



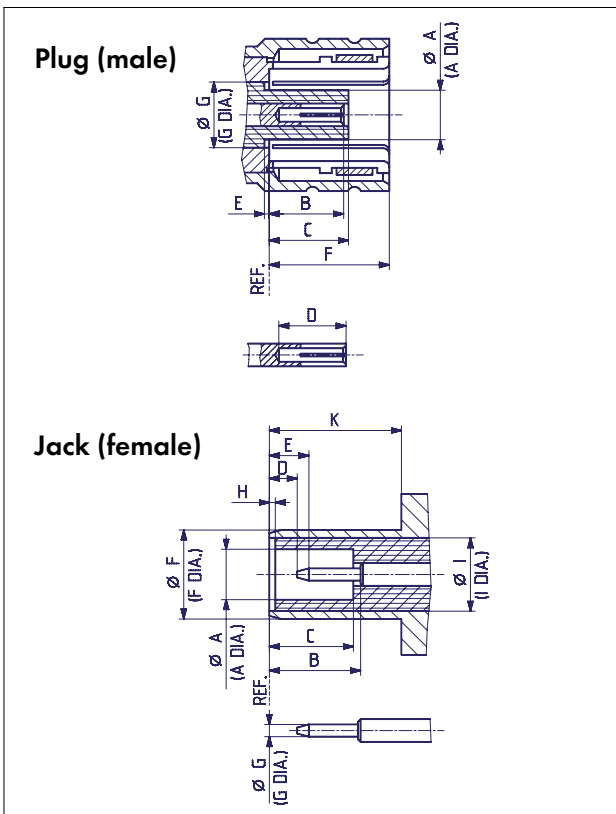
# SERIES SMS, SUBMINIATURE CONNECTORS

## DESCRIPTION

HUBER+SUHNER SMS connectors are used in applications requiring rapid connection and disconnection, even where space is limited. The small physical size of the connector allows a high packing density to be achieved. These connectors are suitable for applications up to 4 GHz.

The SMB, SMC and SMS series have an identical inner construction, but a different coupling mechanism. In accordance with the international specifications, plugs are fitted with female center contacts and jacks with male center contacts. To increase the voltage rating, all insulators overlap.

## INTERFACE DIMENSIONS



## CONTENTS

## PAGE

Description	109
Interface dimensions	109
Interface dimensions in mm / inches	109
Technical data	110
Cable connectors	112
Receptacles with solder end	113
PCB connectors	113

SMS

## INTERFACE DIMENSIONS (MM / INCHES)

	Plug		Jack	
	min.	max.	min.	max.
A	–	2.06/.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	–	5.20/.205	3.66/.144	3.71/.146
G	3.05/.120 nom.		0.48/.019	0.53/.021
H	–	–	0.00/.000	–
I	–	–	3.05/.120 nom.	
K	–	–	5.30/.209	–

**Note:** HUBER+SUHNER SMS plugs are interchangeable with HUBER+SUHNER SMB jacks without any restrictions.

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

## TECHNICAL DATA

ELECTRICAL DATA	REQUIREMENTS
Impedance	50 $\Omega$
Frequency range	DC ... 4 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 - outer contact	$\leq 5$ m $\Omega$ $\leq 2.5$ m $\Omega$
RF-leakage (measured at 1 GHz)	$\geq 55$ dB

MECHANICAL DATA	REQUIREMENTS
Engagement force	typ. 8 N / 1.8 lbs
Disengagement force	typ. 5 N / 1.1 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.

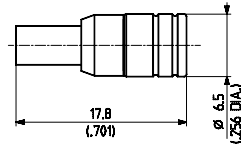
**The products are designed and guaranteed to pass the above mentioned test procedures. Any additional or different requirement arising from specific applications or environmental conditions which is not covered by these test procedures is subject to request.**

## CABLE CONNECTORS

### Straight cable plugs (male)

> for flexible cables

- > closed entry
- > HUBER+SUHNER® full crimp
- > taper sleeves see page 406

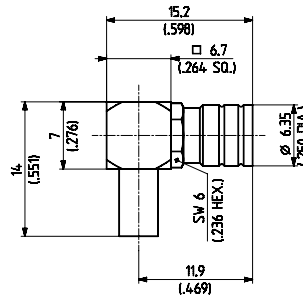


HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Crimp insert
11_SMS-50-1-10/111_NE	22543572	U1 (RG 178 B/U)	single	3077	1 A
11_SMS-50-2-110/111_NH	23011901	U2 (RG 316/U)	bulk 100 pcs.	3077	1 A

### Right angle cable plugs (male)

> for flexible cables

- > open entry
- > HUBER+SUHNER® full crimp
- > taper sleeves see page 406

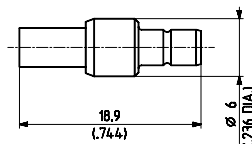


HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Crimp insert
16_SMS-50-1-10/111_NH	22649894	U1 (RG 178 B/U)	bulk 100 pcs.	3096	1 A
16_SMS-50-2-10/111_NE	22543574	U2 (RG 316/U)	single	3096	1 A

### 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	Notes
21_SMB-50-1-10/111_NE	22543424	U1 (RG 178 B/U)	single	3077	1 A	*
21_SMB-50-2-10/111_NH	22651810	U2 (RG 316/U)	bulk 100 pcs.	3077	1 A	*

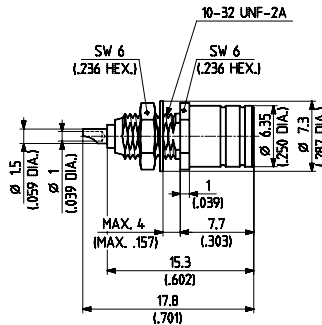
\* intermateable with SMS plug without any restrictions

☒ centre contact NOT captivated

## RECEPTACLES WITH SOLDER END

### Receptacles, plugs (male)

- > open entry
- > bulkhead mounted
- > front mounting



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Crimp insert
12_SMS-50-0-3/133_NH	22651812	bulk 100 pcs.	ML 11	without panel seal

### Receptacles, jacks (female)

- > bulkhead mounted
- > insulating washers see page 408

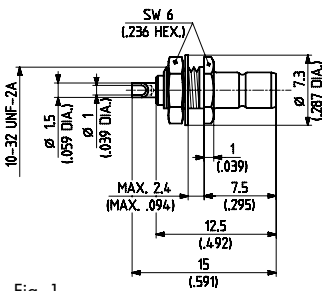


Fig. 1

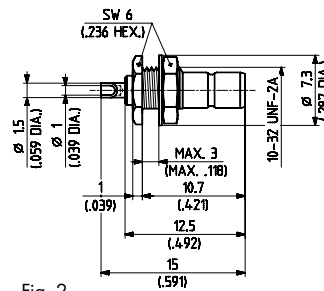


Fig. 2

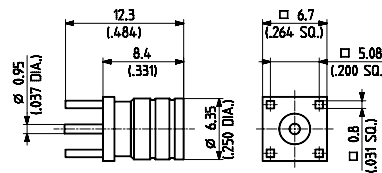


HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes	Fig.
22_SMB-50-0-2/111_NE	22640206	single	ML 11	front mounting, intermateable with SMS plug without any restrictions	1
22_SMB-50-0-3/111_NE	22640207	single	ML 11	rear mounting, intermateable with SMS plug without any restrictions	2

## PCB CONNECTORS

### Straight PCB plugs (male)

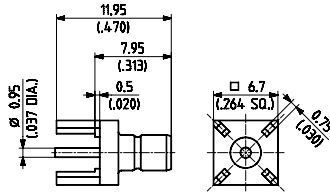
- > open entry
- > 2.54 mm / .100 in. grid



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes
81_SMS-50-0-1/111_NH	22650093	bulk 100 pcs.	ML 15	without stand-off

## Straight PCB jacks (female)

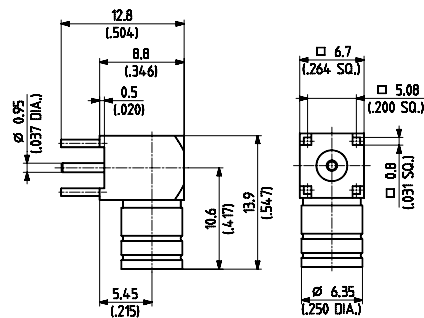
- > with stand-off
- > 2.54 mm / .100 in. grid



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes
82_SMB-50-0-1/111_NH	22645143	bulk 100 pcs.	ML 15	intermateable with SMS plug without any restrictions

## Right angle PCB plugs (male)

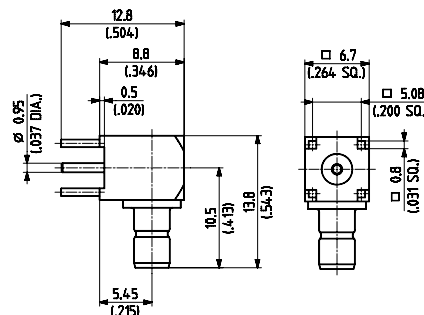
- > open entry
- > with stand-off
- > 2.54 mm / .100 in. grid



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes
84_SMS-50-0-1/111_NE	22640377	single	ML 15	

## Right angle PCB jacks (female)

- > 2.54 mm / .100 in. grid
- > with stand-off



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes
85_SMB-50-0-1/111_NH	22645989	bulk 100 pcs.	ML 15	intermateable with SMS plug without any restrictions

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