

Series SMC – subminiature connectors

Description

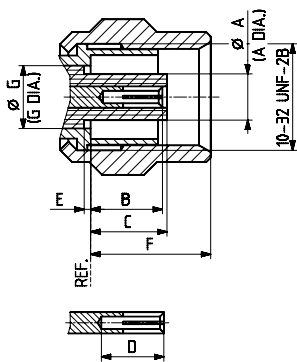
The HUBER+SUHNER SMC subminiature connector series is based on the same design as the SMB series. But due to its screw-on coupling mechanism, the HUBER+SUHNER SMC subminiature connectors are suitable for applications up to 10 GHz.

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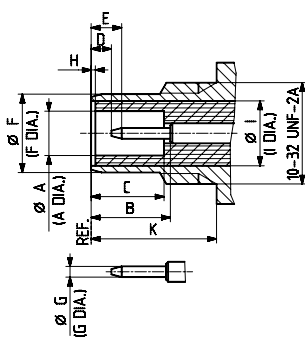
Interface dimensions (mm/inches)

Plug (male)



| | Plug | | Jack | |
|---|-----------------|------------|-----------------|------------|
| | min. | max. | min. | max. |
| A | - | 2.60/0.081 | 2.08/0.082 | - |
| B | 2.85/0.112 | 3.40/0.134 | 3.40/0.134 | - |
| C | - | 3.40/0.134 | 3.40/0.134 | - |
| D | 2.79/0.110 | - | 0.61/0.024 | - |
| E | 0.00/0.000 | - | - | 2.13/0.084 |
| F | - | 5.92/0.233 | - | 3.71/0.146 |
| G | 3.05/0.120 nom. | | 0.48/0.019 | 0.53/0.021 |
| H | - | - | 0.00/0.000 | - |
| I | - | - | 3.05/0.120 nom. | |
| K | - | - | 5.94/0.234 | - |

Jack (female)



Interface dimensions conformable to the standards:

| | |
|----------------|---------------|
| International: | IEC 60169-9 |
| Europe: | CECC 22140 |
| USA: | MIL-PRF-39012 |

Series SMC – technical data

| Electrical data | Requirements |
|---|--|
| Impedance | 50 Ω |
| Frequency range | DC to 10 GHz |
| Dielectric withstanding voltage (at sea level) | 750 V rms, 50 Hz (depending on cable) |
| Working voltage (at sea level) | 250 V rms for cables with 1 mm/0.039 in. dielectric 335 V rms for cables with 2 mm/0.078 in. dielectric |
| Insulation resistance | ≥10 ⁴ MΩ |
| Contact resistance • Centre contact • Outer contact | ≤ 5 mΩ ≤ 2.5 mΩ |
| RF leakage (measured at 1 GHz) | ≥ 90 dB |

| Mechanical data | Requirements |
|--------------------------------------|--------------------------------|
| Coupling nut torque • Recommended | 25 to 35 Ncm/2.2 to 3.1 in lbs |
| Coupling nut retention force | ≥ 150 N/33.72 lbs |
| Contact captivation | ≥ 10 N/2.25 lbs |
| Cable retention force ¹⁾ | see pages 32 - 37 |
| Durability (matings) | ≥ 500 |

| Environmental data | Requirements |
|---------------------|--|
| Temperature range | -65 to +165 °C/-85 to +329 °F |
| Climatic category | IEC → 55/155/21 |
| Thermal shock | MIL-STD-202, method 107, condition B |
| Moisture resistance | MIL-STD-202, method 106 |
| Corrosion | salt spray test acc. to MIL-STD-202, method 101, condition B |
| Vibration | MIL-STD-202, method 204, condition D |

| Material data | | |
|-----------------|------------------------|---|
| Connector parts | Material | Plating |
| Bodies | brass | SUCOPLATE®/SUCOPRO® gold plating/ gold |
| Pin contacts | brass | gold |
| Socket contacts | copper-beryllium alloy | gold |
| Crimp ferrules | copper/brass | SUCOPLATE®/SUCOPRO® gold plating/ gold |
| Coupling nut | brass | SUCOPLATE®/SUCOPRO® gold plating/ gold |
| Insulators | PTFE or PFA | |

Some connectors may have a specification that differs from the above mentioned data.

The products are designed and guaranteed to pass the above mentioned test procedures. Any additional or different requirement arising from specific applications or environmental conditions which is not covered by these test procedures is subject to request.

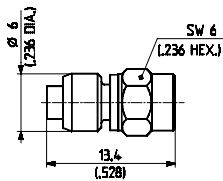
¹⁾ Value considers maximum load of the cables without irreversible variations of specifications.

Series SMC – cable connectors

Straight cable plugs (male)

For semi-rigid cables

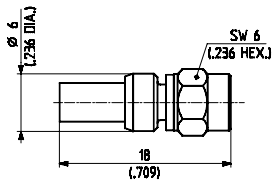
- Cable entry soldered
- Centre contact soldered



| HUBER+SUHNER type | Item no. | Cable group (example) | Packaging | Assembly instruction |
|-----------------------|----------|-----------------------|---------------|----------------------|
| 11_SMC-50-2-13/111_NH | 22650675 | Y3, Y11, Y15 (EZ_86) | bulk 100 pcs. | 9002 |

For flexible cables

- HUBER+SUHNER full crimp
- Taper sleeves see page 494



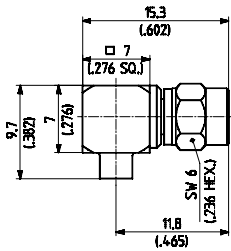
| HUBER+SUHNER type | Item no. | Cable group (example) | Packaging | Plating body | Assembly instruction | Crimp insert |
|--|----------------------|-----------------------|-------------------------|--------------|----------------------|--------------|
| 11_SMC-50-1-10/111_NH | 22648629 | U1 (RG_178_B/U) | bulk 100 pcs. | gold | 3077 | 1A |
| 11_SMC-50-2-10/111_NE 11_SMC-50-2-10/111_NH | 22640811 22645841 | U2 (RG_316_/U) | single bulk 100 pcs. | gold | | |
| 11_SMC-50-2-10/133_NE | 22641528 | U2 (RG_316_/U) | single | SUCOPLATE® | | |
| 11_SMC-50-2-11/111_NE | 22640251 | U4 (K_02252_D) | single | gold | | |

Series SMC – cable connectors

Right angle cable plugs (male)

For semi-rigid cables

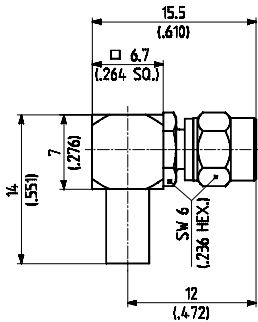
- Cable entry soldered
- Centre contact soldered



| HUBER+SUHNER type | Item no. | Cable group (example) | Packaging | Assembly instruction |
|-----------------------|----------|-----------------------|---------------|----------------------|
| 16_SMC-50-2-25/111_NE | 22644126 | Y3, Y11, Y15 (EZ_86) | single | 9160 |
| 16_SMC-50-2-25/111_NH | 23003713 | | bulk 100 pcs. | |

For flexible cables

- HUBER+SUHNER full crimp
- Taper sleeves see page 494



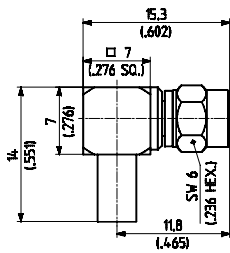
| HUBER+SUHNER type | Item no. | Cable group (example) | Packaging | Plating body | Assembly instruction | Crimp insert |
|-----------------------|----------|-----------------------|---------------|--------------|----------------------|--------------|
| 16_SMC-50-1-10/111_NE | 22543364 | U1 (RG_178_B/U) | single | gold | 3096 | 1A |
| 16_SMC-50-1-10/111_NH | 22648283 | | bulk 100 pcs. | | | |
| 16_SMC-50-2-10/111_NE | 22640269 | U2 (RG_316_/U) | single | gold | | |
| 16_SMC-50-2-10/111_NH | 22645323 | | bulk 100 pcs. | | | |
| 16_SMC-50-2-11/111_NE | 22543366 | U4 (K_02252_D) | single | gold | | |

Series SMC – cable connectors

Right angle cable plugs (male)

For flexible cables

- Cable entry crimp
- Centre contact soldered
- Taper sleeves see page 494

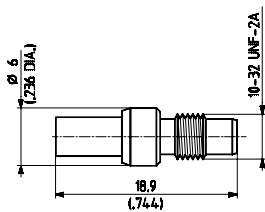


| HUBER+SUHNER type | Item no. | Cable group (example) | Packaging | Assembly instruction | Crimp insert |
|-----------------------|----------|-----------------------|-----------|----------------------|--------------|
| 16_SMC-50-1-20/111_NE | 22644083 | U1 (RG_178_B/U) | single | 9157 | A |
| 16_SMC-50-2-20/111_NE | 22643949 | U2 (RG_316_/U) | | | |

Straight cable jacks (female)

For flexible cables

- HUBER+SUHNER full crimp
- Taper sleeves see page 494

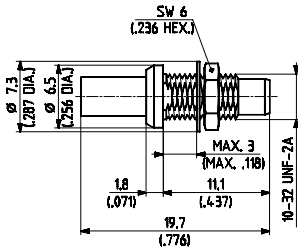


| HUBER+SUHNER type | Item no. | Cable group (example) | Packaging | Assembly instruction | Crimp insert |
|-----------------------|----------|-----------------------|-----------|----------------------|--------------|
| 21_SMC-50-2-10/111_NE | 22640279 | U2 (RG_316_/U) | single | 3077 | 1 A |

Series SMC – cable connectors

For flexible cables

- HUBER+SUHNER full crimp
- Rear mounting
- Taper sleeves see page 494



| HUBER+SUHNER type | Item no. | Cable group (example) | Packaging | Assembly instruction | Mounting hole | Crimp insert |
|-------------------------------------|----------|-----------------------|-----------|----------------------|---------------|--------------|
| 24_SMC-50-1-10/111_NE ¹⁾ | 22640290 | U1 (RG_178_B/U) | single | 3077 | ML 11 | 1 A |
| 24_SMC-50-2-110/111_NE | 22660133 | U2 (RG_316_/U) | single | | | |

Series SMC – receptacles

Straight bulkhead receptacles, jacks (female)

- Solder end
- Insulating washers see page 496

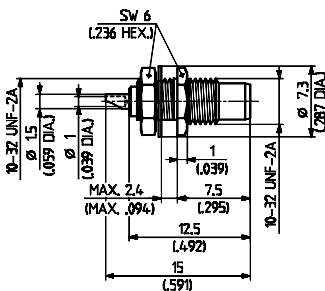


Fig. 1

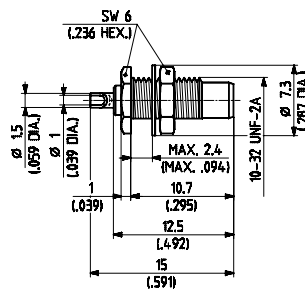


Fig. 2

| HUBER+SUHNER type | Item no. | Packaging | Mounting hole | Fig. | Notes |
|----------------------|----------|-----------|---------------|------|----------------|
| 22_SMC-50-0-2/111_NE | 22640281 | single | ML 11 | 1 | front mounting |
| 22_SMC-50-0-3/111_NE | 22640282 | | | 2 | rear mounting |

¹⁾ Centre contact NOT captivated

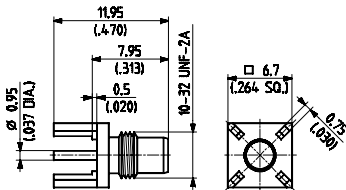
Series SMC – PCB connectors

Straight PCB jacks (female)

- 2.54 mm/0.100 in. grid
- With stand-off



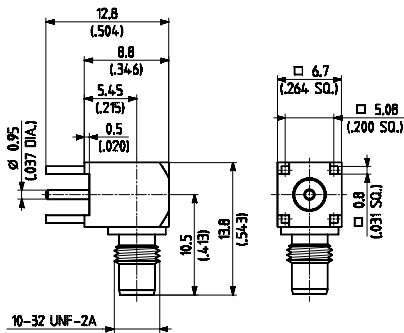
SMC



| HUBER+SUHNER type | Item no. | Packaging | Mounting hole |
|----------------------|----------|---------------|---------------|
| 82_SMC-50-0-1/111_NE | 22640313 | single | ML 15 |
| 82_SMC-50-0-1/111_NH | 22646201 | bulk 100 pcs. | |

Right angle PCB jacks (female)

- 2.54 mm/0.100 in. grid
- With stand-off



| HUBER+SUHNER type | Item no. | Packaging | Mounting hole |
|----------------------|----------|---------------|---------------|
| 85_SMC-50-0-1/111_NE | 22640326 | single | ML 15 |
| 85_SMC-50-0-1/111_NH | 22652987 | bulk 100 pcs. | |
| 85_SMC-50-0-1/133_NE | 22642472 | single | |