



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

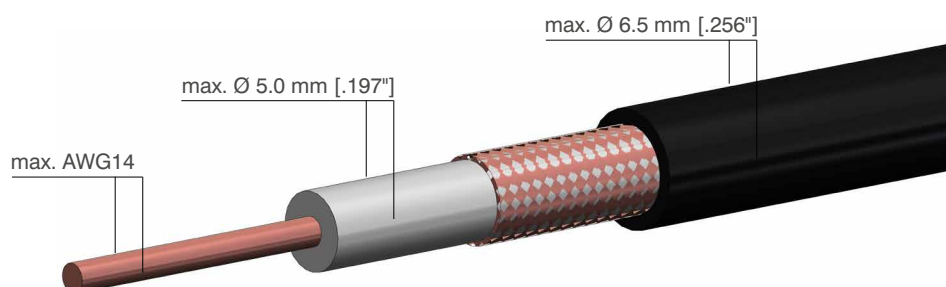
General characteristics and technical data Series S

| 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 |

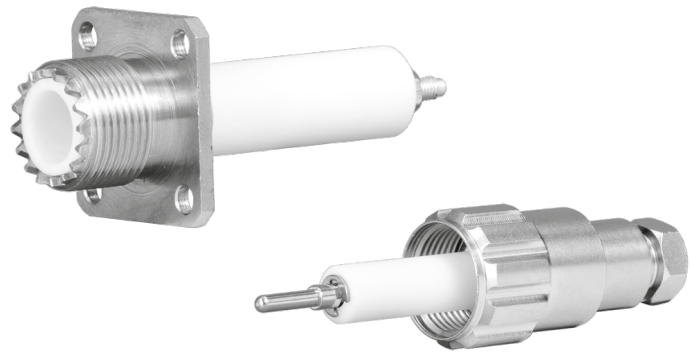
| Contacts | |
|------------------------------|------------------------------|
| Termination method | solder / screw |
| Rated current | 30 A |
| Max. operating current | 40 A |
| Pulse current | 3000 A |
| Contact resistance | 300 $\mu\Omega$ |
| Contact diameter | 2.5 mm [.098"] |
| Max. wire size | AWG 14 / 2.5 mm ² |
| 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 |

| Insulation inserts | |
|--------------------------------------|-------------------|
| 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 |
| Operating temperature POM | -30°C to +120°C |
| Insulating material group PTFE / POM | I (DIN IEC 60664) |

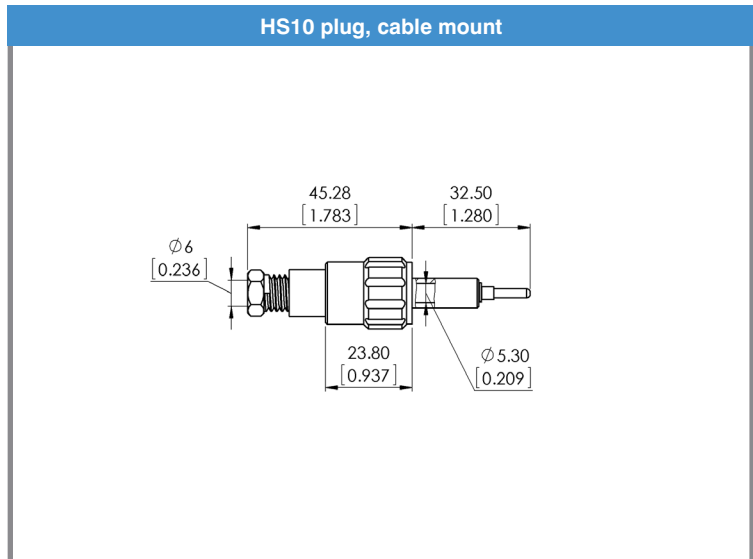
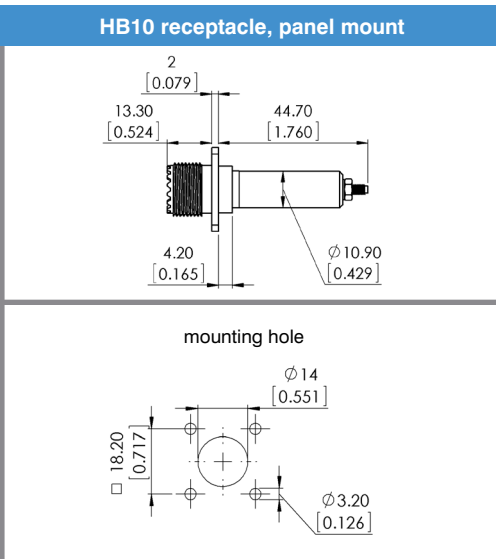
Suitable cable dimensions



| Electrical values | |
|---------------------------|--------------------------|
| Operating voltage (DC) | 10 kV |
| Test voltage (DC) | 15 kV |
| 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



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 kVDC | AWG22 (0,35 mm ²) | 5.40 mm [.213"] | 54 mm [2.126"] | -25 °C / +90 °C |

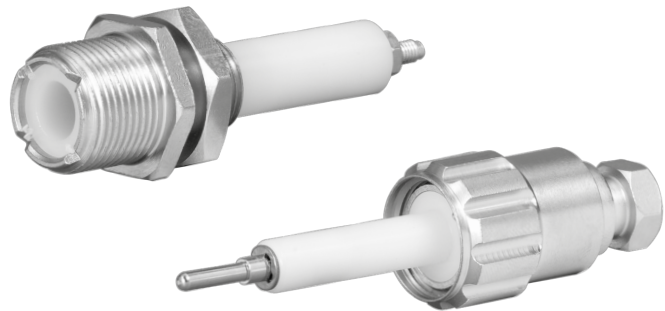
➔ For more information please see page 26

Electrical values

| | |
|---------------------------|--------|
| Operating voltage (DC) | 10 kV |
| Test voltage (DC) | 15 kV |
| Rated current | 30 A |
| Maximum operating current | 40 A |
| Pulse current | 3000 A |

Characteristics

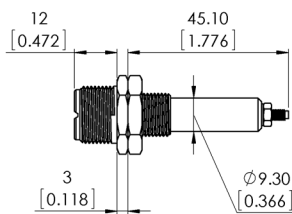
| | |
|--------------------------|--------------------------|
| Insulation material | PTFE |
| Mounting type receptacle | roundflange |
| Contact plating | silver (Ag) or gold (Au) |



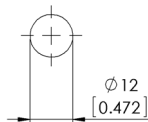
HB11 receptacle, panel mount

HS11 plug, cable mount

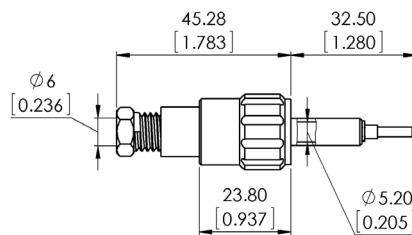
HB11 receptacle, panel mount



mounting hole



HS11 plug, cable mount



drawing - dimensions in mm [inch]

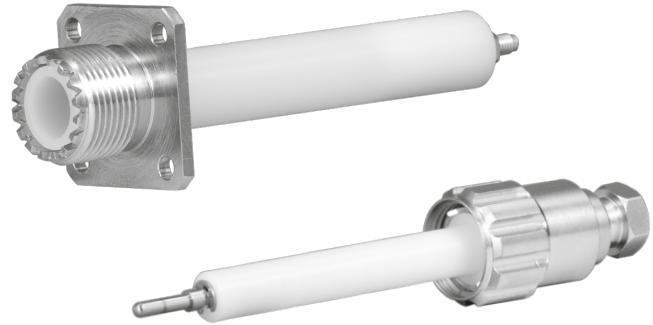
| Part No. | Description | Plug, cable mount | Receptacle, panel mount | Contact silver plated | Contact gold plated |
|----------|--------------|-------------------|-------------------------|-----------------------|---------------------|
| 7310020 | HS11 PTFE | • | | • | |
| 7310021 | HS11/Au PTFE |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

Suitable HV cable, shielded

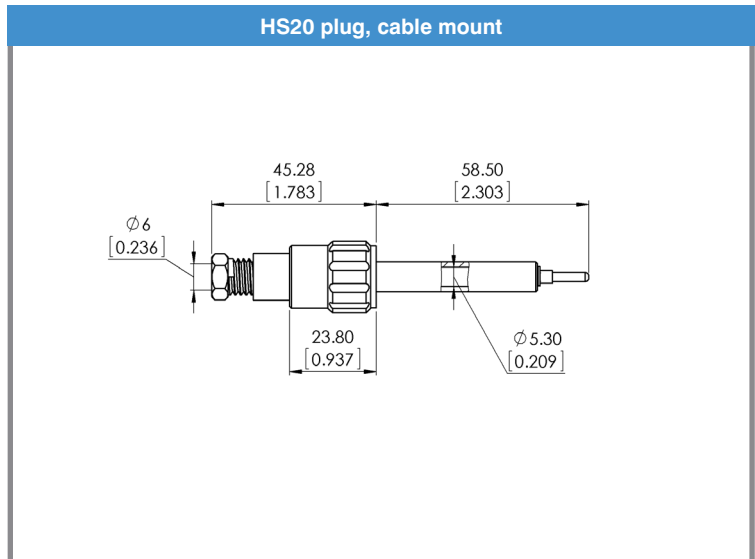
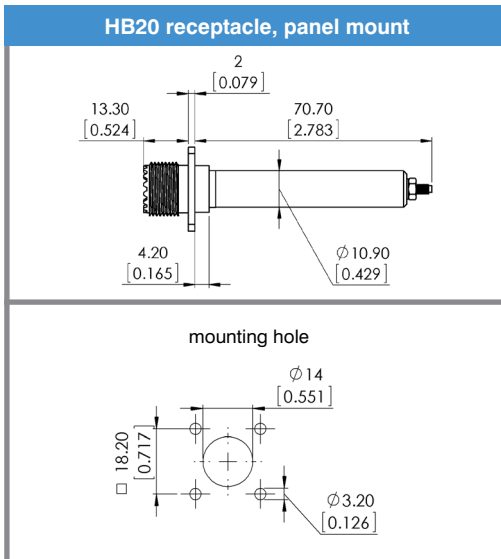
| Part No. | Operating Voltage | Wire size | Outer diameter | Min. bend radius | Temperature range |
|----------|-------------------|-------------------------------|-----------------|------------------|-------------------|
| 3330007 | 30 kVDC | AWG22 (0.35 mm ²) | 5.40 mm [.213"] | 54 mm [2.126"] | -25 °C / +90 °C |

➔ For more information please see page 26

| 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 | |
| Insulation material | PTFE |
| Mounting type receptacle | 4-hole flange |
| Contact plating | silver (Ag) or gold (Au) |



HB20 receptacle, panel mount HS20 plug, cable mount



drawing - dimensions in mm [inch]

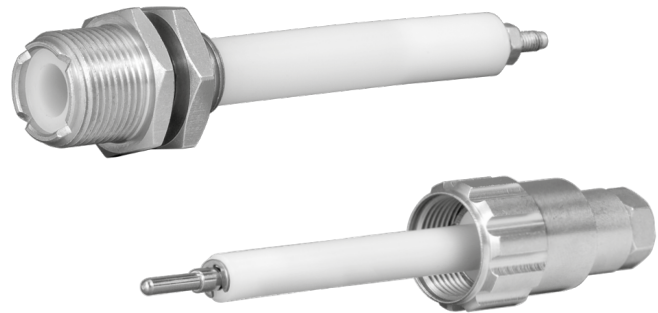
| Part No. | Description | Plug, cable mount | Receptacle, panel mount | Contact silver plated | Contact gold plated |
|----------|--------------|-------------------|-------------------------|-----------------------|---------------------|
| 7320005 | HS20 PTFE | • | | • | |
| 7320006 | HS20/Au PTFE |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

Suitable HV cable, shielded

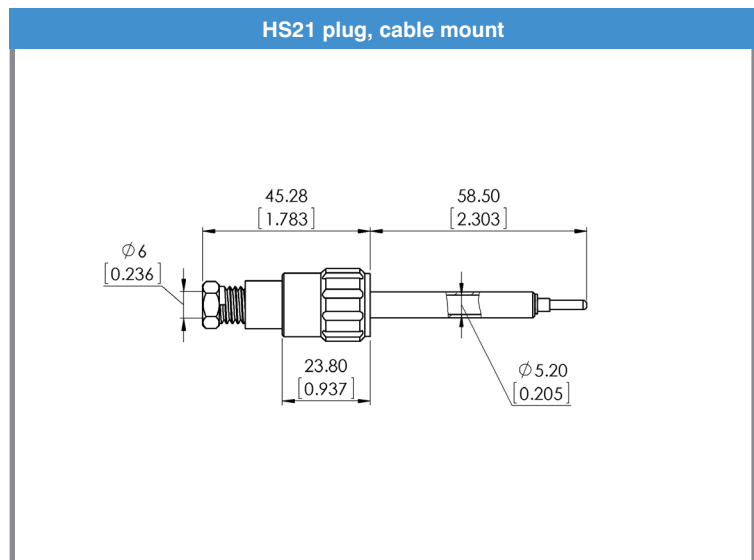
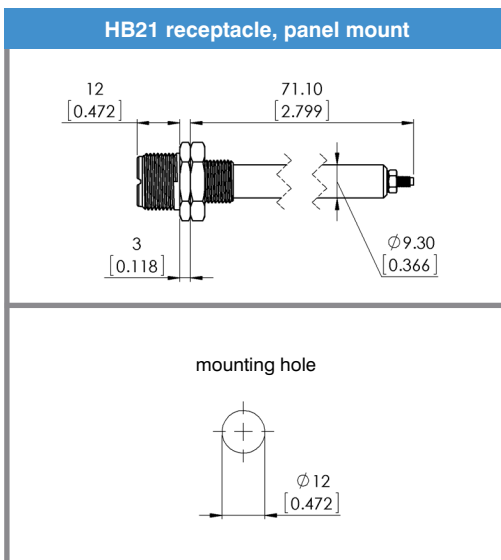
| Part No. | Operating Voltage | Wire size | Outer diameter | Min. bend radius | Temperature range |
|----------|-------------------|-------------------------------|-----------------|------------------|-------------------|
| 3330007 | 30 kVDC | AWG22 (0.35 mm ²) | 5.40 mm [.213"] | 54 mm [2.126"] | -25 °C / +90 °C |

➔ For more information please see page 26

| 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 | |
| Insulation material | PTFE or POM |
| Mounting type receptacle | roundflange |
| Contact plating | silver (Ag) or gold (Au) |



HB21 receptacle, panel mount HS21 plug, cable mount



drawing - dimensions in mm [inch]

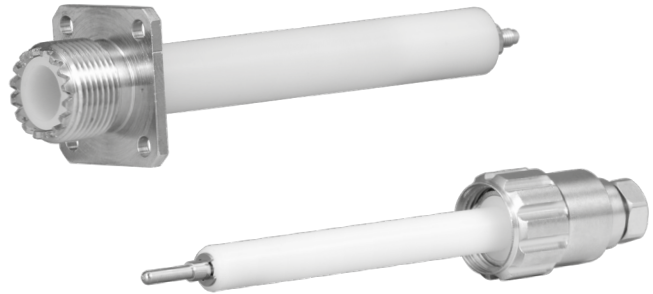
| Part No. | Description | Plug, cable mount | Receptacle, panel mount | Insulation PTFE | Insulation POM | Contact silver plated | Contact gold plated |
|----------|--------------|-------------------|-------------------------|-----------------|----------------|-----------------------|---------------------|
| 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

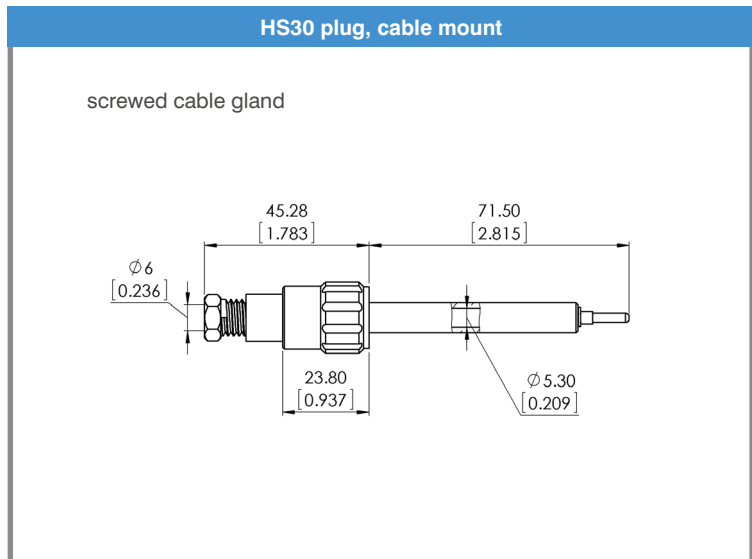
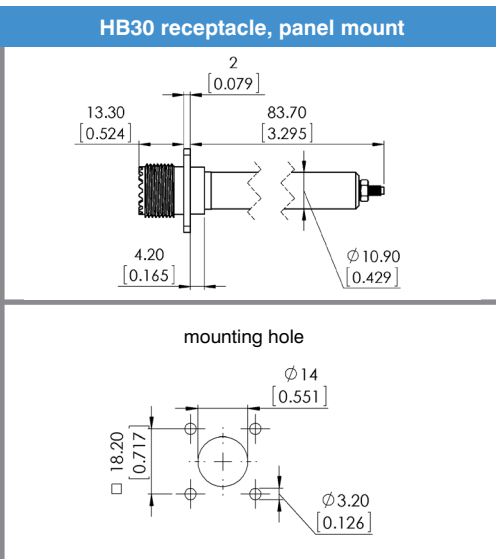
| Part No. | Operating Voltage | Wire size | Outer diameter | Min. bend radius | Temperature range |
|----------|-------------------|-------------------------------|-----------------|------------------|-------------------|
| 3330007 | 30 kVDC | AWG22 (0.35 mm ²) | 5.40 mm [.213"] | 54 mm [2.126"] | -25 °C / +90 °C |

➔ For more information please see page 26

| Electrical values | |
|---------------------------|--------------------------|
| Operating voltage (DC) | 30 kV |
| Test voltage (DC) | 45 kV |
| 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



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 kVDC | AWG22 (0.35 mm ²) | 5.40 mm [.213"] | 54 mm [2.126"] | -25 °C / +90 °C |

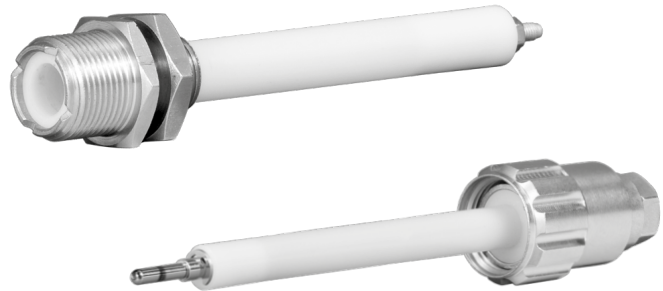
➔ For more information please see page 26

Electrical values

| | |
|---------------------------|--------|
| Operating voltage (DC) | 30 kV |
| Test voltage (DC) | 45 kV |
| Rated current | 30 A |
| Maximum operating current | 40 A |
| Pulse current | 3000 A |

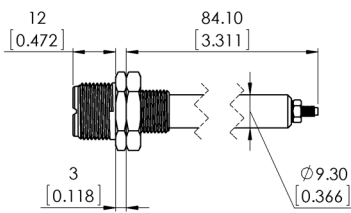
Characteristics

| | |
|--------------------------|--------------------------|
| Insulation material | PTFE |
| Mounting type receptacle | roundflange |
| Contact plating | silver (Ag) or gold (Au) |

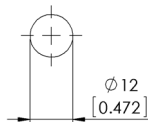


HB31 receptacle, panel mount HS31 plug, cable mount

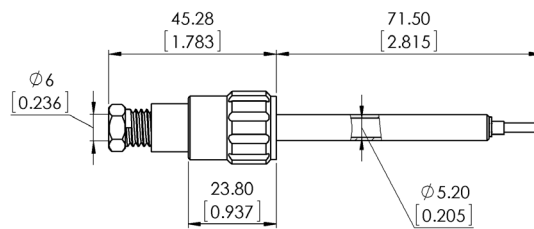
HB31 receptacle, panel mount



mounting hole



HS31 plug, cable mount



drawing - dimensions in mm [inch]

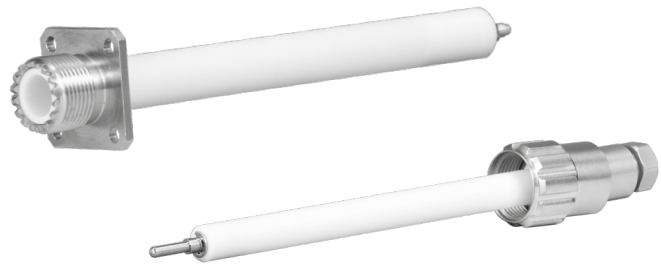
| Part No. | Description | Plug, cable mount | Receptacle, panel mount | Contact silver plated | Contact gold plated |
|----------|--------------|-------------------|-------------------------|-----------------------|---------------------|
| 7331052 | HS31 PTFE | • | | • | |
| 7331053 | HB31 PTFE | |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

Suitable HV cable, shielded

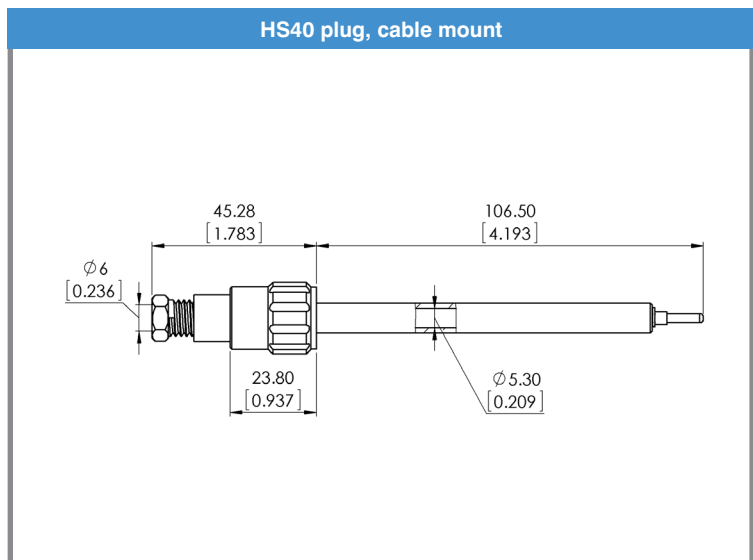
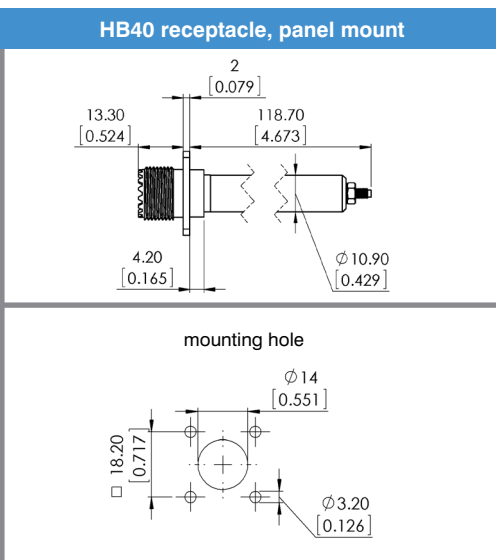
| Part No. | Operating Voltage | Wire size | Outer diameter | Min. bend radius | Temperature range |
|----------|-------------------|-------------------------------|-----------------|------------------|-------------------|
| 3330007 | 30 kVDC | AWG22 (0.35 mm ²) | 5.40 mm [.213"] | 54 mm [2.126"] | -25 °C / +90 °C |

➔ For more information please see page 26

| Electrical values | |
|---------------------------|--------------------------|
| Operating voltage (DC) | 40 kV |
| Test voltage (DC) | 60 kV |
| 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



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 | | • | | • |

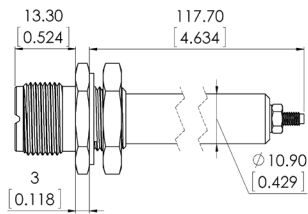
➔ For more information please see page 26

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

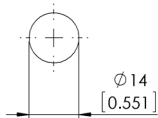


HB41 receptacle, panel mount HS41 plug, cable mount

HB41 receptacle, panel mount

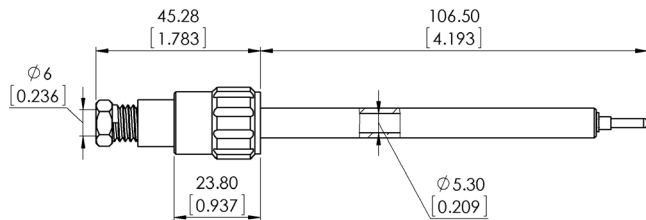


mounting hole



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 | | • | | • |

➔ For more information please see page 26

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, roundflange, NBR, black, for receptacle types HBx1 | |

drawing - dimensions in mm [inch]

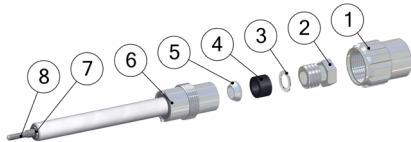
Assembly instructions HS (plug, cable mount)

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).

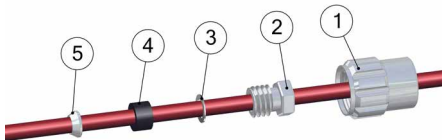
3.



Remove male contact

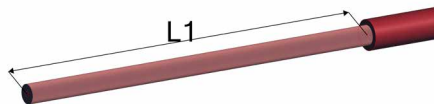
Loose snap ring (7) and take out male contact (8).

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"] |

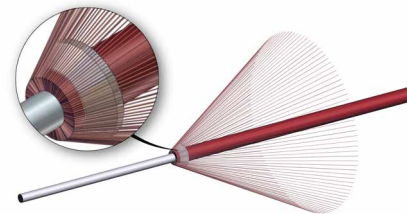
⚠ Do not damage metal shield. Do not damage dielectric insulation. Respect correct order of parts (see picture)

6.



Fold back shield braid over jacket

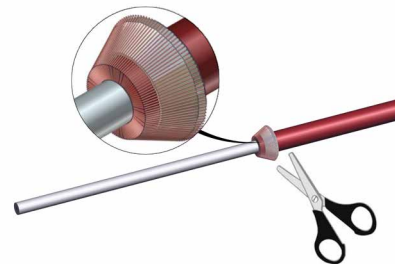
7.



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 break down.

9.



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

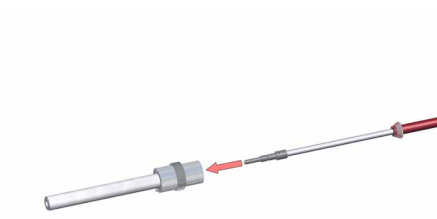
10.



Solder contact (8) on conductor

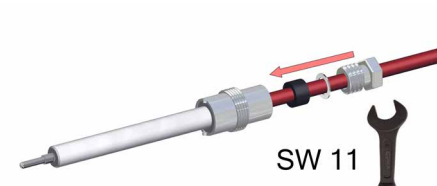
⚠ Tin-solder must not remain on contact surface

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.



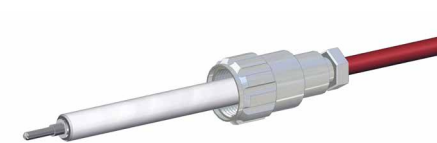
Fix male contact (8) with snap ring (7)

14.



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

15.



Assembly finished



Note – important!

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

Assembly instructions GB (plug, cable mount)

1.



Part as supplied

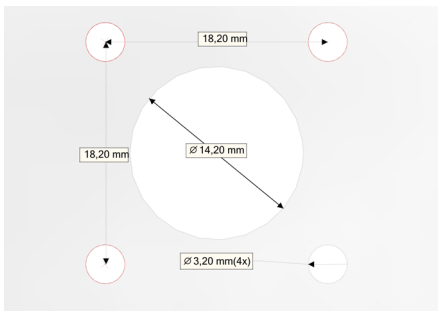
5.



Solder contact (8) on conductor

⚠ Tin-solder must not remain on contact surface

2.



Panel cut out

6.



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

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



Note – important!

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

Cable assemblies - plugs



| Cable characteristics: | Value |
|------------------------|--------------------------------|
| Operating voltage | 30 kVDC |
| Wire size | AWG 22 (0.35 mm ²) |
| Conductor construction | tinned copper |
| Shield construction | tinned copper braid |
| Operating temperature | -25 °C to +90 °C |
| 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

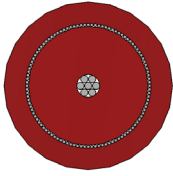
| P/N | Description | Cable length in mm | Contact silver plated | Contact gold plated |
|-------------------|-------------------------------|--------------------|-----------------------|---------------------|
| 7320010.007.xxxxx | HSC21-007 POM (length) mm | (xxxxx) | • | |
| 7320013.007.xxxxx | HSC21-007/Au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

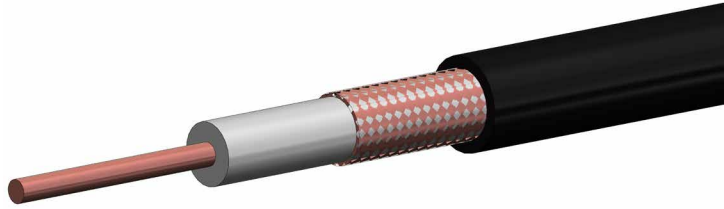
| P/N | Description | Cable length in mm | Contact silver plated | Contact gold plated |
|-------------------|-------------------------------|--------------------|-----------------------|---------------------|
| 7331050.007.xxxxx | HSC30-007 PTFE (length) mm | (xxxxx) | • | |
| 7321150.007.xxxxx | HSC30-007/Au 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) | | • |



Cross section



Cable construction

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

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

| Dimensions | |
|--------------------------------|-------------------------------|
| Wire size | AWG22 (0.35 mm ²) |
| 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"] |