

## N Series - N5 (50 Ω) / N7 (75 Ω)



### FEATURES :

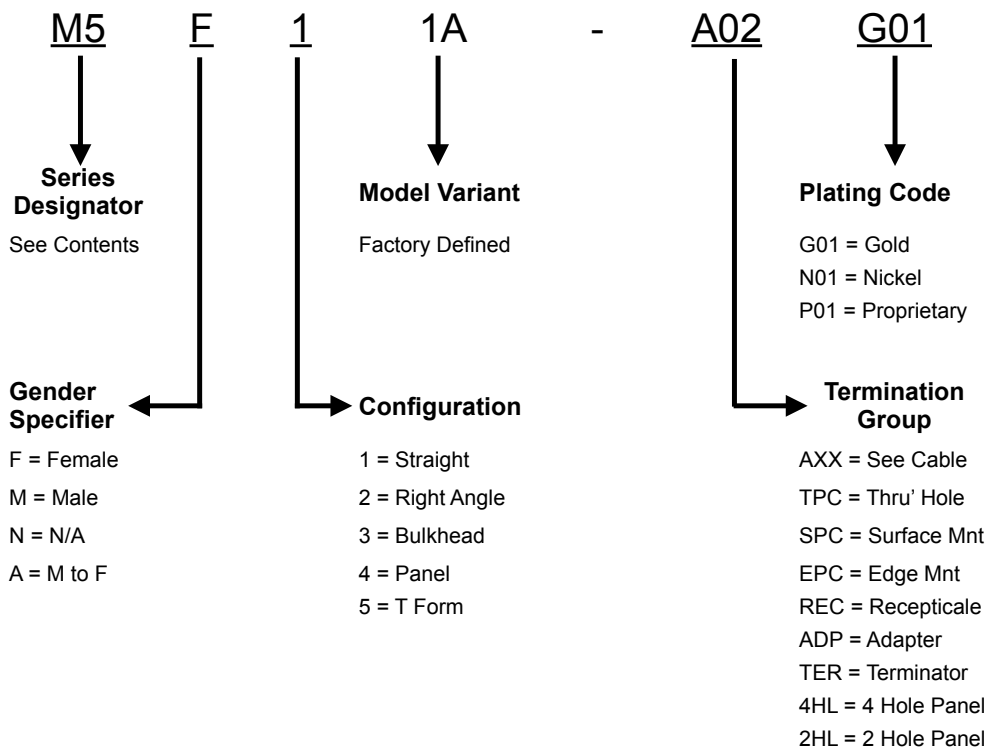
- Wide range of coaxial cable choices
- Threaded coupling ensures
- Handles more power than TNC
- Water tight to IP67 when mated
- Option for Crimp and Clamp

### APPLICATIONS :

- Telecom Base Stations
- In-Building Networks
- Instrumentation
- Telecom
- Radios & Antenna
- Cellular Antennas
- Broadcasting
- Military Radios & Radar



## PART NUMBER CONFIGURATION



## ***ELECTRICAL SPECIFICATIONS***

<u>Impedance</u>	<u>50 <math>\Omega</math> / 75 <math>\Omega</math></u>
<u>Frequency Range</u>	<u>0 – 11 GHz / 0 – 3 GHz</u>
<u>Working Voltage</u>	<u><math>\leq</math> 1500 VRM</u>
<u>Dielectric Withstanding Voltage</u>	<u>2500 VRMS</u>
<u>VSWR</u>	<u>Straight : 1.15 max</u> <u>Right Angle : 1.2 max</u>
<u>Contact Resistance</u>	<u>Center Contact : <math>\leq</math> 1 m<math>\Omega</math></u> <u>Outer Contact : <math>\leq</math> 0.2 m<math>\Omega</math></u>
<u>Insulator Resistance</u>	<u>5000 M<math>\Omega</math> min.</u>

## ***MATERIAL SPECIFICATIONS***

<u>Body and outer contacts</u>	<u>Brass, nickel or silver or Albaloy plated</u>
<u>Male contact</u>	<u>Brass, gold plated</u>
<u>Female contact</u>	<u>P. Bronze or Beryllium Copper, gold or silver plated</u>
<u>Insulator</u>	<u>PTFE</u>
<u>Crimp ferrule</u>	<u>Copper or brass, nickel or silver or Albaloy plated</u>

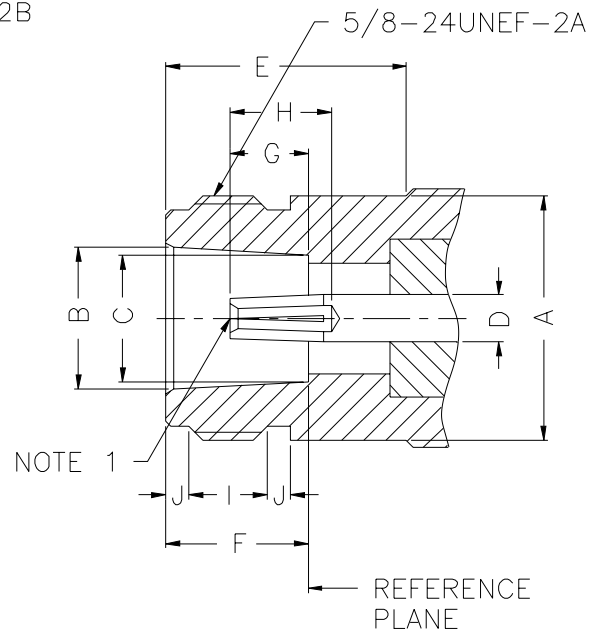
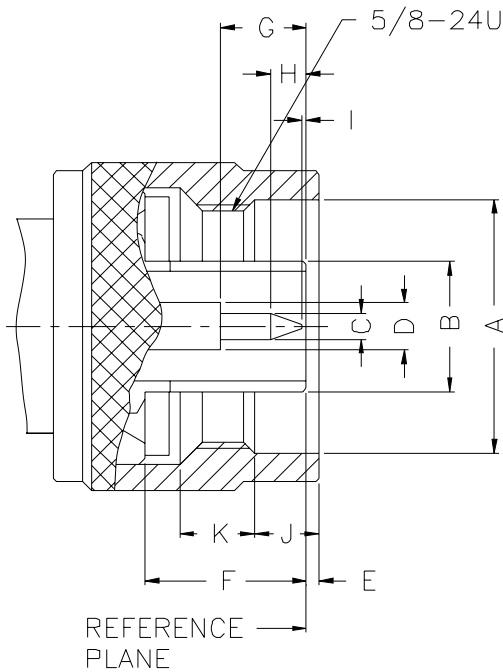
## ***MECHANICAL SPECIFICATIONS***

<u>Coupling mating torque</u>	<u>6 – 10 in-lbs</u>
<u>Cable Retention</u>	<u>60 lbs min.</u>
<u>Durability (matings)</u>	<u>500 cycles min.</u>

## ***ENVIRONMENTAL***

<u>Temperature Range</u>	<u>-65°C to +165°C</u>
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## INTERFACE MATING DIMENSIONS



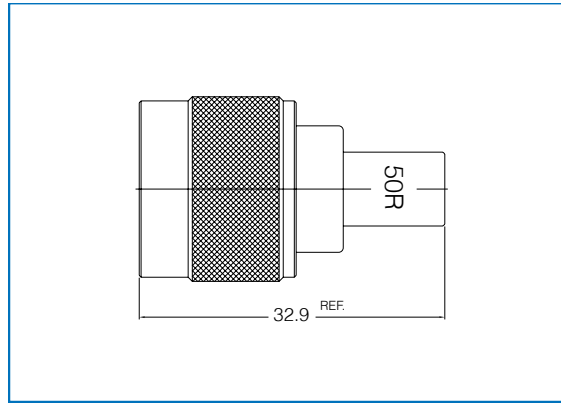
PLUG		
Letter	Millimeters	
	Minimum	Maximum
A	16.00	-
B	-	8.38
C	1.60	1.68
D	3.00	3.15
E	0.41	1.52
F	10.11	10.46
G	5.33	5.84
H	3.30	4.32
I	0.08	-
J	4.01	4.27
K	4.50	5.00

JACK		
Letter	Millimeters	
	Minimum	Maximum
A	-	15.93
B	8.53	8.74
C	8.03	8.13
D	3.00	3.15
E	10.72	-
F	9.04	9.19
G	4.75	5.26
H	5.33	-
I	4.37	5.13
J	1.19	1.96

**Note 1** : I.D. to meet VSWR and contact resistance when mated with 1.6/1.68 mm dia. pin.

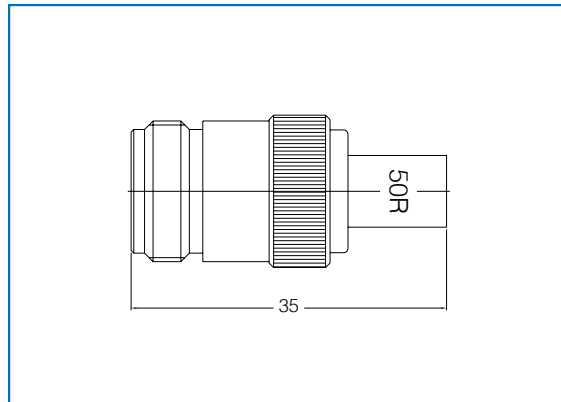
**Terminator Plug**  
**1 Watt**

N5M11A-TERN01



**Terminator Jack**  
**1 Watt**

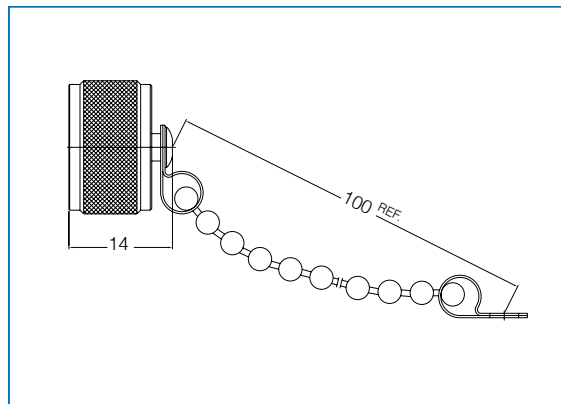
N5F11A-TERN01



**Male Cap with Chain**

N5M12A-TERN01

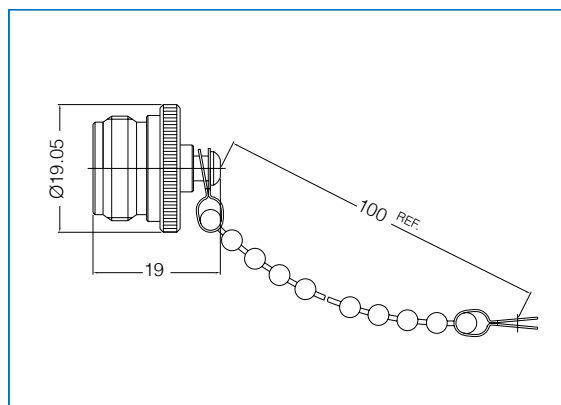
\* Chain Length : 100mm



**Female Cap with Chain**

N5F12A-TERN01

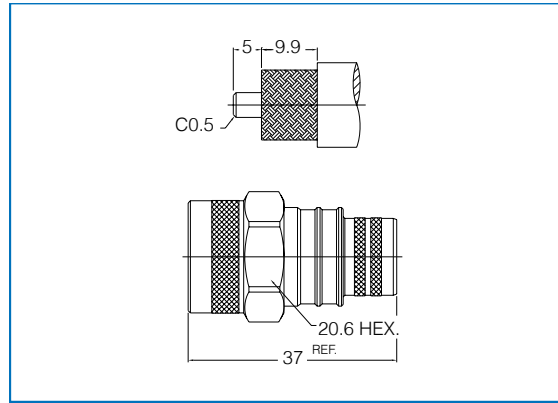
\* Chain Length : 100mm



## Straight Plug, Crimp

N5M12A-AXXN01

Cable group : [24](#)



Cable Groups

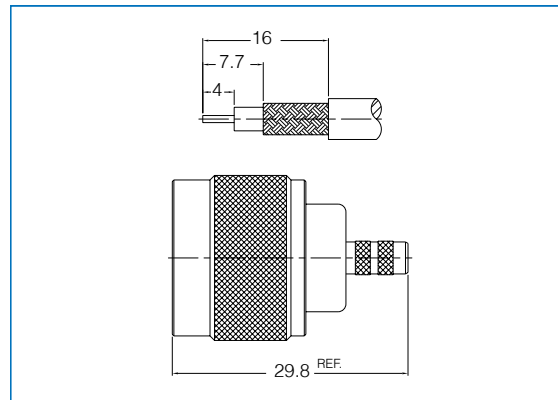
## Straight Plug, Crimp

NYM11A-AXXN01

Cable group : [06](#), [07](#), [08](#), [09](#), [10](#), [11](#), [12](#),  
[13](#), [14](#), [15](#), [16](#), [17](#), [18](#)

Impedance  $Y = 5 = 50 \text{ Ohm}$

$Y = 7 = 75 \text{ Ohm}$

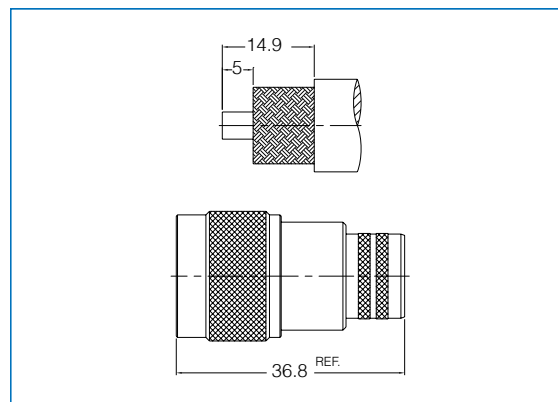


A01 - 500 - RG-178, 198  
A02 - 500 - RG-174, 188A, 316, LMR100  
A03 - 750 - RG-179, 187  
A04 - 500 - RD-316U  
A05 - 750 - RD-179U  
A06 - 500 - RG-58, 58A, 58C, 141, LMR195  
A07 - 500 - RG-55, 142, 223, 400  
A08 - 500 - LMR200  
A09 - 500 - RG-59U Plenum  
A10 - 750 - RG-59, 62  
A11 - 750 - Belden 1505A  
A12 - 750 - Belden 8281  
A13 - 750 - RG-59U Quad Shield  
A14 - 750 - RG-59U Plenum

## Straight Plug, Crimp

N5M12B-AXXN01

Cable group : [24](#)



A15 - 750 - RG-6  
A16 - 500 - 8X, LMR240  
A17 - 500 - LMR400, Belden 9913  
A18 - 500 - RG-8, 8A, 9, 213, 214  
A19 - 750 - RG6U, Quad  
A20 - 750 - RG-11  
A21 - 750 - Belden 1694A  
A22 - 750 - AT&T 734A  
A23 - 750 - AT&T 735A  
A24 - 500 - LMR600  
A25 - 750 - Belden 1696A  
A26 - 750 - Belden 8218  
A27 - 750 - BT-3002  
A28 - 500 - 0885, 0885R, RG-405U

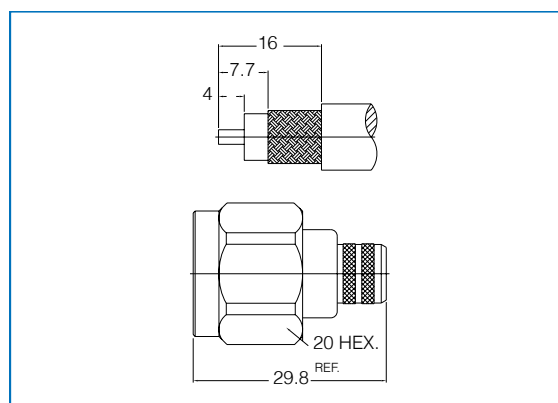
## Straight Plug, Crimp

NYM11B-AXXN01

Cable group : [06](#), [07](#), [08](#), [09](#), [10](#), [11](#), [12](#),  
[13](#), [14](#), [15](#), [16](#), [17](#), [18](#)

Impedance  $Y = 5 = 50 \text{ Ohm}$

$Y = 7 = 75 \text{ Ohm}$

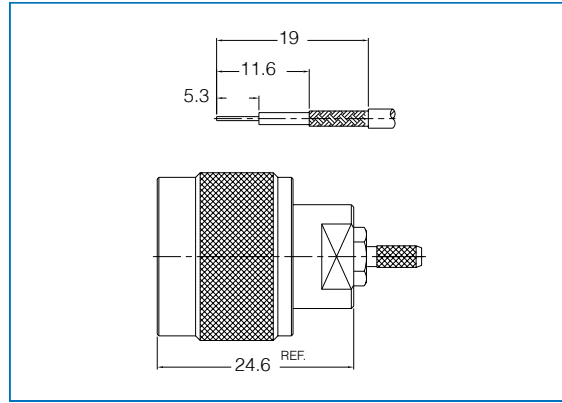


A29 - 500 - 141SR, RG-402U  
A30 - 500 - 1.13mm OD micro  
A31 - 500 - 1.32mm OD micro  
A32 - 500 - 1.37mm OD micro  
A33 - 500 - 047SR cable  
A34 - 750 - FLEX 2  
A35 - 750 - FLEX 3  
A37 - 750 - FLEX 5  
A38 - 500 - 30-2V  
A39 - 500 - 5D-2V  
A40 - 500 - 8D-2V  
A41 - 500 - 5D-FB, LMR300  
A42 - 500 - 1/4" Superflex  
A43 - 500 - 1/2" Superflex

**Straight Plug, Crimp**

N5M13B-AXXN01

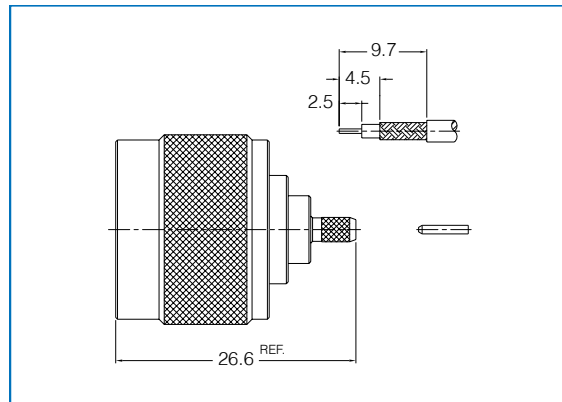
Cable group : 02, 04



**Straight Plug, Crimp-Pin in Pin**

N5M14A-AXXN01

Cable group : 02, 04



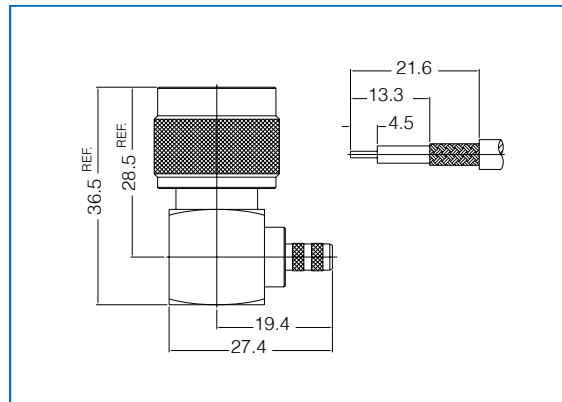
**Right Angle Plug, Crimp**

NYM21A-AXXN01

Cable group : 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16

Impedance  $Y = 5 = 50 \text{ Ohm}$

$Y = 7 = 75 \text{ Ohm}$



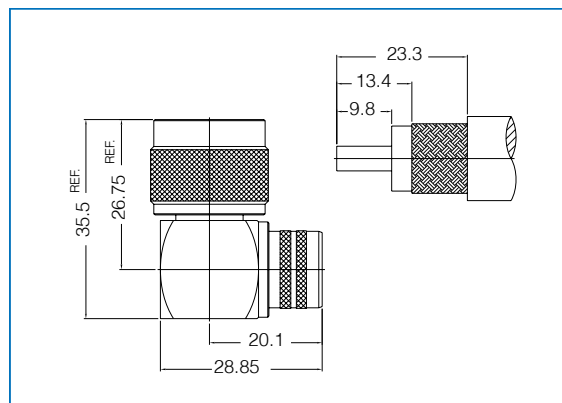
**Right Angle Plug, Crimp**

NYM21B-AXXN01

Cable group : 17, 18, 20, 24

Impedance  $Y = 5 = 50 \text{ Ohm}$

$Y = 7 = 75 \text{ Ohm}$





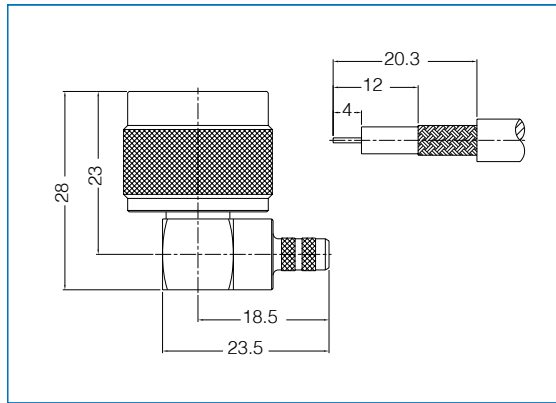
## Right Angle Plug, Crimp

**NYM21C-AXXN01**

Cable group : [06, 07, 08, 09, 10, 11, 12, 16](#)

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm



Cable Groups

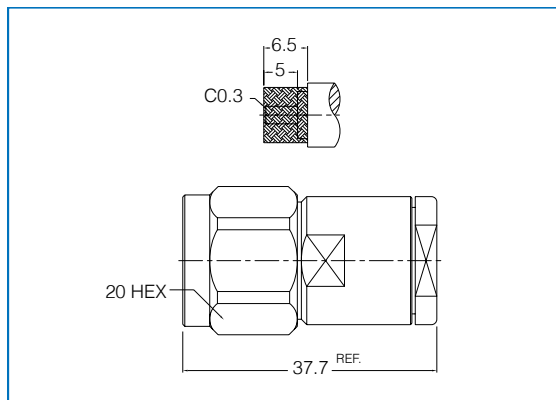
## Straight Plug, Clamp

**NYM15A-AXXN01**

Cable group : [17, 18, 20](#)

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm



A01 - 500 - RG-178, 196  
 A02 - 500 - RG-174, 188A, 316, LMR100  
 A03 - 750 - RG-179, 187  
 A04 - 500 - RD-316U  
 A05 - 750 - RD-179U  
 A06 - 500 - RG-58, 58A, 58C, 141, LMR195  
 A07 - 500 - RG-55, 142, 223, 400  
 A08 - 500 - LMR200  
 A09 - 500 - RG-59U Plenum  
 A10 - 750 - RG-59, 62  
 A11 - 750 - Belden 1505A  
 A12 - 750 - Belden 8281  
 A13 - 750 - RG-59U Quad Shield  
 A14 - 750 - RG-59U Plenum

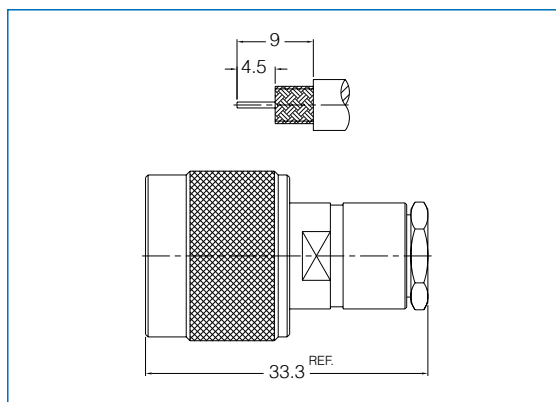
## Straight Plug, Clamp

**NYM15B-AXXN01**

Cable group : [06, 07, 08, 09, 10, 12](#)

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm



A15 - 750 - RG-6  
 A16 - 500 - 8X, LMR240  
 A17 - 500 - LMR400, Belden 9913  
 A18 - 500 - RG-8, 8A, 9, 213, 214  
 A19 - 750 - RG6U Quad  
 A20 - 750 - RG-11  
 A21 - 750 - Belden 1694A  
 A22 - 750 - AT&T 734A  
 A23 - 750 - AT&T 735A  
 A24 - 500 - LMR600  
 A25 - 750 - Belden 1696A  
 A26 - 750 - Belden 8218  
 A27 - 750 - BT-3002  
 A28 - 500 - 0885, 0885R, RG-405U

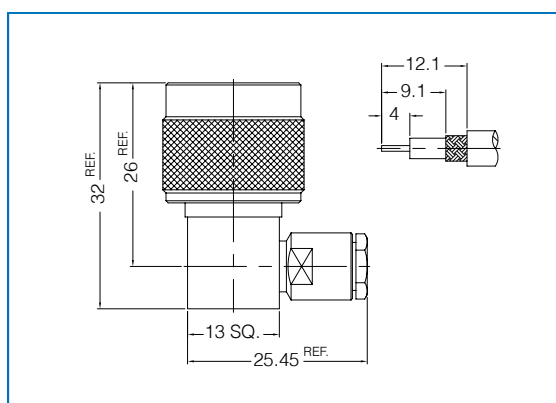
## Right Angle Plug, Clamp

**NYM22A-AXXN01**

Cable group : [06, 07, 08, 09, 10, 12](#)

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm

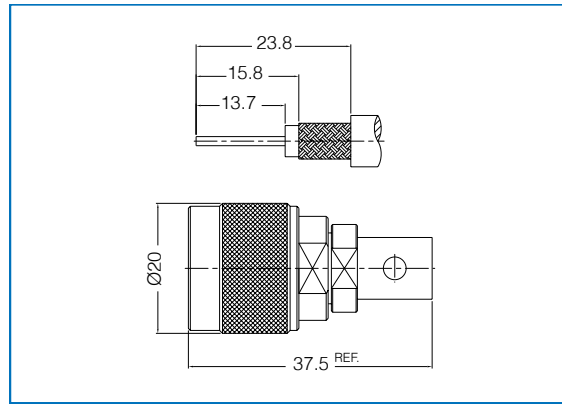


A29 - 500 - 141SR, RG-402U  
 A30 - 500 - 1.13mm OD micro  
 A31 - 500 - 1.32mm OD micro  
 A32 - 500 - 1.37mm OD micro  
 A33 - 500 - 047SR cable  
 A34 - 750 - FLEX 2  
 A35 - 750 - FLEX 3  
 A37 - 750 - FLEX 5  
 A38 - 500 - 30-2V  
 A39 - 500 - 5D-2V  
 A40 - 500 - 8D-2V  
 A41 - 500 - 5D-FB, LMR300  
 A42 - 500 - 1/4" Superflex  
 A43 - 500 - 1/2" Superflex

**Straight Plug, Solder**

N5M16A-AXXN01

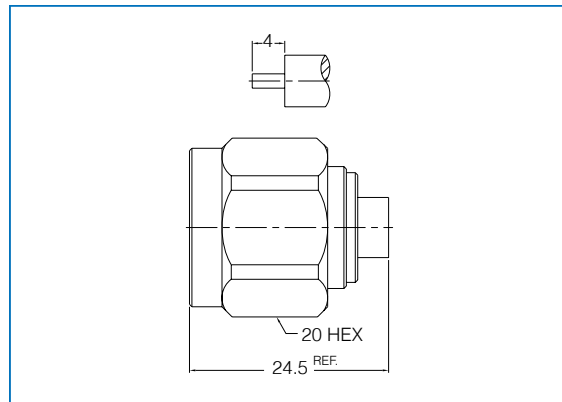
Cable group : 38, 39, 40



**Straight Plug, Solder**

N5M17A-AXXN01

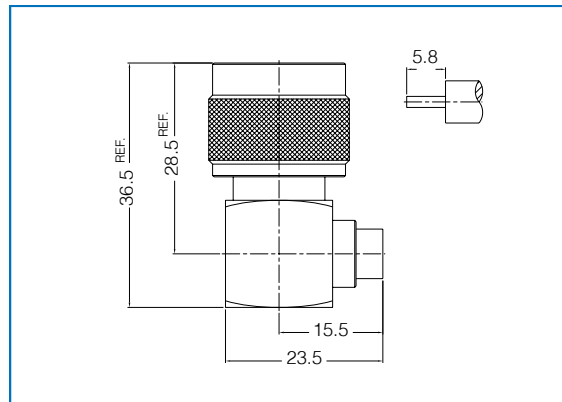
Cable group : 28, 29



**Right Angle Plug, Solder**

N5M27A-AXXN01

Cable group : 28, 29



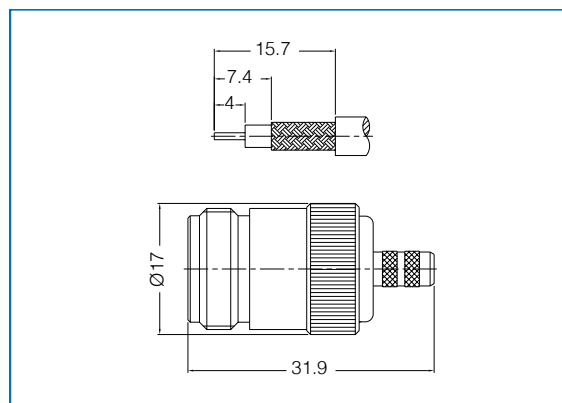
**Straight Jack, Crimp**

NYM11A-AXXN01

Cable group : 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm



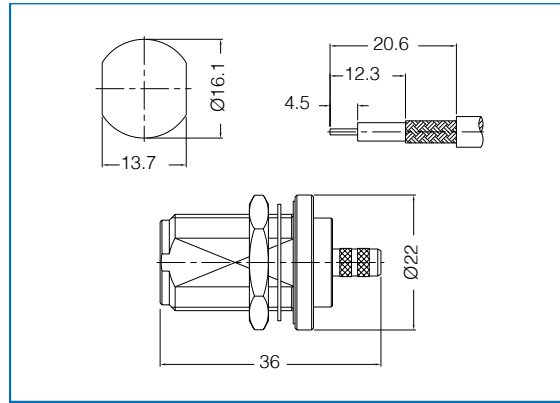
### Bulkhead Jack, Crimp

NYF31A-AXXN01

Cable group : [06](#), [07](#), [08](#), [09](#), [10](#), [11](#), [12](#),  
[13](#), [14](#), [15](#), [16](#), [17](#), [18](#)

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm



Cable Groups

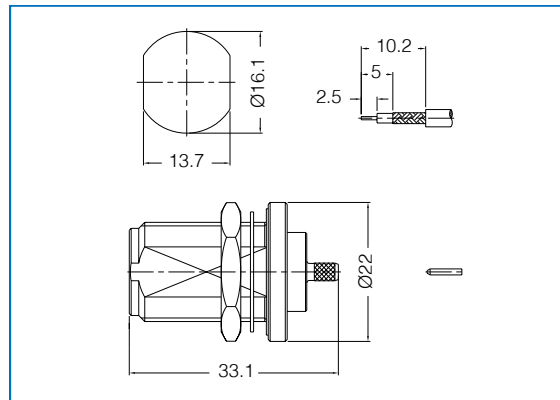
### Bulkhead Jack, Crimp-Pin in Pin

NYF32A-AXXN01

Cable group : [01](#), [02](#), [03](#), [04](#), [05](#)

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm



A01 - 500 - RG-178, 198  
A02 - 500 - RG-174, 188A, 316, LMR100  
A03 - 750 - RG-179, 187  
A04 - 500 - RD-316U  
A05 - 750 - RD-179U  
A06 - 500 - RG-58, 58A, 58C, 141, LMR195  
A07 - 500 - RG-55, 142, 223, 400  
A08 - 500 - LMR200  
A09 - 500 - RG-59U Plenum  
A10 - 750 - RG-59, 62  
A11 - 750 - Belden 1505A  
A12 - 750 - Belden 8281  
A13 - 750 - RG-59U Quad Shield  
A14 - 750 - RG-59U Plenum

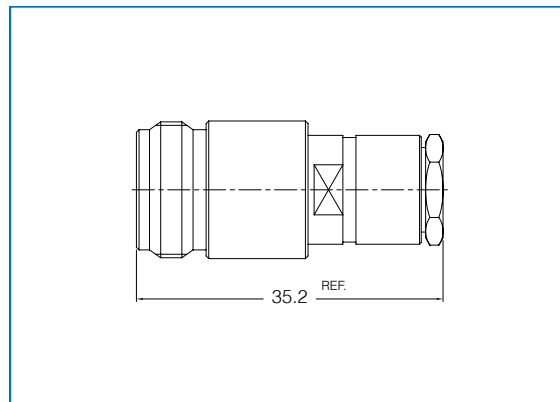
### Straight Jack, Clamp

NYF12A-AXXN01

Cable group : [06](#), [07](#), [10](#), [12](#)

Impedance Y = 5 = 50 Ohm

Y = 7 = 75 Ohm

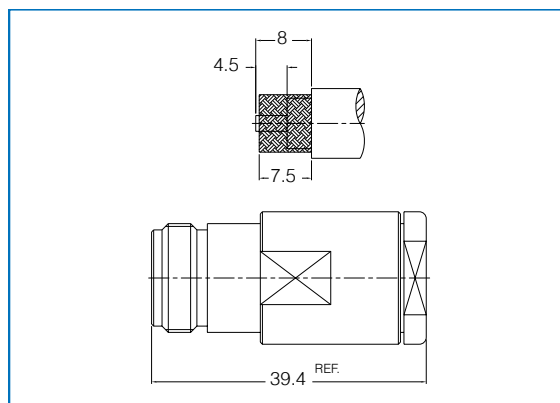


A15 - 750 - RG-6  
A16 - 500 - 8X, LMR240  
A17 - 500 - LMR400, Belden 9913  
A18 - 500 - RG-8, 8A, 9, 213, 214  
A19 - 750 - RG6U, Quad  
A20 - 750 - RG-11  
A21 - 750 - Belden 1694A  
A22 - 750 - AT&T 734A  
A23 - 750 - AT&T 735A  
A24 - 500 - LMR600  
A25 - 750 - Belden 1695A  
A26 - 750 - Belden 8218  
A27 - 750 - BT-3002  
A28 - 500 - 0885, 0885R, RG-405U

### Straight Jack, Clamp

N5F13A-AXXN01

Cable group : [17](#), [18](#), [20](#)

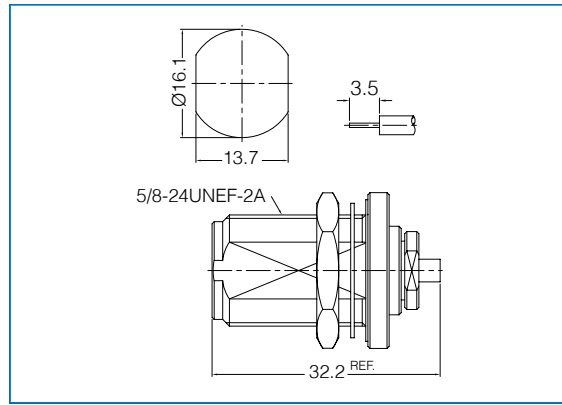


A29 - 500 - 141SR, RG-402U  
A30 - 500 - 1.13mm OD micro  
A31 - 500 - 1.32mm OD micro  
A32 - 500 - 1.37mm OD micro  
A33 - 500 - 047SR cable  
A34 - 750 - FLEX 2  
A35 - 750 - FLEX 3  
A37 - 750 - FLEX 5  
A38 - 500 - 30-2V  
A39 - 500 - 5D-2V  
A40 - 500 - 8D-2V  
A41 - 500 - 5D-FB, LMR300  
A42 - 500 - 1/4" Superflex  
A43 - 500 - 1/2" Superflex

**Bulkhead Jack, Solder**

**N5F31B-AXXN01**

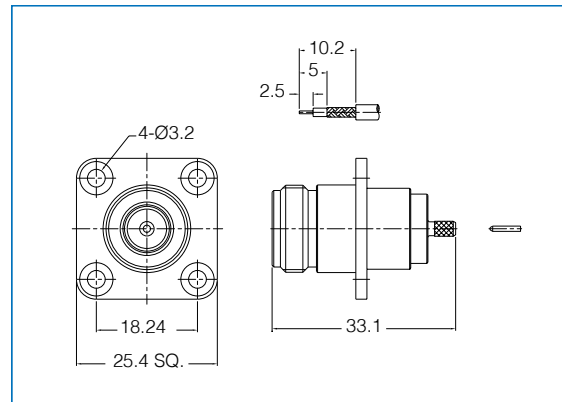
**Cable group : 28, 29**



**Panel Jack, Crimp-Pin in Pin**

**NYF41A-AXXN01**

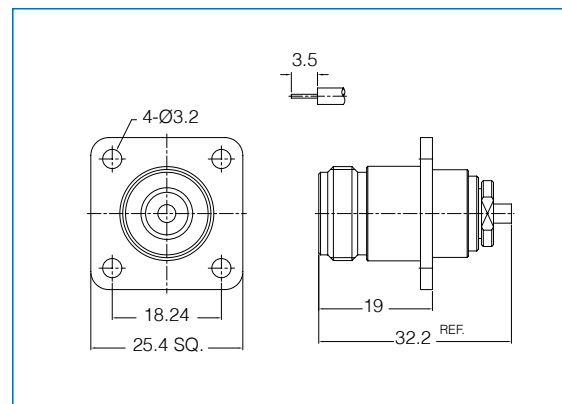
**Cable group : 01, 02, 03, 04, 05**



**Panel Jack, Solder**

**N5F42A-AXXN01**

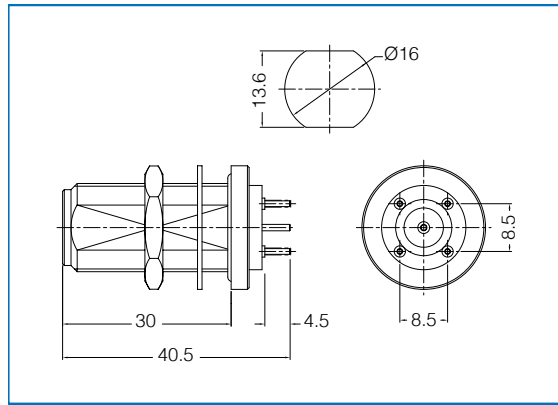
**Cable group : 28, 29**



## Straight Bulkhead PCB Jack

N5F31A-TPCN01

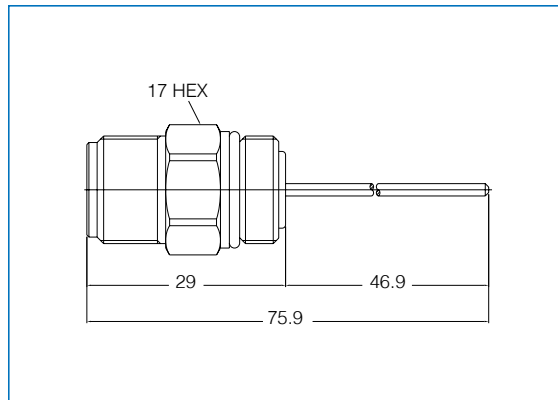
\* Mounting hole : "Y"



### Cable Groups

## Receptacle Jack

N5F11A-RECN01

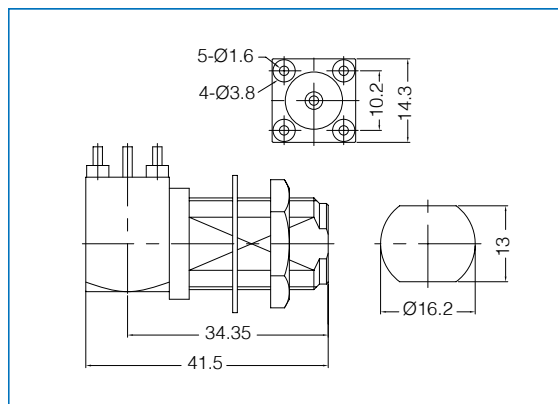


A01 - 50Ω - RG-178, 196  
 A02 - 50Ω - RG-174, 188A, 316, LMR100  
 A03 - 75Ω - RG-179, 187  
 A04 - 50Ω - RD-316U  
 A05 - 75Ω - RD-179U  
 A06 - 50Ω - RG-58, 58A, 58C, 141, LMR195  
 A07 - 50Ω - RG-55, 142, 223, 400  
 A08 - 50Ω - LMR200  
 A09 - 50Ω - RG-59U Plenum  
 A10 - 75Ω - RG-59, 62  
 A11 - 75Ω - Belden 1505A  
 A12 - 75Ω - Belden 8281  
 A13 - 75Ω - RG-59U Quad Shield  
 A14 - 75Ω - RG-59U Plenum

## Right Angle Bulkhead PCB Jack

N5F21A-TPCN01

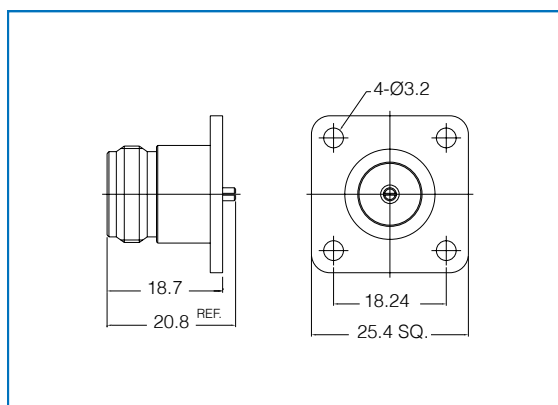
\* Mounting hole : "J"



A15 - 75Ω - RG-6  
 A16 - 50Ω - 8X, LMR240  
 A17 - 50Ω - LMR400, Belden 9913  
 A18 - 50Ω - RG-8, 8A, 9, 213, 214  
 A19 - 75Ω - RG8U Quad  
 A20 - 75Ω - RG-11  
 A21 - 75Ω - Belden 1694A  
 A22 - 75Ω - AT&T 734A  
 A23 - 75Ω - AT&T 735A  
 A24 - 50Ω - LMR600  
 A25 - 75Ω - Belden 1695A  
 A26 - 75Ω - Belden 8218  
 A27 - 75Ω - BT-3002  
 A28 - 50Ω - 0885, 0885RF, RG-405U

## Panel Receptacle Jack

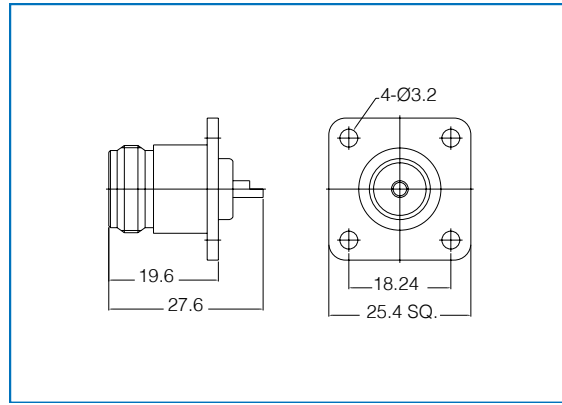
N5F41A-4HNL01



A29 - 50Ω - 141SR, RG-402U  
 A30 - 50Ω - 1.13mm OD micro  
 A31 - 50Ω - 1.32mm OD micro  
 A32 - 50Ω - 1.37mm OD micro  
 A33 - 50Ω - 047SR cable  
 A34 - 75Ω - FLEX 2  
 A35 - 75Ω - FLEX 3  
 A37 - 75Ω - FLEX 5  
 A38 - 50Ω - 30-2V  
 A39 - 50Ω - 5D-2V  
 A40 - 50Ω - 8D-2V  
 A41 - 50Ω - 5D-FB, LMR300  
 A42 - 50Ω - 1/4" Superflex  
 A43 - 50Ω - 1/2" Superflex

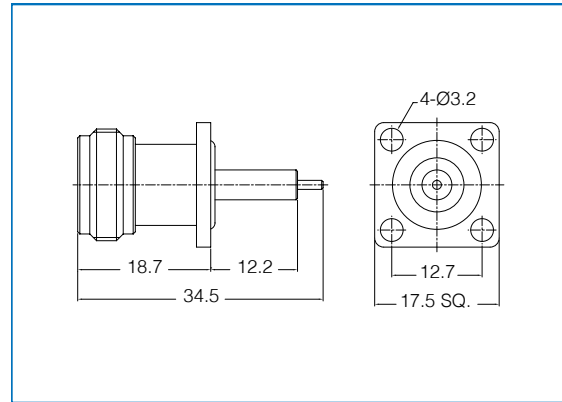
**Panel Receptacle Jack**

N5F41B-4HLN01



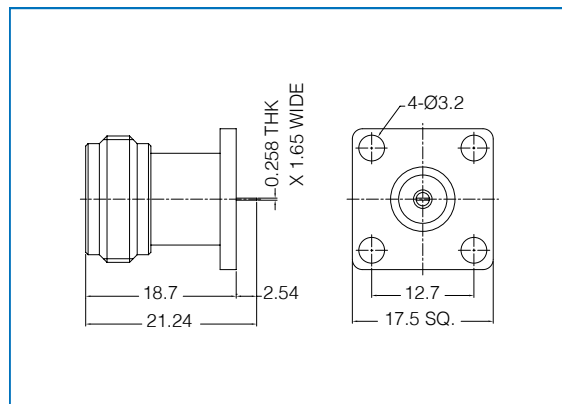
**Panel Receptacle Jack**

N5F42A-4HLN01



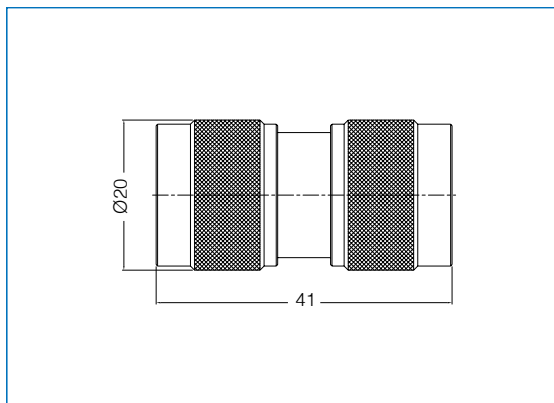
**Panel Receptacle Jack**

N5F42B-4HLN01



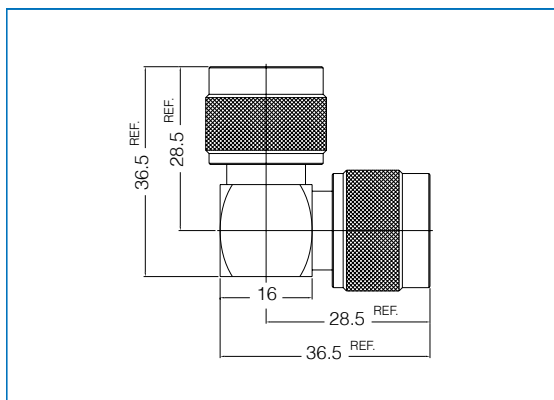
**Adapter, Plug to Plug**

N5M11A-ADPN01



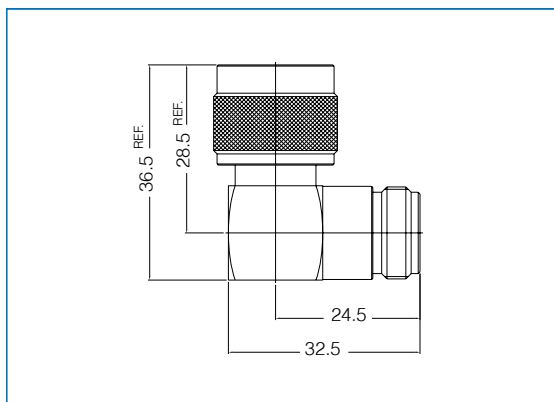
**Right Angle Adapter, Plug to Plug**

N5M21A-ADPN01



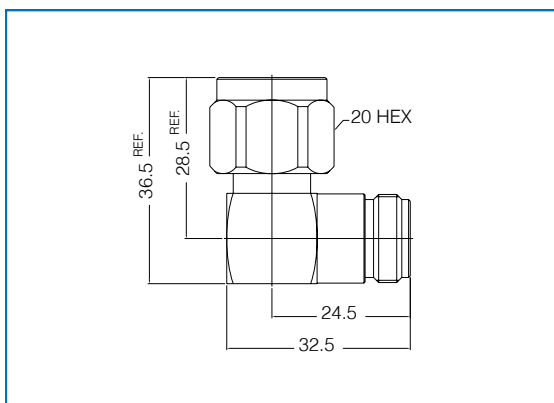
**Right Angle Adapter, Plug to Jack**

N5A21A-ADPN01



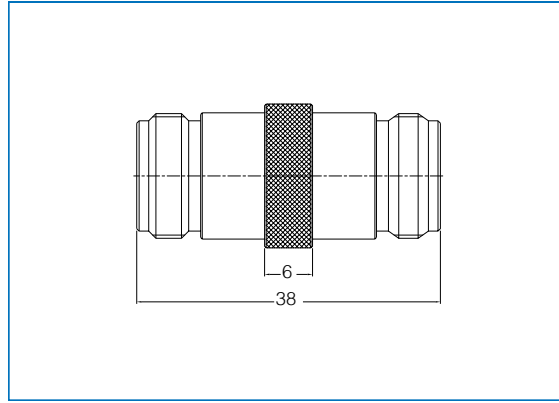
**Right Angle Adapter, Plug to Jack**

N5A22A-ADPN01



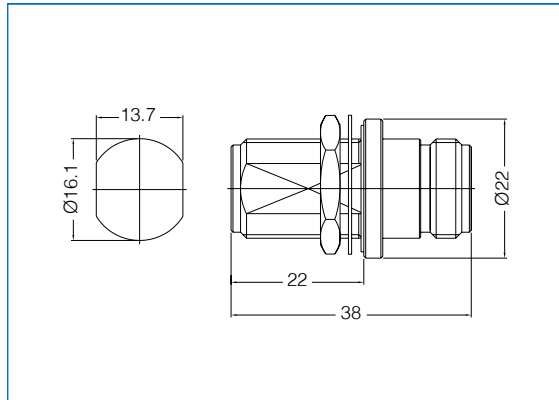
**Adapter, Jack to Jack**

N5F11A-ADPN01



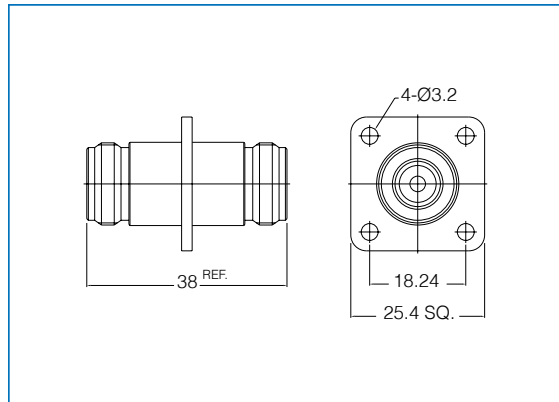
**Bulkhead Adapter, Jack to Jack**

N5F31A-ADPN01



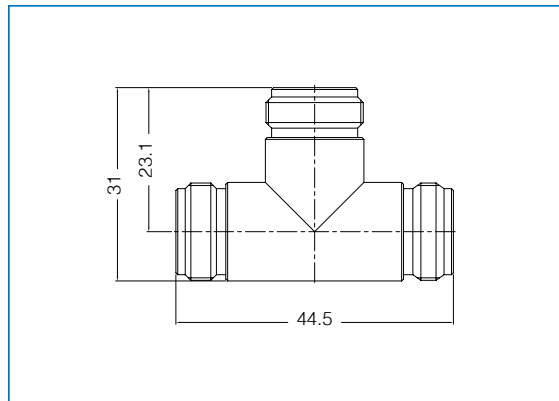
**Panel Adapter, Jack to Jack**

N5F41A-ADPN01



**“T” Adapter, Jack-Jack-Jack**

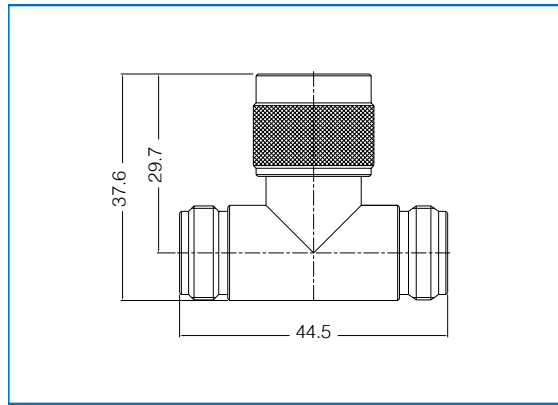
N5F51A-ADPN01





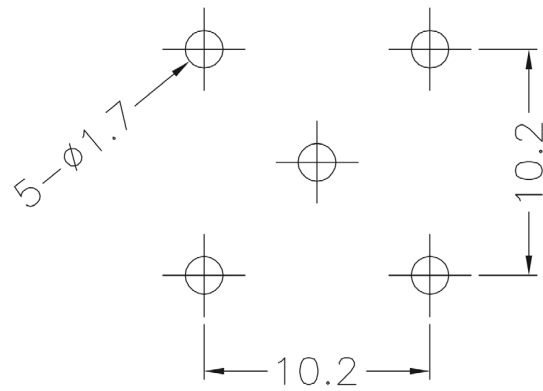
# "T" Adapter, Jack-Plug-Jack

N5A51A-ADPN01

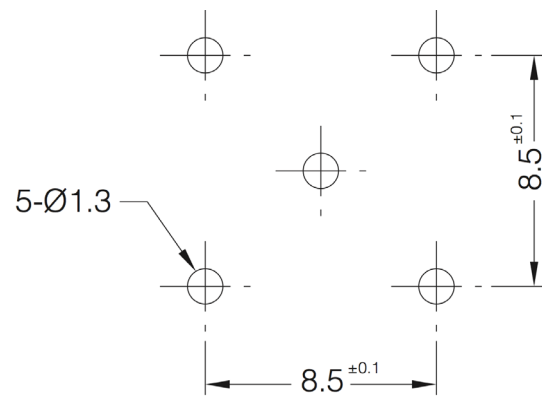


## PCB Layouts

### Layout-J



### Layout-Y

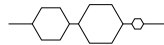




## Application Chart of Crimping Dies

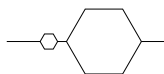


### Die Set No. 1317



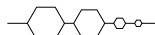
**Hex Sizes :** .213 / .255 / .068  
**Ferrule O.D. :** 7.5mm / 6.5mm  
**Contact O.D. :** 2.1mm  
**Cable Group :** RG-58, 59, 62, 223, LMR-195, LMR-200, LMR-240  
**For :** BNC, TNC, N, Mini-UHF

### Die Set No. 1319



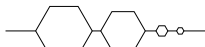
**Hex Sizes :** .10 / .429  
**Ferrule O.D. :** 12.4mm  
**Contact O.D. :** 3.0mm  
**Cable Group :** RG-8, 11, 213, 214  
**For :** N

### Die Set No. 1346



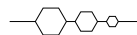
**FHex Sizes :** .213 / .178 / .068 / .042  
**ferrule O.D. :** 6.5mm / 5.3mm  
**Contact O.D. :** 2.1mm / 1.35mm  
**Cable Group :** RG-58, 174, Belden-1855A, Belden-8218, AT&T 735A, BT-3002  
**For :** BNC, True 75Ω BNC, TNC, N, SMA

### Die Set No. 1347



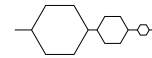
**Hex Sizes :** .324 / .255 / .068 / .042  
**Ferrule O.D. :** 9.5mm / 7.5mm  
**Contact O.D. :** 2.1mm / 1.35mm  
**Cable Group :** RG-6, 59, Belden-8241, Belden-8281, AT&T 734A, LMR-240  
**For :** BNC, True 75Ω BNC, TNC, N, SMA

### Die Set No. 1351



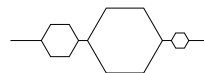
**Hex Sizes :** .178 / .128 / .068  
**Ferrule O.D. :** 5.3mm / 3.9mm  
**Contact O.D. :** 2.1mm  
**Cable Group :** RG-174, 188, 196, 316, 179, LMR-100  
**For :** BNC, TNC, SMA, SMB, SMC, MCX, MMCX

### Die Set No. 1352



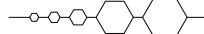
**Hex Sizes :** .324 / .178 / .068  
**Ferrule O.D. :** 9.5mm / 5.3mm  
**Contact O.D. :** 2.1mm  
**Cable Group :** RG-174, 179, 316, LMR-100, Belden-8281, RG-6, LMR-300  
**For :** BNC, TNC, N, SMA, SMB, SMC

### Die Set No. 1353



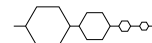
**Hex Sizes :** .213 / .429 / .10  
**Ferrule O.D. :** 6.5mm / 12.4mm  
**Contact O.D. :** 3.0mm  
**Cable Group :** RG-58, 8, 223, LMR-195, LMR-200  
**For :** N

### Die Set No. 1355



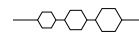
**Hex Sizes :** .052 / .068 / .10 / .213 / .255  
**Ferrule O.D. :** 7.5mm / 6.5mm  
**Contact O.D. :** 3.0mm / 2.1mm / 1.5mm  
**Cable Group :** RG-58, 59, 62, 223, LMR-195  
**For :** BNC, TNC, SMA, SMB, SMC, Mini-UHF, N

### Die Set No. 1376



**Hex Sizes :** .255 / .178 / .068 / .052  
**Ferrule O.D. :** 7.5mm / 5.3mm  
**Contact O.D. :** 2.1mm / 1.5mm  
**Cable Group :** RG-59, 62, 223, 174, 179, 316, LMR-100  
**For :** BNC, TNC, N, SMA, SMB, SMC

### Die Set No. 1377



**Hex Sizes :** .105 / .128 / .151  
**Ferrule O.D. :** 4.4mm / 3.9mm  
**Contact O.D. :** 3.0mm  
**Cable Group :** RG-178, 316, 179, RD-179, RD-316, LMR-100  
**For :** SMA, SMB, SMC, MCX, MMCX

### Die Set No. 1380



**Hex Sizes :** .429 / .118  
**Ferrule O.D. :** 12.4mm  
**Contact O.D. :** 3.5mm  
**Cable Group :** Belden-9913, LMR-400  
**For :** BNC, TNC, N

Reflection → Conversion Table

VSWR	Rf	RL (dB)
1.010	0.005	46.06
1.020	0.0099	40.09
1.030	0.0148	36.61
1.040	0.0196	34.15
1.050	0.0244	32.26
1.060	0.0291	30.71
1.070	0.0338	29.42
1.080	0.0385	28.30
1.090	0.0431	27.32
1.100	0.0476	26.44
1.110	0.0521	25.66
1.120	0.0566	24.94
1.130	0.061	24.29
1.140	0.0654	23.69
1.150	0.0698	23.13
1.160	0.0741	22.61
1.170	0.0783	22.12
1.180	0.0826	21.66
1.190	0.0868	21.23
1.200	0.0909	20.83
1.210	0.095	20.44
1.220	0.0991	20.08
1.230	0.1031	19.73
1.240	0.1071	19.40
1.250	0.1111	19.08
1.260	0.115	18.78
1.270	0.1189	18.49
1.280	0.1228	18.22
1.290	0.1266	17.95
1.300	0.1304	17.69
1.310	0.1342	17.45
1.320	0.1379	17.21
1.330	0.1416	16.98
1.340	0.1453	16.75
1.350	0.1489	16.54
1.360	0.1525	16.33
1.370	0.1561	16.13
1.380	0.1597	15.94
1.390	0.1632	15.75

RL (dB)	Rf	VSWR
50.00	0.0032	1.006
49.00	0.0035	1.007
48.00	0.004	1.008
47.00	0.0045	1.009
46.00	0.005	1.010
45.00	0.0056	1.011
44.00	0.0063	1.013
43.00	0.0071	1.014
42.00	0.0079	1.016
41.00	0.0089	1.018
40.00	0.01	1.020
39.00	0.0112	1.023
38.00	0.0126	1.025
37.00	0.0141	1.029
36.00	0.0158	1.032
35.00	0.0178	1.036
34.00	0.02	1.041
33.00	0.0224	1.046
32.00	0.0251	1.052
31.00	0.0282	1.058
30.00	0.0316	1.065
29.00	0.0355	1.074
28.00	0.0398	1.083
27.00	0.0447	1.094
26.00	0.0501	1.106
25.00	0.0562	1.119
24.00	0.0631	1.135
23.00	0.0708	1.152
22.00	0.0794	1.173
21.00	0.0891	1.196
20.00	0.1	1.222
19.00	0.1122	1.253
18.00	0.1259	1.288
17.00	0.1413	1.329
16.00	0.1585	1.377
15.00	0.1778	1.433
14.00	0.1995	1.499
13.00	0.2239	1.577
12.00	0.2512	1.671

Rf	RL (dB)	VSWR
0.005	46.02	1.010
0.010	40.00	1.020
0.015	36.48	1.030
0.020	33.98	1.041
0.025	32.04	1.051
0.030	30.46	1.062
0.035	29.12	1.073
0.040	27.96	1.083
0.045	26.94	1.094
0.050	26.02	1.105
0.055	25.19	1.116
0.060	24.44	1.128
0.065	23.74	1.139
0.070	23.10	1.151
0.075	22.50	1.162
0.080	21.94	1.174
0.085	21.41	1.186
0.090	20.92	1.198
0.095	20.45	1.210
0.100	20.00	1.222
0.105	19.58	1.235
0.110	19.17	1.247
0.115	18.79	1.260
0.120	18.42	1.273
0.125	18.06	1.286
0.130	17.72	1.299
0.135	17.39	1.312
0.140	17.08	1.326
0.145	16.77	1.339
0.150	16.48	1.353
0.155	16.19	1.367
0.160	15.92	1.381
0.165	15.65	1.395
0.170	15.39	1.410
0.175	15.14	1.424
0.180	14.88	1.439
0.185	14.66	1.454
0.190	14.42	1.469
0.195	14.20	1.484

VSWR = Voltage Standing Wave Ratio    Rf = Reflection Coefficient    RL = Return Loss