

# Series TNC 50 Ω - coaxial miniature connectors

## Description

HUBER+SUHNER TNC connectors are threaded RF connectors applicable from DC up to 11 GHz. The threaded coupling mechanism improves control over the interface dimensions and allows them to be used under a higher environmental load than BNC, especially under a high vibration load.

## Compatibility

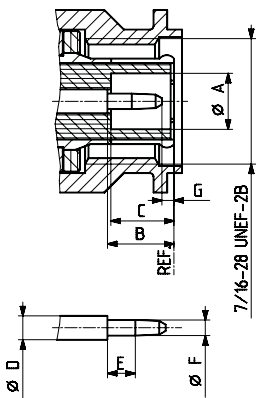
50 Ω TNC connectors and 75 Ω TNC connectors are intermateable without restrictions.

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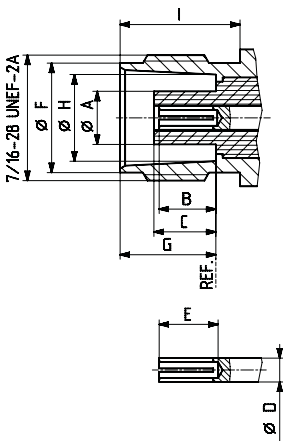
## Interface dimensions (mm/inches)

### Plug (male)



	Plug		Jack	
	min.	max.	min.	max.
A	4.83/0.190	-	-	4.72/0.186
B	5.33/0.210	5.84/0.230	4.72/0.186	5.23/0.206
C	5.28/0.208	5.79/0.228	4.78/0.188	5.28/0.208
D	2.06/0.081	2.21/0.087	2.06/0.081	2.21/0.087
E	1.98/0.078	-	4.95/0.195	-
F	1.32/0.052	1.37/0.054	9.60/0.378	9.70/0.382
G	0.08/0.003	-	8.31/0.327	8.51/0.335
H	-	-	8.10/0.319	8.15/0.321
I	-	-	10.52/0.414	-

### Jack (female)



### Interface dimensions conformable to the standards:

International:	IEC 60169-17
Europe:	CECC 22 200
USA:	MIL-PRF-39012
	TNC-Interface MIL-STD-348/313

# Series TNC 50 Ω - technical data

Electrical data	Requirements
Impedance	50 Ω
Frequency range	DC to 11 GHz
Dielectric withstanding voltage (at sea level)	1.5 kV rms, 50 Hz (depending on cable)
Working voltage (at sea level) <ul style="list-style-type: none"> <li>• Unmated</li> </ul>	500 V rms, 50 Hz (depending on cable)
Insulation resistance	$\geq 5 \cdot 10^3$ MΩ
Contact resistance <ul style="list-style-type: none"> <li>• Centre contact</li> <li>• Outer contact</li> </ul>	<ul style="list-style-type: none"> <li><math>\leq 1.5</math> mΩ</li> <li><math>\leq 1</math> mΩ</li> </ul>
RF leakage (between 2 and 3 GHz)	$\geq 60$ dB

Mechanical data	Requirements
Coupling nut torque <ul style="list-style-type: none"> <li>• Recommended</li> </ul>	46 to 69 Ncm/4.1 to 6.1 in lbs
Coupling nut retention force	$\geq 450$ N/101.2 lbs
Contact captivation	$\geq 27$ N/6.1 lbs
Cable retention force <sup>1)</sup>	see pages 32 - 37
Durability (matings)	$\geq 500$

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	saltspray test acc. to MIL-STD-202, method 101, condition B
Vibration	MIL-STD-202, method 204, condition B
Shock	MIL-STD-202, method 213, condition G

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

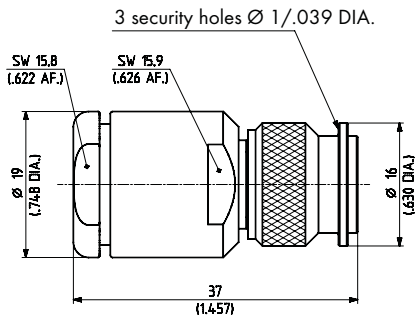
<sup>1)</sup> Value considers maximum load of the cables without irreversible variations of specifications.

# Series TNC 50 Ω - cable connectors

## Straight cable plugs (male)

### For flexible cables

- Cable entry clamp
- Centre contact soldered



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction
11_TNC-50-7-2/133_NE	22640466	U29 (RG_213/U) U32 (RG_214/U)	single	3008

### For flexible cables

- HUBER+SUHNER full crimp
- Taper sleeves see page 526



3 security holes Ø 1/.039 DIA.

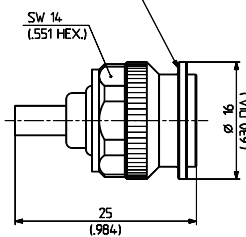


Fig. 1

3 security holes Ø 1/.039 DIA.

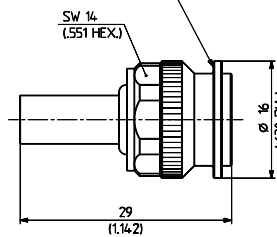


Fig. 2

3 security holes Ø 1/.039 DIA.

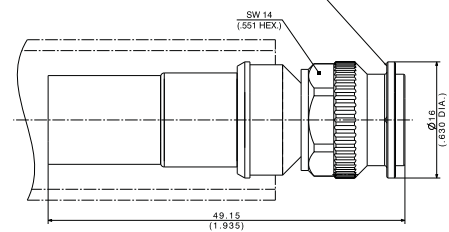


Fig. 3

HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Crimp insert	Fig.
11_TNC-50-2-112/133_NE	23001710	U2 (RG_316_/U)	single	27215	1 A	1
11_TNC-50-2-113/133_NE	23001711	U4 (K_02252_D)	single			
11_TNC-50-3-115/133_NE	23001712	U9, U39 (RG_223/U)	single	3015	2 B	2
11_TNC-50-3-115/133_NH	23001713		bulk 100 pcs.			
11_TNC-50-3-116/133_NE	23001714	U7 (RG_58_C/U)	single			
11_TNC-50-3-116/133_NH	23001715		bulk 100 pcs.			
11_TNC-50-3-117/133_NE	23010015	U11, U41 (RG_400/U)	single			
11_TNC-50-7-18/133_NE	84077868	U30 (SPUMA_400)	single	0000184567	4 D	3