

100 Series



S Series

100 Series

VP Series

MCS Series

MC Series

M Series

MOD Series

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

General characteristics and technical data Series 100

100 Series

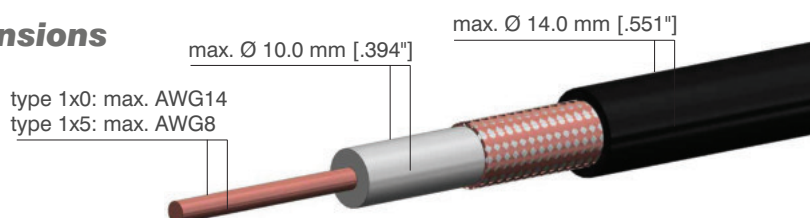
Housing	
Locking system	threaded coupling
Mounting type (panel mount connector)	round flange
Housing material	brass (CuZn)
Surface plating	nickel (Ni)
Protection class (mated connector)	IP67
Operating temperature	-30°C to +80°C

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	AWG 14 / 2.5 mm ²
Contact material	brass (CuZn)
Contact plating	silver (Ag)
Insertion / Withdrawal force	5.5 N / 4.0 N
Mating cycles	100000
Rated temperature	+120°C

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	AWG 8 / 10 mm ²
Contact material	brass (CuZn)
Contact plating	silver (Ag)
Insertion / Withdrawal force	15 N / 10 N
Mating cycles	100000
Rated temperature	+120°C

Insulation inserts	
Number of contacts	1
Insulation material	PTFE
CTI value	600
Flammability class PTFE	UL94 V-0
Operating temperature PTFE	-50°C to +200°C
Insulating material group PTFE / POM	I (DIN IEC 60664)

Suitable cable dimensions



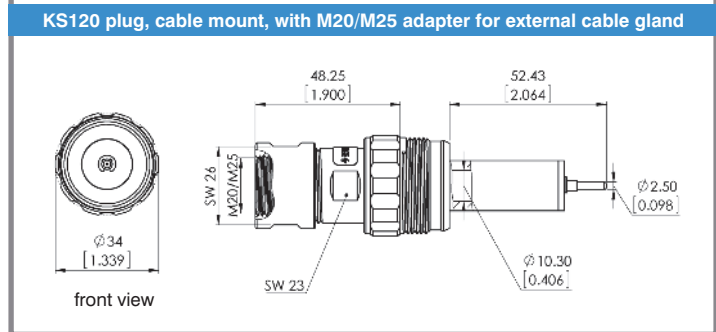
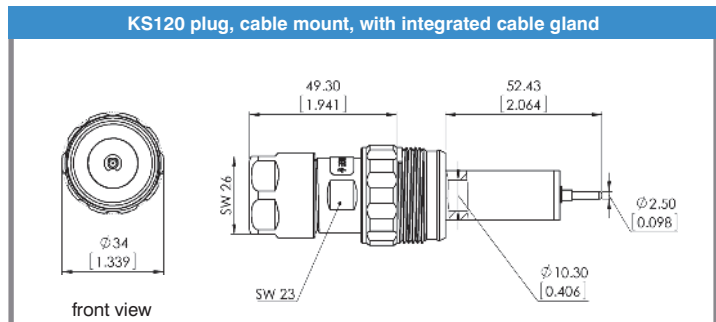
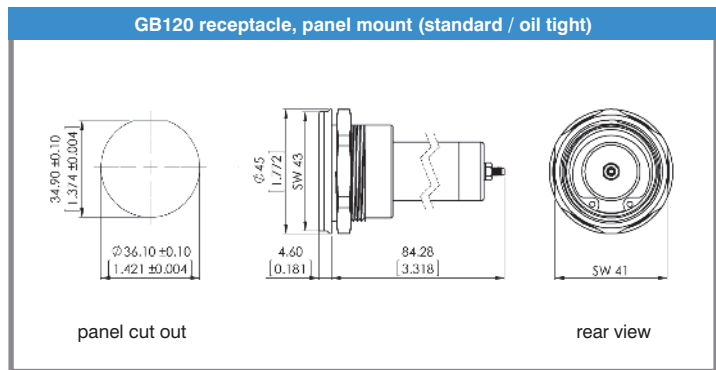


GB120 receptacle, panel mount



KS120 plug, cable mount

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



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
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		•						•

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Mounting instructions: pages 44-47
Cables: pages 48-49

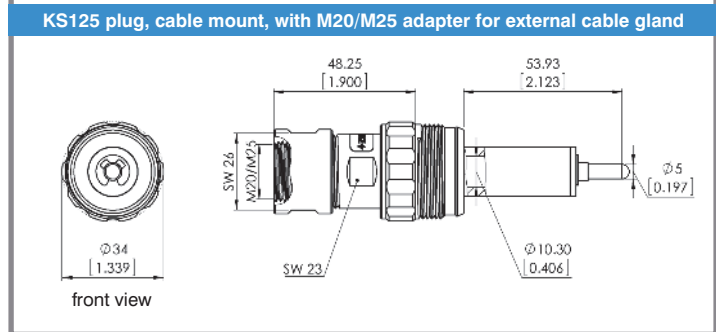
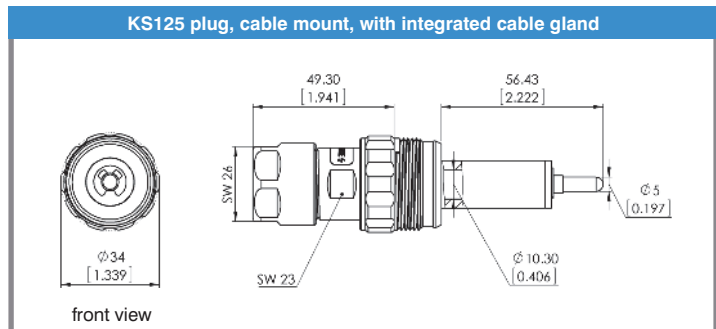
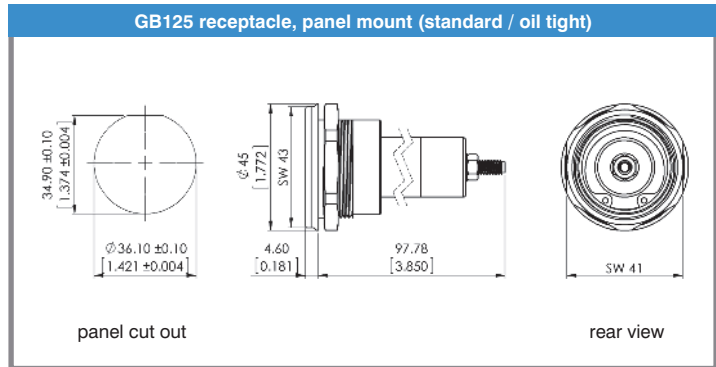
*KV = screwed cable gland



GB125 receptacle, panel mount



KS125 plug, cable mount



drawing - dimensions in mm [inch]

Electrical values	
Operating voltage (DC)	20 kV
Test voltage (DC)	30 kV
Rated current	80 A
Maximum operating current	110 A
Pulse current	10000 A
Characteristics	
Contact size	5 mm [.197"]
Insulation material	PTFE
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

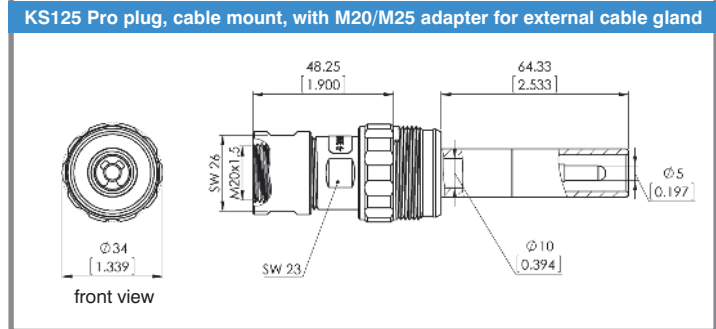
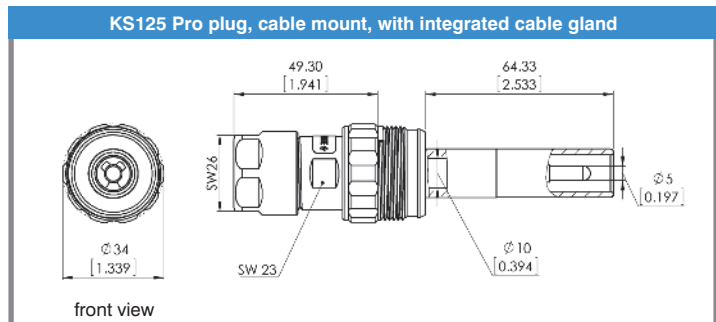
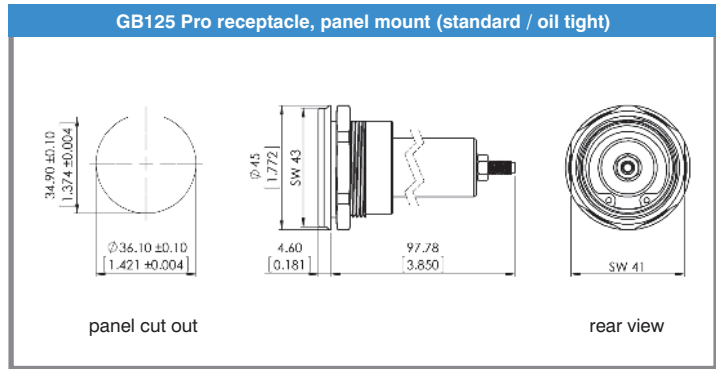
Accessories: page 42
Mounting instructions: pages 44-47
Cables: pages 48-49



GB125 Pro receptacle, panel mount



KS125 Pro plug, cable mount



drawing - dimensions in mm [inch]

Electrical values	
Operating voltage (DC)	20 kV
Test voltage (DC)	30 kV
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	PTFE
Mounting type receptacle	round flange
Contact plating	silver (Ag)

P/N	Description	Plug, cable mount	Receptacle, panel mount	clamping range for cables $\varnothing 6.5 - 8$ mm [.256" - .315"]	clamping range for cables $\varnothing 8 - 9.5$ mm [.315" - .374"]	clamping range for cables $\varnothing 9.5 - 11$ mm [.374" - .433"]	clamping range for cables $\varnothing 11 - 12.5$ mm [.433" - .492"]	clamping range for cables $\varnothing 12.5 - 14$ 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 42
Mounting instructions: pages 44-47
Cables: pages 48-49

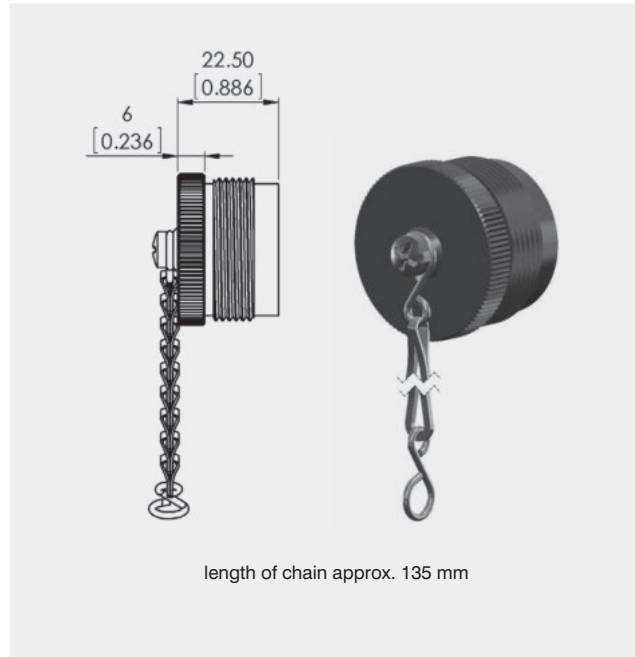
Contacts

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)	
6572007	female contact 5 mm silver plated (Ag)	

Covering

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

Drawing



drawing - dimensions in mm [inch]

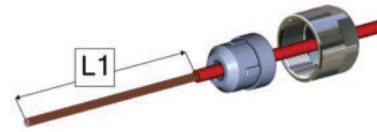
Assembly Instructions Series 100 (plug, cable mount)

1.



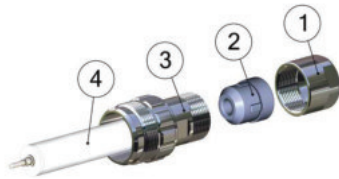
Part as delivered

5.



Remove cable jacket
⚠ Do not damage shield braid

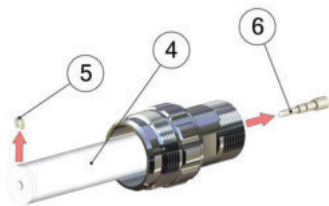
2.



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

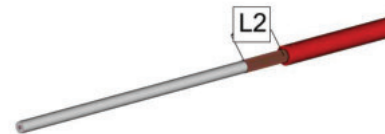
Types	min. L1 mm [inch]
S110 / S115	52 [2.037"]
S120 / S125 / S125 Pro	72 [2.824"]
S130 / S135	92 [3.611"]
S150 / S155	142 [5.580"]
S160 / S165	224 [8.828"]
S1100 / S1105	377 [14.852"]

3.



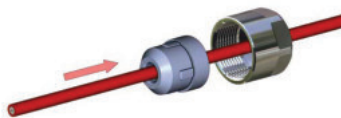
Remove snap ring (5) and take out male
contact (6)

6.



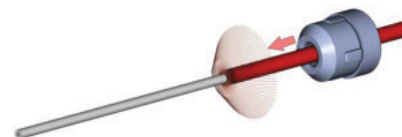
Cut shield braid roughly about 30 mm (=L2)
⚠ Carefully remove shield parts. Loose shield
parts can cause electrical break down

4.



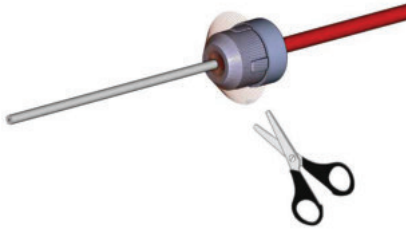
Place cap (1) and sealing insert (2) on cable
⚠ Respect correct order of parts (see picture)

7.



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

8.



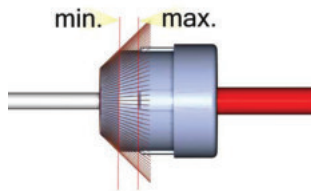
Cut shield to length.
⚠ For length see step 9.

12.



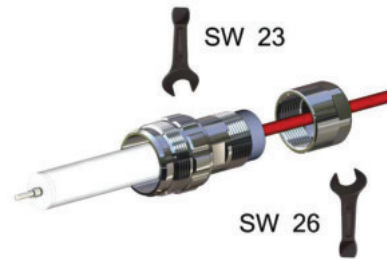
Completely insert cable in insulation part (4) until seal insert (2) plugs in housing (3)

9.



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

13.



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

10.



Remove dielectric insulation

14.

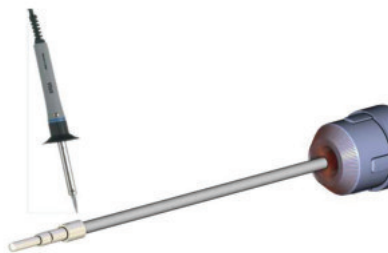


Secure contact (6) with snap ring (5)

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

15.

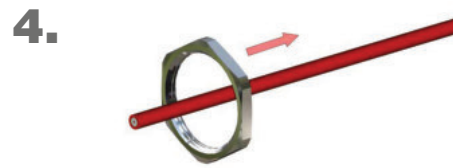


Assembly finished

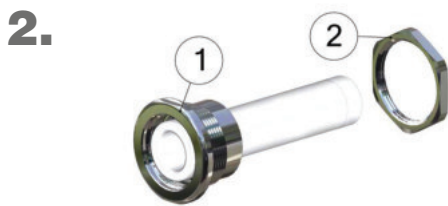
Assembly Instructions Series 100 (receptacle, panel mount)



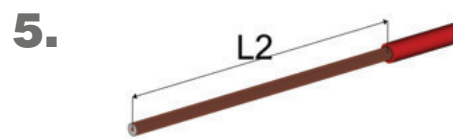
Part as supplied



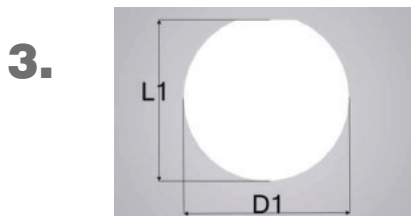
Place counter nut (1) on cable



Remove counter nut (1) from housing (2)



⚠ ONLY when using shielded cable:
Remove cable jacket

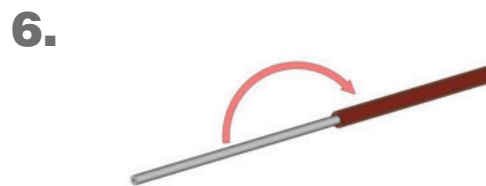


Panel cut out

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

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



Fold back shield braid over jacket

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.

10.



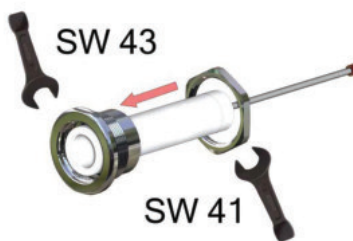
Assembly finished

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

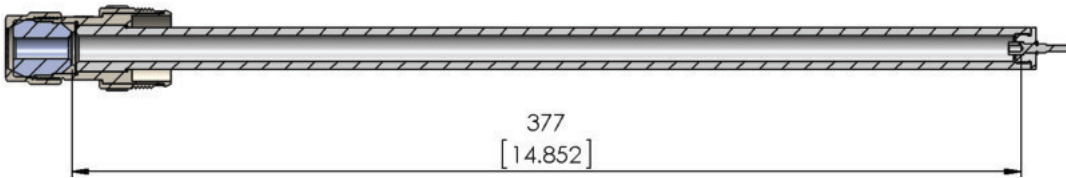
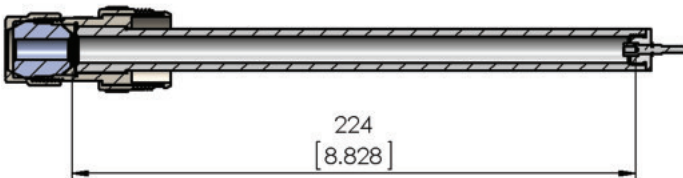
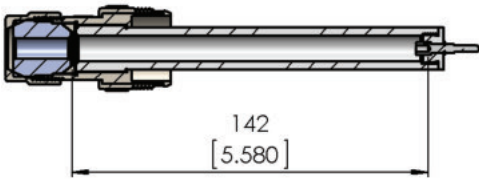
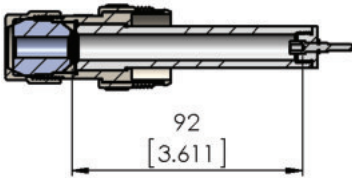
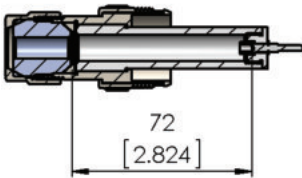
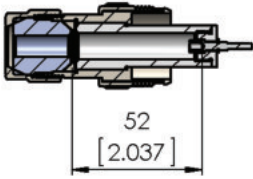


Note – important!

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

IMPORTANT – PLEASE NOTE:

Stated stripping lengths are referring ONLY to jackets of shielded cables!



	Part No. 3330039	Part No. 3330049	Part No. 3330050
Operating voltage DC	60 kVDC	100 kVDC	100 kVDC
Operating voltage AC rms	20 kVAC	30 kVAC	
Conductor size			
AWG	AWG 18	AWG 16	AWG 16
Strands	19 x AWG 30	19 x AWG 29	19 x AWG 29
Cross section	0.97 mm ²	1.2 mm ²	1.2 mm ²
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	LDHMMW PE	LDHMMW PE	LDHMMW PE
Screen (Shield)	YES	NO	YES
Diameter	6.9 mm [.272"]	x	9.8 mm [.386"]
Material	Cu/Sn (AWG 34 t.p.c.) 85% coverage	x	Cu/Sn (AWG 34 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	-51°C to +60°C	-51°C to +60°C
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