



RF Coaxial Connectors Catalog

N-Type



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Type N 50 Ohm Coaxial Connectors



DESCRIPTION

The development of the Type N connector by the United States Army/Navy ran directly parallel to the escalation of U.S. involvement in WWII. It was finally released in 1942, shortly after the U.S. officially ment field and join the coaxial cable of the radio frequency extensively entered the war, and since that time it has been a staple in RF and Microwave applications all over the world.

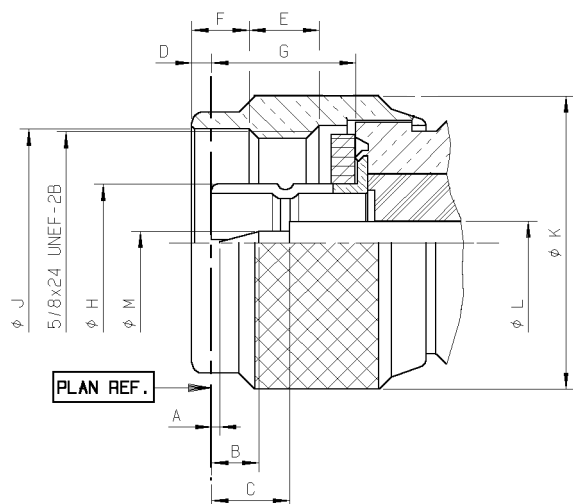
Due to N type connectors joins by one whorl, it has the characteristic of reliable and strong ant-vibration nature, machinery and electric performance finely. It is used in vibration and environment abominable radio equipment of terms and instrument and ground launch system join the coaxial cable of the radio frequency extensively.

CONTENTS

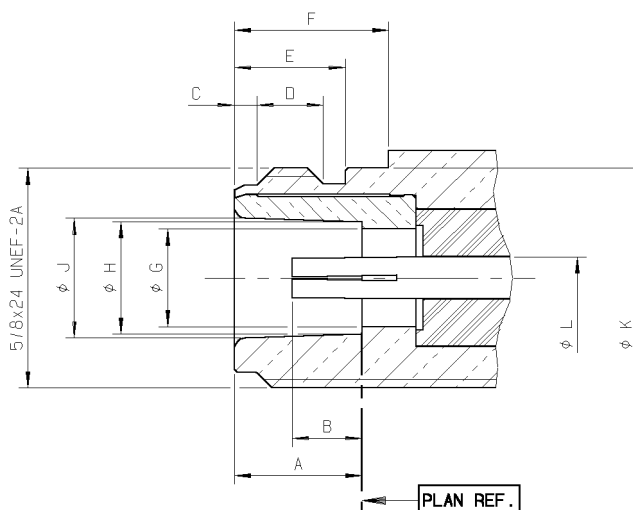
Description	1
Interface dimensions	2
Technical data	3
Cable connectors	4
Receptacles with solder end	11
PCB connectors	14
Protective cap	15
Assembly instruction	16
Mounting hole	21

Type N INTERFACE

PLUG



JACK



LETTER	mm		inch	
	min.	max.	min.	max.
A	0.13	1.03	.005	.13
B	2.80	3.56	.110	.140
C	5.33	5.83	.210	.229
D	1	2	.016	.066
E	4.54	5.39	.179	.212
F	4.05	4.20	.159	.165
G	10.23	10.43	.403	.411
H DIA	8.27	8.37	.326	.329
J DIA	16.1	16.2	.634	.638
K DIA	20.9	21	.823	.827
L DIA	3.01	3.05	.118	.120
M DIA	1.63	1.67	.064	.066

LETTER	mm		inch	
	min.	max.	min.	max.
A	9.05	9.19	.356	.362
B	4.75	5.25	.187	.207
C	1.20	1.95	.047	.077
D	4.4	5.1	.173	.201
E	6.8	9	.268	.354
F	10.9	11.2	.429	.441
G DIA	6.98	7.02	.275	.276
H DIA	8.03	8.13	.316	.320
J DIA	8.53	8.73	.336	.344
K DIA	15.65	15.85	.616	.624
L DIA	3.01	3.05	.118	.120

Interface dimensions conformable to the standards:

International: **IEC61169-16**
 Europe: **CECC 22210**
 USA: **MIL-STD-348A/304,**

IP rating (interface, mated) IP68

TECHNICAL DATA



ELECTRICAL DATA	
Impedance	50 Ohm
Frequency range	DC 0 — 11 GHz
Dielectric withstanding voltage	2,500 volts rms
V.S.W.R.	straight connectors: 1.3 max 0-11 GHz; right angle connectors: 1.35 max 0-11 GHz
Insulation resistance	$\geq 5 \times 1000 \text{ M}\Omega$
Contact resistance	Center Contact 1.0 m Ω Outer Contact 1.0 m Ω
RF leakage	-90 dB minimum at 3 GHz

MECHANICAL DATA	
Braid/Jacket Cable Affixment	Crimps: hex braid crimp; Clamps: screw-thread nut and braid clamp
Center Conductor Cale Affixment	Crimp: crimp or solder; All others: solder only
Mating	5/8-24 threaded coupling
Assembly Torque (body/clamp nut)	18/22 lb-ft (25/30 N-m)

MATERIAL DATA	
Male Contact	Brass, silver or gold plated
Female contact	Phosphorous bronze or beryllium copper, silver or gold plated Other Metal Parts Brass
Gasket	Silicone rubber
Crimp Ferrule	Copper

ENVIRONMENTAL	
Temperature Range	TFE: -65°C to +165°C
Thermal shock	MIL-STD-202, method 107, test condition A-1
Moisture resistance	MIL-STD-202, method 106
Corrosion	MIL-STD-202, method 101, test condition B
Vibration	MIL-STD-202, Method 204, Condition D

CABLE CONNECTORS



Straight cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-2M06-001

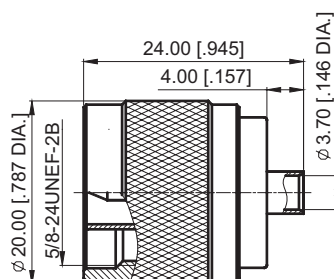
Semi-rigid .141/RG402

Gold

Nickel

A01

- > Cable entry soldered
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-2M11-002

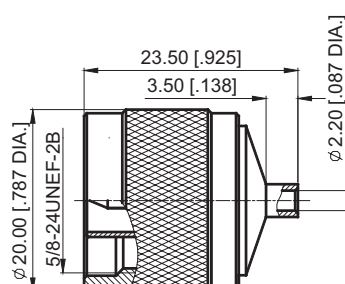
Semi-rigid .086/RG405

Gold

Nickel

A01

- > Cable entry soldered
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-2M13-003

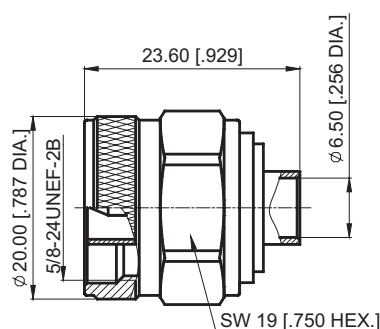
Semi-rigid .250

Gold

Nickel

A01

- > Cable entry soldered
- > Centre contact soldered



CABLE CONNECTORS



Straight cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-1M04-004

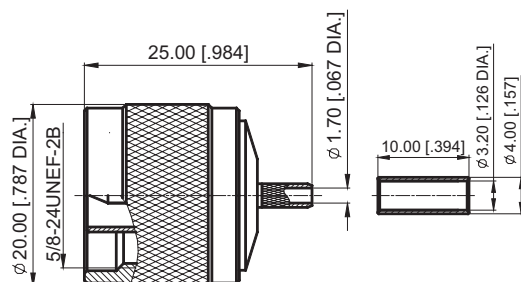
LMR100/RG174/RG316

Gold

Nickel

A02

> Cable entry crimp



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-1M18-005

LMR195/RG58

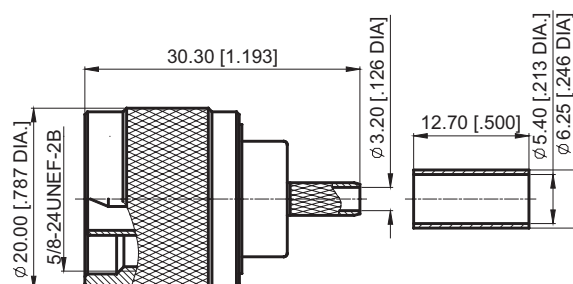
Gold

Nickel

A03

> Cable entry crimp

> Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-1M01-006

LMR400

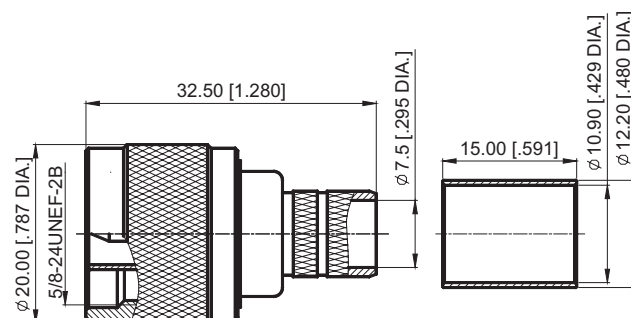
Gold

Nickel

A03

> Cable entry crimp

> Centre contact soldered



CABLE CONNECTORS



Straight cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-1M10-007

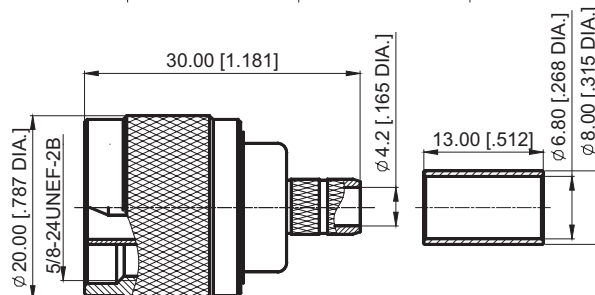
LMR240

Gold

Nickel

A03

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-1M19-008

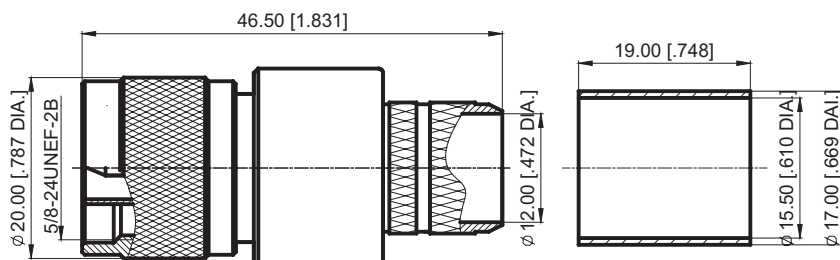
LMR600

Gold

Nickel

A03

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-1M20-009

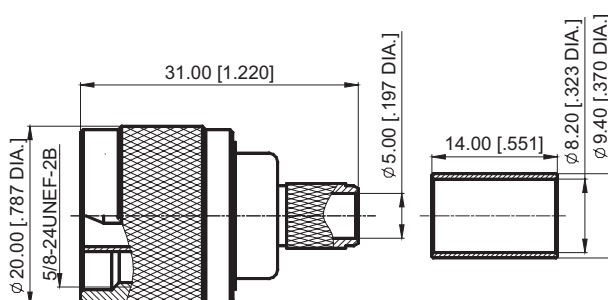
LMR300

Gold

Nickel

A03

- > Cable entry crimp
- > Centre contact soldered



CABLE CONNECTORS



Straight cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-4M04-010

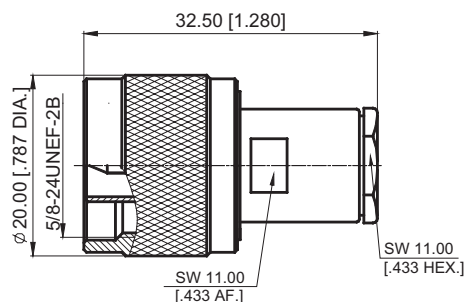
LMR100/RG174/RG316

Gold

Nickel

A04

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-4M18-011

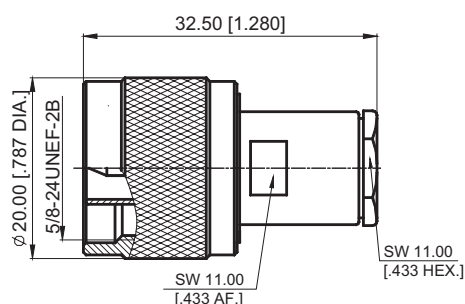
LMR195/RG58

Gold

Nickel

A04

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-4M01-012

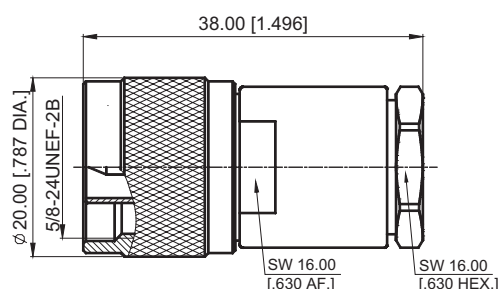
LMR400

Gold

Nickel

A04

- > Cable entry clamp
- > Centre contact soldered



CABLE CONNECTORS



Straight cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-4M19-013

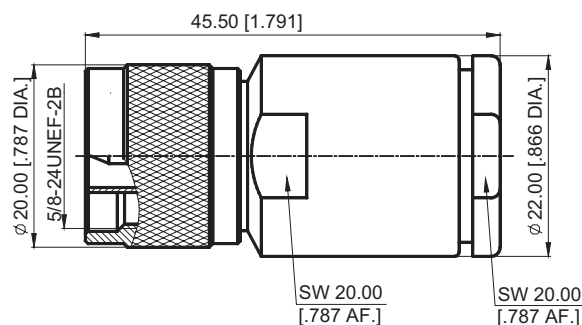
LMR600

Gold

Nickel

A04

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-4M25-040

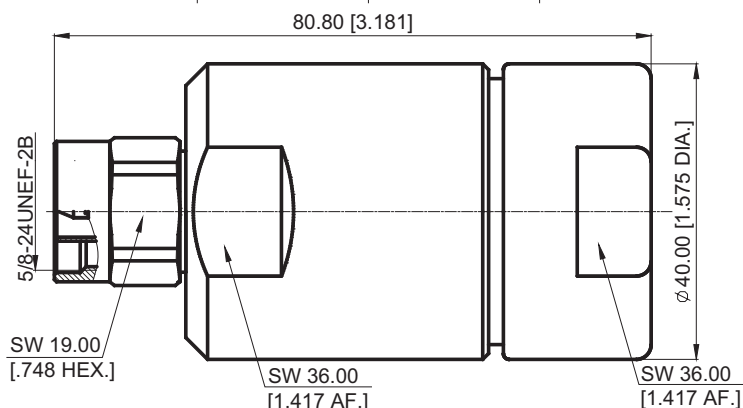
7/8" Cable

Gold

Nickel

A05

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-03-4M26-039

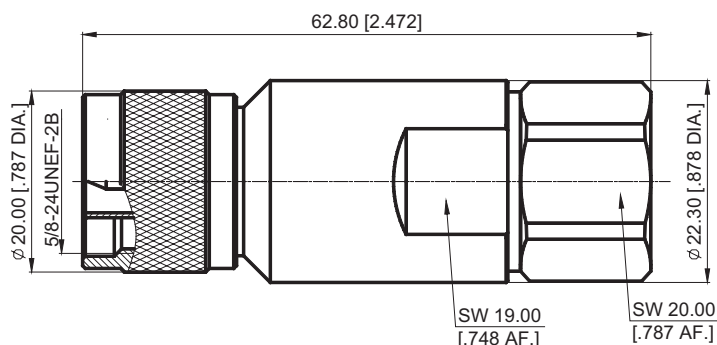
1/2" Cable

Gold

Nickel

A06

- > Cable entry clamp
- > Centre contact soldered



CABLE CONNECTORS

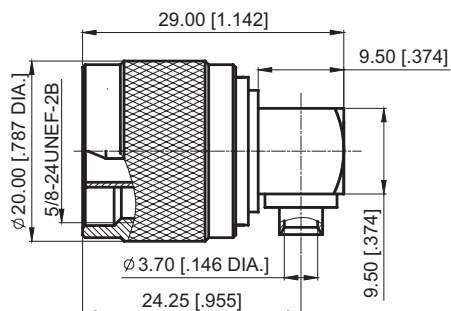


Right angle cable plugs (male)



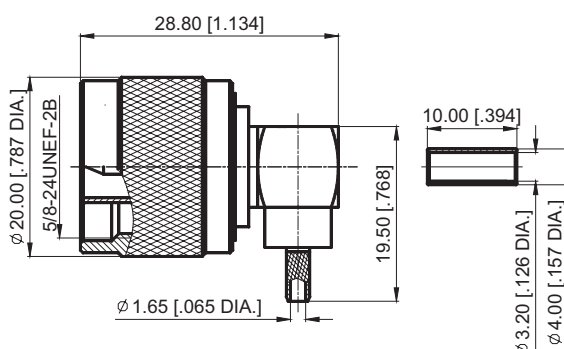
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
50-13-2M06-016	RG402/Semi-rigid .141	Gold	Nickel	A07	

- > Cable entry soldered
- > Centre contact soldered



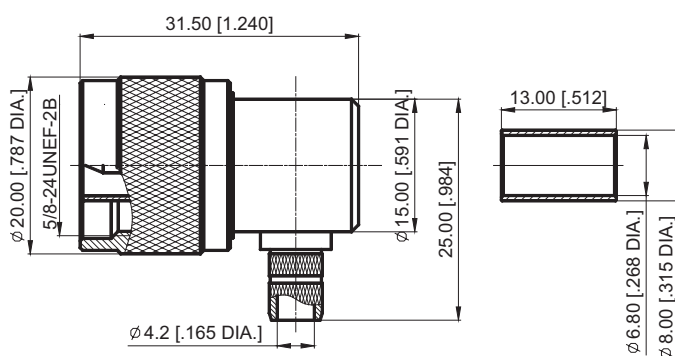
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
50-13-1M04-017	LMR100/RG174/RG316	Gold	Nickel	A08	

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
50-13-1M10-018	LMR240	Gold	Nickel	A08	

- > Cable entry crimp
- > Centre contact soldered



CABLE CONNECTORS



Right angle cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-13-1M01-019

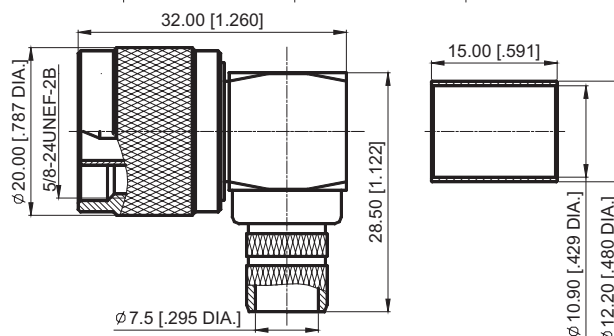
LMR400

Gold

Nickel

A08

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-13-4M01-020

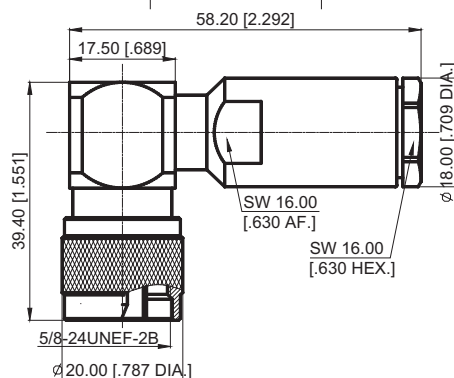
LMR400

Gold

Nickel

A04

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-13-4M26-041

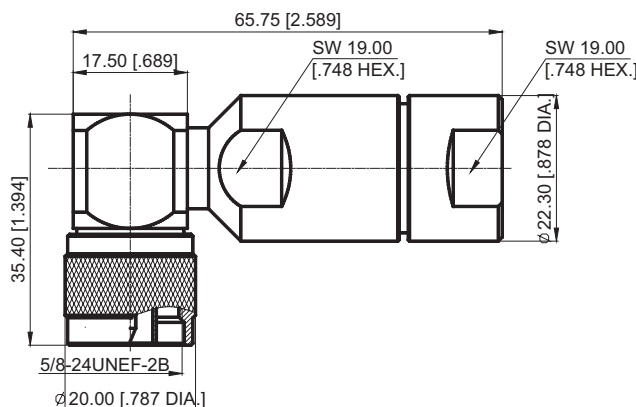
1/2" Cable

Gold

Nickel

A06

- > Cable entry clamp
- > Centre contact soldered



CABLE CONNECTORS



Straight cable jacks (female)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-02-1M18-022

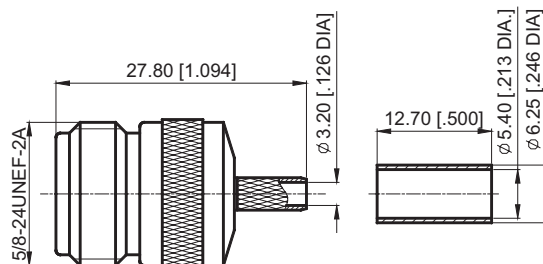
RG58/LMR195

Gold

Nickel

A03

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-02-1M01-023

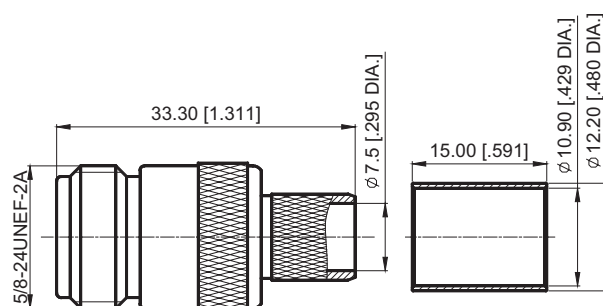
LMR400

Gold

Nickel

A03

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-02-1M10-024

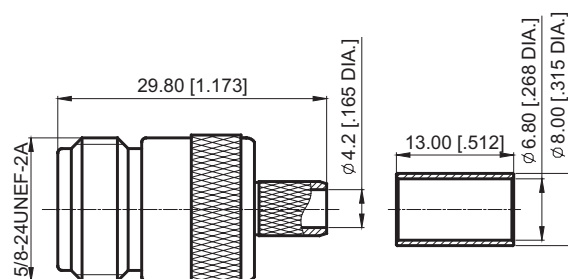
LMR240

Gold

Nickel

A03

- > Cable entry crimp
- > Centre contact soldered



CABLE CONNECTORS



Straight cable jacks (female)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-02-4M01-025

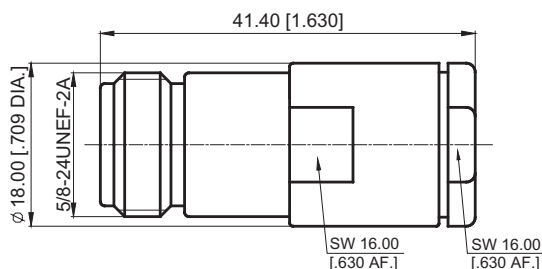
LMR400

Gold

Nickel

A04

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-02-4M18-026

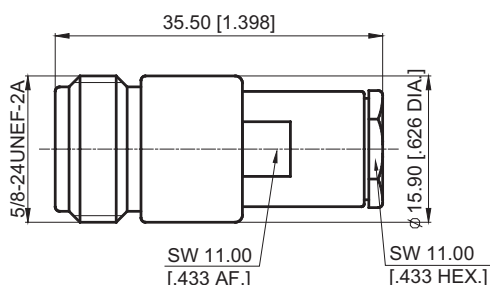
LMR195/RG58

Gold

Nickel

A04

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

50-02-4M26-027

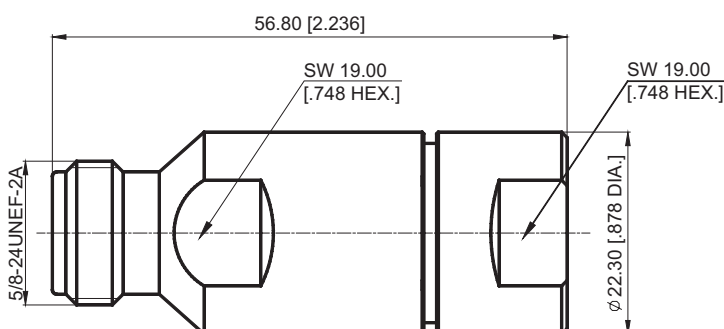
1/2" Cable

Gold

Nickel

A06

- > Cable entry clamp
- > Centre contact soldered



CABLE CONNECTORS

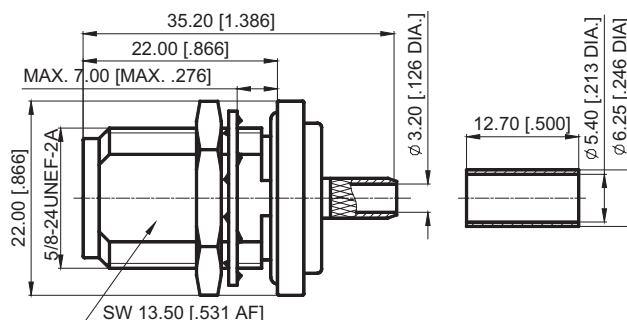


Straight bulkhead cable jacks (female)



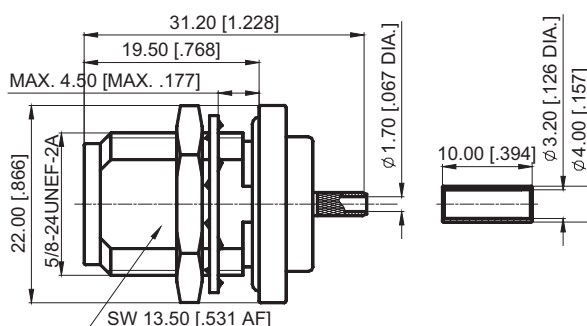
P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
50-02-1D18-028	RG58/LMR195	Gold	Nickel	A03	M01

- > Cable entry crimp
- > Centre contact soldered



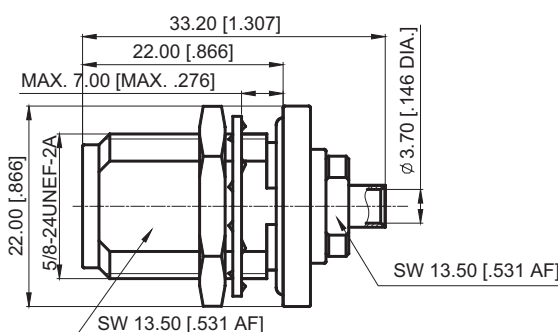
P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
50-02-1D04-029	LMR100/RG174/RG316	Gold	Nickel	A02	M01

- > Cable entry crimp



P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
50-02-2D06-030	LMR240	Gold	Nickel	A09	M01

- > Cable entry soldered
- > Centre contact soldered



CABLE CONNECTORS

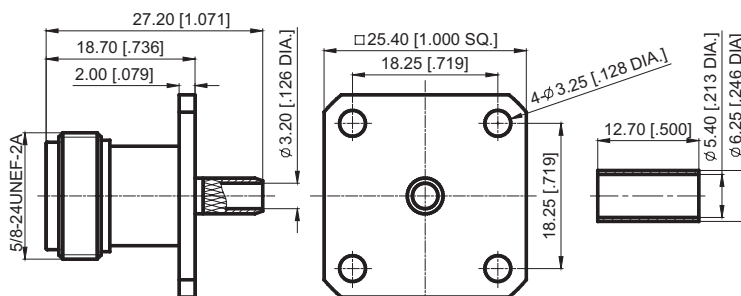


Straight panel cable jacks(female)



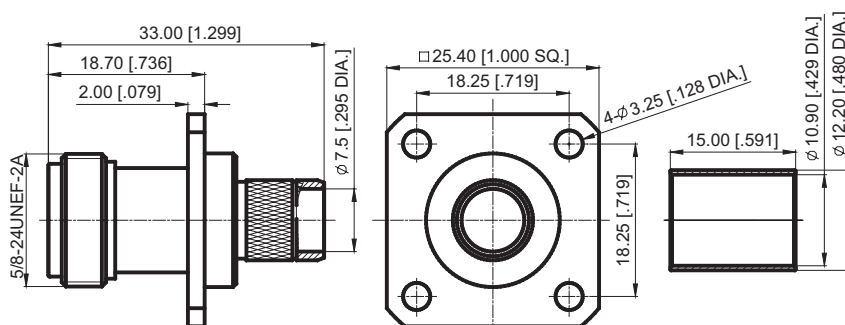
P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
50-02-8F18-031	LMR195/RG58	Gold	Nickel	A03	M02

- > Cable entry crimp
- > Centre contact soldered



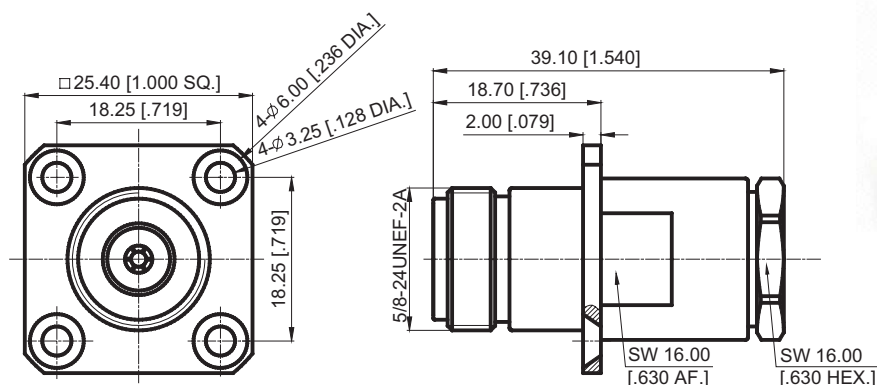
P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
50-02-8F01-032	LMR400	Gold	Nickel	A03	M02

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
50-02-8F01-033	LMR400	Gold	Nickel	A04	M02

- > Cable entry clamp
- > Centre contact soldered



RECEPTACLES WITH SOLDER END

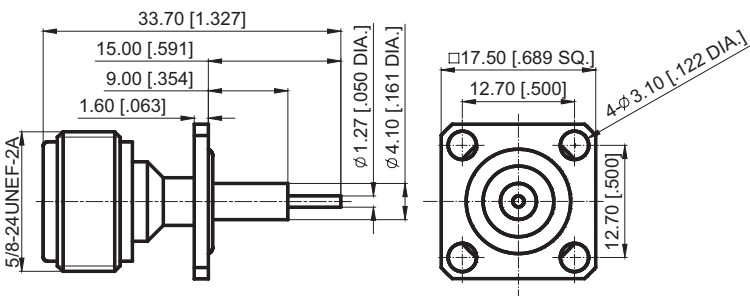


Receptacles, jacks (female)



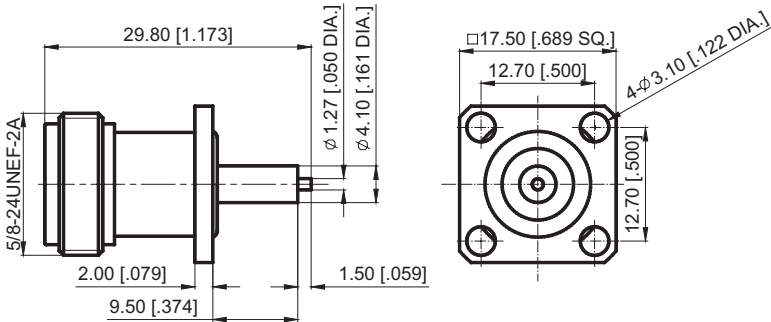
P/N	Mount Hole	Finish		Notes
		Center	Body	
50-02-8F7-034	M03	Gold	Nickel	

> Panel mounted



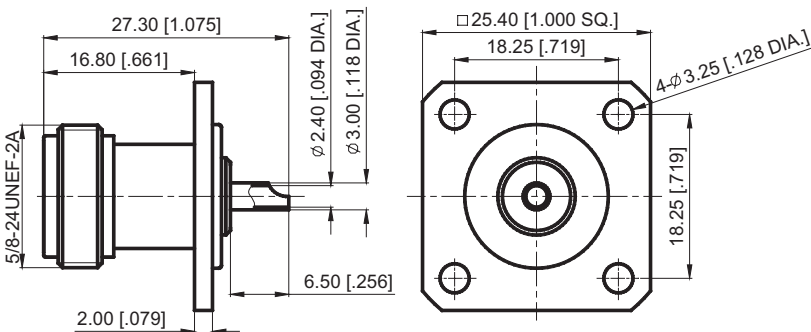
P/N	Mount Hole	Finish		Notes
		Center	Body	
50-02-8F7-035	M03	Gold	Nickel	

> Panel mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	
50-02-8F1-036	M02	Gold	Nickel	

> Panel mounted



RECEPTACLES WITH SOLDER END

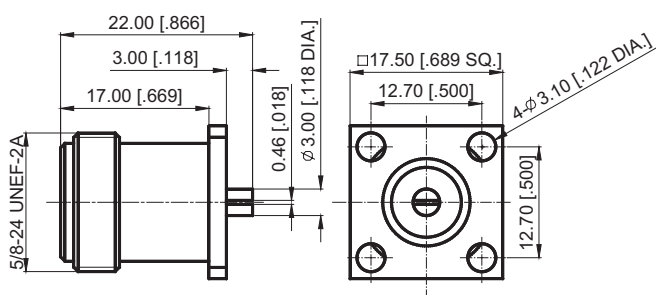


Receptacles, jacks (female)



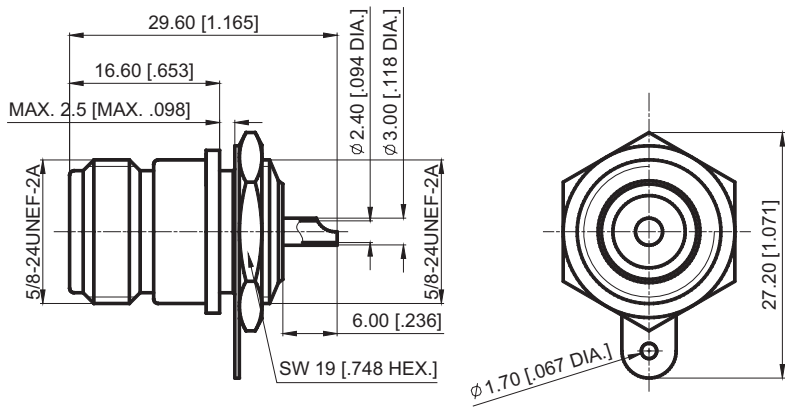
P/N	Mount Hole	Finish		Notes
		Center	Body	
50-02-8F2-037	M03	Gold	Nickel	

> Panel mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	
50-02-8A1-038	M04	Gold	Nickel	

> Panel mounted



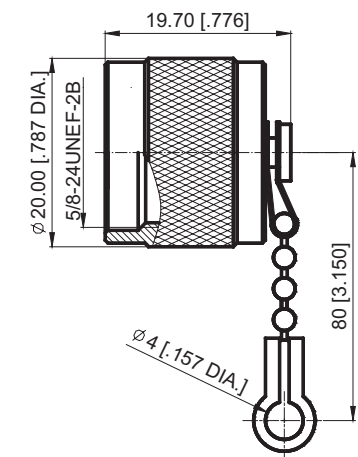
PROTECTIVE CAPS



✓ RoHS

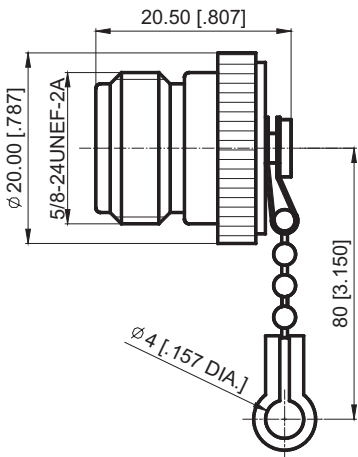
P/N	Finish	Notes
50-03-9N-042	Nickel	

> Protective cap for jacks (females)



P/N	Finish	Notes
50-02-9N-043	Nickel	

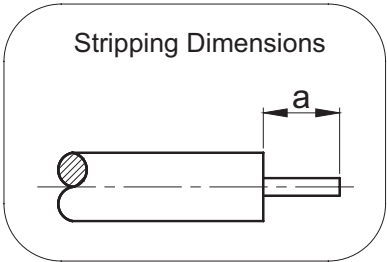
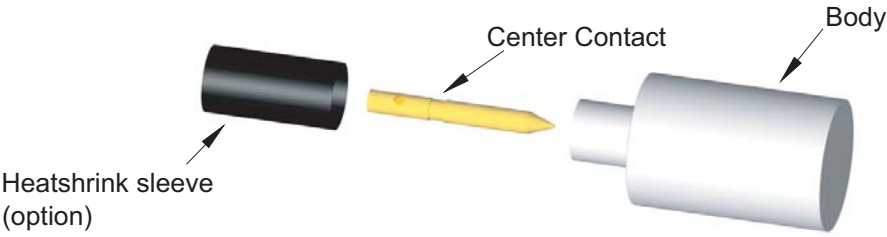
> Protective cap for plugs (males)



ASSEMBLY INSTRUCTIONS



A01



P/N	Cable Type	Stripping Length (mm [in]) a	Notes
50-03-2M06-001	Semi-rigid .141/RG402	5.0 [.197]	
50-03-2M11-002	Semi-rigid .086/RG405	3.5 [.138]	
50-03-2M13-003	Semi-rigid .250	5.5 [.217]	

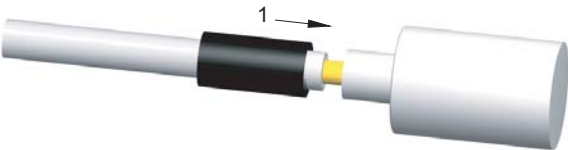
1. • Slide the heatshrink sleeve onto the cable (option).
• Strip the cable as Stripping Dimensions.



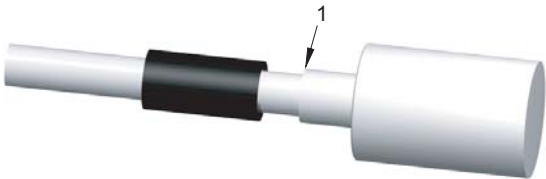
2. • Slide the center contact on until it bottom against the cable dielectric.
• Solder the center contact onto the cable.



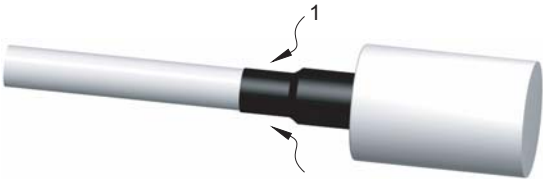
3. • Slide the cable into the body until it stops.



4. • Solder the body onto the cable.



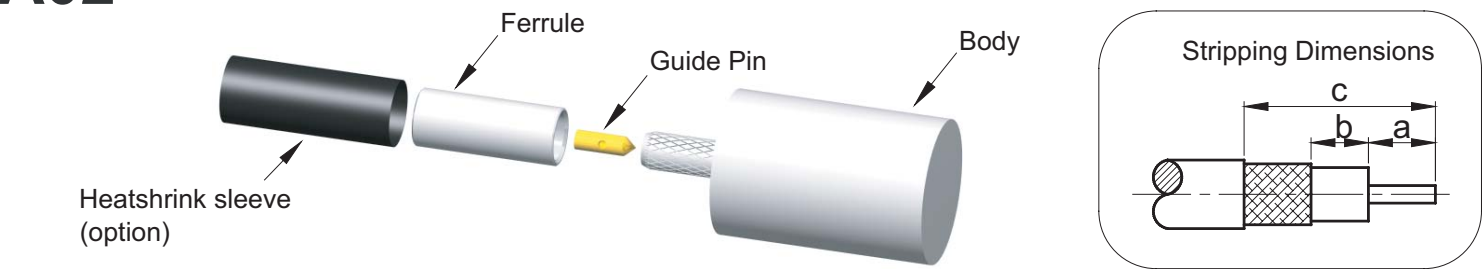
5. • Slide the heatshrink sleeve over the body and heatshrink it in place (option).



ASSEMBLY INSTRUCTIONS



A02



P/N	Cable Type	HEX. Crimp Tool (mm [in])	Stripping Length (mm [in])		
			a	b	c
50-03-1M04-004 50-02-1D04-029	LMR100/RG174/RG316	3.25 [.128]	3 [.118]	3.5 [.138]	13 [.512]

- 1. • Slide the heatshrink sleeve onto the cable (option).
- Slide the ferrule onto the cable.
- Strip the cable as Stripping Dimensions.



- 2. • Slide the guide pin on until it bottom against the cable dielectric.
- Solder the guide pin onto the cable.



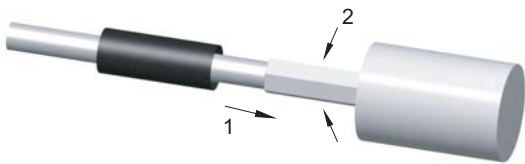
- 3. • Fan the braid.



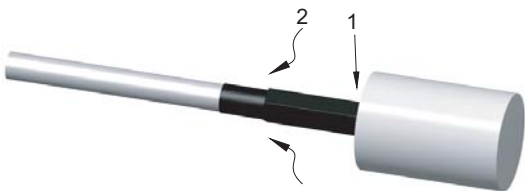
- 4. • Slide the cable into the body until stops.



- 5. • Slide the ferrule over the braid.
- Crimp the ferrule with crimping tool (see table).



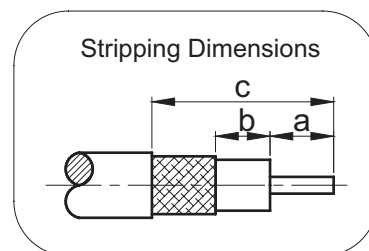
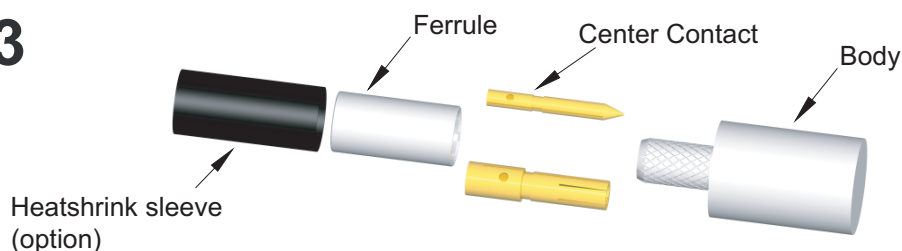
- 6. • Cut the excess of braid if necessary.
- Slide the sleeve over the ferrule and heatshrink it in place (option).



ASSEMBLY INSTRUCTIONS



A03



P/N	Cable Type	HEX. Crimp Tool (mm [in])	Stripping Length (mm [in])		
			a	b	c
50-03-1M18-005	LMR195/RG58	5.41 [.213]	3 [.118]	2 [.079]	13.5 [.531]
50-02-1M18-022				2.5 [.098]	
50-02-1D18-028					
50-02-8F18-031					
50-03-1M10-007	LMR240	6.8 [.268]			
50-02-1M10-024					
50-03-1M20-009	LMR300	8.2 [.323]	5 [.118]	3 [.118]	18 [.709]
50-02-1M01-023	LMR400	10.9 [.429]	5.5 [.217]		4 [.157]
50-03-1M01-006			5 [.118]		
50-02-8F01-032					
50-03-1M19-008	LMR600	15.8 [.625]	6 [.236]	3 [.118]	23 [.906]

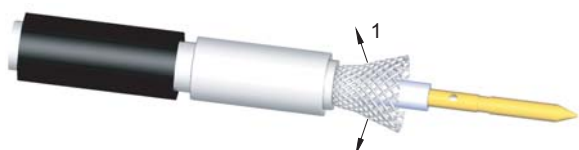
- Slide the heatshrink sleeve onto the cable (option).
- Slide the ferrule onto the cable.
- Strip the cable as Stripping Dimensions.



- Slide the center contact on until it bottom against the cable dielectric.
- Solder the center contact onto the cable.



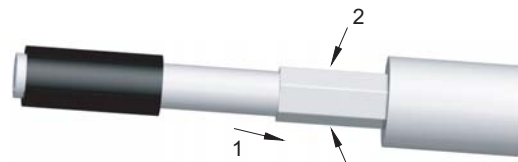
- Fan the braid.



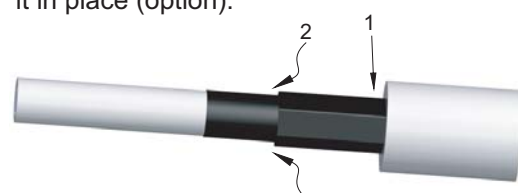
- Slide the cable into the body until stops.



- Slide the ferrule over the braid.
- Crimp the ferrule with crimping tool (see table).

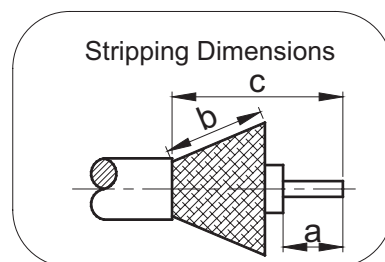
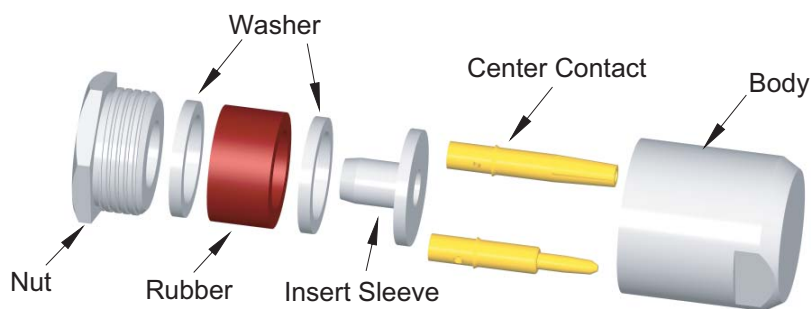


- Cut the excess of braid if necessary.
- Slide the sleeve over the ferrule and heatshrink it in place (option).



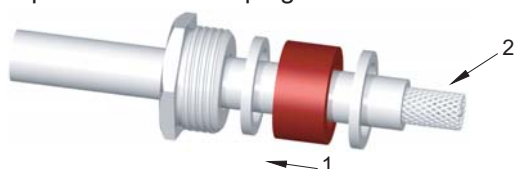
ASSEMBLY INSTRUCTIONS

A04

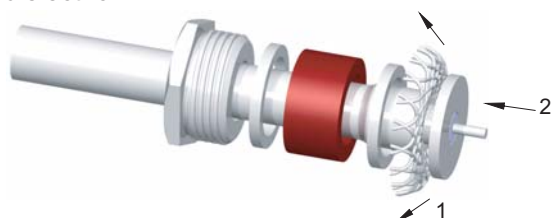


P/N	Cable Type	Stripping Length (mm [in])			Recommended Coupling Torque
		a	b	c	
50-03-4M04-010	LMR100/RG174/RG316	3 [.118]	6 [.236]	6 [.236]	450N·cm
50-03-4M18-011	LMR195/RG58				
50-02-4M18-026					
50-03-4M01-012	LMR400	5 [.197]	11 [.433]	11 [.433]	
50-13-4M01-020					
50-02-4M01-025					
50-02-8F01-033					
50-03-4M19-013	LMR600	6 [.236]	13 [.512]	13 [.512]	

- Slide the nut, the washer, the rubber and another washer onto the cable.
- Strip the cable as Stripping Dimensions.



- Fold the braid back.
- Insert the insert sleeve into the cable (under the braid) until the back surface flush with the cable dielectric.

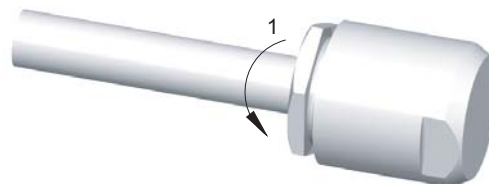


- Slide the center contact on until it bottom against the cable dielectric.
- Solder the center contact.

- Slide the nut over the cable assembly.



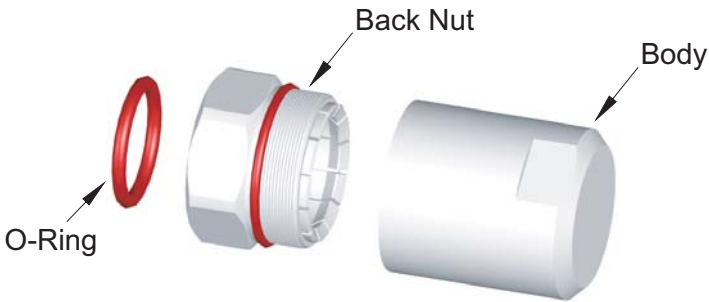
- Screw sub-assembly into the body with wrench, recommended coupling torque see table.



ASSEMBLY INSTRUCTIONS

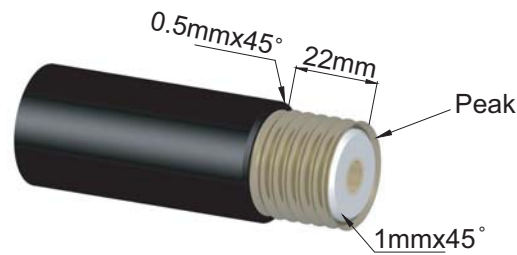


A05

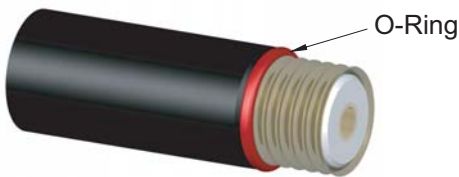


P/N	Cable Type	Stripping Length (mm [in])	Recommended Coupling Torque
50-03-4M25-040	7/8" Cable	See Figure	800N·cm

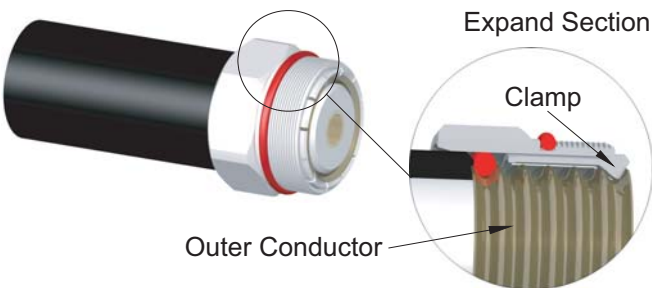
1. • Stripping dimensions as shown, Several problems should be paid attention in stripping:
- (a) The end of the outer conductor's stripping should be on the wave peak.
 - (b) The end surface of the dielectric should be chamfered to 1mmx45°.
 - (c) Removing the burr at the inner conductor's inside lip
 - (d) The end of the jacket surface should be chamfered to 0.5mmx45°.
 - (e) Removing impurities such as copper scale and burr at the end of the cable surface.



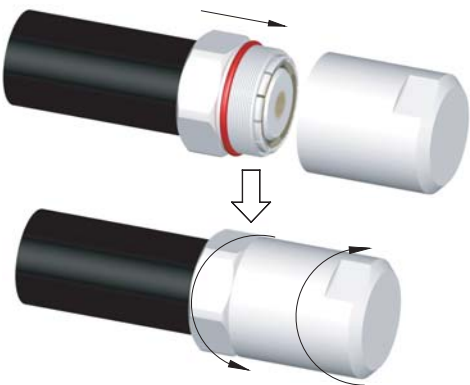
2. • Put the O-ring in the trough of the cable as shown.



3. • Screw off the back nut, assemble the back nut to the cable and make sure that the clamp is in the trough of the cable as shown by the following figure, flare the outer conductor of the cable so as to make sure that the outer conductor touch slanting surface of the inside hole at the clamp as shown.



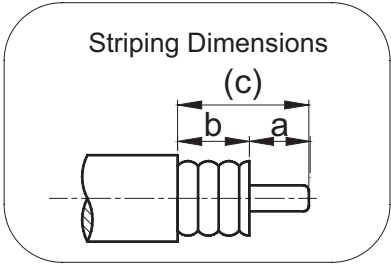
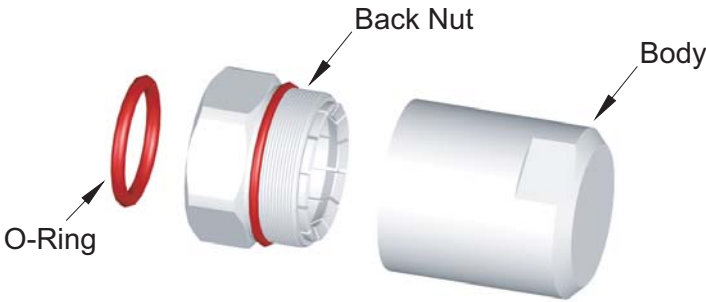
4. • Combine the main body and back nut by screwing as shown.
- Keep the back nut and the cable motionless, then tighten the main body and back nuts with a wrench.



ASSEMBLY INSTRUCTIONS

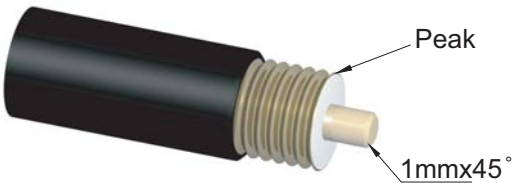


A06

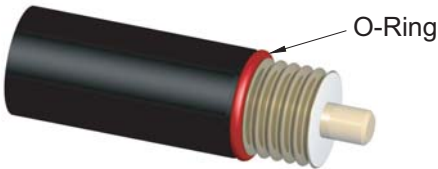


P/N	Cable Type	Stripping Length (mm [in])			Recommended Coupling Torque
		a	b	c	
50-02-4M26-027	1/2" Cable	10 [.394]	18 [.709]	28 [1.102]	800N·cm
50-03-4M26-039					
50-13-4M26-041					

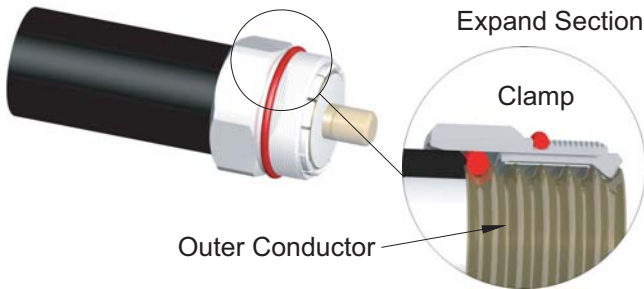
1. • Stripping dimensions as table, Several problems should be paid attention in stripping:
- (a) The end of the outer conductor's stripping should be on the wave peak.
 - (d) Inner conductor should be chamfered to 1mmx45°.
 - (e) Removing impurities such as copper scale and burr at the end of the cable surface.



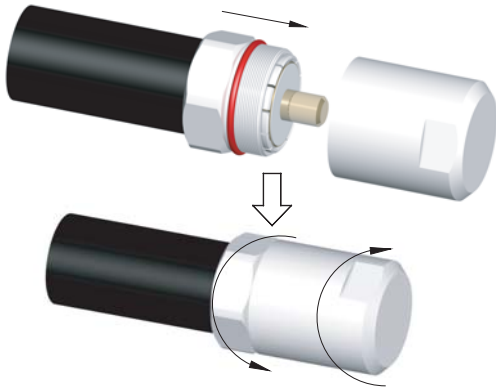
2. • Put the O-ring in the trough of the cable as shown.



3. • Screw off the back nut, assemble the back nut to the cable and make sure that the clamp is in the trough of the cable as shown by the following figure, flare the outer conductor of the cable so as to make sure that the outer conductor touch slanting surface of the inside hole at the clamp as shown.



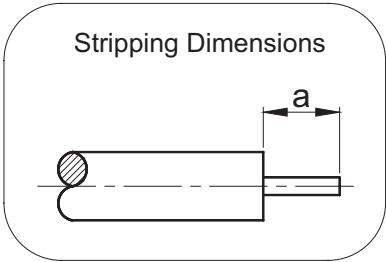
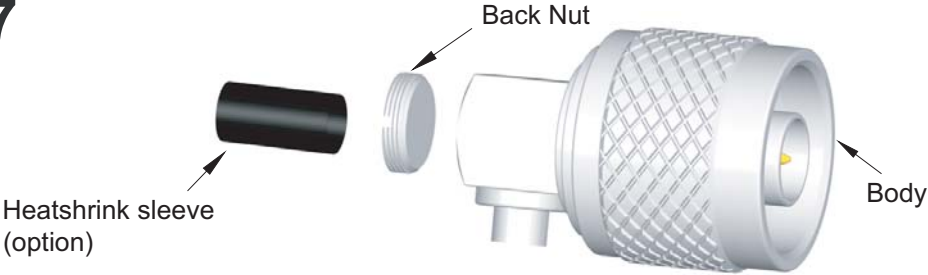
4. • Combine the main body and back nut by screwing as shown.
- Keep the back nut and the cable motionless, then tighten the main body and back nuts with a wrench.



ASSEMBLY INSTRUCTIONS



A07

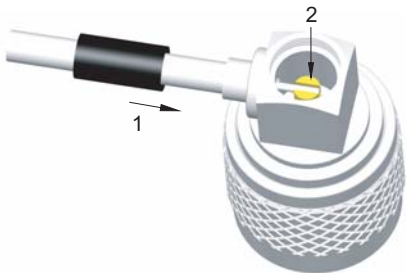


P/N	Cable Type	Stripping Length (mm [in])	Notes
50-13-2M06-016	RG402/Semi-rigid .141	5.5 [.217]	

1. • Slide the heatshrink sleeve onto the cable (option).
• Strip the cable as Stripping Dimensions.



2. • Slide the cable into the body until it stops.
• Solder the inner conductor.



3. • Screw the back nut onto the body.



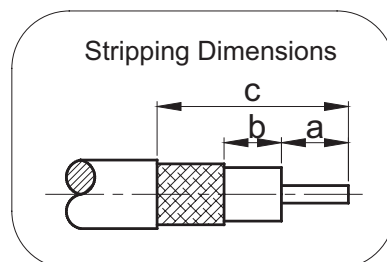
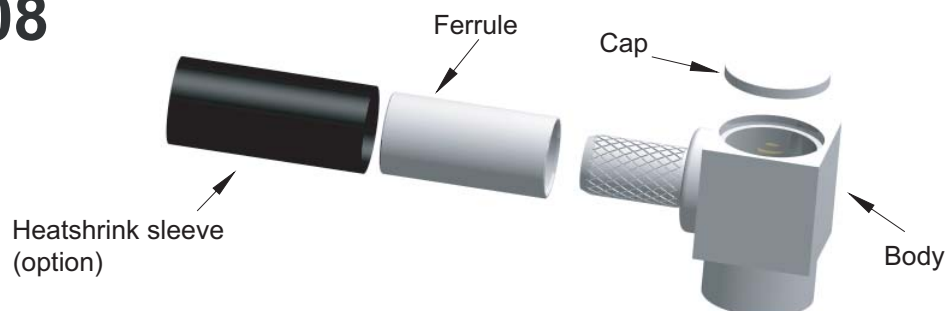
4. • Slide the sleeve over the body and heatshrink it in place (option).



ASSEMBLY INSTRUCTIONS



A08



P/N	Cable Type	HEX. Crimp Tool (mm [in])	Stripping Length (mm [in])		
			a	b	c
50-13-1M04-017	LMR100/RG174/RG316	3.25 [.128]	3 [.118]	5 [.197]	16 [.630]
50-13-1M10-018	LMR240	6.8 [.268]		3 [.118]	20 [.787]
50-13-1M01-019	LMR400	10.9 [.429]	4 [.157]	5 [.197]	23 [.906]

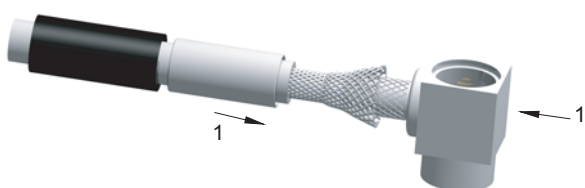
- Slide the heatshrink sleeve onto the cable (option).
Slide the ferrule onto the cable.
Strip the cable as Stripping Dimensions.



- Fan the braid.



- Push the body under the braid.
Slide the ferrule over the braid.



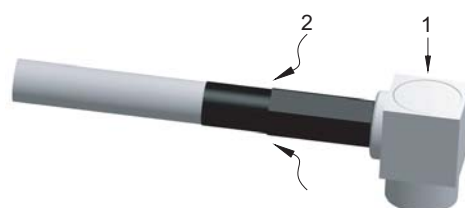
- Crimp the ferrule with crimping tool (see table).
Solder the inner conductor.



- Place the cap into the body.



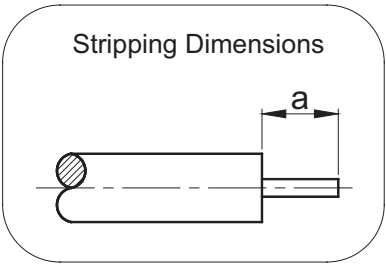
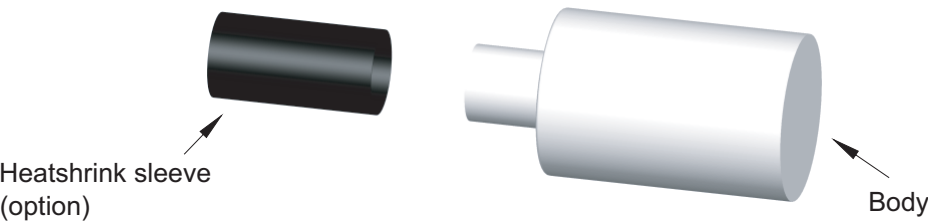
- Press on the cap until stops.
Slide the sleeve over the ferrule and heatshrink it in place (option).



ASSEMBLY INSTRUCTIONS



A09

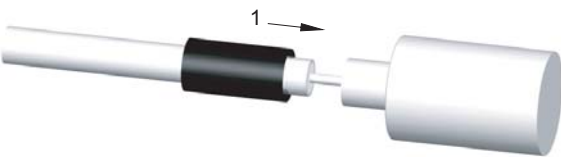


P/N	Cable Type	Stripping Length (mm [in])	Notes
50-02-2D06-030	RG402/Semi-rigid .141	4.5 [.177]	

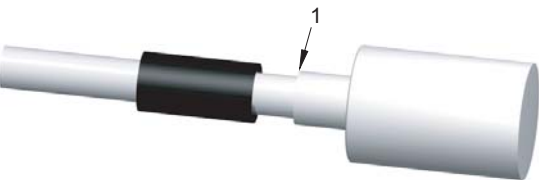
1. • Slide the heatshrink sleeve onto the cable (option).
• Strip the cable as Stripping Dimensions.



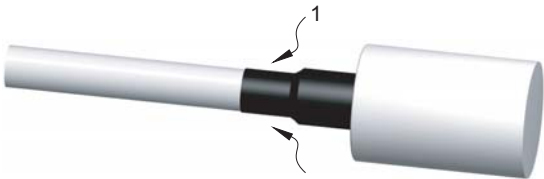
2. • Slide the cable into the body until it stops.



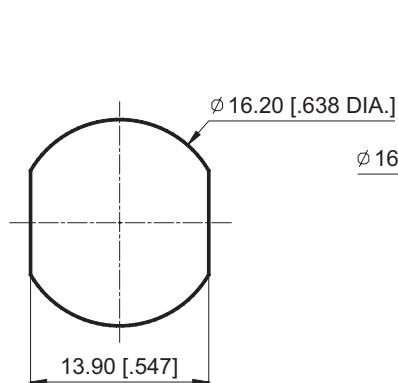
3. • Solder the body onto the cable.



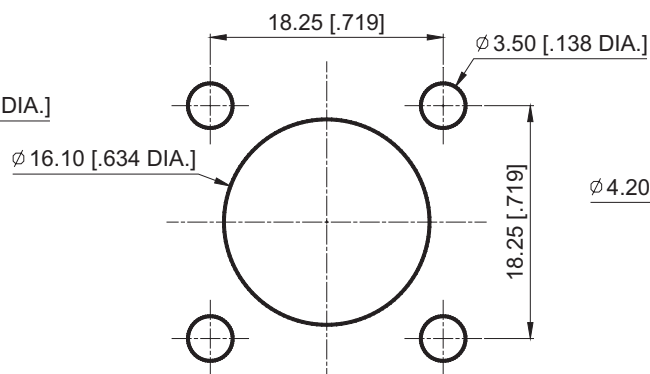
4. • Slide the heatshrink sleeve over the body and heatshrink it in place (option).



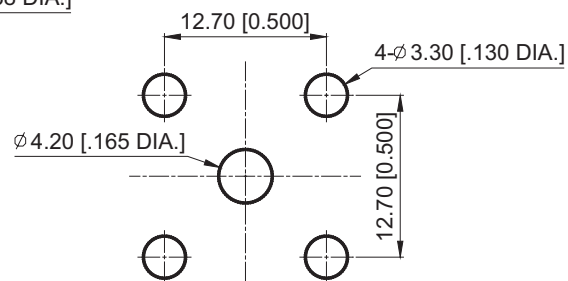
MOUNTING HOLES



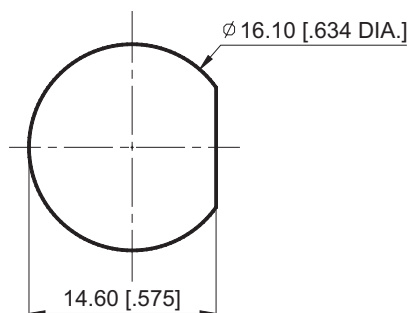
M01



M02



M03



M04