

# SERIES N 75 Ω COAXIAL CONNECTORS

## Description

SUHNER N connectors are available with 50 Ω and 75 Ω impedance. The SUHNER N 75 Ω connectors are suitable for applications up to 1.5 GHz. The screw-type coupling mechanism provides a sturdy and reliable connection. SUHNER N 75 Ω connectors are available in many different patterns.

## Compatibility

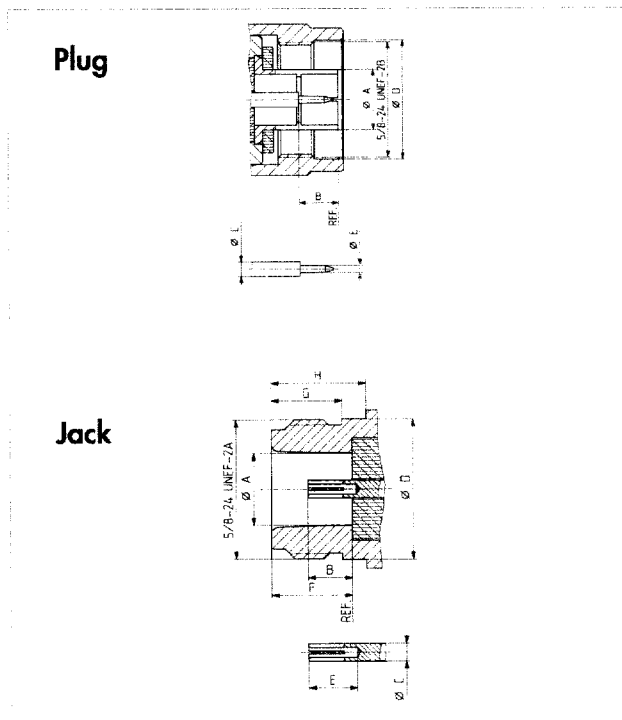
Center conductors of N 75 Ω connectors have a smaller diameter than those of the 50 Ω version. Therefore 50 Ω and 75 Ω connectors must not be mated with each other.

## Contents

Page

Description	331
Interface Dimensions	331
Interface Dimensions in mm / inches	331
Standards	331
Technical Data	332
Connectors for Flexible Cables	334
Receptacles with Solder End	337
Adaptors Within-Series	338
Protective Caps	340
Termination	341

## Interface Dimensions



## Interface Dimensions in mm / inches

	Plug		Jack	
	min.	max.	min.	max.
A	—	8.38/.330	8.03/.316	8.13/.320
B	5.33/.210	5.84/.230	4.75/.187	5.26/.207
C	—	2.00/.079	—	2.00/.079
D	16.00/.630	—	—	15.93/.627
E	1.00/.039	1.05/.041	5.33/.210	—
F	—	—	9.04/.356	9.19/.362
G	—	—	6.76/.266	—
H	—	—	10.72/.422	—

## Standards

Interface dimensions conform to:  
**IEC 169-16**  
**CECC 22 210**  
**MIL-STD-348A/304**

## Technical Data

### ELECTRICAL DATA

	REQUIREMENTS
Impedance	75 $\Omega$
Frequency range - flexible cables	DC ... 1.5 GHz (see also Appendix page 436)
RF-leakage (measured at 1 GHz)	$\geq 90$ dB
Dielectric withstanding voltage (at sea level)	2.5 kV rms, 50 Hz
Working voltage (at sea level)	$\leq 1.0$ kV rms, 50 Hz
Insulation resistance	$\geq 5 \cdot 10^3$ M $\Omega$
Contact resistance - centre contact - outer contact	$\leq 1.0$ m $\Omega$ $\leq 1.0$ m $\Omega$

### MECHANICAL DATA

	REQUIREMENTS
Coupling nut torque - recommended - proof torque	0.68 Nm ... 1.13 Nm / 6.0 ... 10.0 in. lbs 1.70 Nm / 15.0 in. lbs
Coupling nut retention force	$\geq 450$ N / 101.2 lbs
Contact captivation	$\geq 68$ N / 15.3 lbs
Cable retention force <sup>1)</sup>	see pages 36 - 41
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 acc. to 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 I

**MATERIAL DATA**

<b>CONNECTOR PART</b>	<b>STANDARDS</b>	<b>MATERIAL</b>	<b>PLATING</b>
Bodies Pin contact	QQ-B-626	brass	SUCOPLATE® gold plated
Outer contact, slotted	DIN 17660	spring bronze	SUCOPLATE®
Female contacts	QQ-C-530/MIL-H-7199 CuBe2	beryllium-copper, hardened	gold plated
Crimp ferrules	SUHNER® specification	copper	SUCOPLATE®
Insulators, standard version	ASTM-D-1457, BS 4271 Grade B	PTFE	
Gaskets	ASTM-E-1418 PS 1	silicone rubber	

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

## Connectors for Flexible Cables

### straight plugs

- > cable entry clamp
- > centre contact soldered

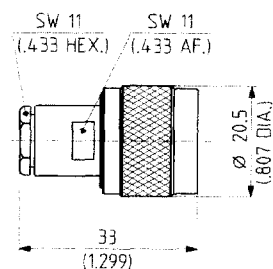


Fig. 1

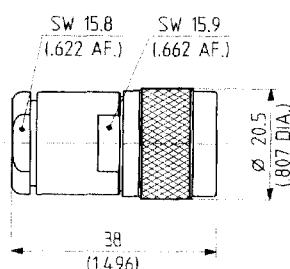
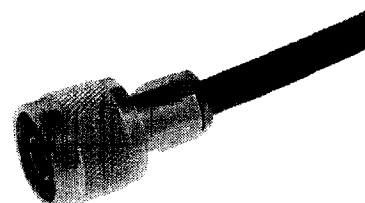


Fig. 2



SUHNER TYPE	Ident. no.	Cable group (example)	Assembly instruction	Weight	Fig.	Notes
11 N-75-3-4	• 542463	U12,14 (G03233)	27042	34.0 g/1.19 oz.	1	
11 N-75-4-3	• 542467	U15 (RG 59 B/U)	27042	34.0 g/1.19 oz.	1	
11 N-75-4-6	• 542475	U18 (G 04233 D)	27042	34.0 g/1.19 oz.	1	
11 N-75-5-2	• 542484	U23 (RG 6 A/U)	3045	54.0 g/1.89 oz.	2	
11 N-75-7-4	• 542497	U37.35 (RG216/U)	3008	48.0 g/1.68 oz.	2	

### straight plugs

- > SUHNER® full crimp
- > taper sleeves see page 423

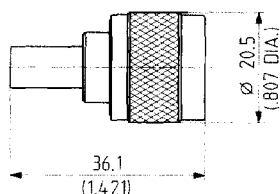


Fig. 1

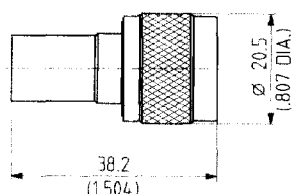
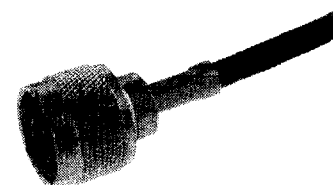


Fig. 2



SUHNER TYPE	Ident. no.	Cable group (example)	Crimp insert	Assembly instruction	Weight	Fig.	Notes
11 N-75-4-8	• 542477	U16 (RG 59 B/U)	2C	3063	30.0 g/1.05 oz.	1	
11 N-75-4-9	• 542478	U18 (G 04233 D)	2C	3063	30.0 g/1.05 oz.	1	
11 N-75-7-16	• 542511	U34 (RG 11 A/U)	2D	3061	32.0 g/1.12 oz.	2	
11 N-75-7-18	• 542512	U36 (RG 216/U)	2D	3061	32.0 g/1.12 oz.	2	

- centre contact captivated

cable groups see page 36

assembly tools see page 403

mounting holes see page 441

## right angle plugs

- > cable entry clamp
- > centre contact soldered

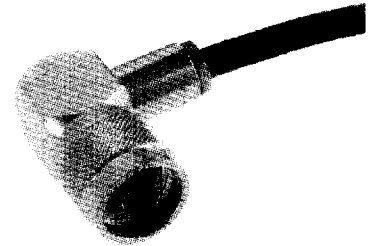
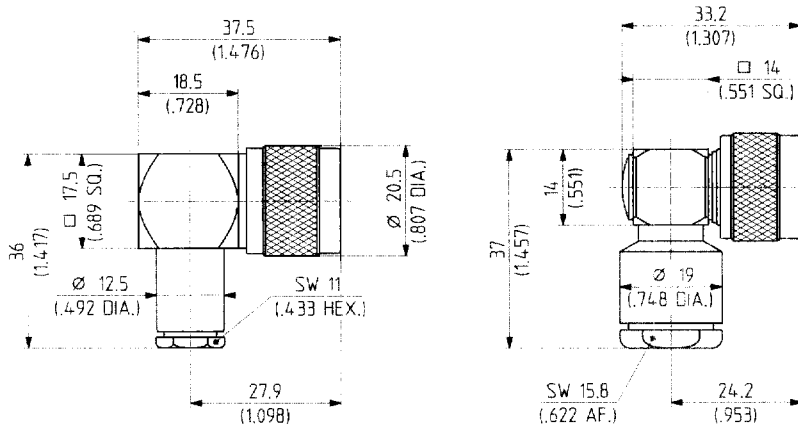


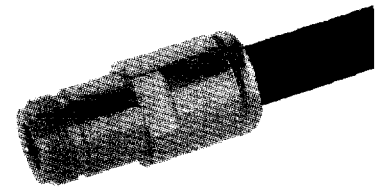
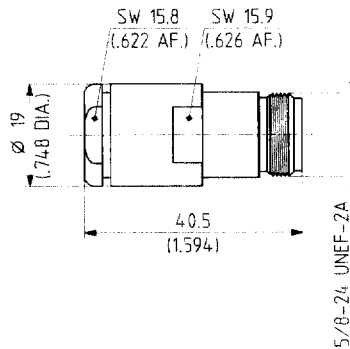
Fig. 1

Fig. 2

SUHNER TYPE	Ident. no.	Cable group (example)	Assembly instruction	Weight	Fig.	Notes
16 N-75-4-1	● 542529	U15 (RG 59 B/U)	3024	69.0 g / 2.42 oz.	1	
16 N-75-7-7	● 658933	U37,35 (RG216/U)	27229	75.0 g / 2.63 oz.	2	

## straight jacks

- > cable entry clamp
- > centre contact soldered



SUHNER TYPE	Ident. no.	Cable group (example)	Assembly instruction	Weight	Notes
21 N-75-7-8	● 640902	U37,35 (RG216/U)	3008	49.0 g / 1.72 oz.	

- centre contact captivated

- > SUHNER® full crimp
- > taper sleeves see page 423

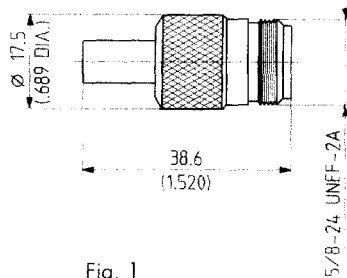


Fig. 1

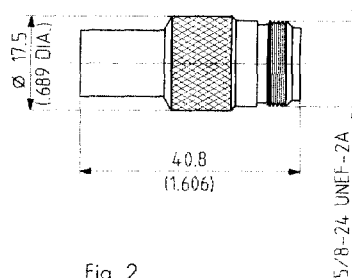
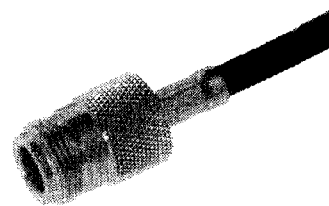


Fig. 2



SUHNER TYPE	Ident. no.	Cable group (example)	Crimp insert	Assembly instruction	Weight	Fig.	Notes
21 N-75-4-8	• 640810	U16 (RG 59 B/U)	2C	3063	34.0 g/1.19 oz.	1	
21 N-75-4-9	• 641156	U18 (G 04233 D)	2C	3063	34.0 g/1.19 oz.	1	
21 N-75-7-18	• 641220	U36 (RG 216/U)	2D	3061	35.0 g/1.23 oz.	2	

## bulkhead jacks

- > cable entry clamp
- > centre contact soldered
- > with panel seal
- > suitable for insulated mounting
- > insulating washers see page 425

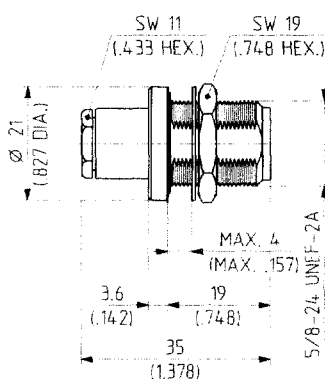


Fig. 1

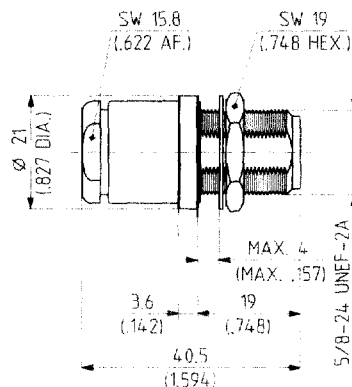
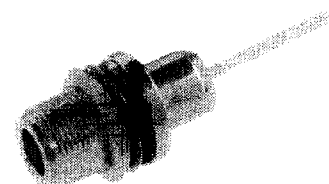


Fig. 2



SUHNER TYPE	Ident. no.	Cable group (example)	Assembly instruction	Mounting hole	Weight	Fig.	Notes
24 N-75-4-2	• 543628	U15 (RG 59 B/U)	3017	ML 12	40.0 g/1.40 oz.	1	
24 N-75-7-8	• 641060	U37,35 (RG216/U)	3008	ML 12	51.0 g/1.79 oz.	2	

- centre contact captivated

## panel jacks

- > cable entry clamp
- > centre contact soldered
- > fastening screws see page 424

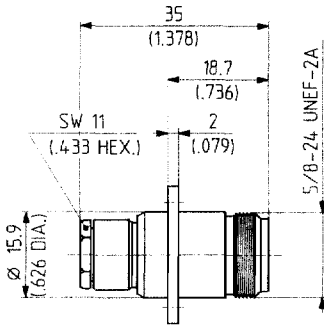
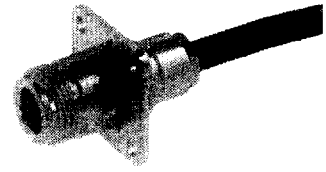


Fig. 1

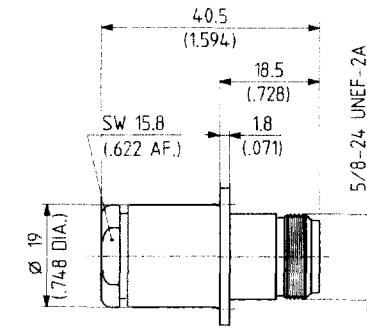
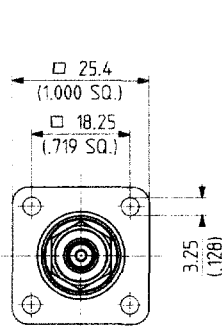
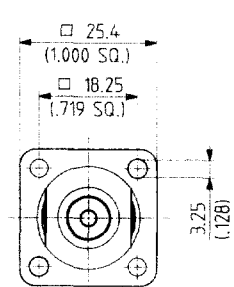


Fig. 2

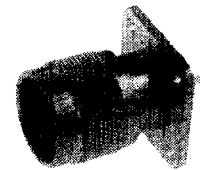
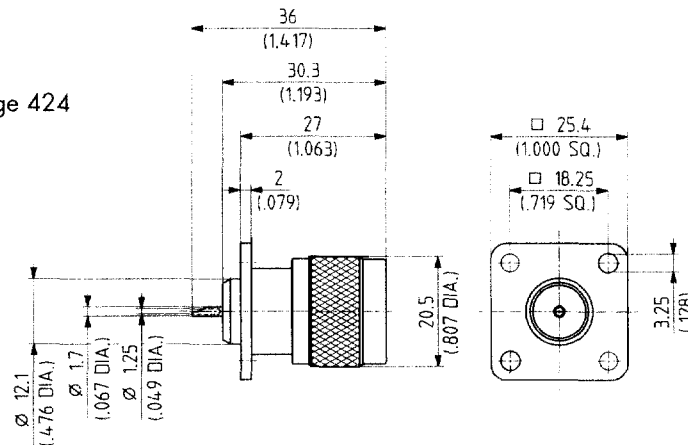


SUHNER TYPE	Ident. no.	Cable group (example)	Assembly instruction	Mounting hole	Weight	Fig.	Notes
25 N-75-4-2	• 542590	U15 (RG 59 B/U)	27042	ML 14	41.0 g / 1.44 oz.	1	
25 N-75-7-8	• 542608	U37,35 (RG216/U)	3008	ML 18	51.0 g / 1.79 oz.	2	

## Receptacles with Solder End

### receptacle, male

- > panel mounted
- > fastening screws see page 424

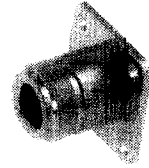
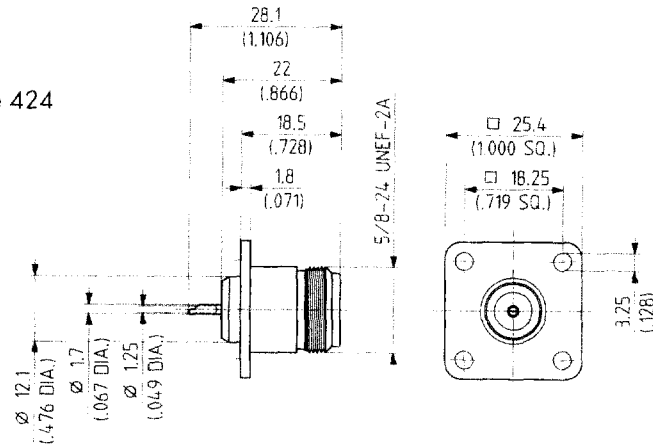


SUHNER TYPE	Ident. no.	Mounting hole	Weight	Notes
13 N-75-0-1	• 542522	ML 16	45.0 g / 1.58 oz.	

- centre contact captivated

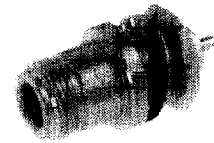
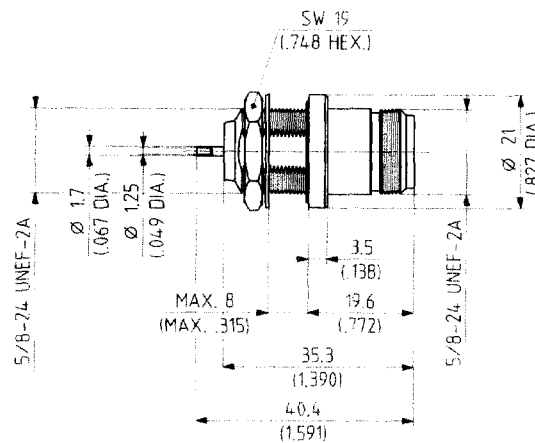
## receptacles, female

- > panel mounted
- > fastening screws see page 424



SUHNER TYPE	Ident. no.	Mounting hole	Weight	Notes
23 N-75-0-1	• 542575	ML 17	30.0 g/1.05 oz.	

- > bulkhead mounted
- > solder tags see page 426
- > with panel seal
- > suitable for insulated mounting
- > insulating washers see page 425

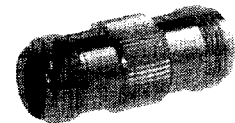
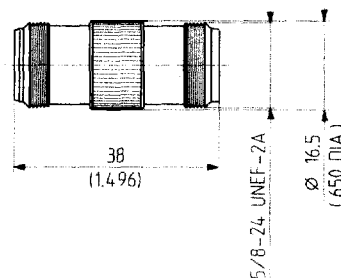


SUHNER TYPE	Ident. no.	Mounting hole	Weight	Notes
22 N-75-0-1	• 542569	ML 12	46.0 g/1.61 oz.	

## Adaptors Within-Series

### straight adaptors

- > jack to jack



SUHNER TYPE	Ident. no.	Weight	Notes
31 N-75-0-2	• 542612	49.0 g/1.72 oz.	

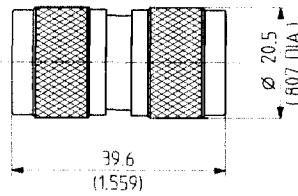
- centre contact captivated

cable groups see page 36

assembly tools see page 403

mounting holes see page 441

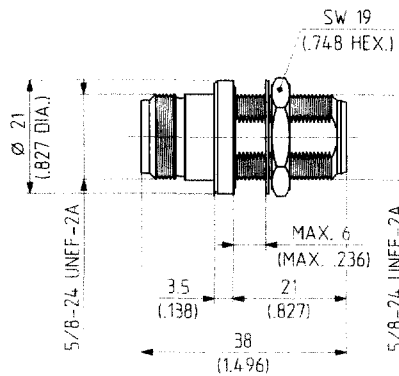
> plug to plug



SUHNER TYPE	Ident. no.	Weight	Notes
32 N-75-0-1	● 542618	54.0 g / 1.89 oz.	

### bulkhead adaptor

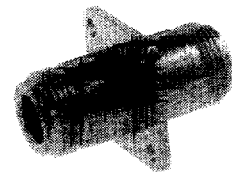
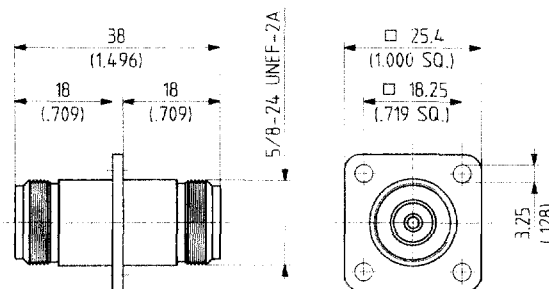
- > jack to jack
- > with panel seal
- > suitable for insulated mounting
- > insulating washers see page 425



SUHNER TYPE	Ident. no.	Mounting hole	Weight	Notes
34 N-75-0-1	● 542631	ML 12	47.0 g / 1.65 oz.	

### straight panel adaptor

- > jack to jack
- > fastening screws see page 424



SUHNER TYPE	Ident. no.	Mounting hole	Weight	Notes
37 N-75-0-1	● 542633	ML 14	49.0 g / 1.72 oz.	max. applicable panel thickness 6.5 mm / .256 in.

● centre contact captivated

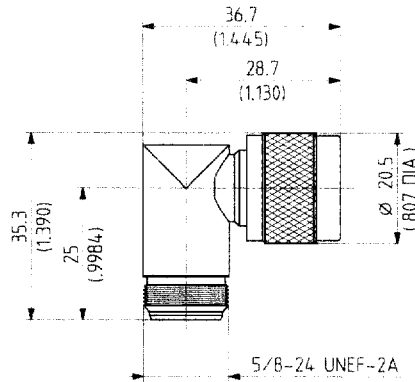
cable groups see pages 36

assembly tools see page 403

mounting holes see page 441

## right angle adaptor

> plug to jack



SUHNER TYPE	Ident. no.	Weight	Notes
53 N-75-0-4	• 651799	61.0 g/2.13 oz.	

## Protective Caps

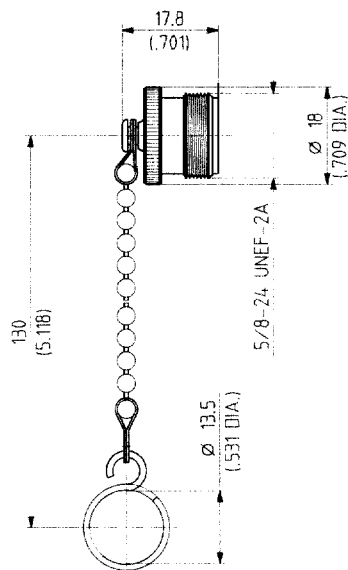


Fig. 1

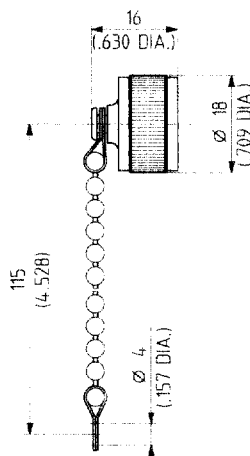


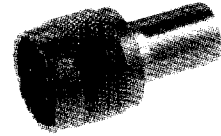
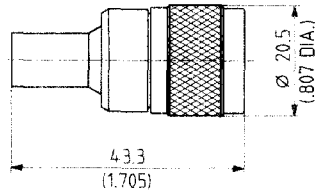
Fig. 2



SUHNER TYPE	Ident. no.	Weight	Fig.	Notes
61 N-0-0-1	542452	16.0 g/0.56 oz.	1	for plugs
62 N-0-0-1	543433	15.0 g/0.53 oz.	2	for jacks

• centre contact captivated

# Termination



SUHNER TYPE	Ident. no.	VSWR 1.3 GHz	Interface	Impedance	Weight	Notes
65 N-75-0-11	550107	≤ 1.05	plug	75 Ω ± 1 %	44.0 g / 1.54 oz.	

Permissible power: 1 W at max. 30°C / 86°F ambient temperature, derated linearly to zero watt at 130°C / 266°F ambient temperature;  
 1.5 kW pulsed power with a duration ≤ 10 ms, rise time ≥ 5 ns

- centre contact captivated