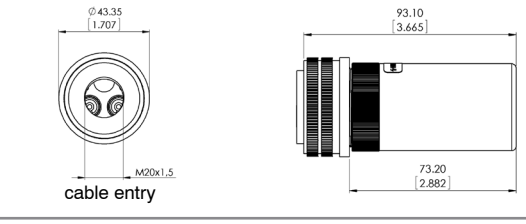
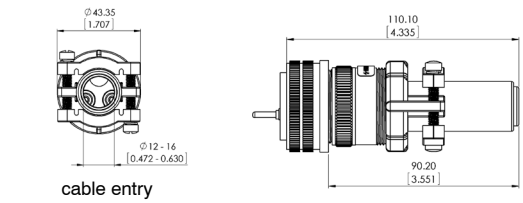
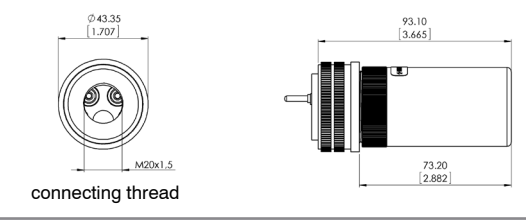
Type M215 **2 Pin 12 kV DC**

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	2
Number of pins E-contact 2.5 mm (LV)	-
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	POM or PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 215/POM** **Part no. 7743051** **Version: GB 215 PTFE** **Part no. 7743071**	
Type: plug, panel mount **Version: GS 215/POM** **Part no. 7743041** **Version: GS 215/PTFE** **Part no. 7743077**	
Type: receptacle, cable mount, with symmetric cable gland **Version: KB 215 POM/Sym KV** **Part no. 7743038** **Version: KB 215 PTFE/Sym KV** **Part no. 7743078**	
Type: receptacle, cable mount, connecting thread M20 **Version: KB 215/M20/POM** **Part no. 7743072** **Version: KB 215/M20/PTFE** **Part no. 7743079** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 215/POM/Sym KV** **Part no. 7743021** **Version: KS 215/PTFE/Sym KV** **Part no. 7743022**	
Type: plug, cable mount, connecting thread M20 **Version: KS 215/M20/POM** **Part no. 7743023** **Version: KS 215/M20/PTFE** **Part no. 7743069** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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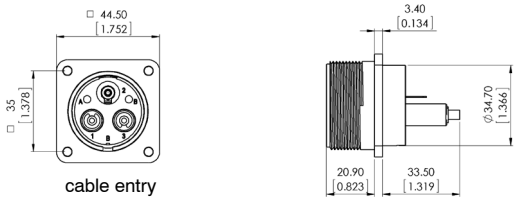
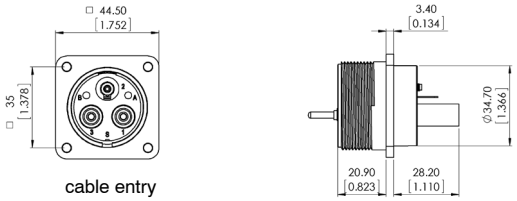
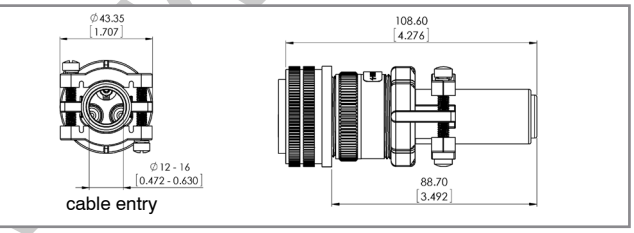
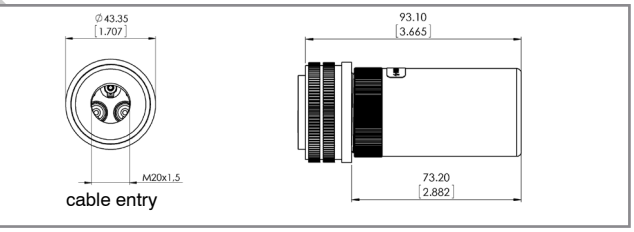
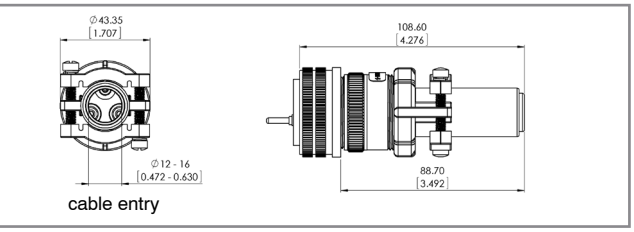
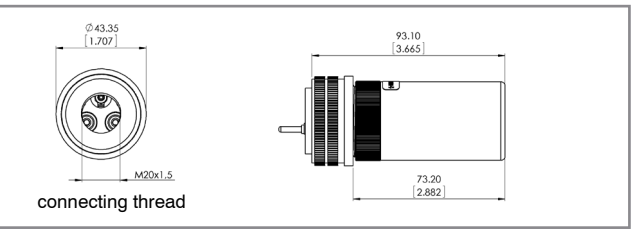
Type M215/1E **2(+1) Pin 12 kV DC**

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	2
Number of pins E-contact 2.5 mm (LV)	1
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	POM or PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 215/1E/POM** **Part no. 7743053** **Version: GB 215/1E/PTFE** **Part no. 7743094**	
Type: plug, panel mount **Version: GS 215/1E/POM** **Part no. 7743055** **Version: GS 215/1E/PTFE** **Part no. 7743048**	
Type: receptacle, cable mount, with symmetric cable gland **Version: KB 215/1E/POM/Sym KV** **Part no. 7743056** **Version: KB 215/1E/PTFE/Sym KV** **Part no. 7743095**	
Type: receptacle, cable mount, connecting thread M20 **Version: KB 215/1E/M20/POM** **Part no. 7743076** **Version: KB 215/1E/M20/PTFE** **Part no. 7743096** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 215/1E/POM/Sym KV** **Part no. 7743054** **Version: KS 215/1E/PTFE/Sym KV** **Part no. 7743097**	
Type: plug, cable mount, connecting thread M20 **Version: KS 215/1E/M20/POM** **Part no. 7743073** **Version: KS 215/1E/M20/PTFE** **Part no. 7743064** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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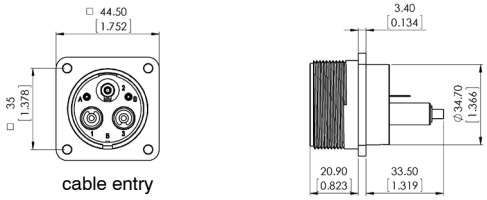
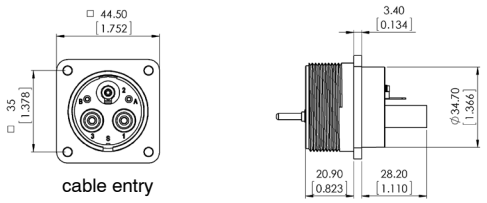
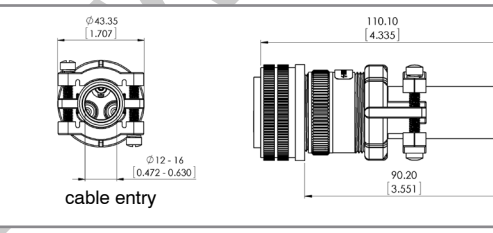
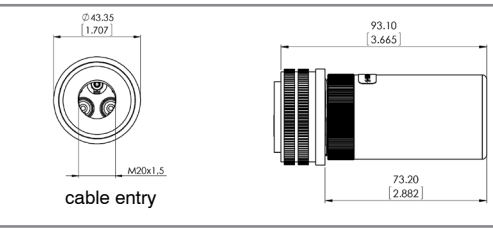
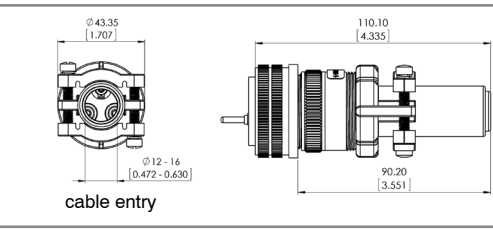
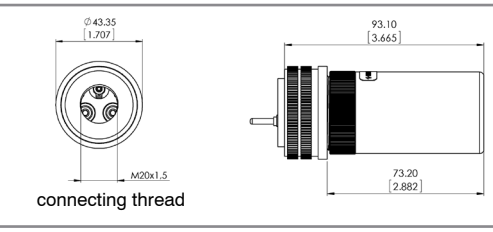
Type M215/2I/1E **2(+3) Pin 12 kV DC**

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	2
Number of pins E-contact 2.5 mm (LV)	1
Number of pins I-contact 1.5 mm (LV)	2
Insulation material	POM or PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 215/2I/1E/POM** **Part no. 7743052** **Version: GB 215/2I/1E/PTFE** **Part no. 7743070**	
Type: plug, panel mount **Version: GS 215/2I/1E/POM** **Part no. 7743057** **Version: GS 215/2I/1E/PTFE** **Part no. 7743075**	
Type: receptacle, cable mount, with symmetric cable gland **Version: KB 215/2I/1E/POM/Sym KV** **Part no. 7743098** **Version: KB 215/2I/1E/PTFE/Sym KV** **Part no. 7743101**	
Type: receptacle, cable mount, connecting thread M20 **Version: KB 215/2I/1E/M20/POM** **Part no. 7743058** **Version: KB 215/2I/1E/M20/PTFE** **Part no. 7743080** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 215/2I/1E/POM/Sym KV** **Part no. 7743099** **Version: KS 215/2I/1E/PTFE/Sym KV** **Part no. 7743100**	
Type: plug, cable mount, connecting thread M20 **Version: KS 215/2I/1E/M20/POM** **Part no. 7743059** **Version: KS 215/2I/1E/M20/PTFE** **Part no. 7743085** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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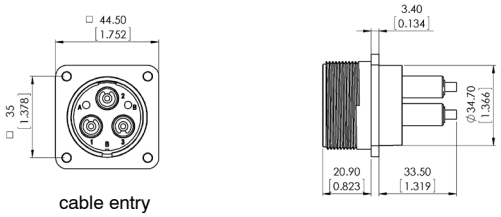
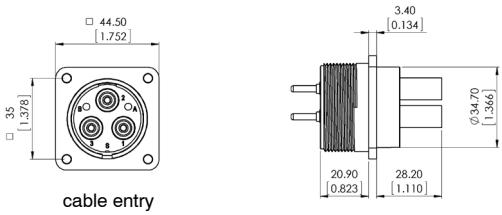
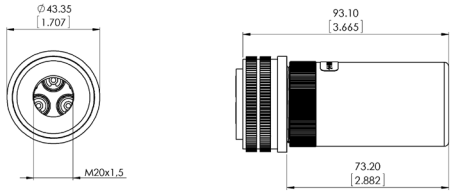
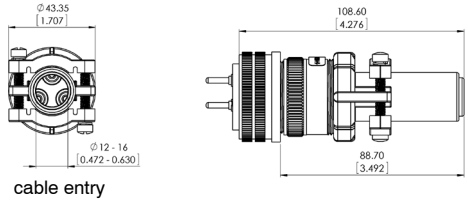
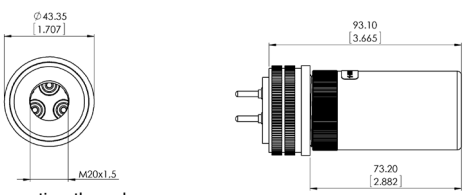
Type M315 3 Pin 12 kV DC

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	3
Number of pins E-contact 2.5 mm (LV)	-
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	POM or PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 315/POM** **Part no. 7430100** **Version: GB 315/PTFE** **Part no. 7430600**	
Type: plug, panel mount **Version: GS 315/POM** **Part no. 7430200** **Version: GS 315/PTFE** **Part no. 7430700**	
Type: receptacle, cable mount, connecting thread M20 **Version: KB 315/M20/POM** **Part no. 7430310** **Version: KB 315/M20/PTFE** **Part no. 7430810** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 315/POM/Sym KV** **Part no. 7430400** **Version: KS 315/PTFE/Sym KV** **Part no. 7430900**	
Type: plug, cable mount, connecting thread M20 **Version: KS 315/M20/POM** **Part no. 7430410** **Version: KS 315/M20/PTFE** **Part no. 7430910** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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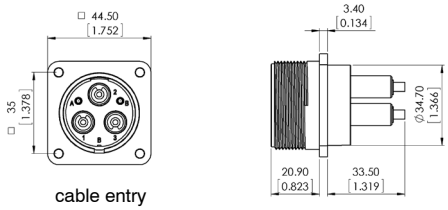
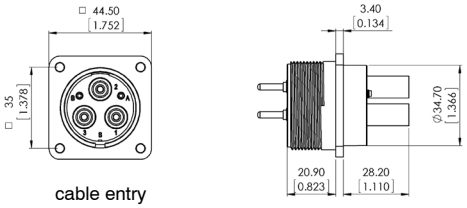
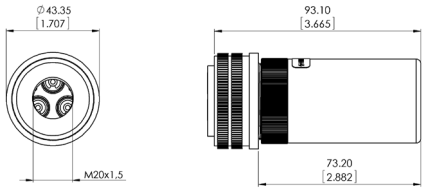
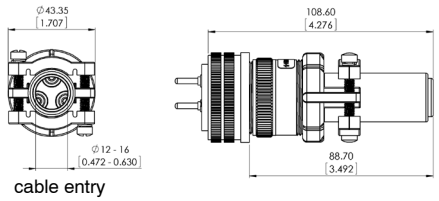
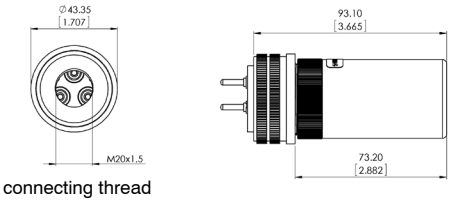
Type M315/2E **3(+2) Pin 12 kV DC**

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	3
Number of pins E-contact 2.5 mm (LV)	2
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	POM

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 315/2E/POM** **Part no. 7743060**	
Type: plug, panel mount **Version: GS 315/2E/POM** **Part no. 7743061**	
Type: receptacle, cable mount, connecting thread M20 **Version: KB 315/2E/M20/POM** **Part no. 7743033** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 315/2E/POM/Sym KV** **Part no. 7743034**	
Type: plug, cable mount, connecting thread M20 **Version: KS 315/2E/M20 /POM** **Part no. 7743102** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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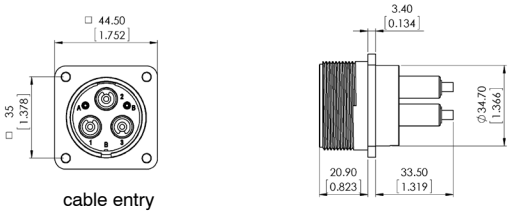
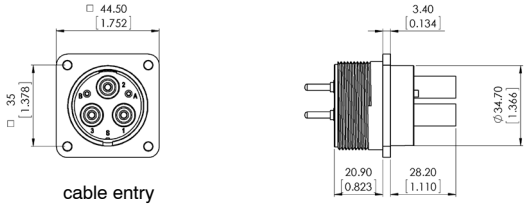
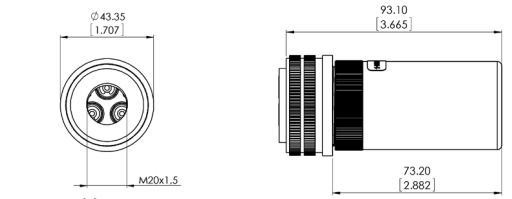
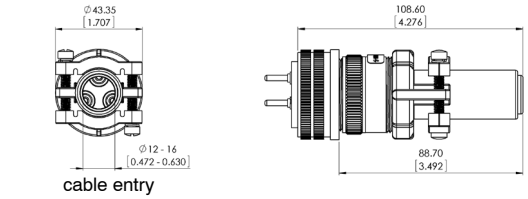
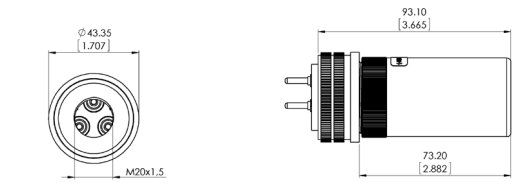
Type M315/2I 3(+2) Pin 12 kV DC

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	3
Number of pins E-contact 2.5 mm (LV)	-
Number of pins I-contact 1.5 mm (LV)	2
Insulation material	POM

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 315/2I/POM** **Part no. 7743036**	
Type: plug, panel mount **Version: GS 315/2I/POM** **Part no. 7743043**	
Type: receptacle, cable mount, connecting thread M20 **Version: KB 315/2I/M20/POM** **Part no. 7743042** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 315/2I/POM/Sym KV** **Part no. 7743035**	
Type: plug, cable mount, connecting thread M20 **Version: KS 315/2I/M20 /POM** **Part no. 7743103** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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M5

Overview size M5

P/N	Type / Description	Plug	Receptacle	Cable Mount			Panel mount	Insulation material		Number of contacts		
				Standard housing connecting thread M25	Standard housing connecting thread M32	Symmetric cable gland		POM	PTFE	HV Standard 2.7 mm	HV interlock 2.7 mm	LV 2.5 mm
7450100	GB 515 POM		•				•	•		5		
7450200	GS 515 POM	•					•	•		5		
7450312	KB 515/M25 POM		•	•				•		5		
7450313	KB 515/M32 POM		•		•			•		5		
7450400	KS 515 POM Sym KV	•				•		•		5		
7450419	KS 515/M25 POM	•		•				•		5		
7450414	KS 515/M32 POM	•			•			•		5		
7450600	GB 515 PTFE		•				•		•	5		
7450700	GS 515 PTFE	•					•		•	5		
7450821	KB 515/M25 PTFE		•	•					•	5		
7450819	KB 515/M32 PTFE		•		•				•	5		
7450900	KS 515 PTFE Sym KV	•				•			•	5		
7450914	KS 515/M25 PTFE	•		•					•	5		
7450916	KS 515/M32 PTFE	•			•				•	5		
7745010	GS 515/1E PTFE interlock	•					•		•	2	2	1
7745011	GB 515/1E PTFE		•				•		•	4		1
7745027	KB 515/1E/M25 PTFE		•	•					•	4		1
7745028	KB 515/1E/M32 PTFE		•		•				•	4		1
7745025	KS 515/1E PTFE Sym KV interlock	•				•			•	2	2	1
7745029	KS 515/1E/M25 PTFE interlock	•		•					•	2	2	1
7745032	KS 515/1E/M32 PTFE interlock	•			•				•	2	2	1

*HV = High Voltage
*LV = Low Voltage

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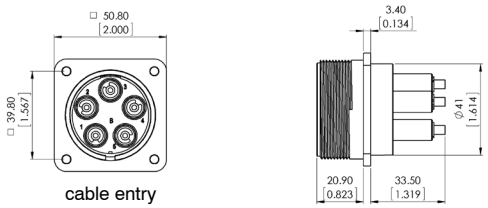
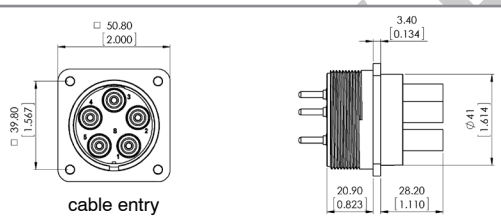
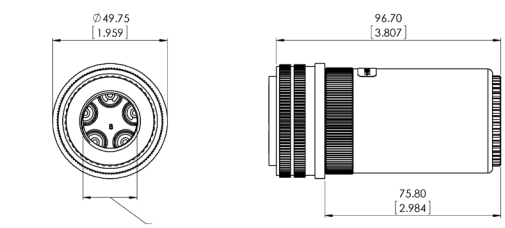
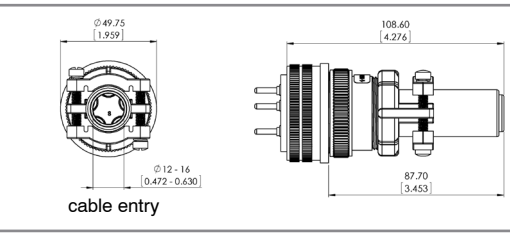
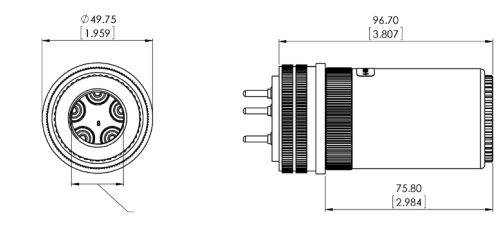
Type M515 5 Pin 12 kV DC

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	5
Number of pins E-contact 2.5 mm (LV)	-
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	POM or PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 515/POM** **Part no. 7450100** **Version: GB 515/PTFE** **Part no. 7450600**	
Type: plug, panel mount **Version: GS 515/POM** **Part no. 7450200** **Version: GS 515/PTFE** **Part no. 7450700**	
Type: receptacle, cable mount, connecting thread M25 **Version: KB 515/M25/POM** **Part no. 7450312** **Version: KB 515/M32/POM** **Part no. 7450313** **Version: KB 515/M25/PTFE** **Part no. 7450821** **Version: KB 515/M32/PTFE** **Part no. 7450819** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 515/POM/Sym KV** **Part no. 7450400** **Version: KS 515/PTFE/Sym KV** **Part no. 7450900**	
Type: plug, cable mount, connecting thread M25 **Version: KS 515/M25/POM** **Part no. 7450419** **Version: KS 515/M32/POM** **Part no. 7450414** **Version: KS 515/M25/PTFE** **Part no. 7450914** **Version: KS 515/M32/PTFE** **Part no. 7450916** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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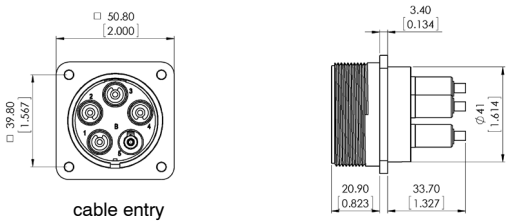
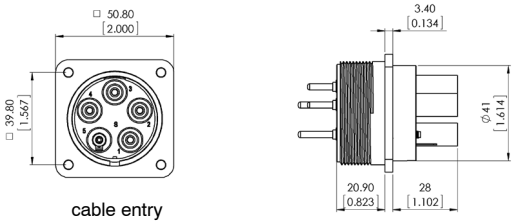
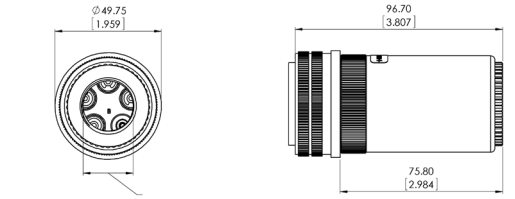
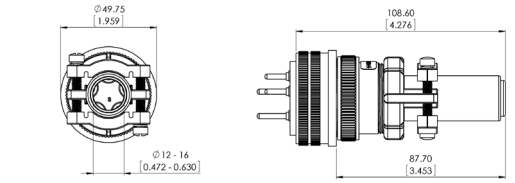
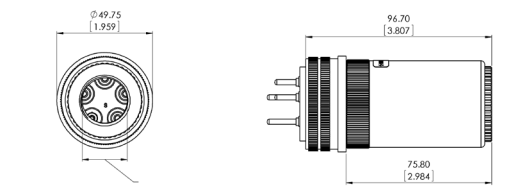
Type M515/1E **4(+1) Pin 12 kV DC**

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	4
Number of pins E-contact 2.5 mm (LV)	1
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 515/1E/PTFE** **Part no. 7745011**	
Type: plug, panel mount **Version: GS 515/1E/PTFE interlock** **Part no. 7745010**	
Type: receptacle, cable mount, connecting thread M25 **Version: KB 515/1E/M25/PTFE Part no. 7745027** **Version: KB 515/1E/M32/PTFE Part no. 7745028** *(for cable glands see page 152*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 515/1E/PTFE/ Sym KV interlock** **Part no. 7745025**	
Type: plug, cable mount, connecting thread M25 **Version: KS 515/1E/M25/ PTFE interlock - Part no. 7745029** **Version: KS 515/1E/M32/ PTFE interlock - Part no. 7745032** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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M7

Overview size M7

Part no.	Type / Description	Plug	Recep-tacle	Cable Mount		Panel mount	Insulation material	Number of contacts		
				Standard housing connecting thread M25	Symmetric cable gland		PTFE	HV 2.7 mm	LV 1.5 mm	LV 2.5 mm
7470411	KS 715 PTFE Sym KV	•			•		•	7		
7470414	KS 715/M25 PTFE	•		•			•	7		
7470812	KB 715/M25 PTFE		•	•			•	7		
7470600	GB 715 PTFE		•			•	•	7		
7470200	GS 715 PTFE	•				•	•	7		
7470416	KS 715/1E/M25 PTFE	•			•		•	6		1
7470417	KS 715/1E PTFE Sym KV	•		•			•	6		1
7747022	KB 715/1E/M25 PTFE		•	•			•	6		1
7747011	GB 715/1E PTFE		•			•	•	6		1
7470701	GS 715/1E PTFE	•				•	•	6		1
7470706	KS 715/2I/1E PTFE Sym KV	•			•		•	4	2	1
7470704	KS 715/2I/1E/M25 PTFE	•		•			•	4	2	1
7470705	KB 715/2I/1E/M25 PTFE		•	•			•	4	2	1
7470707	GB 715/2I/1E PTFE		•			•	•	4	2	1
7470702	GS 715/2I/1E PTFE	•				•	•	4	2	1

*HV = High Voltage
*LV = Low Voltage

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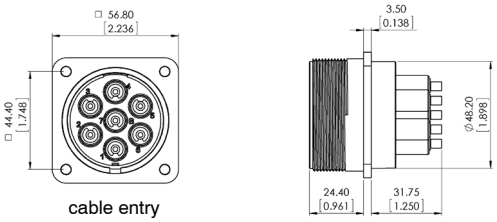
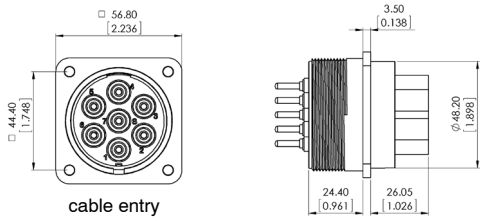
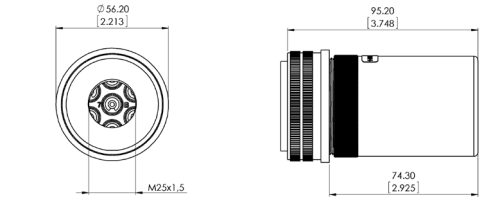
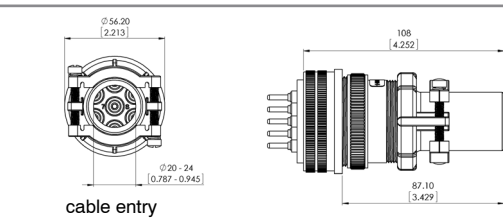
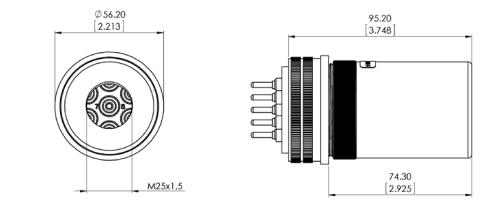
Type M715 **7 Pin 12 kV DC**

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	7
Number of pins E-contact 2.5 mm (LV)	-
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 715/PTFE** **Part no. 7470600**	 cable entry
Type: plug, panel mount **Version: GS 715/PTFE** **Part no. 7470200**	 cable entry
Type: receptacle, cable mount, connecting thread M25 **Version: KB 715/M25/PTFE** **Part no. 7470812** *(for cable glands see page 152)*	 cable entry
Type: plug, cable mount, with symmetric cable gland **Version: KS 715/PTFE/Sym KV** **Part no. 7470411**	 cable entry
Type: plug, cable mount, connecting thread M25 **Version: KS 715/M25/PTFE** **Part no. 7470414** *(for cable glands see page 152)*	 connecting thread

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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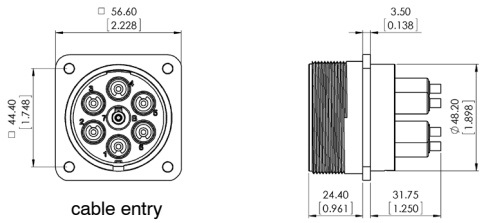
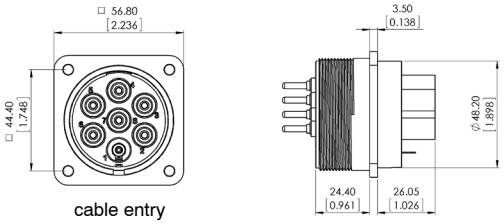
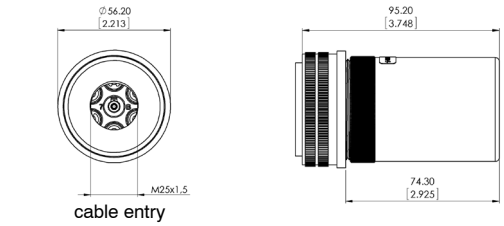
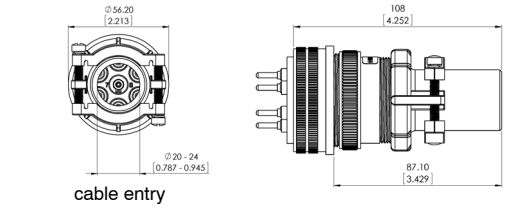
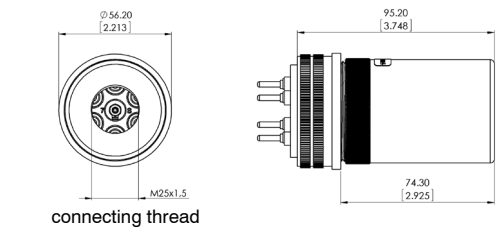
Type M715/1E 6(+1) Pin 12 kV DC

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	6
Number of pins E-contact 2.5 mm (LV)	1
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version:** **GB 715/1E/PTFE** **Part no. 7747011**	 
Type: plug, panel mount **Version:** **GS 715/1E/PTFE** **Part no. 7470701**	 
Type: receptacle, cable mount, connecting thread M25 **Version:** **KB 715/1E/M25/PTFE** **Part no. 7747022** *(for cable glands see page 152)*	 
Type: plug, cable mount, with symmetric cable gland **Version:** **KS 715/1E/PTFE/Sym KV** **Part no. 7470417**	 
Type: plug, cable mount, connecting thread M25 **Version:** **KS 715/1E/M25/PTFE** **Part no. 7470416** *(for cable glands see page 152)*	 

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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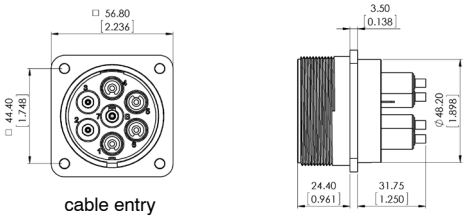
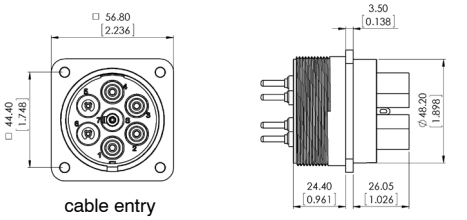
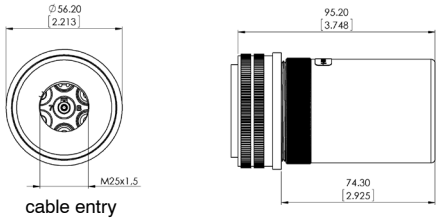
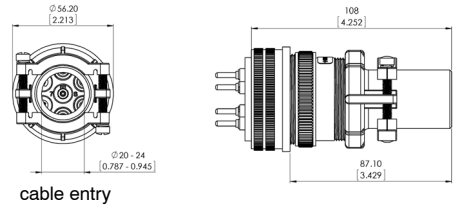
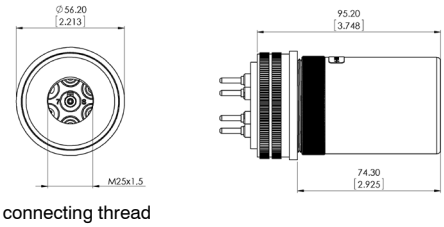
Type M715/2I/1E **4(+3) Pin 12 kV DC**

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	4
Number of pins E-contact 2.5 mm (LV)	1
Number of pins I-contact 1.5 mm (LV)	2
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version:** **GB 715/2I/1E/PTFE** **Part no. 7470707**	 cable entry
Type: plug, panel mount **Version:** **GS 715/2I/1E/PTFE** **Part no. 7470702**	 cable entry
Type: receptacle, cable mount, connecting thread M25 **Version:** **KB 715/2I/1E/M25/PTFE** **Part no. 7470705** *(for cable glands see page 152)*	 cable entry
Type: plug, cable mount, with symmetric cable gland **Version:** **KS 715/2I/1E/PTFE/Sym KV** **Part no. 7470706**	 cable entry
Type: plug, cable mount, connecting thread M25 **Version:** **KS 715/2I/1E/M25/PTFE** **Part no. 7470704** *(for cable glands see page 152)*	 connecting thread

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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M9

Overview size M9

Part no.	Type / Description	Plug	Recep-tacle	Cable Mount		Panel mount	Number of contacts		
				Standard housing M32	Symmetric cable gland		HV 2.7 mm	LV 1.5 mm	LV 2.5 mm
7490600	GB 915 PTFE		•			•	9	-	-
7490200	GS 915 PTFE	•				•	9	-	-
7490811	KB 915/M32 PTFE		•	•			9	-	-
7490400	KS 915 PTFE Sym KV	•			•		9	-	-
7490416	KS 915/M32 PTFE	•		•			9	-	-
7749011	GB 915/1E PTFE		•			•	8	-	1
7749010	GS 915/1E PTFE interlock	•				•	8	-	1
7749023	KB 915/1E/M32 PTFE		•	•			8	-	1
7490417	KS 915/1E PTFE Sym KV	•			•		8	-	1
7490415	KS 915/1E/M32 PTFE	•		•			8	-	1
7749088	GB 915/2I PTFE		•			•	7	2	-
7749082	GS 915/2I PTFE	•				•	7	2	-
7749057	KB 915/2I/M32 PTFE		•	•			7	2	-
7749053	KS 915/2I PTFE Sym KV	•			•		7	2	-
7749058	KS 915/2I/M32 PTFE	•		•			7	2	-
7749070	GB 915/2I/1E PTFE		•			•	6	2	1
7749080	GS 915/2I/1E PTFE	•				•	6	2	1
7749059	KB 915/2I/1E/M32 PTFE		•	•			6	2	1
7749087	KS 915/2I/1E PTFE Sym KV	•			•		6	2	1
7749090	KS 915/2I/1E/M32 PTFE	•		•			6	2	1

*HV = High Voltage
*LV = Low Voltage

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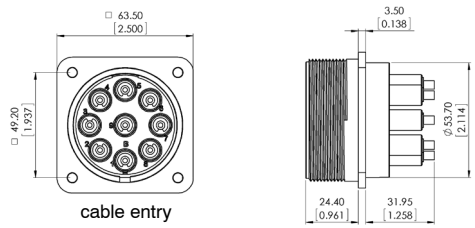
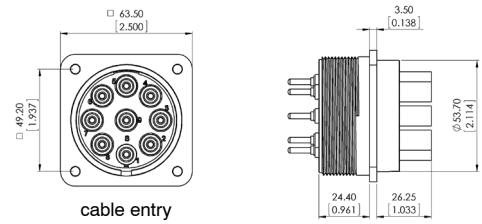
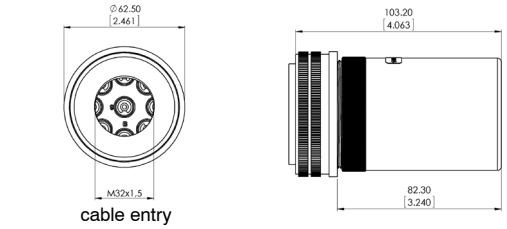
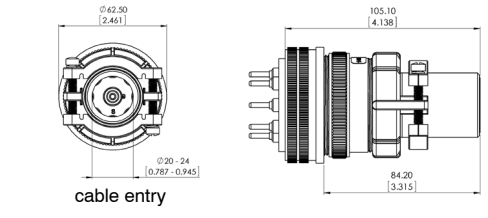
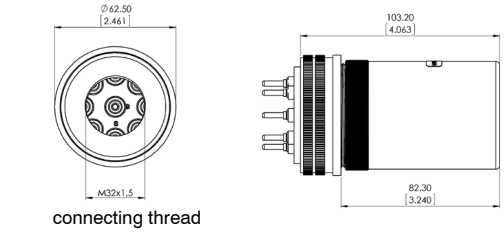
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	9
Number of pins E-contact 2.5 mm (LV)	-
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 915/PTFE** **Part no. 7490600**	 
Type: plug, panel mount **Version: GS 915/PTFE** **Part no. 7490200**	 
Type: receptacle, cable mount, connecting thread M32 **Version: KB 915/M32/PTFE** **Part no. 7490811** *(for cable glands see page 152)*	 
Type: plug, cable mount, with symmetric cable gland **Version: KS 915/PTFE/Sym KV** **Part no. 7490400**	 
Type: plug, cable mount, connecting thread M32 **Version: KS 915/M32/PTFE** **Part no. 7490416** *(for cable glands see page 152)*	 

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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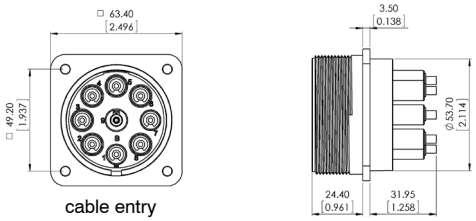
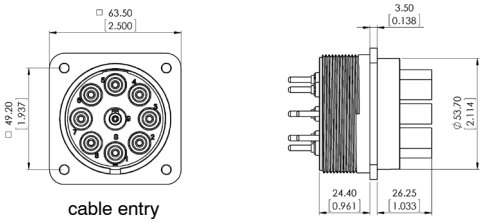
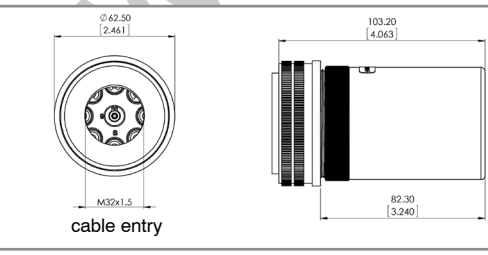
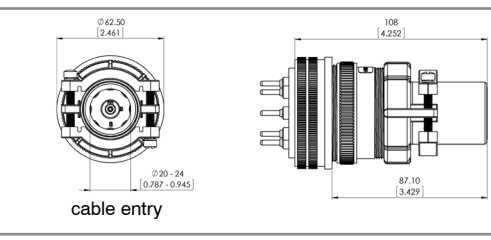
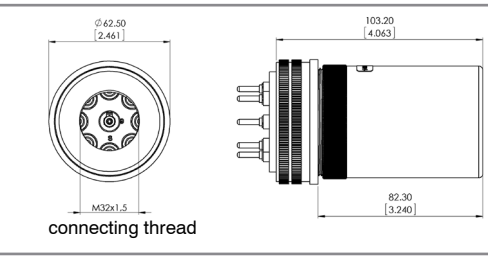
Type M915/1E 8(+1) Pin 12 kV DC

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	8
Number of pins E-contact 2.5 mm (LV)	1
Number of pins I-contact 1.5 mm (LV)	-
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 915/1E/PTFE** **Part no. 7749011**	
Type: plug, panel mount **Version:** **GS 915/1E/PTFE interlock** **Part no. 7749010**	
Type: receptacle, cable mount, connecting thread M32 **Version: KB 915/1E/M32/PTFE** **Part no. 7749023** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version:** **KS 915/1E/PTFE/Sym KV** **Part no. 7490417**	
Type: plug, cable mount, connecting thread M32 **Version:** **KS 915/1E/M32/PTFE** **Part no. 7490415** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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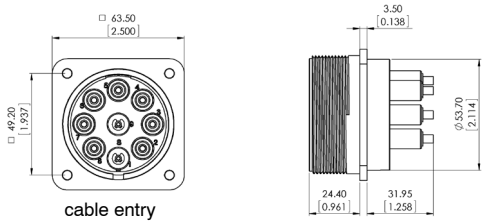
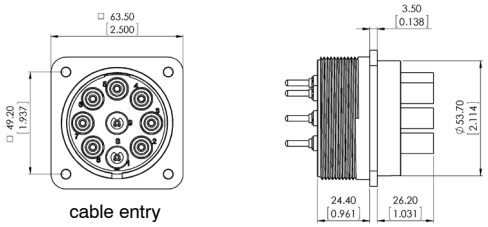
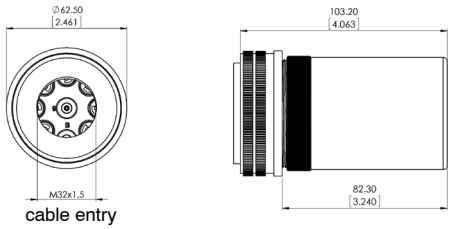
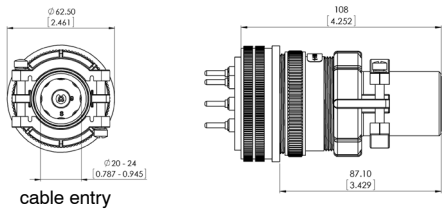
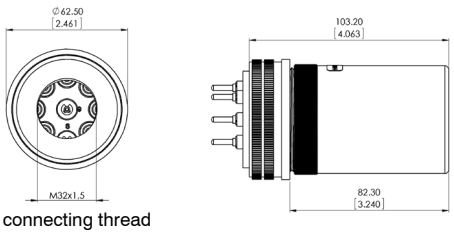
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	7
Number of pins E-contact 2.5 mm (LV)	-
Number of pins I-contact 1.5 mm (LV)	2
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 915/2I/PTFE** **Part no. 7749088**	 cable entry
Type: plug, panel mount **Version: GS 915/2I/PTFE** **Part no. 7749082**	 cable entry
Type: receptacle, cable mount, connecting thread M32 **Version: KB 915/2I/M32/PTFE** **Part no. 7749057** *(for cable glands see page 152)*	 cable entry
Type: plug, cable mount, with symmetric cable gland **Version: KS 915/2I/PTFE/Sym KV** **Part no. 7749053**	 cable entry
Type: plug, cable mount, connecting thread M32 **Version: KS 915/2I/M32/PTFE** **Part no. 7749058** *(for cable glands see page 152)*	 connecting thread

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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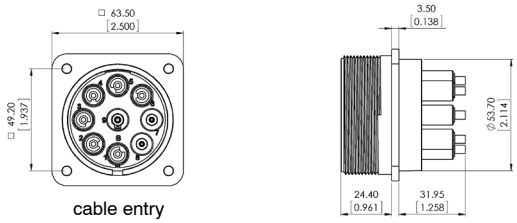
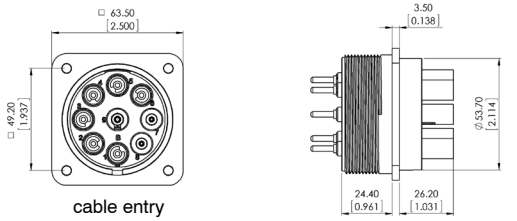
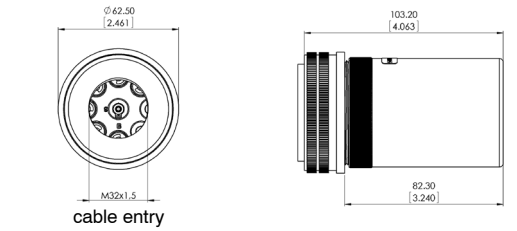
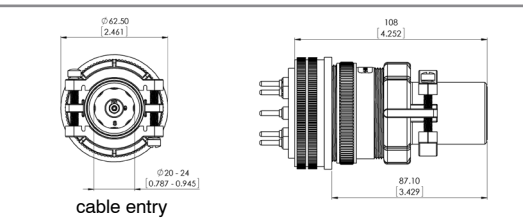
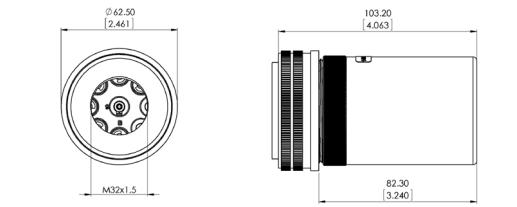
Type M915/2I/1E 6(+3) Pin 12 kV DC

Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC
Rated current	30 A

Characteristics	
Number of pins high voltage (HV)	6
Number of pins E-contact 2.5 mm (LV)	1
Number of pins I-contact 1.5 mm (LV)	2
Insulation material	PTFE

Layout

Type / Version / Part number	Picture / Drawing
Type: receptacle, panel mount **Version: GB 915/2I/1E/PTFE** **Part no. 7749070**	
Type: plug, panel mount **Version: GS 915/2I/1E/PTFE** **Part no. 7749080**	
Type: receptacle, cable mount, connecting thread M32 **Version: KB 915/2I/1E/M32/PTFE** **Part no. 7749059** *(for cable glands see page 152)*	
Type: plug, cable mount, with symmetric cable gland **Version: KS 915/2I/1E/PTFE/Sym KV** **Part no. 7749087**	
Type: plug, cable mount, connecting thread M32 **Version: KS 915/2I/1E/M32/PTFE** **Part no. 7749090** *(for cable glands see page 152)*	

drawing - dimensions in mm [inch]

Contacts, cable glands and accessories: *Pages 150-153*
Mounting instructions: *Pages 154-159*

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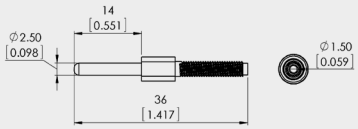
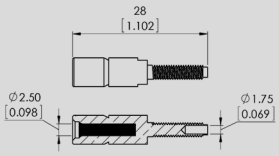
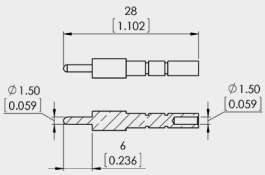
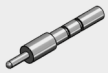
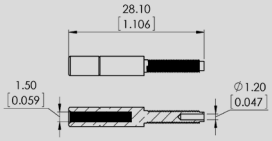
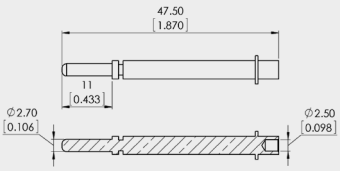
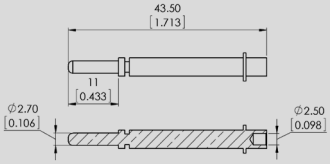
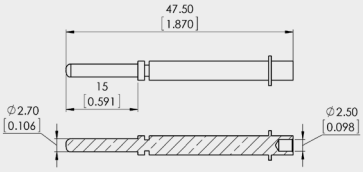
Contacts

Part no.	Description	Drawing	Picture
6574015	LV male contact 3/5 (E) 2.5 mm nickel plated for connector size M3 / M5 / M7 / M9		
6572005	LV female contact 3/5 (E) 2.5 mm nickel plated for connector size M3 / M5 / M7 / M9		
6574020	LV male contact 3/5 (I) 1.5 mm nickel plated for connector size M3 / M5		
6574002	LV female contact 3/5 (I) 1.5 mm nickel plated for connector size M3 / M5		
6571012	HV male contact 2.7 mm standard for connector size M7 / M9, silver plated		
6571013	HV standard male contact 2.7 mm for connectors size M3 / M5, male interlock contact for size M9 silver plated		
6571014	HV male interlock contact 2.7 mm for connectors size M5, silver plated		
6571002	HV female contact 2.7 mm standard for connectors size M3 / M5 / M7 / M9, silver plated		

drawing - dimensions in mm [inch]

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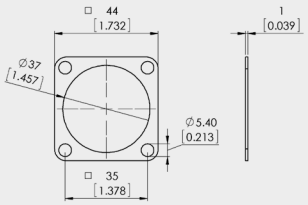
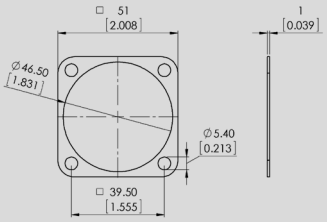
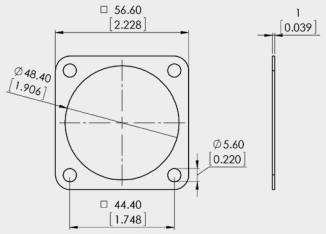
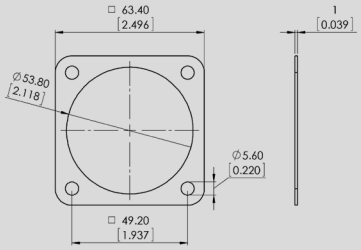
Gaskets

Part no.	Description	Drawing
6572050	Flat gasket Size M3	
6572051	Flat gasket Size M5	
6572052	Flat gasket Size M7	
6572053	Flat gasket Size M9	

drawing - dimensions in mm [inch]

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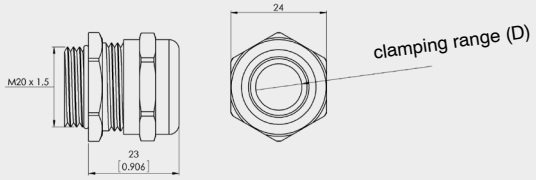
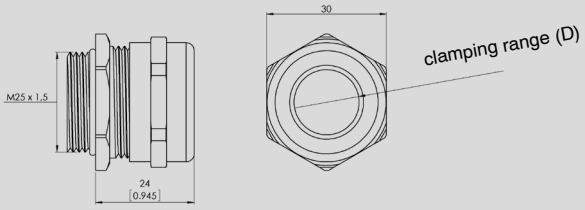
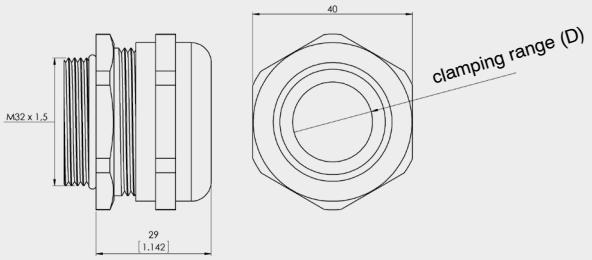
Single parts / Screwed cable glands

Part no.	Description	Clamping range (D) in mm	Drawing
1674111	Screwed cable gland M20 x 1.5, 7-12 mm	7-12	
1674110	Screwed cable gland M20 x 1.5, 10-14 mm	10-14	
1674119	Screwed cable gland M25 x 1.5, 9-16 mm	9-16	
1674117	Screwed cable gland M25 x 1.5, 13-18 mm	13-18	
1674082	Screwed cable gland M32 x 1.5, 13-20 mm	13-20	
1674078	Screwed cable gland M32 x 1.5, 18-25 mm	18-25	

drawing - dimensions in mm [inch]

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Thread reductions

Part no.	Description
1674045	Reduction PG29 to PG21
1674046	Reduction PG29 to PG16
1674047	Reduction M25 to M20
1674063	Reduction M25 to M16
1674057	Reduction M32 to M25
1674084	Reduction M32 to M20

Thread extensions

Part no.	Description
1674062	Extension PG21 to PG29
1674106	Extension M20 to M25
1674108	Extension M25 to M32

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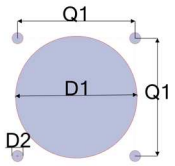
Assembly Instructions Series M (receptacle, panel mount)

1.

Part as supplied.

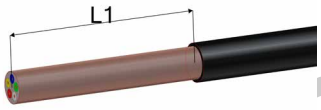
2.



Panel cut out

Connector size	Q1 mm [inch]	D1 mm [inch]	D2 mm [inch]
M3	34.90 [1.374"]	35.90 [1.413"]	3.75 [.148"]
M5	39.65 [1.561"]	42.20 [1.661"]	3.75 [.148"]
M7	44.45 [1.750"]	49.30 [1.941"]	4.40 [.173"]
M9	49.25 [1.939"]	54.90 [2.161"]	4.40 [.173"]

3.



Carefully remove cable jacket (L1 = min. 65mm).
⚠ Do not damage metal shield braid.

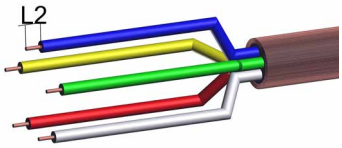
4.

Fold back shield braid.

5.

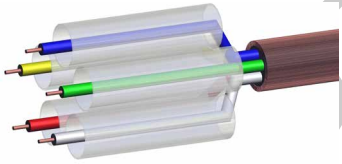
Remove any filling elements from cable.

6.



Remove dielectric insulation of single wires (L2 = 5 mm [.197"]).
⚠ Do not damage conductors.

7.

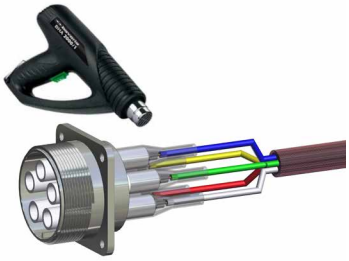


Slide one shrinking tube on each single wire.

8.

Solder one conductor on each female contact.

9.



Slide shrinking tubes on insulation parts and shrink tubes - shrinking temperature 100°C [+230°F].

10.

Assembly finished.

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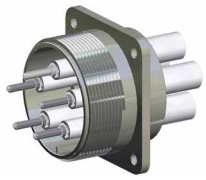
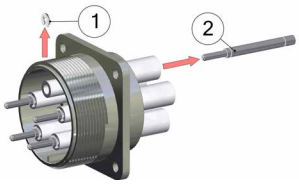
Assembly Instructions Series M (plug, panel mount)

1.



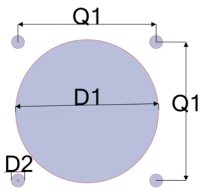
Part as supplied.

2.



Remove snap rings (1) and take out male contacts (2).

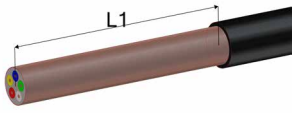
3.



Panel cut out

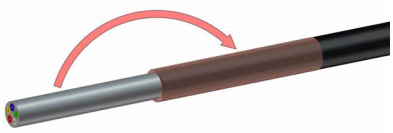
Connector size	Q1 mm [inch]	D1 mm [inch]	D2 mm [inch]
M3	34.90 [1.374"]	35.90 [1.413"]	3.75 [.148"]
M5	39.65 [1.561"]	42.20 [1.661"]	3.75 [.148"]
M7	44.45 [1.750"]	49.30 [1.941"]	4.40 [.173"]
M9	49.25 [1.939"]	54.90 [2.161"]	4.40 [.173"]

4.



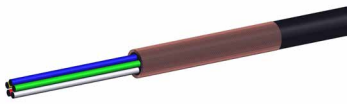
Carefully remove cable jacket (L1 = min. 65 mm).
⚠ Do not damage metal shield braid.

5.



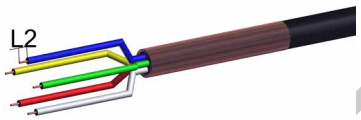
Fold back shield braid.

6.



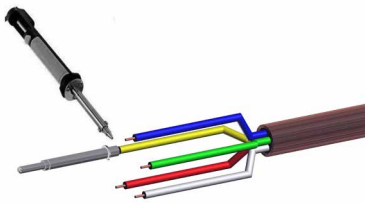
Remove any filling elements from cable.

7.



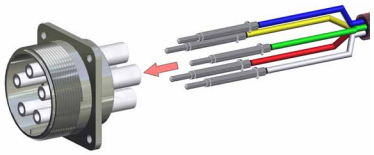
Remove dielectric insulation of single wires (L2 = 5 mm [.197"]).
⚠ Do not damage conductors.

8.



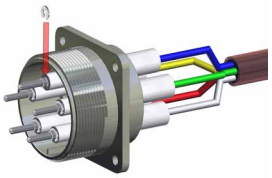
Solder one male contact (2) on each conductor.

9.



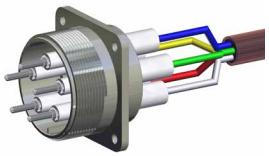
Slide single wires completely into insulation tubes.

10.



Fix male contacts (2) with snap rings (1).

11.



Assembly finished.

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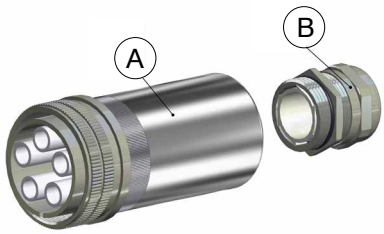
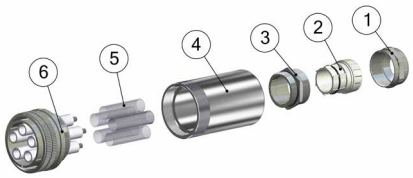
Assembly Instructions Series M (receptacle, cable mount)

1.



Part as supplied.
Connector housing (A).
Optional: Screwed cable gland (B).

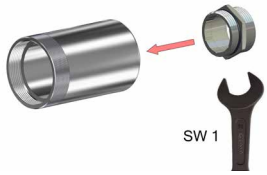
2.



Components.
Screwed cable gland (B): cap (1), sealing insert (2), cable gland basis (3).

Connector housing (A): housing adapter (4), shrinking tubes (5), housing basis (6).

3.



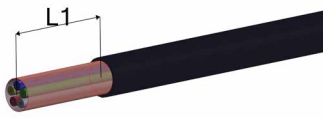
Screw cable gland basis (3) to housing adapter (4).

Screwed cable gland size	Wrench size (SW 1)	Tightening torque [Nm]
M16	20	6
M20	24	10
M25	30	14
M32	40	24

4.

Place cap (1), sealing insert (2) and housing adapter (4) on cable.
⚠ Respect correct order of parts (see picture).

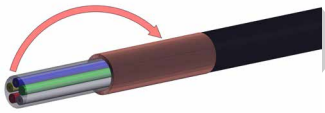
5.



Remove cable jacket.
⚠ Do not damage shield braid.

Connector size	L1 mm [inch]
M3 / M5 / M7	45 [1.772"]
M9	60 [2.362"]

6.



Fold back shield braid over jacket.

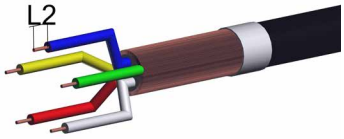
7.

Fix shield braid with tape.

8.

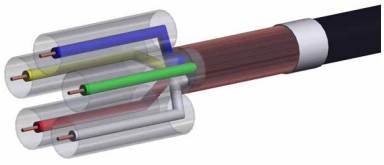
Remove any filling elements from cable.

9.



Remove dielectric insulation (L2 = min. 5 mm [.197"]).

10.



Place shrinking tubes on single wires.

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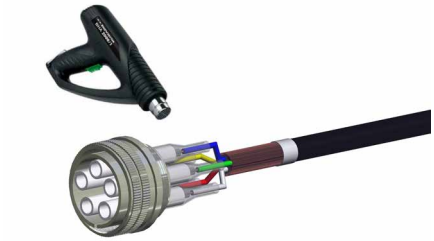
11.

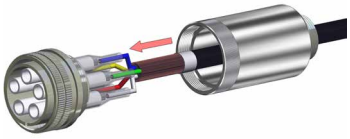
Solder one conductor each on a female contact.
⚠ Tin-solder should not remain on contact surface. Do not damage shrinking tubes.

12.



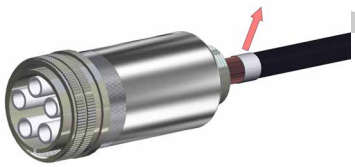
Place shrinking tubes on insulators. Tubes shall cover both insulators and wires. Then shrink tubes. Shrinking temperature 100°C [+230°F].

13.



Screw adapter (4) to housing basis (6).

14.

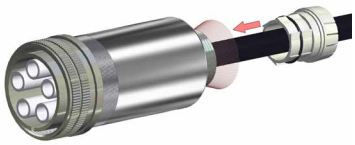


Remove tape.

15.

Completely widen shield braid.

16.

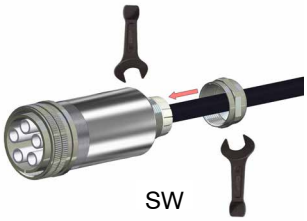


Completely slide seal insert (2) under shield braid into cable gland basis (3).

17.

Cut overlapping shield braid.
⚠ Carefully remove shield strands. Loose strands can cause electrical breakdown.

18.



Screw cable gland cap (1) to cable gland basis (3).

Screwed cable gland size	Wrench size (SW)	Tightening torque [Nm]
M16	20	5
M20	24	8
M25	30	12
M32	40	20

19.

Assembly finished.

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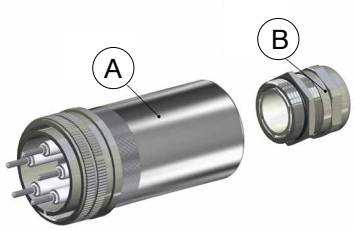
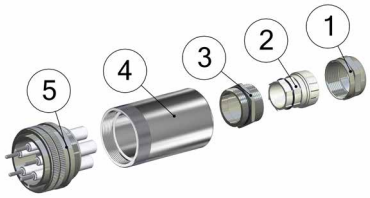
Assembly Instructions Series M (plug, cable mount)

1.



Part as supplied.
Connector housing (A).
Optional: Screwed cable gland (B).

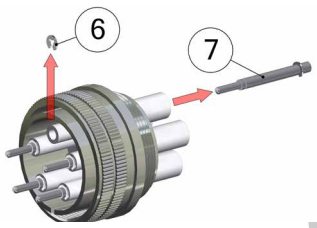
2.



Components
Screwed cable gland (B): cap (1), sealing insert (2), cable gland basis (3).

Connector housing (A): housing adapter (4), housing basis (5).

3.



Remove contacts if supplied mounted.
Remove snap rings (6) and take out male contacts (7).

4.

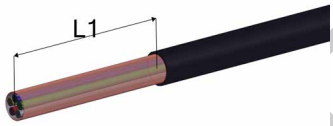
Screw cable gland basis (3) to housing adapter (4).

Screwed cable gland size	Wrench size (SW 1)	Tightening torque [Nm]
M16	20	5
M20	24	8
M25	30	12
M32	40	20

5.

Place cap (1), sealing insert (2) and housing adapter (4) on cable.
⚠ Respect correct order of parts (see picture).

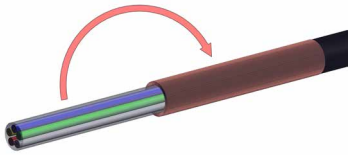
6.



Fold back shield braid over jacket.
⚠ Do not damage shield braid.

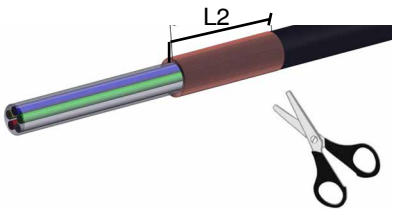
Connector size	L1 [mm]
M3 / M5 / M7	70 [2.756"]
M9	85 [3.346"]

7.



Fold back shield braid over jacket.

8.

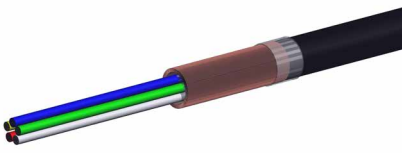


Shorten shield braid to length L2 = 40 mm.

9.

Fix shield braid with tape.

10.



Remove any filling elements from cable.

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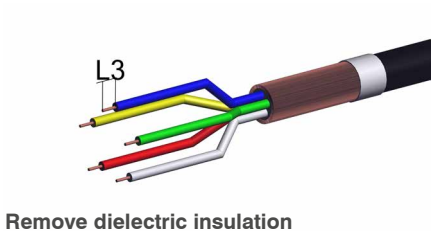
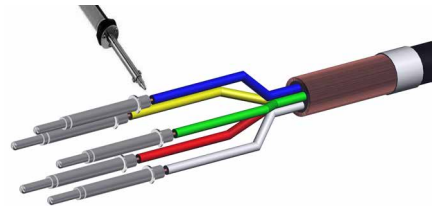
11.



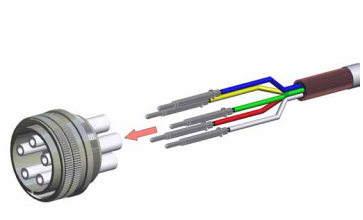
Remove dielectric insulation (L3 = min. 5 mm [.197"]).

12.



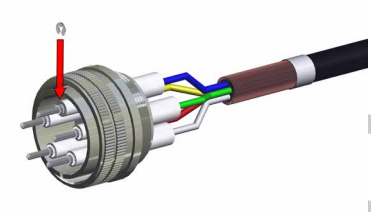
Solder male contacts (7) on conductor.
⚠ Tin-solder must not remain on contact surface.

13.



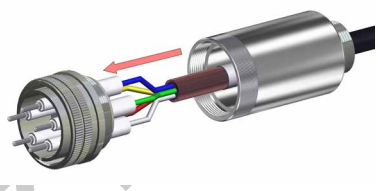
Slide contacts (7) completely into insulation tubes (5).

14.



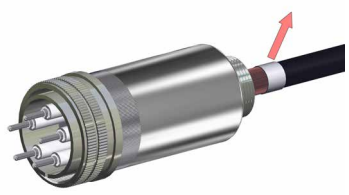
Fix contacts (7) with snap rings (6).

15.



Screw adapter (4) to housing basis (5).

16.



Remove tape.

17.

Completely widen shield braid.

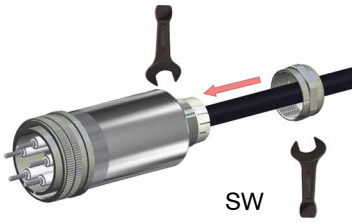
18.

Completely slide seal insert (2) under shield braid into cable gland basis (3).

19.

Cut overlapping shield braid.
⚠ Carefully remove shield strands. Loose strands can cause electrical breakdown.

20.



Screw cable gland cap (1) to cable gland basis (3).

Screwed cable gland size	Wrench size (SW)	Tightening torque [Nm]
M16	20	5
M20	24	8
M25	30	12
M32	40	20

21.

Assembly finished.

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MOD Series

- Operating voltage up to 12 kV DC
- Operating current up to 25 A / 30 A
- Up to 14 high voltage contacts
- Robust industrial connector shells with lever locking system
- Combinable with modules for low voltage, signal transmission and pneumatic
- Protection class IP65 (mated connector)

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General characteristics and technical data type MOD-HP

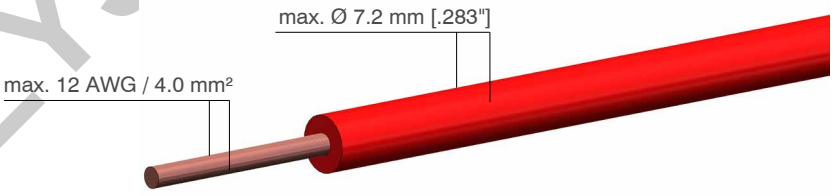
Housings	
Number of module slots	2, 3, 5, 7
Locking system	Lever locking
Mounting type (panel mount connector)	4-hole-flange
Housing material	Aluminium alloy
Surface plating	Epoxy powder coating
Protection class (mated connector)	IP65 acc. DIN EN 60529
Operating temperature	-30°C to +80°C [-22°F to +176°F]

Contacts type MOD-HP	
Termination method	Crimp / solder
Rated current (at +23°C [73°F])	25 A
Contact resistance	≤ 2 mΩ
Contact diameter	2.5 mm
Wire size	0.5 - 4.0 mm² [20-12 AWG]
Contact material	Copper alloy
Contact plating	Silver (Ag)
Mating cycles	≥ 500

Contacts not included. Choose contacts from page 190.

Module type MOD-HP	
Number of pins	2
Material	PA 6.6 GF
Flammability class	UL94 V-0
Operating temperature	-40°C to +125°C [-40°F to +257°F]
CTI-Value	600
Insulating material group	I (DIN IEC 60664)
Max. diameter of dielectric cable insulation (single wire)	7.2 mm

Suitable cable dimensions (single wire)



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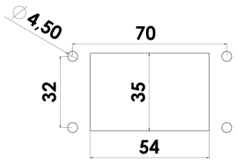
Type MOD-HP Size 2M **2-Pin 12 kV DC**

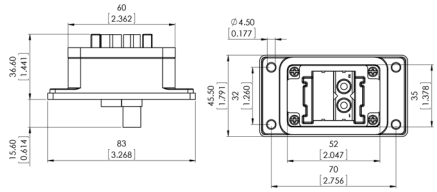
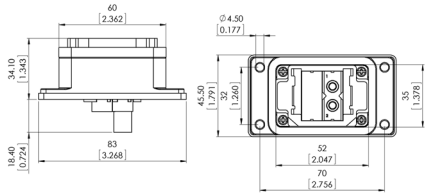
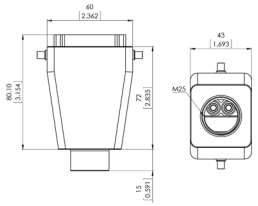
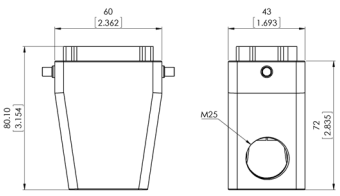
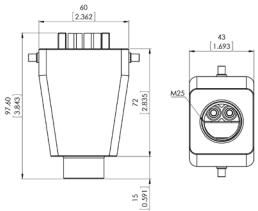
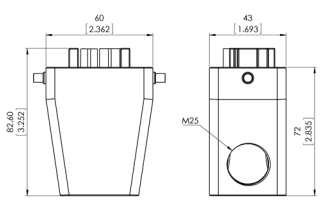
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	2
Insulation material	PA 6.6 GF

Panel cut out



Suitable contacts on page 190

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 1HP/2M** **Part no. 9021300**	
Plug, panel mount **GSR 1HP/2M** **Part no. 9021350**	
Plug, cable mount, cable entry top M25 **KSR 1HP/AO/2M** **Part no. 9021010**	
Plug, cable mount, cable entry side 90° M25 **KSR 1HP/AS/2M** **Part no. 9021200**	
Receptacle, cable mount, cable entry top M25 **KBR 1HP/AO/2M** **Part no. 9021150**	
Receptacle, cable mount, cable entry side 90° M25 **KBR 1HP/AS/2M** **Part no. 9021250**	

drawing - dimensions in mm [inch]

Contacts: *Pages 190-195*
Cable glands and tools: *Page 199*

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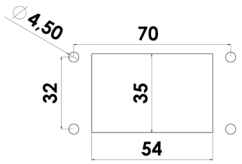
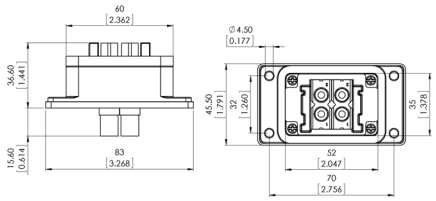
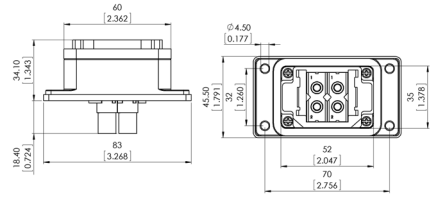
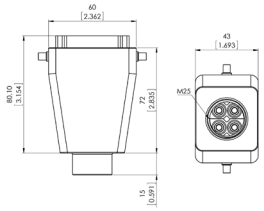
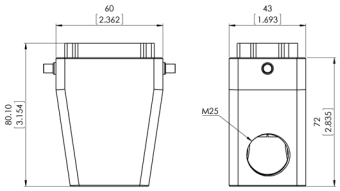
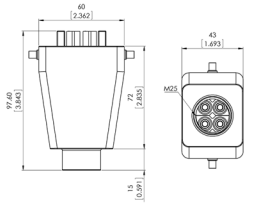
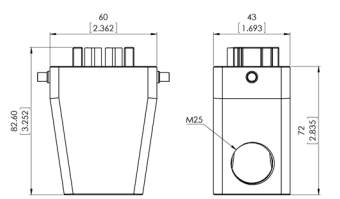
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	4
Insulation material	PA 6.6 GF

Panel cut out



Suitable contacts on page 190

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 2HP/2M** **Part no. 9022300**	
Plug, panel mount **GSR 2HP/2M** **Part no. 9022350**	
Plug, cable mount, cable entry top M25 **KSR 2HP/AO/2M** **Part no. 9022100**	
Plug, cable mount, cable entry side 90° M25 **KSR 2HP/AS/2M** **Part no. 9022200**	
Receptacle, cable mount, cable entry top M25 **KBR 2HP/AO/2M** **Part no. 9022150**	
Receptacle, cable mount, cable entry side 90° M25 **KBR 2HP/AS/2M** **Part no. 9022250**	

drawing - dimensions in mm [inch]

Contacts: *Pages 190-195*
Cable glands and tools: *Page 199*

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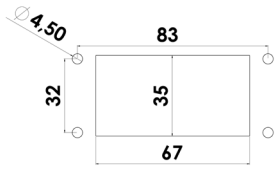
Type MOD-HP Size 3M **6-Pin 12 kV DC**

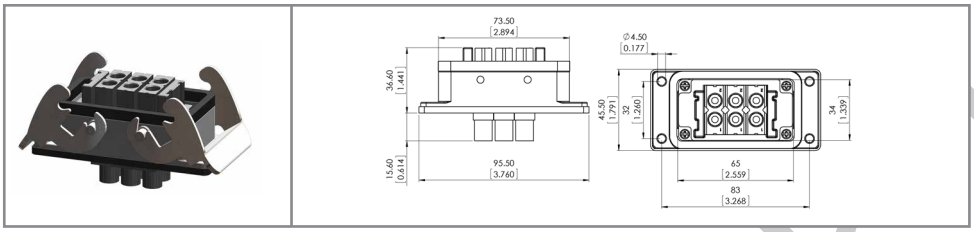
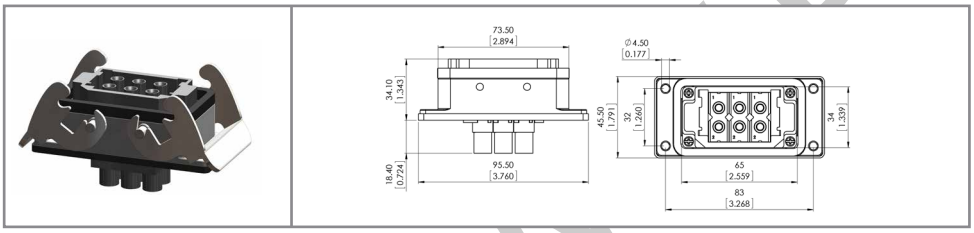
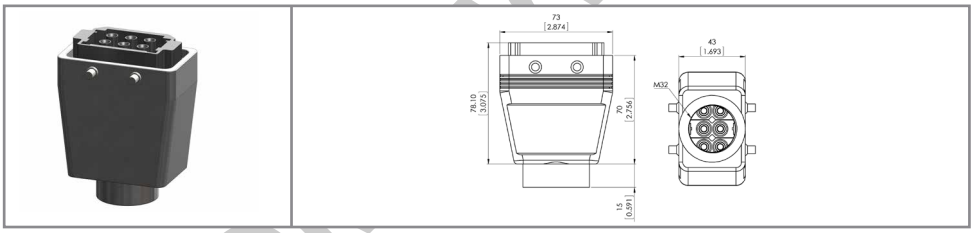
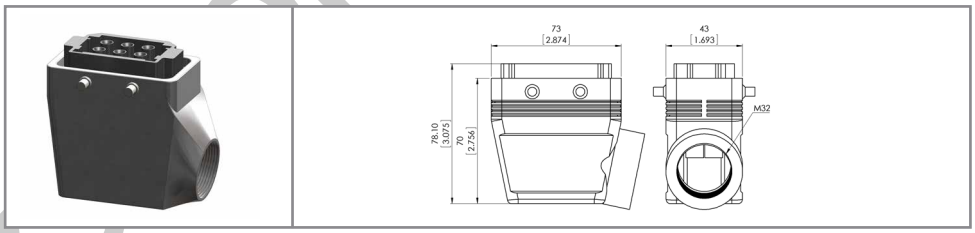
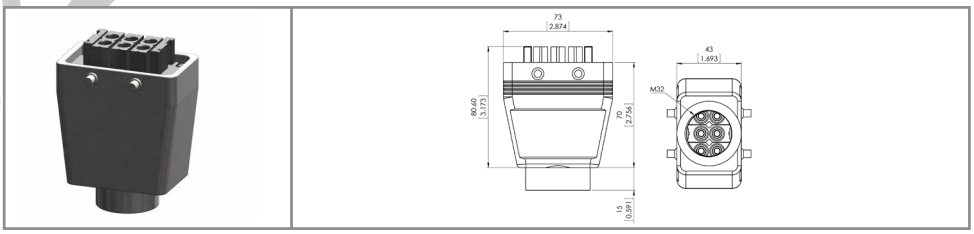
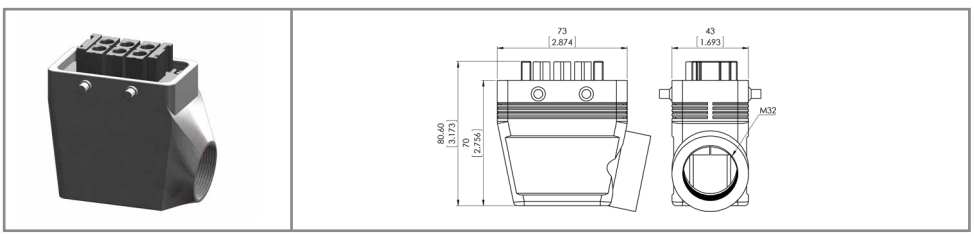
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	6
Insulation material	PA 6.6 GF

Panel cut out



Suitable contacts on page 190

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 3HP/3M** **Part no. 9033300**	
Plug, panel mount **GSR 3HP/3M** **Part no. 9033350**	
Plug, cable mount, **Cable entry top M32** **KSR 3HP/AO/3M** **Part no. 9033100**	
Plug, cable mount, **cable entry side 90° M32** **KSR 3HP/AS/3M** **Part no. 9033200**	
Receptacle, cable mount, **cable entry top M32** **KBR 3HP/AO/3M** **Part no. 9033150**	
Receptacle, cable mount, **cable entry side 90° M32** **KBR 3HP/AS/3M** **Part no. 9033250**	

drawing - dimensions in mm [inch]

Contacts: *Pages 190-195*
Cable glands and tools: *Page 199*

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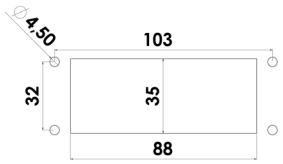
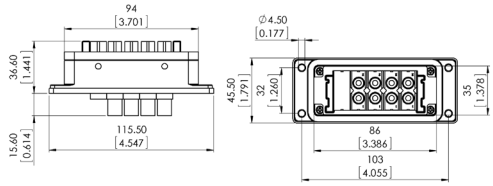
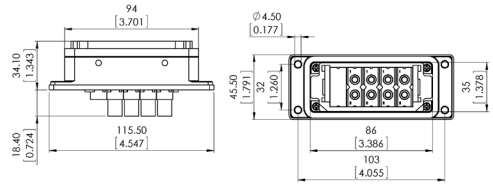
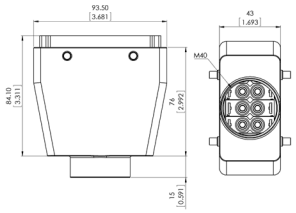
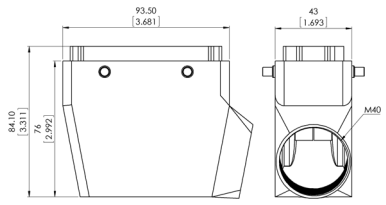
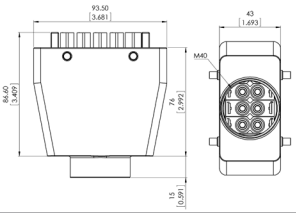
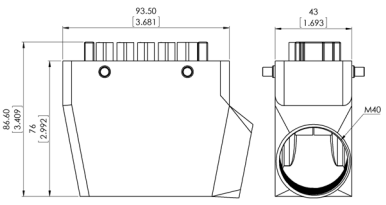
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	8
Insulation material	PA 6.6 GF

Panel cut out



Suitable contacts on page 190

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 4HP/5M** **Part no. 9054300**	
Plug, panel mount **GSR 4HP/5M** **Part no. 9054350**	
Plug, cable mount, cable entry top M40 **KSR 4HP/AO/5M** **Part no. 9054100**	
Plug, cable mount, cable entry side 90° M40 **KSR 4HP/AS/5M** **Part no. 9054200**	
Receptacle, cable mount, cable entry top M40 **KBR 4HP/AO/5M** **Part no. 9054150**	
Receptacle, cable mount, cable entry side 90° M40 **KBR 4HP/AS/5M** **Part no. 9054250**	

drawing - dimensions in mm [inch]

Contacts: *Pages 190-195*
Cable glands and tools: *Page 199*

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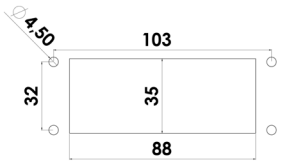
Type MOD-HP Size 5M **10-Pin 12 kV DC**

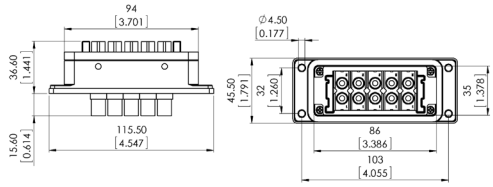
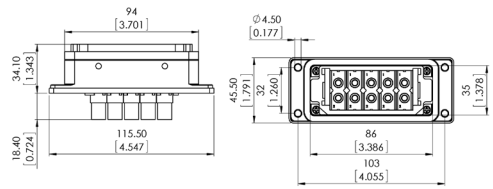
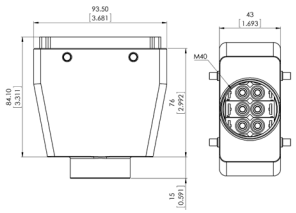
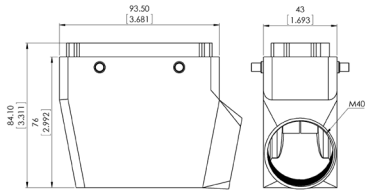
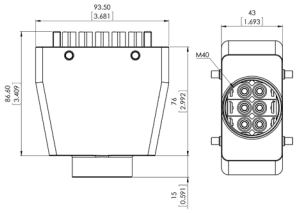
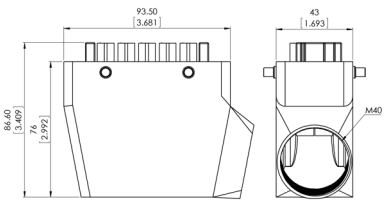
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	10
Insulation material	PA 6.6 GF

Panel cut out



Suitable contacts on page 190

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 5HP/5M** **Part no. 9055300**	
Plug, panel mount **GSR 5HP/5M** **Part no. 9055350**	
Plug, cable mount, cable entry top M40 **KSR 5HP/AO/5M** **Part no. 9055100**	
Plug, cable mount, cable entry side 90° M40 **KSR 5HP/AS/5M** **Part no. 9055200**	
Receptacle, cable mount, cable entry top M40 **KBR 5HP/AO/5M** **Part no. 9055150**	
Receptacle, cable mount, cable entry side 90° M40 **KBR 5HP/AS/5M** **Part no. 9055250**	

drawing - dimensions in mm [inch]

Contacts: *Pages 190-195*
Cable glands and tools: *Page 199*

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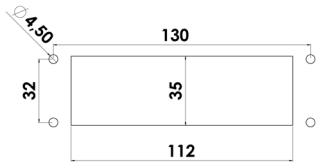
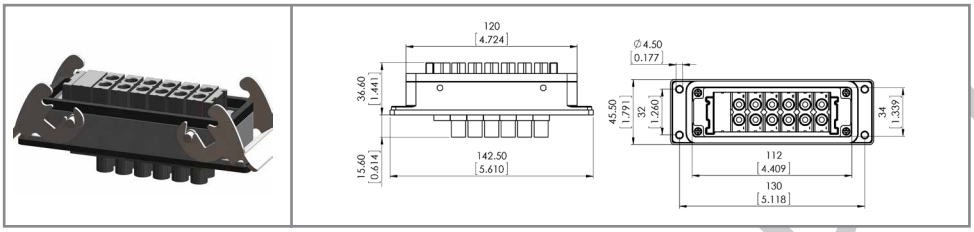
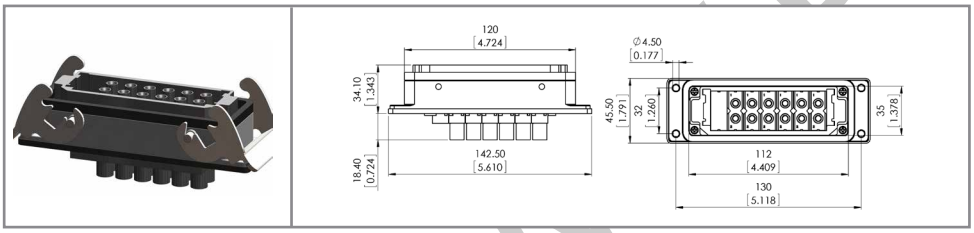
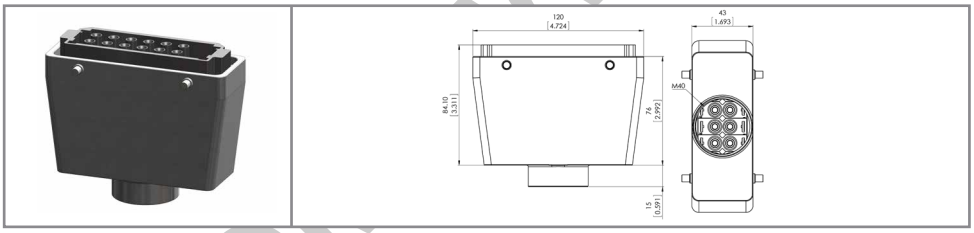
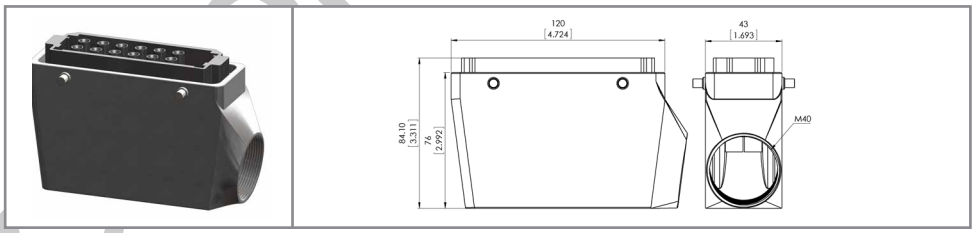
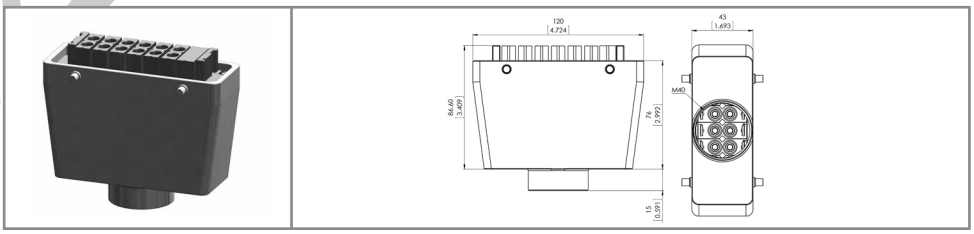
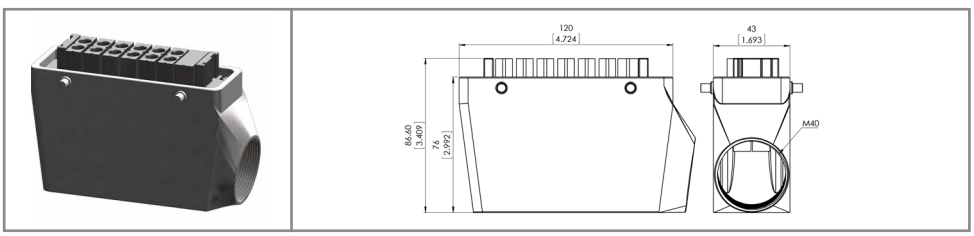
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	12
Insulation material	PA 6.6 GF

Panel cut out



Suitable contacts on page 190

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 6HP/7M** **Part no. 9076300**	
Plug, panel mount **GSR 6HP/7M** **Part no. 9076350**	
Plug, cable mount, cable entry top M40 **KSR 6HP/AO/7M** **Part no. 9076100**	
Plug, cable mount, cable entry side 90° M40 **KSR 6HP/AS/7M** **Part no. 9076200**	
Receptacle, cable mount, cable entry top M40 **KBR 6HP/AO/7M** **Part no. 9076150**	
Receptacle, cable mount, cable entry side 90° M40 **KBR 6HP/AS/7M** **Part no. 9076250**	

drawing - dimensions in mm [inch]

Contacts: *Pages 190-195*
Cable glands and tools: *Page 199*

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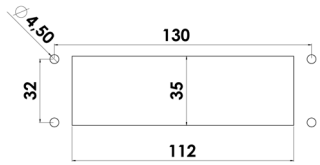
Type MOD-HP Size 7M **14-Pin 12 kV DC**

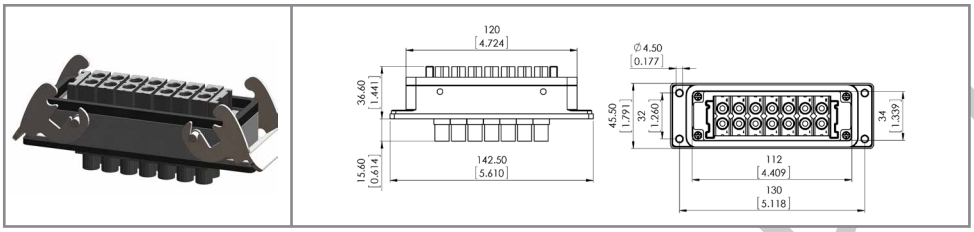
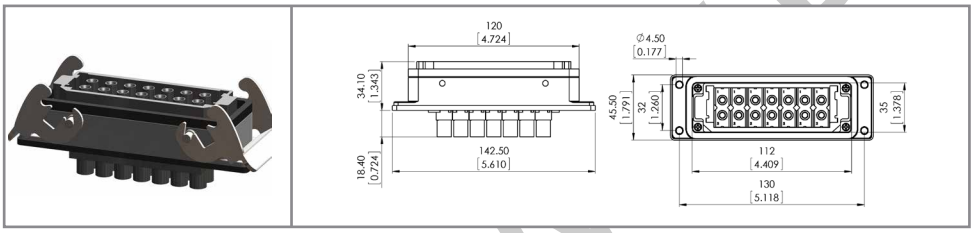
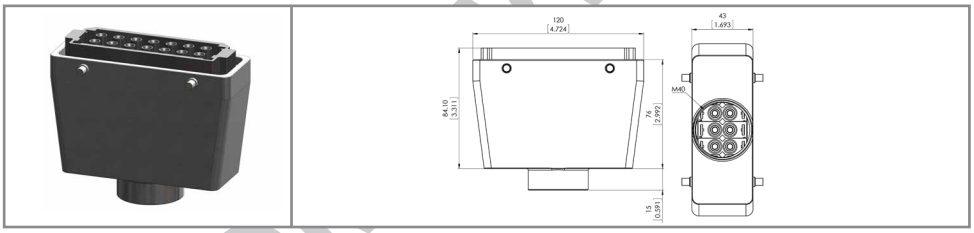
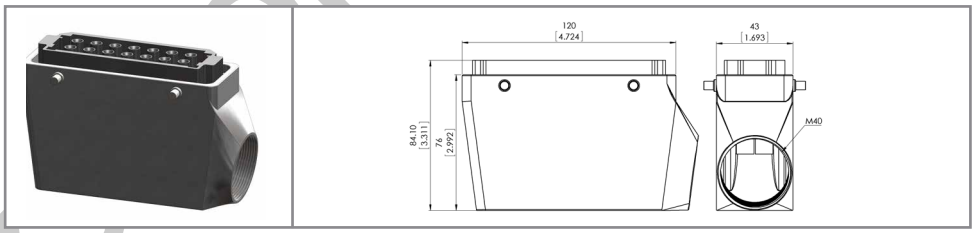
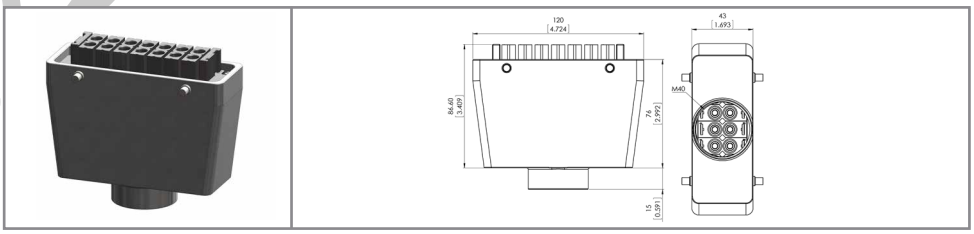
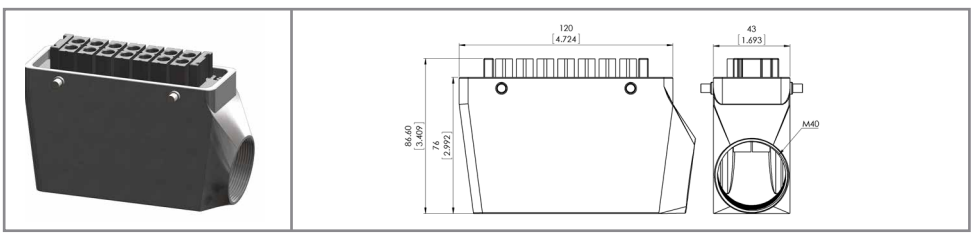
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	14
Insulation material	PA 6.6 GF

Panel cut out



Suitable contacts on page 190

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 7HP/7M** **Part no. 9077300**	
Plug, panel mount **GSR 7HP/7M** **Part no. 9077350**	
Plug, cable mount, cable entry top M40 **KSR 7HP/AO/7M** **Part no. 9077100**	
Plug, cable mount, cable entry side 90° M40 **KSR 7HP/AS/7M** **Part no. 9077200**	
Receptacle, cable mount, cable entry top M40 **KBR 7HP/AO/7M** **Part no. 9077150**	
Receptacle, cable mount, cable entry side 90° M40 **KBR 7HP/AS/7M** **Part no. 9077250**	

drawing - dimensions in mm [inch]

Contacts: *Pages 190-195*
Cable glands and tools: *Page 199*

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Overview Series MOD-HP

Part no.	Description	HV contacts	Plug	Recepta-cle	Cable mount	Connecting thread	Panel mount	Page
9021300	GBR 1HP/2M	2		•			•	149
9021350	GSR 1HP/2M	2	•				•	149
9021010	KSR 1HP/AO/2M	2	•		•	M25		149
9021200	KSR 1HP/AS/2M	2	•		•	M25		149
9021150	KBR 1HP/AO/2M	2		•	•	M25		149
9021250	KBR 1HP/AS/2M	2		•	•	M25		149
9022300	GBR 2HP/2M	4		•			•	150
9022350	GSR 2HP/2M	4	•				•	150
9022100	KSR 2HP/AO/2M	4	•		•	M25		150
9022200	KSR 2HP/AS/2M	4	•		•	M25		150
9022150	KBR 2HP/AO/2M	4		•	•	M25		150
9022250	KBR 2HP/AS/2M	4		•	•	M25		150
9033300	GBR 3HP/3M	6		•			•	151
9033350	GSR 3HP/3M	6	•				•	151
9033100	KSR 3HP/AO/3M	6	•		•	M32		151
9033200	KSR 3HP/AS/3M	6	•		•	M32		151
9033150	KBR 3HP/AO/3M	6		•	•	M32		151
9033250	KBR 3HP/AS/3M	6		•	•	M32		151
9054300	GBR 4HP/5M	8		•			•	152
9054350	GSR 4HP/5M	8	•				•	152
9054100	KSR 4HP/AO/5M	8	•		•	M40		152
9054200	KSR 4HP/AS/5M	8	•		•	M40		152
9054150	KBR 4HP/AO/5M	8		•	•	M40		152
9054250	KBR 4HP/AS/5M	8		•	•	M40		152
9055300	GBR 5HP/5M	10		•			•	153
9055350	GSR 5HP/5M	10	•				•	153
9055100	KSR 5HP/AO/5M	10	•		•	M40		153
9055200	KSR 5HP/AS/5M	10	•		•	M40		153
9055150	KBR 5HP/AO/5M	10		•	•	M40		153
9055250	KBR 5HP/AS/5M	10		•	•	M40		153
9076300	GBR 6HP/7M	12		•			•	154
9076350	GSR 6HP/7M	12	•				•	154
9076100	KSR 6HP/AO/7M	12	•		•	M40		154
9076200	KSR 6HP/AS/7M	12	•		•	M40		154
9076150	KBR 6HP/AO/7M	12		•	•	M40		154
9076250	KBR 6HP/AS/7M	12		•	•	M40		154
9077300	GBR 7HP/7M	14		•			•	155
9077350	GSR 7HP/7M	14	•				•	155
9077100	KSR 7HP/AO/7M	14	•		•	M40		155
9077200	KSR 7HP/AS/7M	14	•		•	M40		155
9077150	KBR 7HP/AO/7M	14		•	•	M40		155
9077250	KBR 7HP/AS/7M	14		•	•	M40		155

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General characteristics and technical data type MOD-T

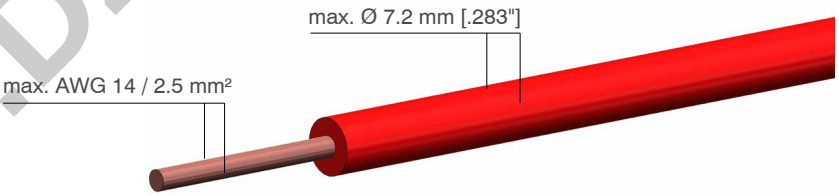
Housings	
Number of module slots	2, 3, 5, 7
Locking system	Lever locking
Mounting type (panel mount connector)	4-hole-flange
Housing material	Aluminium alloy
Surface plating	Epoxy powder coating
Protection class (in mated condition)	IP65 acc. DIN EN 60529
Operating temperature	-30°C to +80°C [-22°F to +176°F]

Contacts type MOD-T	
Termination method	Solder
Rated current (at +23°C [+73°F])	30 A
Contact resistance	300µΩ
Contact diameter	2.7 mm
Wire size	2.5 mm² [14 AWG]
Contact material	Brass (CuZn)
Contact plating	Silver (Ag)
Mating cycles	≥ 100000

Contacts included

Module type MOD-T	
Number of pins	2
Module material	PA 6.6 GF
Insulation material	PTFE
Flammability class	UL94 V-0
Operating temperature modules	-40°C to +125°C [-40°F to +257°F]
Operating temperature insulation parts	-50°C to +260°C [-58°F to +500°F]
CTI-Value	600
Insulating material group	I (DIN IEC 60664)
Max. diameter of dielectric cable insulation (single wire)	7.2 mm

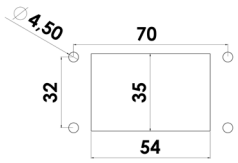
Suitable cable dimensions (single wire)



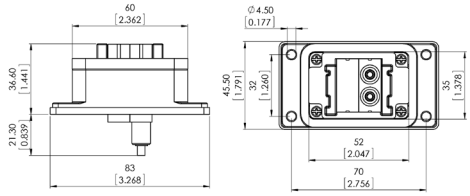
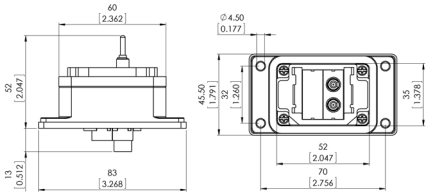
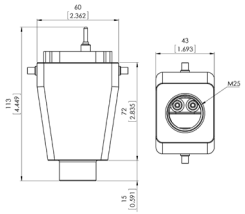
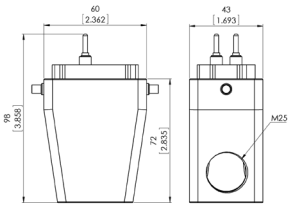
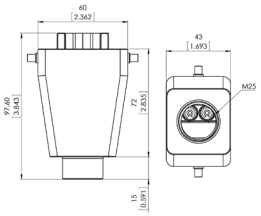
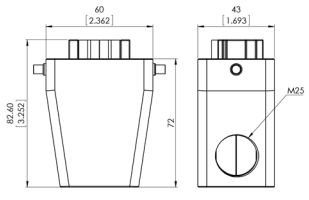
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	2
Insulation material	PTFE

Panel cut out



Contacts included.

Type / Version / Part number	Picture / Drawing	
Receptacle, panel mount **GBR 1T2/2M** **Part no. 9021305**		
Plug, panel mount **GSR 1T2/2M** **Part no. 9021355**		
Plug, cable mount, cable entry top M25 **KSR 1T2/AO/2M** **Part no. 9021015**		
Plug, cable mount, cable entry side 90° M25 **KSR 1T2/AS/2M** **Part no. 9021205**		
Receptacle, cable mount, cable entry top M25 **KBR 1T2/AO/2M** **Part no. 9021155**		
Receptacle, cable mount, cable entry side 90° M25 **KBR 1T2/AS/2M** **Part no. 9021255**		

drawing - dimensions in mm [inch]

Cable glands and tools: Page 199

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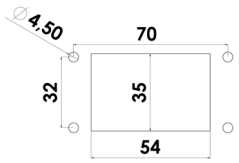
Type MOD-T Size 2M **4-Pin 12 kV DC**

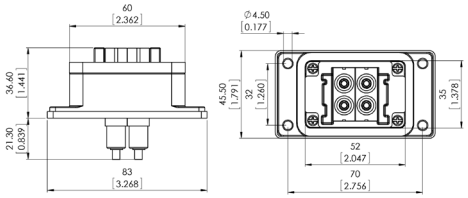
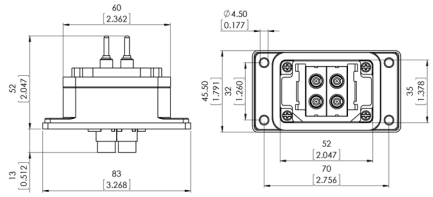
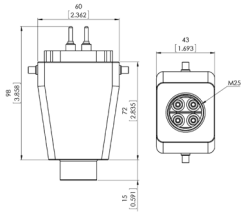
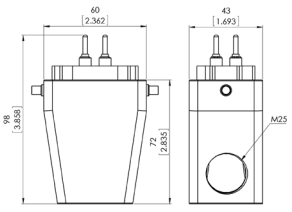
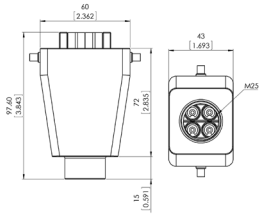
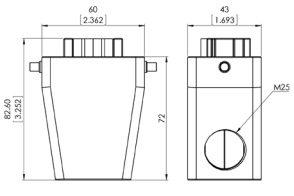
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	4
Insulation material	PTFE

Panel cut out



Contacts included.

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 2T2/2M** **Part no. 9022305**	
Plug, panel mount **GSR 2T2/2M** **Part no. 9022355**	
Plug, cable mount, cable entry top M25 **KSR 2T2/AO/2M** **Part no. 9022105**	
Plug, cable mount, cable entry side 90° M25 **KSR 2T2/AS/2M** **Part no. 9022205**	
Receptacle, cable mount, cable entry top M25 **KBR 2T2/AO/2M** **Part no. 9022155**	
Receptacle, cable mount, cable entry side 90° M25 **KBR 2T2/AS/2M** **Part no. 9022255**	

drawing - dimensions in mm [inch]

Cable glands and tools: *Page 199*

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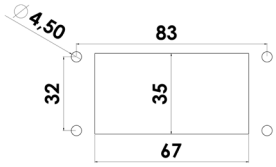
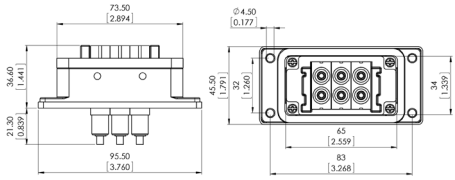
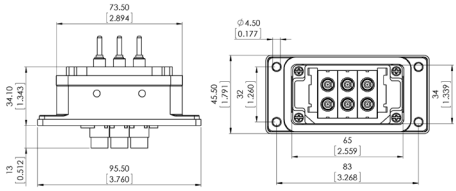
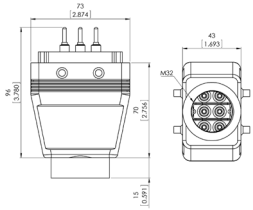
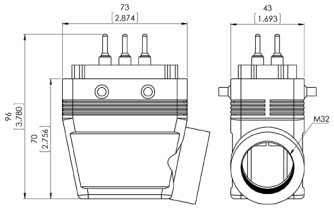
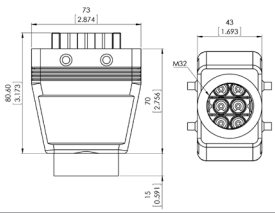
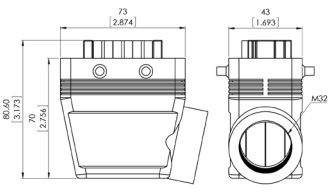
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	6
Insulation material	PTFE

Panel cut out



Contacts included.

Type / Version / Part number	Picture / Drawing	
Receptacle, panel mount **GBR 3T2/3M** **Part no. 9033305**		
Plug, panel mount **GSR 3T2/3M** **Part no. 9033355**		
Plug, cable mount, cable entry top M32 **KSR 3T2/AO/3M** **Part no. 9033105**		
Plug, cable mount, cable entry side 90° M32 **KSR 3T2/AS/3M** **Part no. 9033205**		
Receptacle, cable mount, cable entry top M32 **KBR 3T2/AO/3M** **Part no. 9033155**		
Receptacle, cable mount, cable entry side 90° M32 **KBR 3T2/AS/3M** **Part no. 9033255**		

drawing - dimensions in mm [inch]

Cable glands and tools: Page 199

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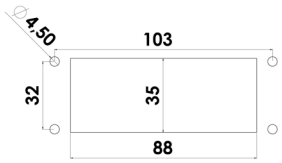
Type MOD-T Size 5M **8-Pin 12 kV DC**

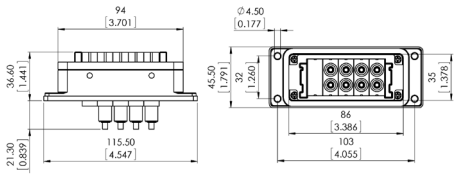
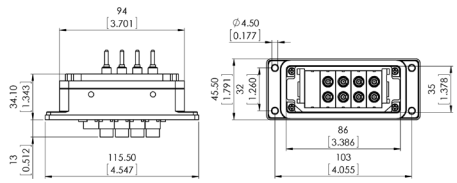
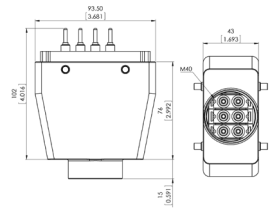
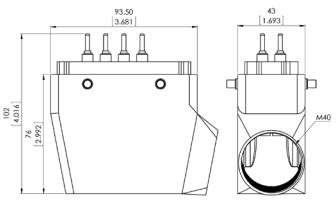
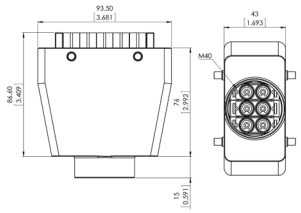
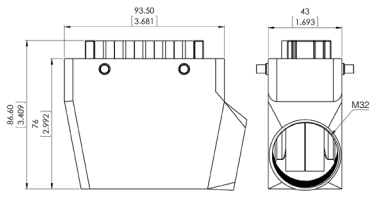
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	8
Insulation material	PTFE

Panel cut out



Contacts included.

Type / Version / Part number	Picture / Drawing	
Receptacle, panel mount **GBR 4T2/5M** **Part no. 9054305**		
Plug, panel mount **GSR 4T2/5M** **Part no. 9054355**		
Plug, cable mount, cable entry top M40 **KSR 4T2/AO/5M** **Part no. 9054105**		
Plug, cable mount, cable entry side 90° M40 **KSR 4T2/AS/5M** **Part no. 9054205**		
Receptacle, cable mount, cable entry top M40 **KBR 4T2/AO/5M** **Part no. 9054155**		
Receptacle, cable mount, cable entry side 90° M32 **KBR 4T2/AS/5M** **Part no. 9054255**		

drawing - dimensions in mm [inch]

Cable glands and tools: Page 199

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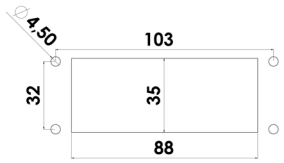
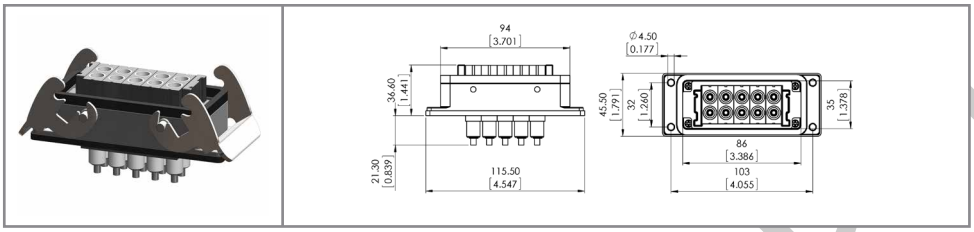
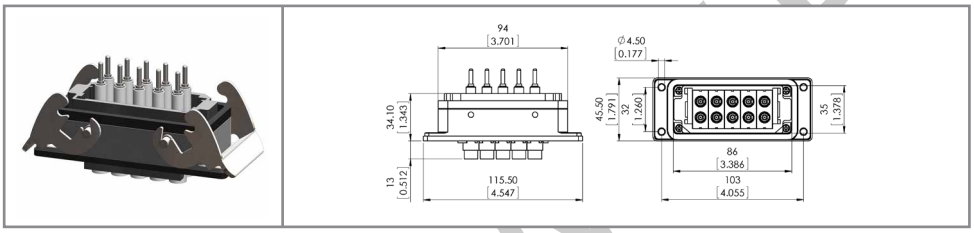
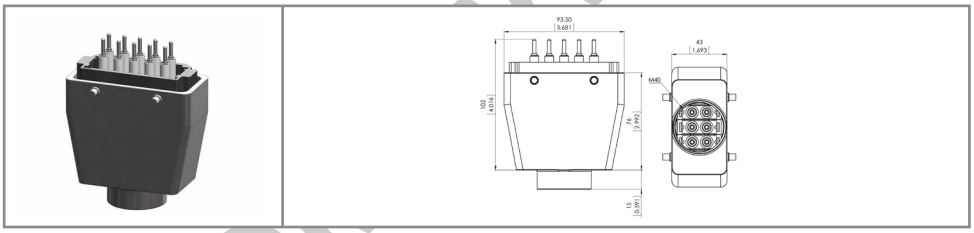
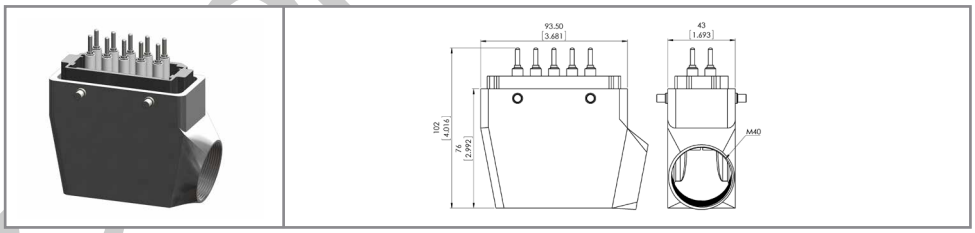
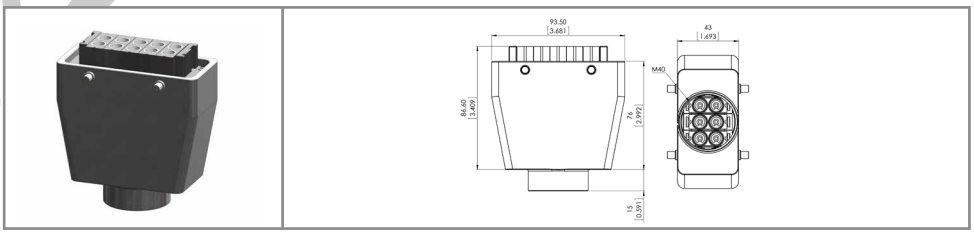
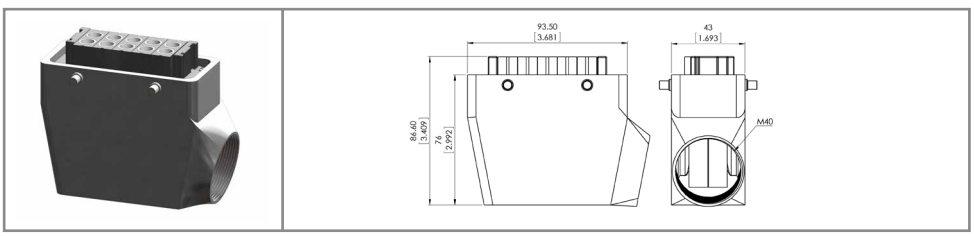
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	10
Insulation material	PTFE

Panel cut out



Contacts included.

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 5T2/5M** **Part no. 9055305**	
Plug, panel mount **GSR 5T2/5M** **Part no. 9055355**	
Plug, cable mount, cable entry top M40 **KSR 5T2/AO/5M** **Part no. 9055105**	
Plug, cable mount, cable entry side 90° M40 **KSR 5T2/AS/5M** **Part no. 9055205**	
Receptacle, cable mount, cable entry top M40 **KBR 5T2/AO/5M** **Part no. 9055155**	
Receptacle, cable mount, cable entry side 90° M40 **KBR 5T2/AS/5M** **Part no. 9055255**	

drawing - dimensions in mm [inch]

Cable glands and tools: Page 199

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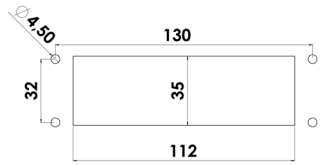
Type MOD-T Size 7M **12-Pin 12 kV DC**

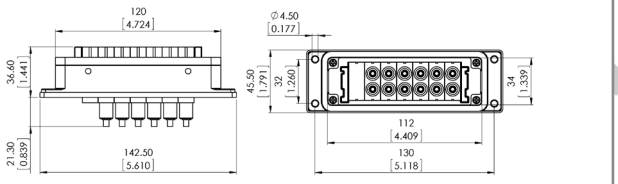
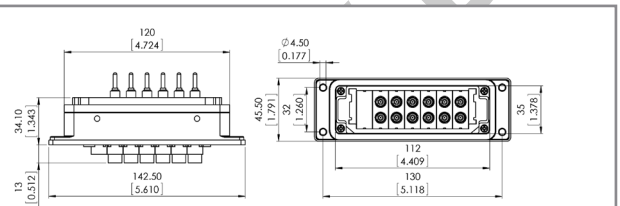
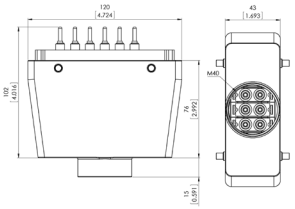
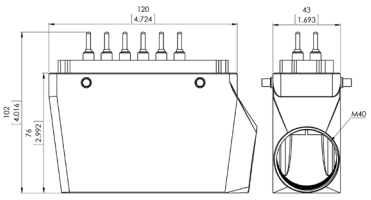
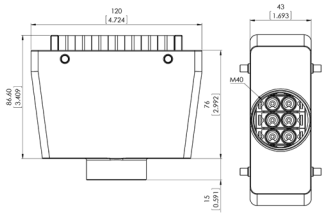
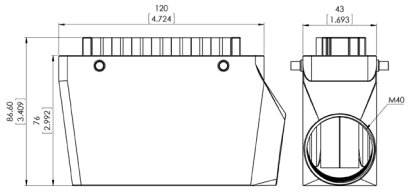
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	12
Insulation material	PTFE

Panel cut out



Contacts included.

Type / Version / Part number	Picture / Drawing
Receptacle, panel mount **GBR 6T2/7M** **Part no. 9076305**	
Plug, panel mount **GSR 6T2/7M** **Part no. 9076355**	
Plug, cable mount, cable entry top M40 **KSR 6T2/AO/7M** **Part no. 9076105**	
Plug, cable mount, cable entry side 90° M40 **KSR 6T2/AS/7M** **Part no. 9076215**	
Receptacle, cable mount, cable entry top M40 **KBR 6T2/AO/7M** **Part no. 9076155**	
Receptacle, cable mount, cable entry side 90° M40 **KBR 6T2/AS/7M** **Part no. 9076255**	

drawing - dimensions in mm [inch]

Cable glands and tools: Page 199

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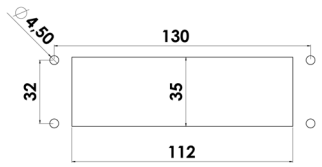
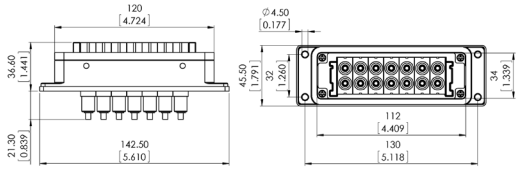
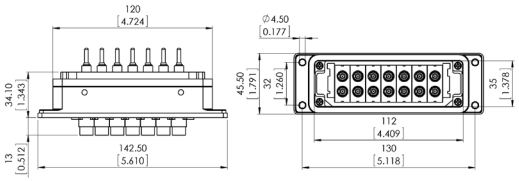
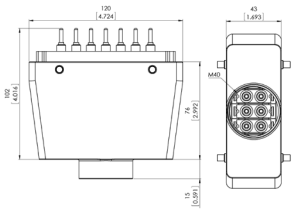
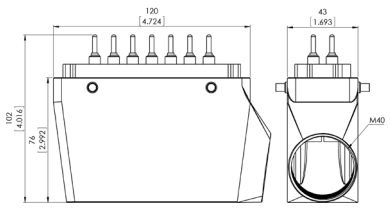
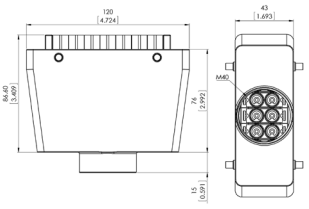
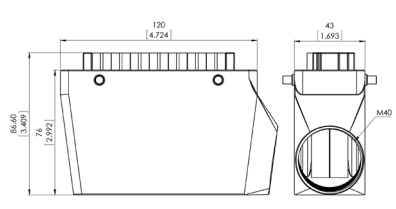
Electrical values	
Operating voltage	12 kV DC
Test voltage	18 kV DC

Characteristics	
Number of pins	14
Insulation material	PTFE

Panel cut out



Contacts included.

Type / Version / Part number	Picture / Drawing	
Receptacle, panel mount **GBR 7T2/7M** **Part no. 9077305**		
Plug, panel mount **GSR 7T2/7M** **Part no. 9077355**		
Plug, cable mount, cable entry top M40 **KSR 7T2/AO/7M** **Part no. 9077105**		
Plug, cable mount, cable entry side 90° M40 **KSR 7T2/AS/7M** **Part no. 9077205**		
Receptacle, cable mount, cable entry top M40 **KBR 7T2/AO/7M** **Part no. 9077155**		
Receptacle, cable mount, cable entry side 90° M40 **KBR 7T2/AS/7M** **Part no. 9077255**		

drawing - dimensions in mm [inch]

Cable glands and tools: Page 199

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Part no.	Description	HV contacts	Plug	Recepta-cle	Cable mount	Connecting thread	Panel mount	Page
9021305	GBR 1T2/2M	2		•			•	172
9021355	GSR 1T2/2M	2	•				•	172
9021015	KSR 1T2/AO/2M	2	•		•	M25		172
9021205	KSR 1T2/AS/2M	2	•		•	M25		172
9021155	KBR 1T2/AO/2M	2		•	•	M25		172
9021255	KBR 1T2/AS/2M	2		•	•	M25		172
9022305	GBR 2T2/2M	4		•			•	173
9022355	GSR 2T2/2M	4	•				•	173
9022105	KSR 2T2/AO/2M	4	•		•	M25		173
9022205	KSR 2T2/AS/2M	4	•		•	M25		173
9022155	KBR 2T2/AO/2M	4		•	•	M25		173
9022255	KBR 2T2/AS/2M	4		•	•	M25		173
9033305	GBR 3T2/3M	6		•			•	174
9033355	GSR 3T2/3M	6	•				•	174
9033105	KSR 3T2/AO/3M	6	•		•	M32		174
9033205	KSR 3T2/AS/3M	6	•		•	M32		174
9033155	KBR 3T2/AO/3M	6		•	•	M32		174
9033255	KBR 3T2/AS/3M	6		•	•	M32		174
9054305	GBR 4T2/5M	8		•			•	175
9054355	GSR 4T2/5M	8	•				•	175
9054105	KSR 4T2/AO/5M	8	•		•	M40		175
9054205	KSR 4T2/AS/5M	8	•		•	M40		175
9054155	KBR 4T2/AO/5M	8		•	•	M40		175
9054255	KBR 4T2/AS/5M	8		•	•	M32		175
9055305	GBR 5T2/5M	10		•			•	176
9055355	GSR 5T2/5M	10	•				•	176
9055105	KSR 5T2/AO/5M	10	•		•	M40		176
9055205	KSR 5T2/AS/5M	10	•		•	M40		176
9055155	KBR 5T2/AO/5M	10		•	•	M40		176
9055255	KBR 5T2/AS/5M	10		•	•	M40		176
9076305	GBR 6T2/7M	12		•			•	177
9076355	GSR 6T2/7M	12	•				•	177
9076105	KSR 6T2/AO/7M	12	•		•	M40		177
9076215	KSR 6T2/AS/7M	12	•		•	M40		177
9076155	KBR 6T2/AO/7M	12		•	•	M40		177
9076255	KBR 6T2/AS/7M	12		•	•	M40		177
9077305	GBR 7T2/7M	14		•			•	178
9077355	GSR 7T2/7M	14	•				•	178
9077105	KSR 7T2/AO/7M	14	•		•	M40		178
9077205	KSR 7T2/AS/7M	14	•		•	M40		178
9077155	KBR 7T2/AO/7M	14		•	•	M40		178
9077255	KBR 7T2/AS/7M	14		•	•	M40		178

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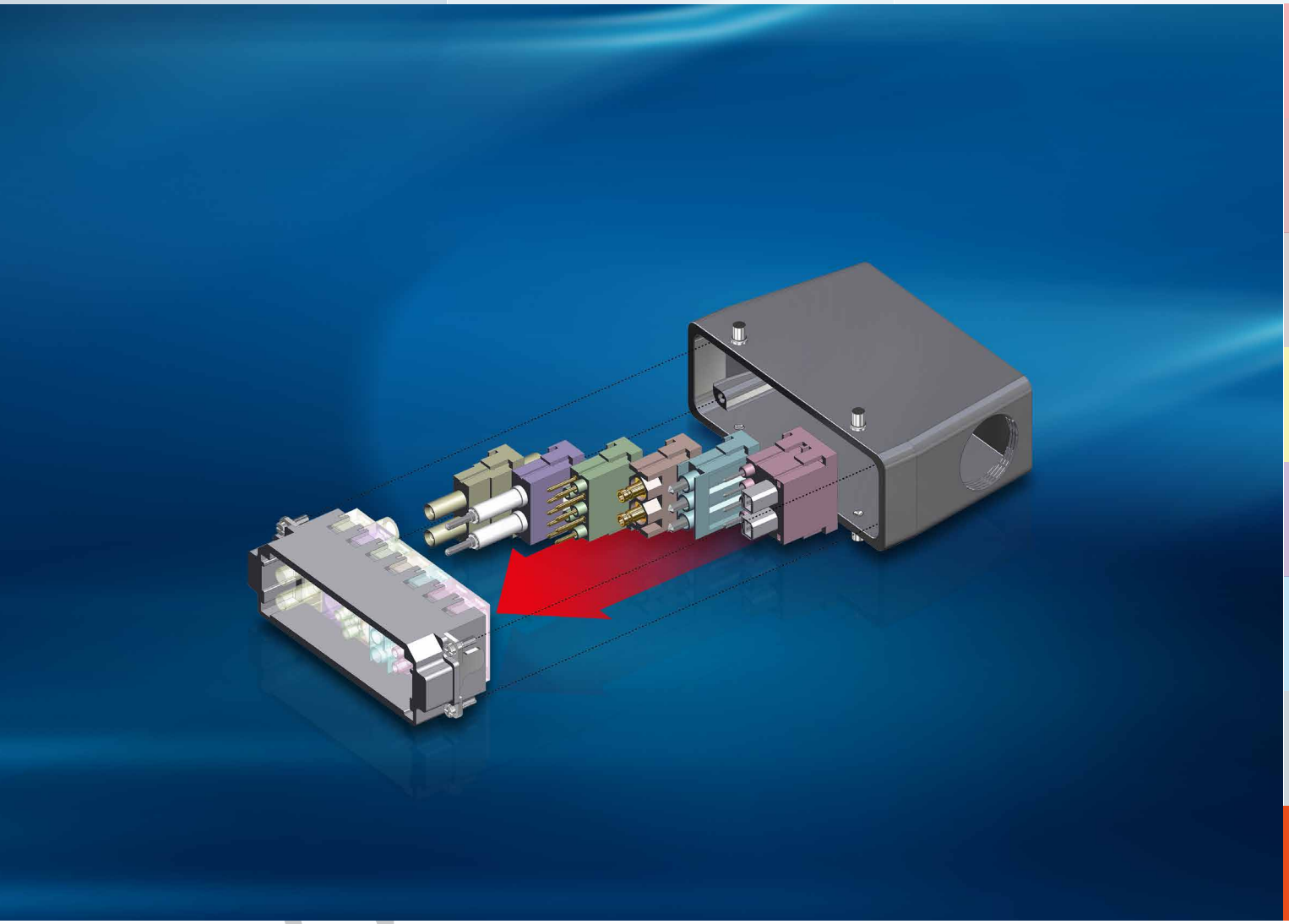
MOD Serie

System components



- Modules
- Module frames
- Industrial connector housings
- Contacts
- Screwed cable glands
- Tools

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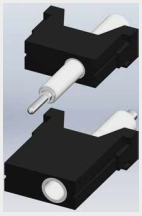
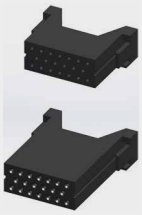
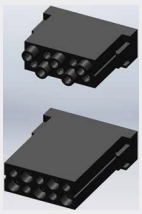
High voltage modules

Picture	Description	Part Number	Operating voltage	Contact size	Wire size
	HiPro HV module plug, 2-pin	6111133	12 kV DC	2.5 mm choose contacts from page 190	0.5-4.0 mm² 20-12 AWG
	HiPro HV module socket, 2-pin	6111134			
	PTFE-1 module plug, 1-pin	6580000	12 kV DC	2.7 mm contacts included	2.5 mm² 14 AWG
	PTFE-1 module socket, 1-pin	6580100			
	PTFE-2 module plug, 2-pin	6580010	12 kV DC	2.7 mm contacts included	2.5 mm² 14 AWG
	PTFE-2 module socket, 2-pin	6580110			

Low voltage modules

Picture	Description	Part Number	Operating voltage	Contact size	Wire size
	20-pin plug module	6575051	63 V	1.0 mm choose contacts from page 192	0.09-0.5 mm² 28-20 AWG
	20-pin socket module	6575061			
	10-pin plug module	6575070	400 V	1.6 mm choose contacts from page 193	0.14-2.5 mm² 26-14 AWG
	10-pin socket module	6575080			
	5-pin plug module	6575065	400 V	2.5 mm choose contacts from page 194	0.5-4.0 mm² 20-12 AWG
	5-pin socket module	6575075			
	3-pin plug module	6575062	630 V	3.6 mm choose contacts from page 195	1.5-10.0 mm² 16-8 AWG
	3-pin socket module	6575063			

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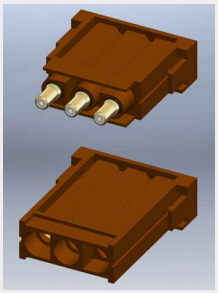
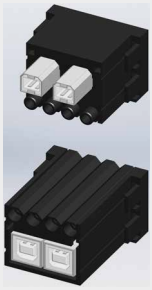
KOAX module

Picture	Description	Part Number	Operating voltage	Wire size
	3-pin KOAX plug module	6575072	250 V	RG 58, 174 179, 316
	3-pin KOAX socket module	6575082		

Contacts: Page 196

RJ45 module

Picture	Description	Part Number
	RJ45 plug module CAT5e / USB type 2 + 4 male signal contacts 1.6 mm (26-14 AWG)	4100007
	RJ45 socket module CAT5e / USB type 2 + 4 female signal contacts 1.6 mm (26-14 AWG)	4200007

Contacts: Page 197

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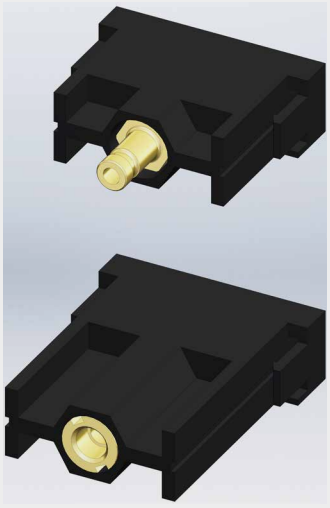
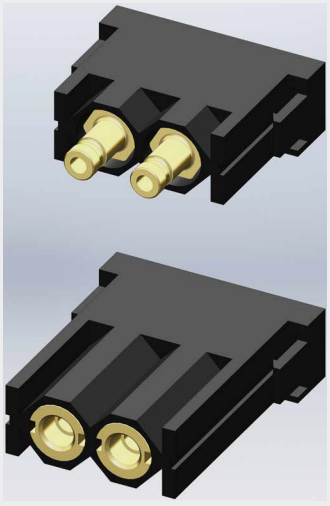
Pneumatic modules - single shut-off

Picture	Description	Part Number	Number of contacts
	Pneumatic plug module ST-1PN-M hose size 2.5 mm	6580201	1
	Pneumatic socket module BU-1PN-M hose size 2.5 mm – with shut-off	6580251	
	Pneumatic plug module ST-1PN-M hose size 4.0 mm	6580204	
	Pneumatic socket module BU-1PN-M hose size 4.0 mm – with shut-off	6580254	
	Pneumatic plug module ST-2PN-M hose size 2.5 mm	6580202	2
	Pneumatic socket module BU-2PN-M hose size 2.5 mm – with shut-off	6580252	
	Pneumatic plug module ST-2PN-M hose size 4.0 mm	6580205	
	Pneumatic socket module BU-2PN-M hose size 4.0 mm – with shut-off	6580255	

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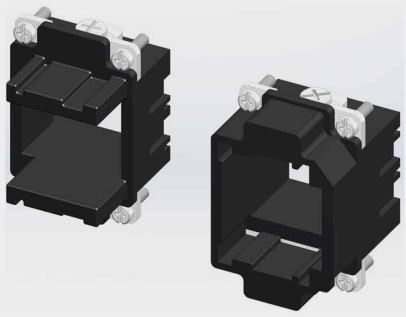
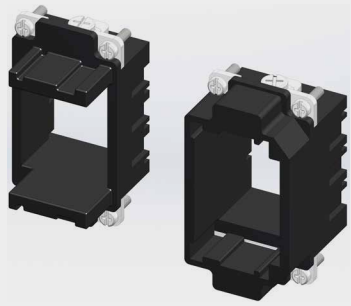
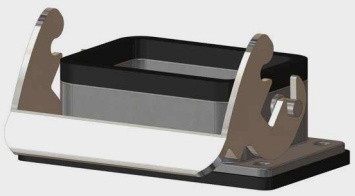
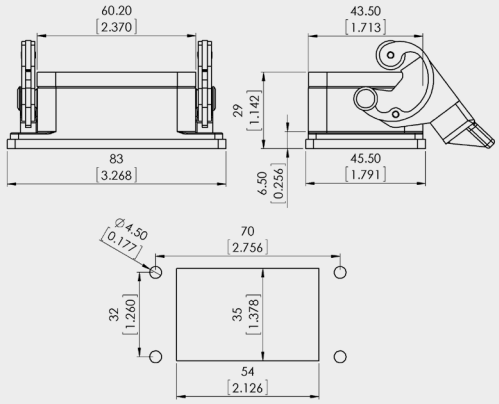
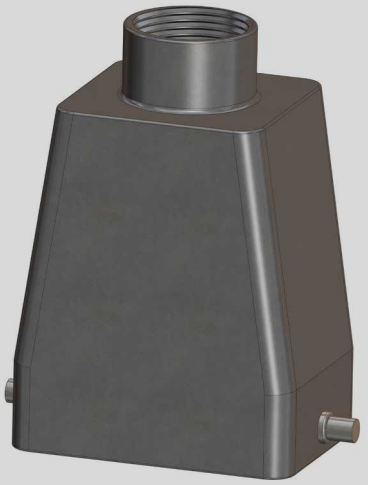
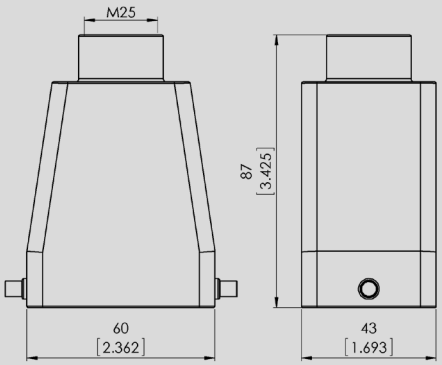
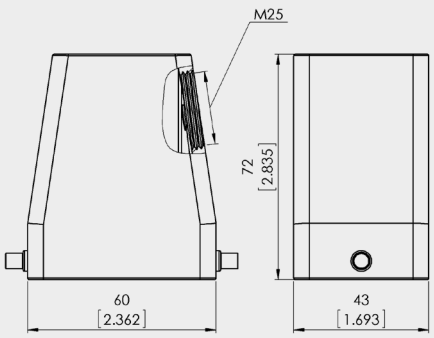
Frames for plug and socket modules

Picture	Description	Part Number
	Module frame for plug modules Size: 2 modules	6575043
	Module frame for receptacle modules Size: 2 modules	6575033
	Module frame for plug modules Size: 3 modules	6575042
	Module frame for receptacle modules Size: 3 modules	6575032
	Module frame for plug modules Size: 5 modules	6575040
	Module frame for receptacle modules Size: 5 modules	6575030
	Module frame for plug modules Size: 7 modules	6575045
	Module frame for receptacle modules Size: 7 modules	6575035

Housings for 2 module frames

Picture	Description / Part Number	Drawing
	Panel mount housing 2M/ LB for 2 modules frame 1-lever-locking system Part no. 6575158	
	Hood, top entry 2M/ HB/ AO/ M25/ LB for 2 modules frame cable top entry connecting thread M25 1-lever-locking system Part no. 6574931 choose screwed cable gland from page 199	
	Hood, side entry 2M/ HB/ AS/ M25/ LB for 2 modules frame cable side entry 90° connecting thread M25 1-lever-locking system Part no. 6574930 choose screwed cable gland from page 199	

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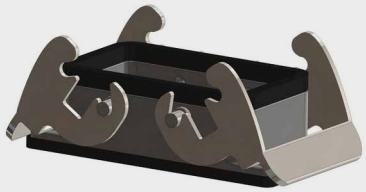
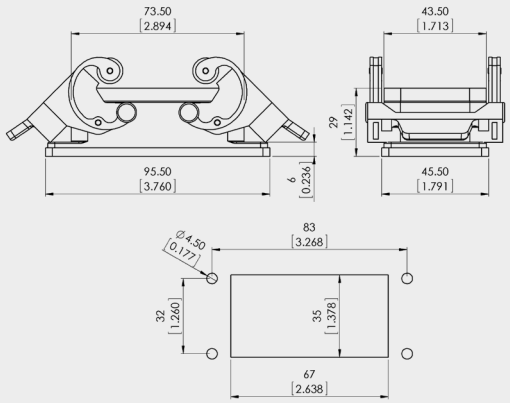
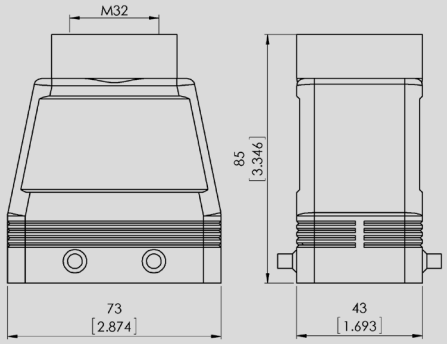
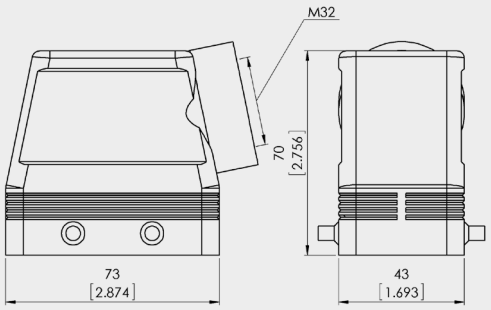
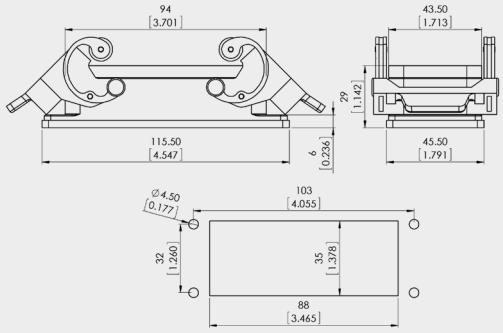
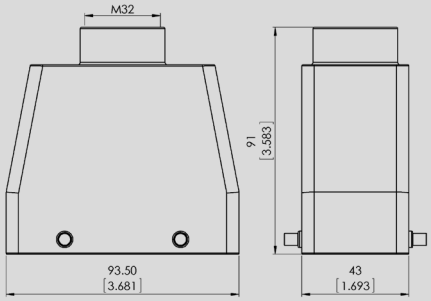
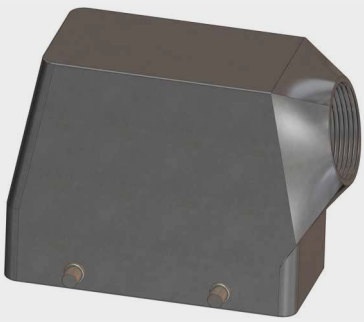
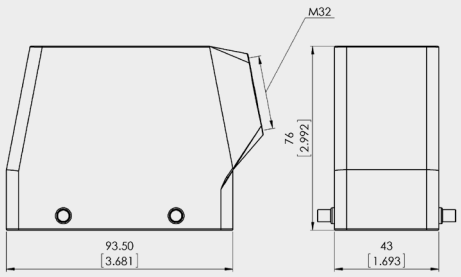
Housings for 3 module frames

Picture	Description / Part Number	Drawing
	Panel mount housing 3M/QB for 3 modules frame 2-lever-locking system Part no. 6575159	
	Hood, top entry 3M/ HB/ AO/ M32/ QB for 3 modules frame cable top entry connecting thread M32 2-lever-locking system Part no. 6574802 choose screwed cable gland from page 199	
	Hood, side entry 3M/ HB/ AS/ M32/ QB for 3 modules frame cable side entry 90° connecting thread M32 2-lever-locking system Part no. 6574807 choose screwed cable gland from page 199	

Housings for 5 module frames

Picture	Description / Part Number	Drawing
	Panel mount housing 5M/ QB for 5 modules frame 2-lever-locking system Part no. 6575161	
	Hood, top entry 5M/ HB/ AO/ M32/ QB for 5 modules frame cable top entry connecting thread M32 2-lever-locking system Part no. 6575147 choose screwed cable gland from page 199	
	Hood, side entry 5M/ HB/ AS/ M32/ QB for 5 modules frame cable side entry 90° connecting thread M32 2-lever-locking system Part no. 6574833 choose screwed cable gland from page 199	

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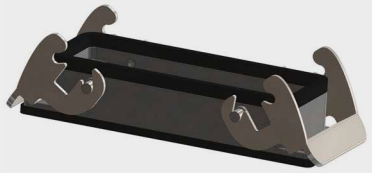
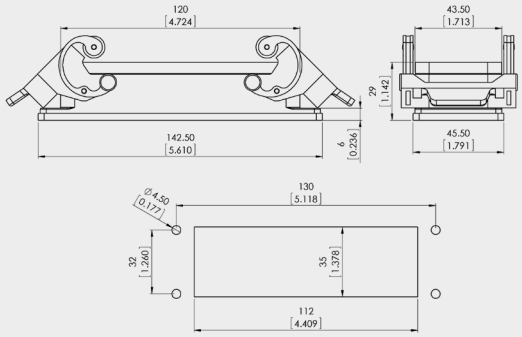
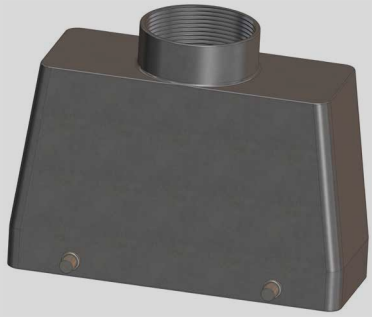
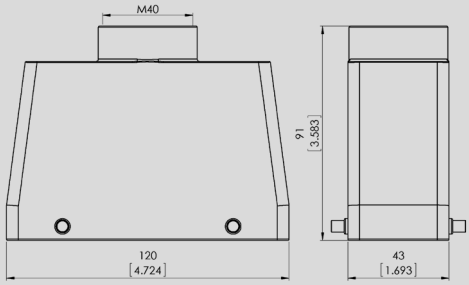
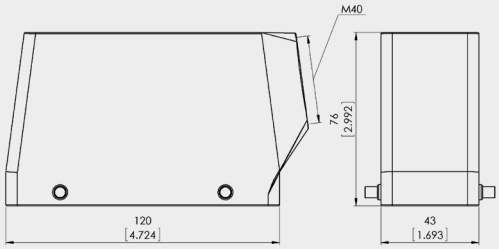
Housings for 7 module frames

Picture	Description / Part Number	Drawing
	Panel mount housing 7M/ QB for 7 modules frame 2-lever-locking system Part no. 6575162	
	Hood, top entry 7M/ HB/ AO/ M40/ QB for 7 modules frame cable top entry connecting thread M40 2-lever-locking system Part no. 6575163 choose screwed cable gland from page 199	
	Hood, side entry 7M/ HB/ AS/ M40/ QB for 7 modules frame cable side entry 90° connecting thread M40 2-lever-locking system Part no. 6574829 choose screwed cable gland from page 199	

HiPro HV module

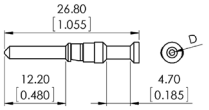
plug module
part no. 6111133

socket module
part no. 6111134

General characteristics	Value
Number of contacts	2
Termination method	Crimp or solder
Wire size	0.5-4.0 mm² [20-12 AWG]
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	12 kV DC
Test voltage	18 kV DC
Pollution degree	1
Material group	1
Contact resistance	≤ 2 mΩ
Insulation resistance	≥ 10^{10} Ω
Climatical characteristics	**Value**
Rated temperature	-40°C to +125°C [-40°F to +257°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 500
Material characteristics	
Insert (module)	PA 6.6 FR
Contacts	Brass (CuZn)
Contacts surface plating	Silver (Ag)

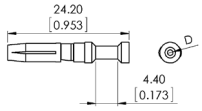
Male contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575087	Male contact 2.5 mm / 20 AWG	0.5	20	
6575089	Male contact 2.5 mm / 18 AWG	0.75-1.0	18	
6575092	Male contact 2.5 mm / 16 AWG	1.5	16	
6575094	Male contact 2.5 mm / 14 AWG	2.5	14	
6575091	Male contact 2.5 mm / 12 AWG	4.0	12	

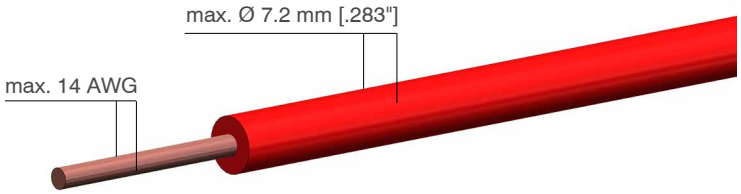


Female contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575108	Female contact 2.5 mm / 20 AWG	0.5	20	
6575111	Female contact 2.5 mm / 18 AWG	0.75-1.0	18	
6575102	Female contact 2.5 mm / 16 AWG	1.5	16	
6575104	Female contact 2.5 mm / 14 AWG	2.5	14	
6575113	Female contact 2.5 mm / 12 AWG	4.0	12	



Suitable cable dimensions (single wire)



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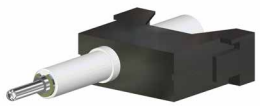
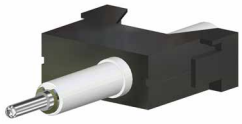
PTFE HV module 1-pin

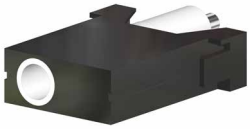
plug module
part no. 6580000



plug module
part no. 6580050



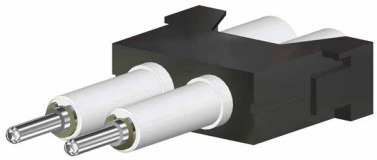
socket module
part no. 6580100



socket module
part no. 6580150

General characteristics	Value
Number of contacts	1
Termination method	Solder
Termination size	2.5 mm² [14 AWG]
Contact diameter	2.7 mm
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	12 kV DC
Test voltage	18 kV DC
Pollution degree	1
Material group	1
Contact resistance	300 µΩ
Climatical characteristics	**Value**
Rated temperature	-40°C to +125°C [-40°F to +257°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 100,000
Material characteristics	
Insert (module)	PA 6.6 FR
Insulator	PTFE
Contacts	Brass (CuZn)
Contacts surface plating	Silver (Ag)

PTFE HV module 2-pin

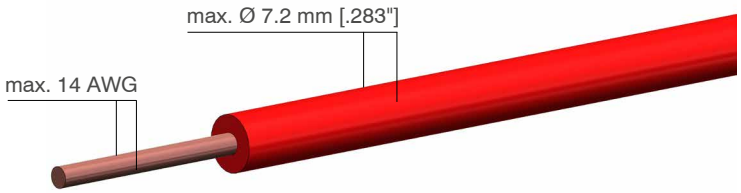


plug module
part no. 6580010

socket module
part no. 6580110

General characteristics	Value
Number of contacts	2
Termination method	Solder
Termination size	2.5 mm² [14 AWG]
Contact diameter	2.7 mm
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	12 kV DC
Test voltage	18 kV DC
Pollution degree	1
Material group	1
Contact resistance	300 µΩ
Climatical characteristics	**Value**
Rated temperature	-40°C to +125°C [-40°F to +257°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 100,000
Material characteristics	
Insert (module)	PA 6.6 FR
Insulator	PTFE
Contacts	Brass (CuZn)
Contacts surface plating	Silver (Ag)

Suitable cable dimensions (single wire)



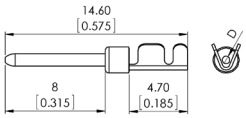
20-pin module

plug module
part no. 6575051

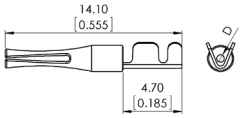
socket module
part no. 6575061

General characteristics	Value
Number of contacts	20
Termination method	Crimp or solder
Termination size	0.09-0.5 mm² [28-20 AWG]
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	63 V
Pollution degree	3
Overvoltage category	III
Material group	II
Rated impulse withstand voltage	4 kV
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 10^{12} Ω
Climatical characteristics	**Value**
Rated temperature	-40°C to +125°C [-40°F to +257°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 500
Material characteristics	
Insert (module)	PA 6.6 FR
Male contacts	Brass (CuZn)
Female contacts	Bronze (CuSn)
Contacts surface plating	Gold (Au)

Male contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575114	Male contact AU 1.0 mm / 28-24 AWG	0.09-0.25	28-24	
6575137	Male contact AU 1.0 mm / 24-20 AWG	0.25-0.5	24-20	

Female contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575115	Female contact AU 1.0 mm / 28-24 AWG	0.09-0.25	28-24	
6575136	Female contact AU 1.0 mm / 24-20 AWG	0.25-0.5	24-20	

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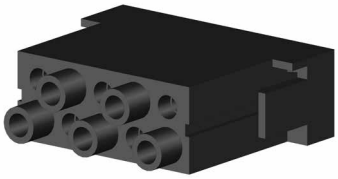
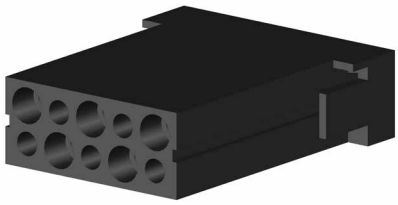
10-pin module – 400 V - contacts 1.6 mm

10-pin module



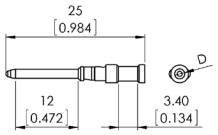
plug module
part no. 6575070



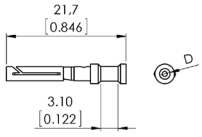
socket module
part no. 6575080

General characteristics	Value
Number of contacts	10
Termination method	Crimp or solder
Termination size	0.14-2.5 mm² [26-14 AWG]
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	400 V
Pollution degree	3
Overvoltage category	III
Material group	II
Rated impulse withstand voltage	6 kV
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 10^{10} Ω
Climatical characteristics	**Value**
Rated temperature	-40°C to +100°C [-40°F to +212°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 500
Material characteristics	
Insert (module)	PA 6.6 FR
Contacts	Brass (CuZn)
Contacts surface plating	Silver (Ag) / gold (Au)

Male contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Silver plated	Gold plated	Picture / Drawing
6575085	Male contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575086	Male contact 1.6 mm / 20 AWG	0.5	20	•		
6575088	Male contact 1.6 mm / 20-16 AWG	0.75-1.0	20-16	•		
6575090	Male contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575083	Male contact 1.6 mm / 14 AWG	2.5	14	•		
6575118	Male contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575121	Male contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575116	Male contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575124	Male contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575125	Male contact AU 1.6 mm / 14 AWG	2.5	14		•	

Female contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Silver plated	Gold plated	Picture / Drawing
6575095	Female contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575107	Female contact 1.6 mm / 20 AWG	0.5	20	•		
6575098	Female contact 1.6 mm / 20-16 AWG	0.75-1.0	20-16	•		
6575100	Female contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575084	Female contact 1.6 mm / 14 AWG	2.5	14	•		
6575127	Female contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575131	Female contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575117	Female contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575132	Female contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575133	Female contact AU 1.6 mm / 14 AWG	2.5	14		•	

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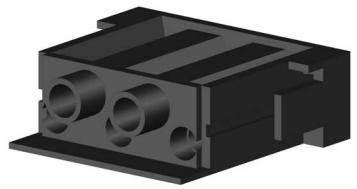
5-pin module

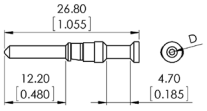


plug module
part no. 6575065

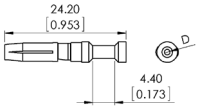
socket module
part no. 6575075

General characteristics	Value
Number of contacts	5
Termination method	Crimp or solder
Termination size	0.5-4.0 mm² [20-12 AWG]
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	400 V
Pollution degree	3
Overvoltage category	III
Material group	II
Rated impulse withstand voltage	6 kV
Contact resistance	≤ 2 mΩ
Insulation resistance	≥ 10^{10} Ω
Climatical characteristics	**Value**
Rated temperature	-40°C to +125°C [-40°F to +257°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 500
Material characteristics	
Insert (module)	PA 6.6 FR
Contacts	Brass (CuZn)
Contacts surface plating	Silver (Ag)

Male contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575087	Male contact 2.5 mm / 20 AWG	0.5	20	
6575089	Male contact 2.5 mm / 18 AWG	0.75-1.0	18	
6575092	Male contact 2.5 mm / 16 AWG	1.5	16	
6575094	Male contact 2.5 mm / 14 AWG	2.5	14	
6575091	Male contact 2.5 mm / 12 AWG	4.0	12	

Female contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575108	Female contact 2.5 mm / 20 AWG	0.5	20	
6575111	Female contact 2.5 mm / 18 AWG	0.75-1.0	18	
6575102	Female contact 2.5 mm / 16 AWG	1.5	16	
6575104	Female contact 2.5 mm / 14 AWG	2.5	14	
6575113	Female contact 2.5 mm / 12 AWG	4.0	12	

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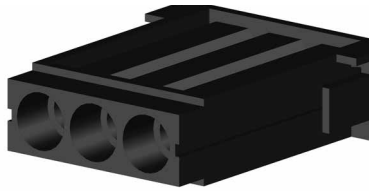
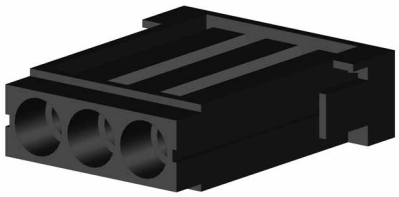
3-pin module – 630 V - contacts 3.6 mm

3-pin module



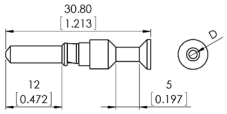
plug module
part no. 6575062



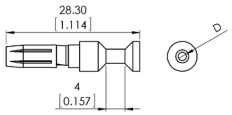
socket module
part no. 6575063

General characteristics	Value
Number of contacts	3
Termination method	Crimp or solder
Termination size	1.5-10.0 mm² [16-8 AWG]
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	630 V
Pollution degree	3
Overvoltage category	III
Material group	II
Rated impulse withstand voltage	8 kV
Contact resistance	≤ 1 mΩ
Insulation resistance	≥ 10^{10} Ω
Climatical characteristics	**Value**
Rated temperature	-40°C to +125°C [-40°F to +257°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 500
Material characteristics	
Insert (module)	PA 6.6 FR
Contacts	Brass (CuZn)
Contacts surface plating	Silver (Ag)

Male contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575099	Male contact 3.6 mm / 16 AWG	1.5	16	
6575106	Male contact 3.6 mm / 14 AWG	2.5	14	
6575093	Male contact 3.6 mm / 12 AWG	4.0	12	
6575139	Male contact 3.6 mm / 10 AWG	6.0	10	
6575096	Male contact 3.6 mm / 8 AWG	10.0	8	

Female contacts

Part no.	Description	Cross section in mm² (D)	AWG (D)	Picture / Drawing
6575109	Female contact 3.6 mm / 16 AWG	1.5	16	
6575105	Female contact 3.6 mm / 14 AWG	2.5	14	
6575103	Female contact 3.6 mm / 12 AWG	4.0	12	
6575138	Female contact 3.6 mm / 10 AWG	6.0	10	
6575097	Female contact 3.6 mm / 8 AWG	10.0	8	

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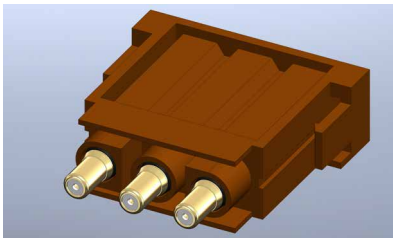
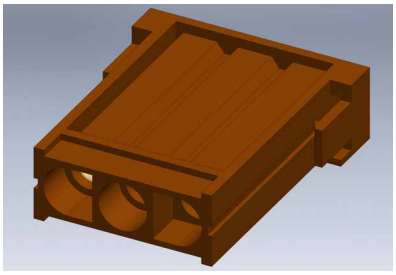
KOAX module



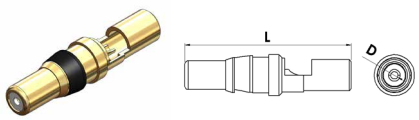
plug module
part no. 6575072



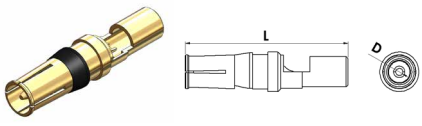
socket module
part no. 6575082

General characteristics	Value
Number of contacts	3
Termination method	Crimp or solder
Termination size	RG 58, 174, 179, 316
Flammability	UL94 V-0
Electrical characteristics	**Value**
Rated voltage	250 V
Pollution degree	3
Overvoltage category	III
Material group	II
Impedance	50 Ω
Frequency range	2 GHz
Climatical characteristics	**Value**
Rated temperature	-40°C to +125°C [-40°F to +257°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 500
Material characteristics	
Insert (module)	PA 6.6 FR
Module color	Russet
Contacts surface plating	Gold (Au)

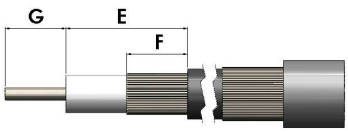
Male contacts

Part no.	Description	for cable size	Picture / Drawing
6575141	Male coax contact RG 58	RG 58	
6575110	Male coax contact RG 174, 179, 316	RG 174, 179, 316	

Female contacts

Part no.	Description	for cable size	Picture / Drawing
6575142	Female coax contact RG 58	RG 58	
6575112	Female coax contact RG 174, 179, 316	RG 174, 179, 316	

Dimensions and stripping lengths

Type	L [mm]	D [mm]	E [mm]	F [mm]	G [mm]	Drawing
Contacts (male/ female) for RG 58	26.3	3.2	9.5	7.9	2	
Contacts (male/ female) for RG 174, 179, 316	23.6	1.7	7.9	6.3	2	

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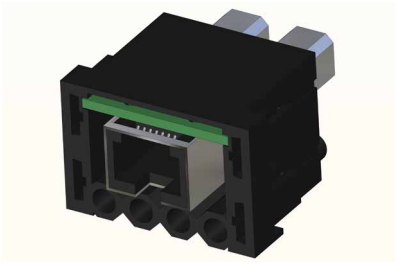
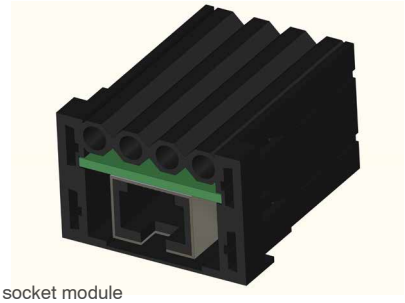
RJ45 module – Cat 5e / 100 Mbit/s

RJ45 module



plug module
part no. 4100007

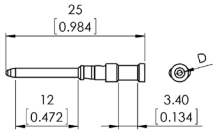


socket module
part no. 4200007

General characteristics	Value RJ45 contacts	Value power contacts
Number of contacts	8 + shield	4
Termination method	Plug	Crimp
Termination size		0.14-2.5 mm² [26-14 AWG]
Flammability	UL94 V-0	
Electrical characteristics	**Value**	
Rated voltage	30 V	400 V
Rated current	1 A	10A
Data transmission rate	100 Mbit/s	
Transfer response	In acc. with category 5 (CAT 5)	
Climatical characteristics	**Value**	
Rated temperature	-20°C to +80°C [-4°F to +176°F]	
Mechanical characteristics	**Value**	
Mating cycles	≥ 500	
Material characteristics		
Insert (module)	PA 6.6 FR	
Contacts		Brass (CuZn)
Contacts surface plating		Silver (Ag) / gold (Au)

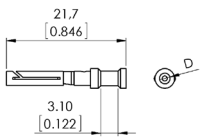
Male contacts

Part no.	Description	Cross section in mm² (D)	AWG	silver plated	gold plated	Picture / Drawing
6575085	Male contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575086	Male contact 1.6 mm / 20 AWG	0.5	20	•		
6575088	Male contact 1.6 mm / 20-16 AWG	0.75-1.0	20-16	•		
6575090	Male contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575083	Male contact 1.6 mm / 14 AWG	2.5	14	•		
6575118	Male contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575121	Male contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575116	Male contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575124	Male contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575125	Male contact AU 1.6 mm / 14 AWG	2.5	14		•	



Female contacts

Part no.	Description	Cross section in mm² (D)	AWG	silver plated	gold plated	Picture / Drawing
6575095	Female contact 1.6 mm / 26-22 AWG	0.14-0.37	26-22	•		
6575107	Female contact 1.6 mm / 20 AWG	0.5	20	•		
6575098	Female contact 1.6 mm / 20-16 AWG	0.75-1.0	20-16	•		
6575100	Female contact 1.6 mm / 16-15 AWG	1.5	16-15	•		
6575084	Female contact 1.6 mm / 14 AWG	2.5	14	•		
6575127	Female contact AU 1.6 mm / 26-22 AWG	0.14-0.37	26-22		•	
6575131	Female contact AU 1.6 mm / 20 AWG	0.5	20		•	
6575117	Female contact AU 1.6 mm / 20-16 AWG	0.75-1.0	20-16		•	
6575132	Female contact AU 1.6 mm / 16-15 AWG	1.5	16-15		•	
6575133	Female contact AU 1.6 mm / 14 AWG	2.5	14		•	



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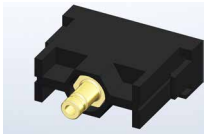
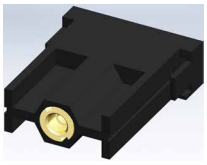
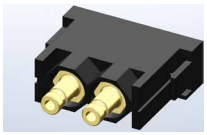
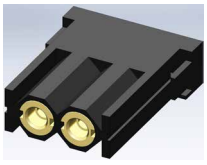
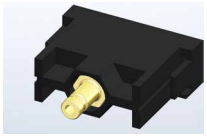
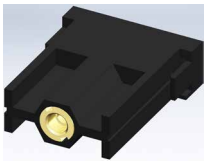
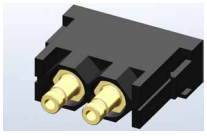
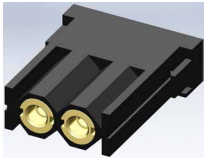
Pneumatic modules for hose size 2.5 mm

Pneumatic module	
plug module part no. 6580201	
socket module part no. 6580251	
plug module part no. 6580202	
socket module part no. 6580252	

General characteristics	Value
Number of contacts	1, 2
Termination method	Hose connection
Hose size (inner diameter)	2.5 mm
Flammability	UL94 V-0
Technical characteristics	**Value**
Operating pressure	8 bar with PTFE hose
Contact travel (feed path)	4 mm
Shut-off	One-sided (on socket module)
Recommended hose material	PTFE
Climatical characteristics	**Value**
Rated temperature	-20°C to +100°C [-4°F to +212°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 5000
Material characteristics	
Insert (module)	PA 6.6 FR
Contacts	Brass (CuZn)

Pneumatic modules for hose size 4.0 mm

Pneumatic module	
plug module part no. 6580204	
socket module part no. 6580254	
plug module part no. 6580205	
socket module part no. 6580255	

General characteristics	Value
Number of contacts	1, 2
Termination method	Hose connection
Hose size (inner diameter)	4.0 mm
Flammability	UL94 V-0
Technical characteristics	**Value**
Operating pressure	8 bar with PTFE hose
Contact travel (feed path)	4 mm
Shut-off	One-sided (on socket module)
Recommended tube material	PTFE
Climatical characteristics	**Value**
Rated temperature	-20°C to +100°C [-4°F to +212°F]
Mechanical characteristics	**Value**
Mating cycles	≥ 5000
Material characteristics	
Insert (module)	PA 6.6 FR
Contacts	Brass (CuZn)

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Screwed cable glands

Picture	Description	Part number	Clamping range in mm (D)
	KV M25x1.5, 9 – 16 mm	1674119	9 – 16
	KV M25x1.5, 13 – 18 mm	1674117	13 – 18
	KV M32x1.5, 13 – 20 mm	1674082	13 – 20
	KV M32x1.5, 18 – 25 mm	1674078	18 – 25
	KV M40x1.5, 20 – 26 mm	1674072	20 – 26

Tools

Description	Part number
Extracting tool for contacts 1.0 mm	3000000
Extracting tool for contacts 1.6 mm	3000001
Extracting tool for contacts 2.5 mm	3000003
Extracting tool for contacts 3.6 mm	3000004
Removal tool for modules	3000006
Crimping tool for contacts 1.0 mm	3000019
Crimping tool for contacts 1.6 / 2.5 mm	3000015
Crimping tool for contacts 3.6 mm	3000020

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Glossary

AC voltage / AC applications
Connectors in this catalogue are only approved for DC voltages. GES cannot make any statements about the use with AC voltages. The use of the products in this catalogue with AC voltages needs approval by the customer under the elctrical, mechanical and environmental conditions of customer's application.

Clearance
The shortest distance in air between two conductive parts (see IEC 60664).

Contact resistance
The electrical resistance of a mated set of contacts under specified conditions. Tested according to tests IEC 60512-2.

Creepage distance
The shortest distance along the surface of the insulating material between two conductive parts. The longer the distance the less the risk of arc damage or tracking. Minimum creepage distances are specified according to the rated voltage and the applicable pollution degree and CTI.

CTI-Value and Insulation material class
CTI = Comparative Tracking Index. The CTI-Value defines the maximum leakage current on surfaces under a given set up. Leakage current is the current that occurs on surfaces of insulators. The higher the CTI-value the lower the leakage current. This is important for defining the necessary creepage distance for high voltage connections.

After the CTI-value materials are classified in insulation material classes.

DIN IEC 60664-1 distinguishes different insulation material groups:

- Insulation material group I CTI ≥ 600
- Insulation material group II 400 ≤ CTI < 600
- Insulation material group IIIa 175 ≤ CTI < 400
- Insulation material group IIIb 100 ≤ CTI < 175

GES only uses plastic Insulation material group I for shortest possible connectors.

Housing
The part of a connector into which the insert and the contacts are assembled. It may function as part of the locking mechanism.

Insertion and withdrawal force
The force required to fully insert or withdraw a set of mated connectors without the effect of coupling, locking or similar devices. The insertion force usually is greater than the withdrawal force.

Insulation material group
see "CTI-Value".

Mating cycle
One mating cycle comprises one insertion and one withdrawal operation. Term used in the definition of connector life.

Operating current, maximal
The current which causes a temperature rise to 120°C [+248°F] (VDE 0627).

Operating temperature
The temperature at which an electrical or mechanical device operates.

Operating voltage
see "Rated voltage"

Plug, cable mount
Plug (male contact) in cable mount housing.

Pollution degree
The pollution degree must be defined taking the expected pollution around the equipment into account. The pollution degree effects the dielectric strength of a connector and is one of the cause variables for calculation of clearance and creepage distances. According to DIN IEC 60664-1 there are four degrees of pollution:

- Pollution degree 1
  No pollution or only dry, non-conductive pollution occurs. The pollution has no influence.
- Pollution degree 2
  Only non-conductive pollution occurs except occasionally a temporary conductivity caused by condensation is to be expected.
- Pollution degree 3
  Conductive pollution occurs or dry non-conductive pollution occurs which becomes conductive due to condensation which is to be expected.
- Pollution degree 4
  The pollution generates persistent conductivity caused by conductive dust or by rain or snow.

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Glossary

All the rated voltages stated for the parts in this catalogue are assessed based on “Pollution Degree 1”. Users need to define the pollution degree for their application.

Pulse current
Current load for no more than 10 ms.

Rated Current
A current value assigned by the manufacturer which the connector or PSD can carry continously and causes a temperature rise of 45°C [+113°F] (e.g. from 23°C to 68°C [+73°F to +154°F]).Current values listed in this catalogue refer to environmental temperatures of +20°C [+68°F].

Rated Voltage
The maximum voltage a connector can withstand in mated condition without losing its properties. All mentioned voltages are DC-voltages.

Receptacle, panel mount
Receptacle (female contact) in panel mount housing.

Test Voltage
Test voltages stated in this catalogue are minimum 1.5 times the rated voltages for the duration of 1 minute. The connectors must not be operated at test voltage levels.

Wire size / AWG
Is a measurement of how large a wire is, either in diameter, cross sectional area or AWG (American Wire Gauge).

→ **Conversion table mm²/AWG**

AWG	mm² (exakt value)	mm² (nearest standard)
22	0.324	0.4
20	0.519	0.5
18	0.823	0.75
16	1.13	1.5
14	2.08	2.5
12	3.31	4
10	5.261	6
8	8.367	10
6	13.30	16
4	21.15	25
3	26.67	
2	33.62	35
1	42.41	

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