



# SERIES SMC SUBMINIATURE CONNECTORS

## DESCRIPTION

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

### Coupling mechanism:

The SMC screw-on mechanism permits a vibration-proof connection suitable for semi-permanent connections and for use in mobile equipment with low VSWR requirements.

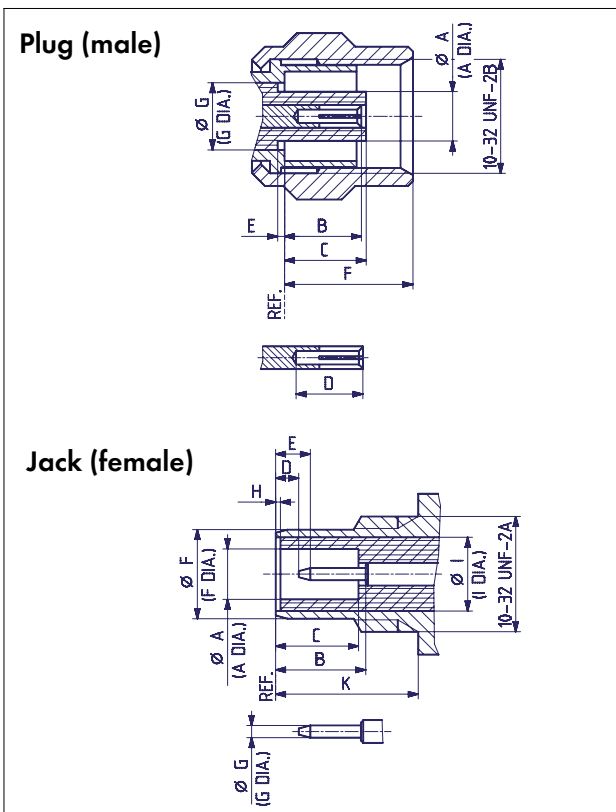
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SMC

## INTERFACE DIMENSIONS



## INTERFACE DIMENSIONS (MM / INCHES)

	Plug		Jack	
	min.	max.	min.	max.
A	–	2.60/.081	2.08/.082	–
B	2.85/.112	3.40/.134	3.40/.134	–
C	–	3.40/.134	3.40/.134	–
D	2.79/.110	–	0.61/.024	–
E	0.00/.000	–	–	2.13/.084
F	–	5.92/.233	–	3.71/.146
G	3.05/.120 nom.		0.48/.019	0.53/.021
H	–	–	0.00/.000	–
I	–	–	3.05/.120 nom.	
K	–	–	5.94/.234	–

### Interface dimensions conformable to the Standards:

International:	<b>IEC 60169-9</b>
Europe:	<b>CECC 22140</b>
USA:	<b>MIL-C-39012 SMC</b>
	<b>Interface MIL-STD-348A/312</b>
Great Britain:	<b>BS 9210 N 0009 SMC</b>
France:	<b>NFC 93561 series KMV</b>
Germany:	<b>VG 95286</b>

**IP rating (interface, mated) IP50**

## TECHNICAL DATA

ELECTRICAL DATA	REQUIREMENTS
Impedance	50 $\Omega$
Frequency range	DC ... 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	$\geq 10^4$ M $\Omega$
Contact resistance	
- centre contact	$\leq 5$ m $\Omega$
- outer contact	$\leq 2.5$ m $\Omega$
RF-leakage (measured at 1 GHz)	$\geq 90$ dB

MECHANICAL DATA	REQUIREMENTS
Coupling nut torque	
- recommended	25 Ncm ... 35 Ncm / 2.2 in. lbs ... 3.1 in. lbs
- proof torque	71 Ncm / 6.2 in. lbs
Coupling nut retention force	$\geq 150$ N / 33.72 lbs
Contact captivation	$\geq 10$ N / 2.25 lbs
Cable retention force <sup>1)</sup>	see pages 28 - 34
Durability (matings)	$\geq 500$

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

ENVIRONMENTAL DATA	TEST CONDITIONS
Temperature range	- 65° C ... + 165° C / - 85° F ... + 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	Saltspray 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	gold
Pins contacts	brass	gold
Socket contacts	copper-beryllium alloy	gold
Crimp ferrules	copper / brass	gold
Springs	copper-beryllium alloy	gold
Insulators	PTFE or PFA	

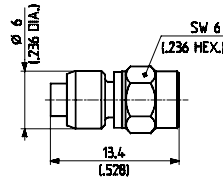
Some connectors may have a specification that differs from the above mentioned data.

**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.**

# CABLE CONNECTORS

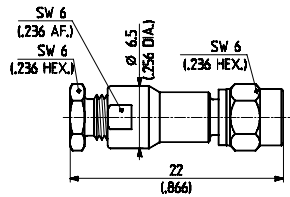
## Straight cable plugs (male)

- > for semi-rigid cables
- > cable entry soldered
- > centre contact soldered



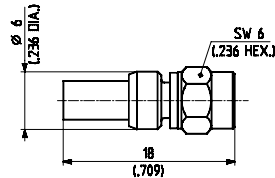
HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
11_SMC-50-2-13/111_NH	22650675	Y3, Y11 (EZ 86)	bulk 100 pcs.	9002	

- > for flexible cables
- > cable entry HUBER+SUHNER® pressure-sleeve
- > centre contact soldered



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
11_SMC-50-1-6/111_NE	22640238	U1 (RG 178 B/U)	single	3041	
11_SMC-50-2-5/111_NE	22640246	U2 (RG 316/U)	single	3041	

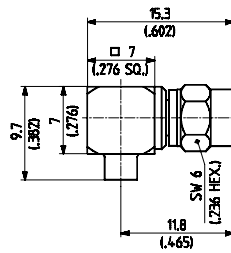
- > for flexible cables
- > HUBER+SUHNER® full crimp
- > taper sleeves see page 406



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Crimp insert
11_SMC-50-1-10/111_NH	22648629	U1 (RG 178 B/U)	bulk 100 pcs.	3077	1A
11_SMC-50-2-10/111_NH	22645841	U2 (RG 316/U)	bulk 100 pcs.	3077	1A
11_SMC-50-2-10/133_NE	22641528	U2 (RG 316/U)	single	3077	1A
11_SMC-50-2-11/111_NE	22640251	U4 (K 02252 D)	single	3077	1A

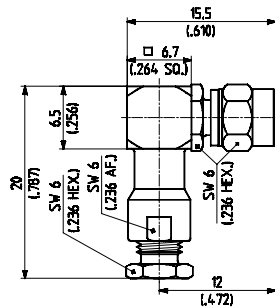
## Right angle cable plugs (male)

- > for semi-rigid cables
- > cable entry soldered
- > centre contact soldered



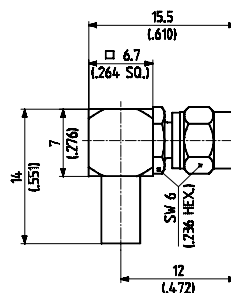
HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
16_SMC-50-2-25/111_NE	22644126	Y3, Y11 (EZ 86)	single	9160	
16_SMC-50-2-25/111_NH	23003713	Y3, Y11 (EZ 86)	bulk 100 pcs.	9160	

- > for flexible cables
- > cable entry HUBER+SUHNER® pressure-sleeve
- > centre contact soldered



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
16_SMC-50-2-5/111_NE	22640264	U2 (RG 316/U)	single	3039	

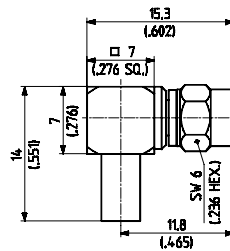
- > for flexible cables
- > HUBER+SUHNER® full crimp
- > taper sleeves see page 406



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Crimp insert
16_SMC-50-1-10/111_NH	22648283	U1 (RG 178 B/U)	bulk 100 pcs.	3096	1A
16_SMC-50-2-10/111_NH	22645323	U2 (RG 316/U)	bulk 100 pcs.	3096	1A
16_SMC-50-2-11/111_NE	22543366	U4 (K 02252 D)	single	3096	1A

> for flexible cables

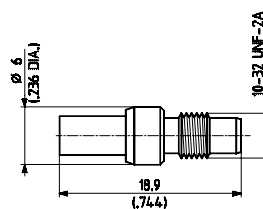
- > cable entry crimp
- > centre contact soldered
- > taper sleeves see page 406



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)	single	9157	A

### Straight cable jacks (female)

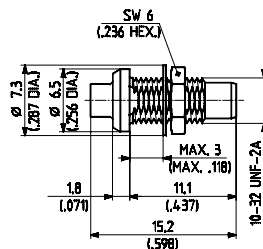
- > for flexible cables
- > HUBER+SUHNER® full crimp
- > taper sleeves see page 406



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
21_SMC-50-2-11/111_NE	22644232	U4 (K 02252 D)	single	3077	1 A

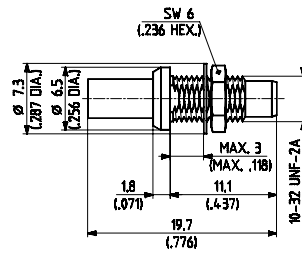
### Straight bulkhead cable jacks (female)

- > for semi-rigid cables
- > cable entry soldered
- > centre contact soldered



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Mounting hole
24_SMC-50-2-13/111_NH	22650209	Y3, Y11 (EZ 86)	bulk 100 pcs.	9002	ML 11

- > for flexible cables
- > HUBER+SUHNER® full crimp
- > rear mounting
- > taper sleeves see page 406



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Mounting hole	Crimp insert
24_SMC-50-1-10/111_NH	22648484	U1 (RG 178 B/U)	bulk 100 pcs.	3077	ML 11	1 A
24_SMC-50-2-110/111_NH	22660135	U2 (RG 316/U)	bulk 100 pcs.	3077	ML 11	1 A

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## RECEPTACLES WITH SOLDER END

### Receptacles, jacks (female)

- > bulkhead mounted
- > insulating washers see page 408

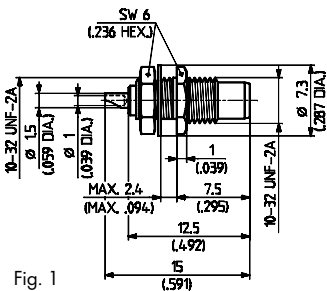


Fig. 1

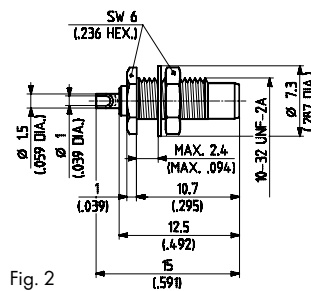


Fig. 2

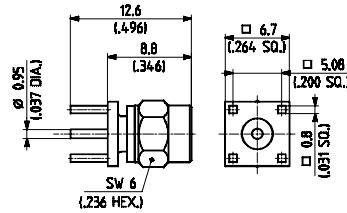
HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Fig.	Notes
22_SMC-50-0-2/111_NE	22640281	single	ML 11	1	front mounting
22_SMC-50-0-3/111_NE	22640282	single	ML 11	2	rear mounting
22_SMC-50-0-3/133_NE	22641428	single	ML 11	2	rear mounting

☒ centre contact NOT captivated

## PCB CONNECTORS

### Straight PCB plugs (male)

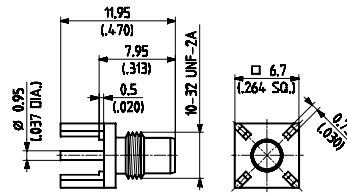
> 2.54 mm / .100 in. grid



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes
81_SMC-50-0-1/111_NE	22640312	single	ML 15	without stand-off

### Straight PCB jacks (female)

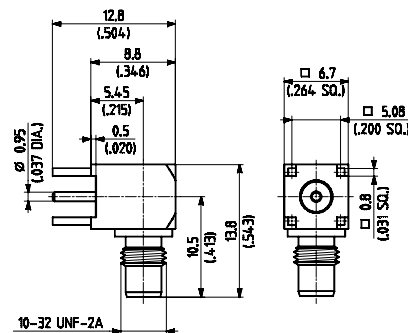
> 2.54 mm / .100 in. grid



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes
82_SMC-50-0-1/111_NH	22646201	bulk 100 pcs.	ML 15	with stand-off

### Right angle PCB jacks (female)

> 2.54 mm / .100 in. grid



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