



# SERIES PC 3.5 PRECISION SUBMINIATURE CONNECTORS

## DESCRIPTION

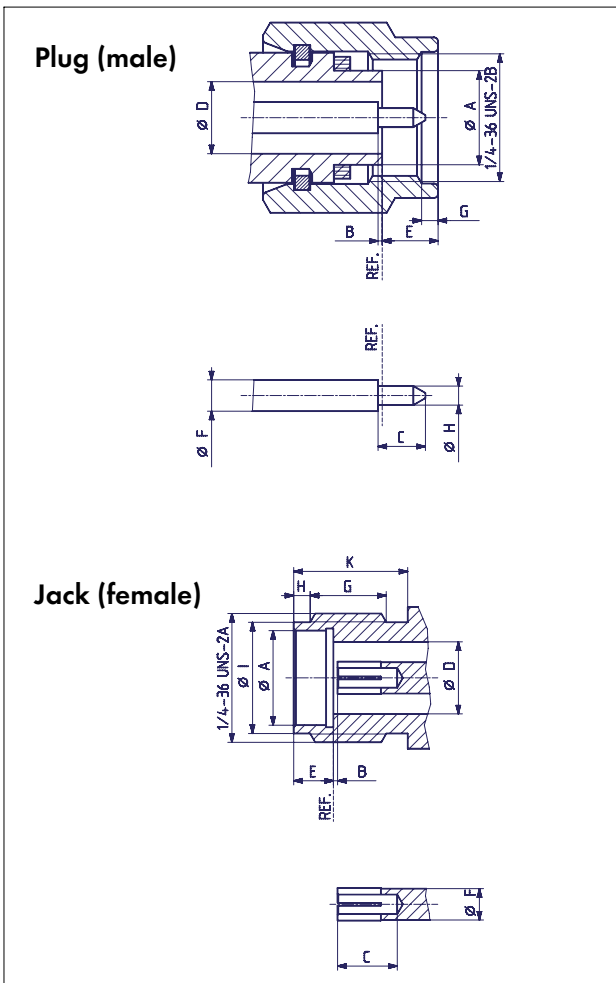
HUBER+SUHNER PC 3.5 connectors are precision connectors for use in microwave applications up to 33 GHz. They are especially suitable for use with semi-rigid cables and microwave components. They are **inter-mateable with SMA and SK connectors**. Due to an air dielectric interface and the more durable construction a superior repeatability further enhances the performance.

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## INTERFACE DIMENSIONS



## INTERFACE DIMENSIONS (MM / INCHES)

	Plug		Jack	
	min.	max.	min.	max.
A	4.55/.179	4.58/.180	4.60/.181	4.63/.182
B	0.00/.000	0.08/.003	0.00/.000	0.08/.003
C	2.03/.080	2.29/.090	2.79/.110	3.18/.125
D	3.49/.138	3.51/.138	3.49/.138	3.51/.138
E	2.36/.093	3.56/.135	1.88/.074	1.98/.078
F	1.51/.060	1.52/.060	1.51/.060	1.52/.060
G	0.38/.015	1.14/.045	3.35/.132	4.62/.182
H	0.92/.036	0.93/.037	0.38/.015	1.14/.045
I	–	–	5.30/.209	5.40/.213
K	–	–	5.54/.218	–

**Interface dimensions conformable to the Standards:**

International: **IEC 60169-23**

**IP rating (interface, mated) IP68**

## TECHNICAL DATA

ELECTRICAL DATA	REQUIREMENTS
Impedance	50 $\Omega$
Frequency range	DC ... 33 GHz
Dielectric withstanding voltage (at sea level) - RG 405/U - RG 402/U	750 V rms, 50 Hz 1000 V rms, 50 Hz
Working voltage (at sea level) - RG 405/U - RG 402/U	$\leq$ 250 V rms, 50 Hz $\leq$ 335 V rms, 50 Hz
Insulation resistance	$\geq$ 5 · 10 <sup>3</sup> M $\Omega$
Contact resistance - centre contact - outer contact	$\leq$ 3 m $\Omega$ $\leq$ 2 m $\Omega$
RF-leakage	$\geq$ 100 dB - f (GHz) dB
VSWR (typical values) - RG 405/U - RG 402/U - adaptors	$\leq$ 1.13 up to 26.5 GHz $\leq$ 1.10 up to 26.5 GHz $\leq$ 1.08 up to 18 GHz / $\leq$ 1.15 up to 26.5 GHz

MECHANICAL DATA	REQUIREMENTS
Coupling nut torque - recommended - proof torque	0.80 Nm ... 1.10 Nm / 7.1 in. lbs ... 9.7 in. lbs 1.70 Nm / 15.0 in. lbs
Coupling nut retention force	$\geq$ 270 N / 60.7 lbs
Contact captivation	$\geq$ 27 N / 6.1 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 ... + 90°C / - 85 °F ... + 194 °F
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
Shock	MIL-STD-202, Method 213, Condition I

MATERIAL DATA		
CONNECTOR PART	MATERIAL	PLATING
Bodies	stainless steel	passivated
Cable entries	brass	gold
Centre contacts	copper-beryllium alloy	gold
Support beads	polystyrene, crosslinked	
Gaskets	silicone rubber	

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 plugged-in

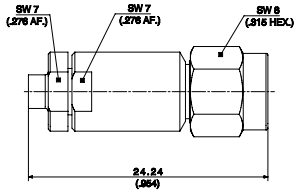


Fig. 1

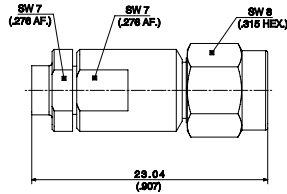


Fig. 2

HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Fig.	Notes
11_PC35-50-2-4/199_UE	84009440	Y3, Y11 (EZ 86)	single	0000215467	1	
11_PC35-50-3-4/199_UE	84009380	Y5, Y12 (EZ 141)	single	0000215467	2	

## Straight cable jacks (female)

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

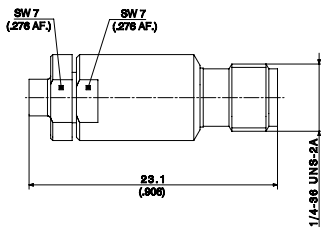


Fig. 1

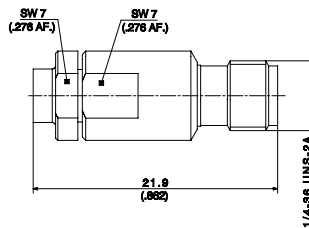


Fig. 2

HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Fig.	Notes
21_PC35-50-2-4/199_UE	84009419	Y3, Y11 (EZ 86)	single	0000215467	1	
21_PC35-50-3-3/199_UE	84009382	Y5, Y12 (EZ 141)	single	0000215467	2	

## Straight bulkhead cable jacks (female)

- > for semi-rigid cables
- > bulkhead mounted
- > cable entry soldered
- > centre contact plugged-in
- > with panel seal

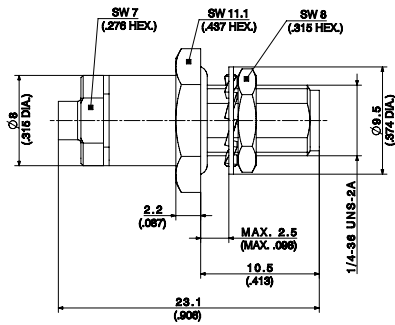


Fig. 1

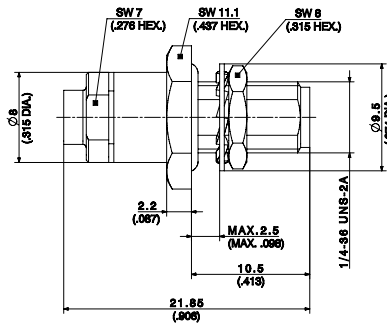


Fig. 2

HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Fig.	Mounting hole
24_PC35-50-2-2/199_UE	84009405	Y3, Y11 (EZ 86)	single	0000215467	1	ML 35
24_PC35-50-3-2/199_UE	84009383	Y5, Y12 (EZ 141)	single	0000215467	2	ML 35

## CONNECTORS WITH INTERCHANGEABLE TRANSITION PINS

### Flange mount, jacks (female)

- > panel mounted

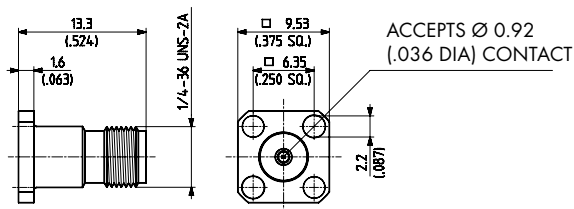
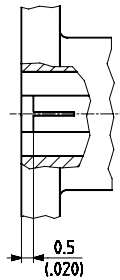


Fig. 1

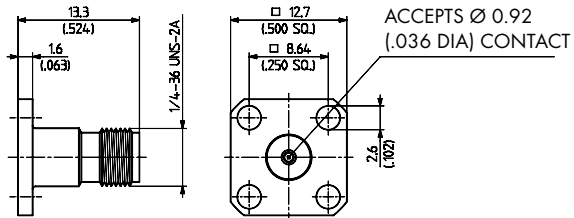
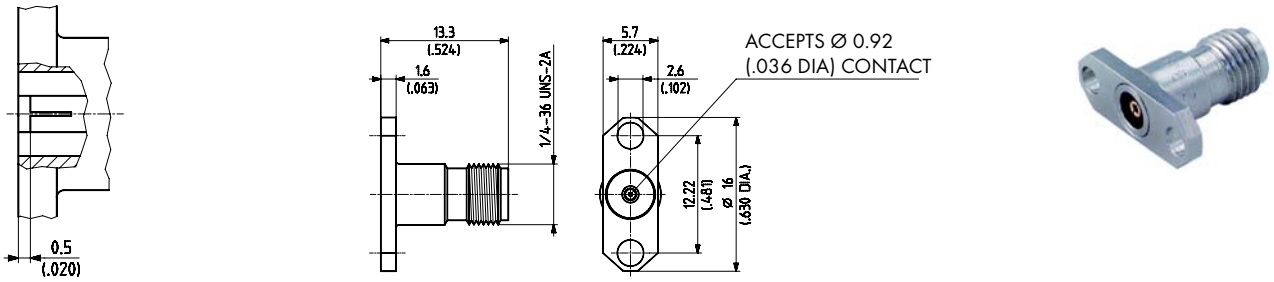


Fig. 2

HUBER+SUHNER type	Item no.	Packaging	Flange type	Fig.	Notes
23_PC35-50-0-51/199_UE	22644918	single	square	1	
23_PC35-50-0-53/199_UE	22644910	single	square	2	

> panel mounted

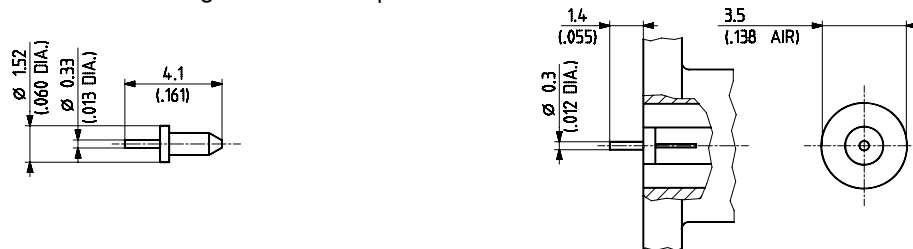


HUBER+SUHNER type	Item no.	Packaging	Flange type	Notes
23_PC35-50-0-54/199_UE	22644911	single	2-hole	

### Transition Pins

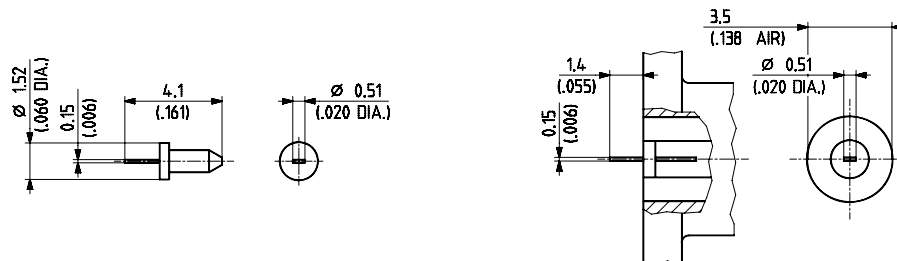
for PC 3.5 connectors with interchangeable contact pins

#### Pin contact



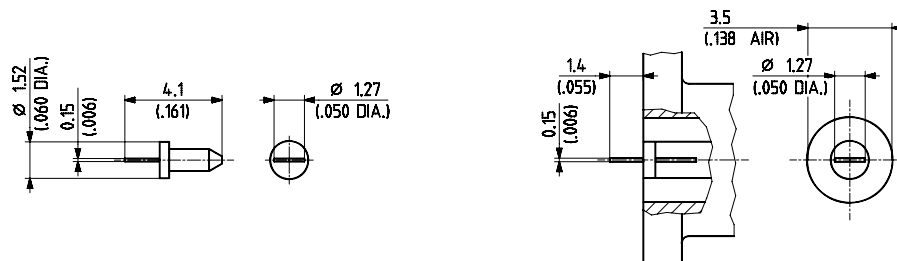
HUBER+SUHNER type	Item no.	Packaging	Plating	Notes
73_Z-0-0-168	22644927	10 pins	gold	

#### Tab contact



HUBER+SUHNER type	Item no.	Packaging	Plating	Notes
73_Z-0-0-169	22644931	10 pins	gold	

#### Tab contact



HUBER+SUHNER type	Item no.	Packaging	Plating	Notes
73_Z-0-0-170	22644932	10 pins	gold	