



RF Coaxial Connectors Catalog

BNC



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BNC 50 Ohm Coaxial Connectors



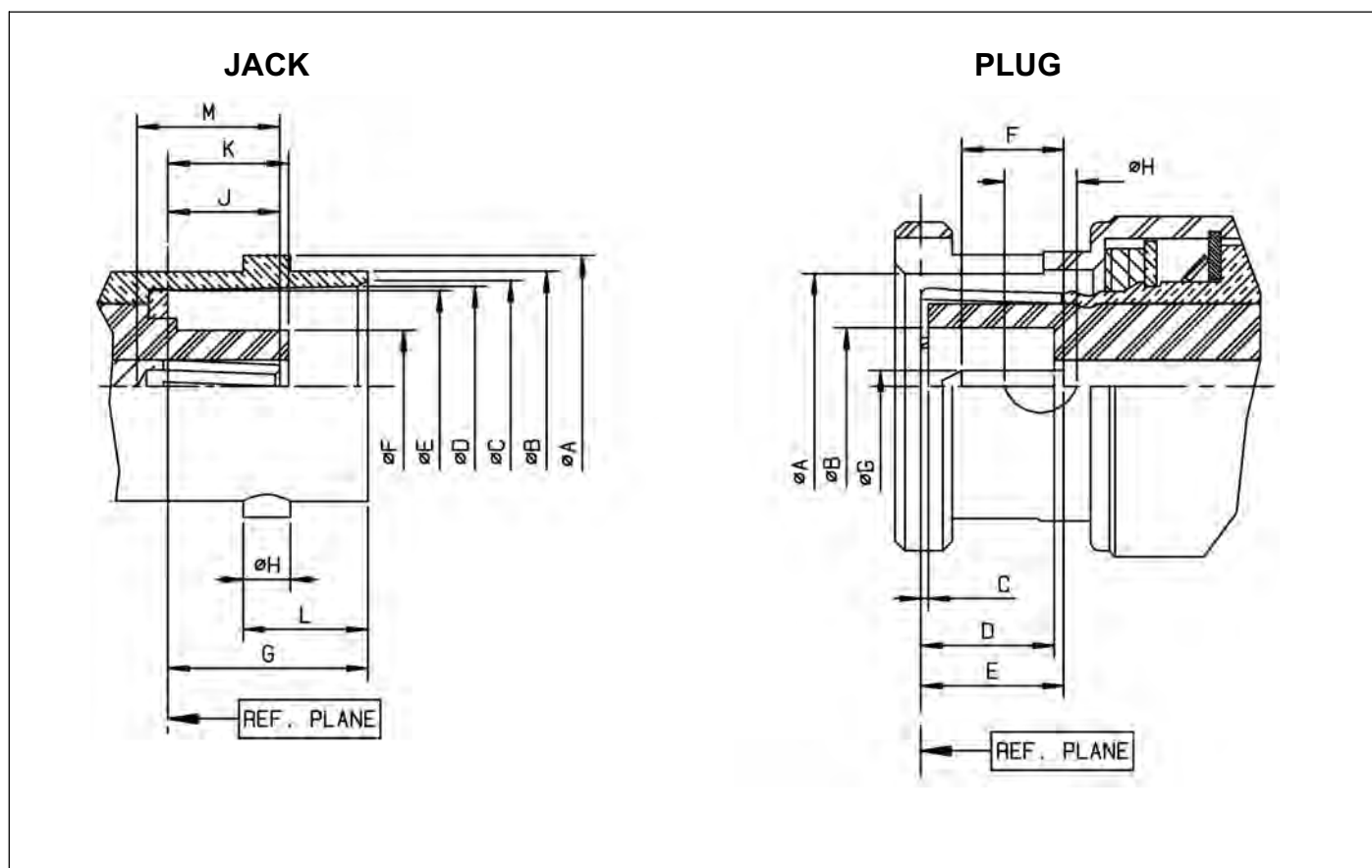
DESCRIPTION

The Bayonet-Neil-Concelman, or BNC, connector derives its name from the surnames of the type N inventor Paul Neil and type C inventor Carl Concelman- the “bayonet” refers to the style of locking mechanism employed by this series. Developed in the late 1940s, the BNC is basically a scaled down version of the Type C, and its compact design, easy quick connect/disconnect coupling and economical manufacturing cost have all helped to ensure that it is consistently applied in radio equipment and electron tube instrument field and join the coaxial cable of the radio frequency extensively.

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BNC INTERFACE



LETTER	mm		inch	
	min.	max.	min.	max.
A DIA	10.97	11.07	.432	.436
B DIA	9.60	9.70	.378	.382
C DIA	8.79	9.04	.346	.356
D DIA	8.31	8.46	.327	.333
E DIA	8.10	8.15	.319	.321
F DIA	-	4.72	-	.186
G	8.31	8.51	.327	.335
H	1.91	2.06	.075	.081
J	4.72	5.23	.186	.206
K	4.78	5.28	.188	.208
L	5.18	5.28	.204	.208
M	4.95	-	.195	-

LETTER	mm		inch	
	min.	max.	min.	max.
A DIA	9.78	9.91	.385	.390
B DIA	4.83	-	.190	-
C	0.15	-	.006	-
D	5.28	5.79	.208	.228
E	5.33	5.84	.210	.230
F	1.98	-	.078	-
G DIA	1.32	1.37	.052	.054
H DIA	2.31	2.46	.091	.097

Interface dimensions conformable to the standards:

International: **IEC61169-8**
 Europe: **CECC 22120**
 USA: **MIL-C-39012,**
BNC Interface MIL-STD-348A/301

IP rating (interface, mated) IP64

TECHNICAL DATA



ELECTRICAL DATA	
Impedance	50 Ohm
Frequency range	DC 0 — 4 GHz
Dielectric withstanding voltage	1.5 kV rms, 50 Hz(depending on cable)
Working voltage	500 V rms, 50 Hz(depending on cable)
Insulation resistance	$\geq 5 \times 1000 \text{ M}\Omega$
Contact resistance	inter contact $\leq 1.5 \text{ m}\Omega$ out contact $\leq 1 \text{ m}\Omega$
RF leakage	$\geq 55 \text{ dB}$

MECHANICAL DATA	
Coupling nut torque	7 Ncm...28 Ncm/0.6 in.lbs...2.5 in.lbs
Coupling nut retention force	$\geq 450 \text{ N} / 101.2 \text{ lbs}$
Contact captivation	$\geq 27 \text{ N} / 6.1 \text{ lbs}$
Durability(matings)	≥ 500

ENVIRONMENTAL	
Temperature Range	-40 °C to + 155 °C
Thermal shock	MIL-STD-202, Method 107, Condition B
Moisture resistance	MIL-STD-202, Method 106
Corrosion	Saltspray test acc.to MIL-STD-202
Vibration	MIL-STD-202, Method 204, Condition B

CABLE CONNECTORS

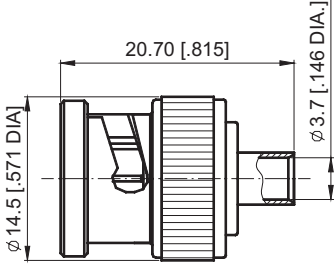


Straight cable plugs (male)



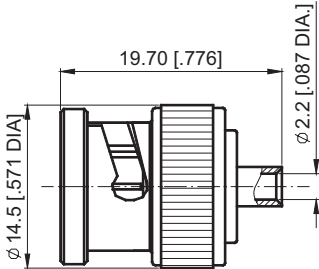
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
10-03-2M06-001	Semi-rigid .141/RG402	Gold	Nickel	A01	

- > Cable entry soldered
- > Centre contact soldered



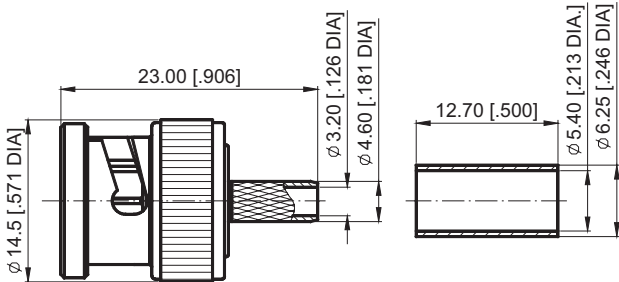
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
10-03-2M11-002	Semi-rigid .086/RG405	Gold	Gold	A01	

- > Cable entry soldered
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
10-03-1M18-003	LMR195/RG58	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		

10-03-1M04-004

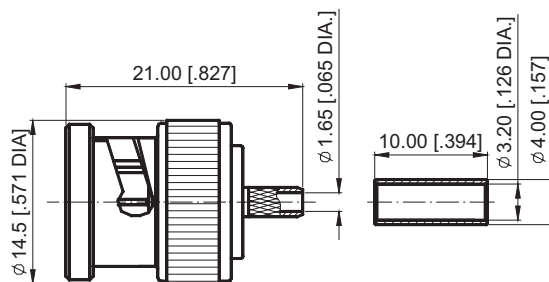
LMR100/RG174/RG316

Gold

Nickel

A02

> Cable entry crimp



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

10-03-1M10-005

LMR240

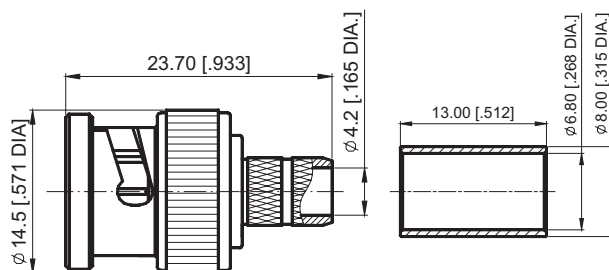
Gold

Gold

A03

> Cable entry crimp

> Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

10-03-1M01-006

LMR400

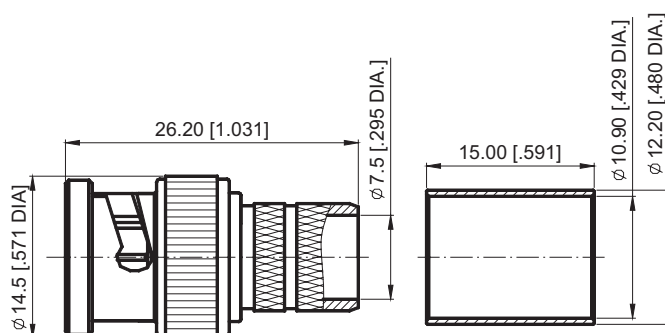
Gold

Nickel

A03

> Cable entry crimp

> Centre contact soldered



CABLE CONNECTORS



Straight cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

10-03-4M04-011

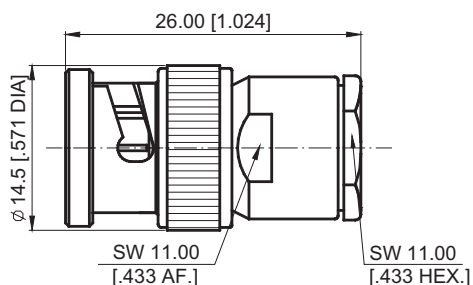
LMR100/RG174/RG316

Gold

Nickel

A05

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

10-03-4M18-012

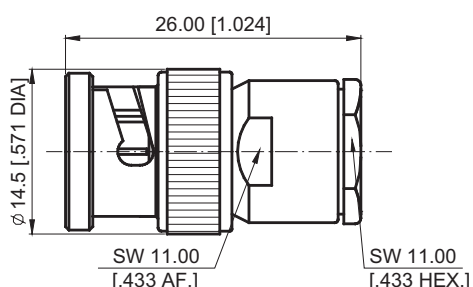
LMR195/RG58

Gold

Nickel

A05

- > Cable entry clamp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

10-03-4M09-013

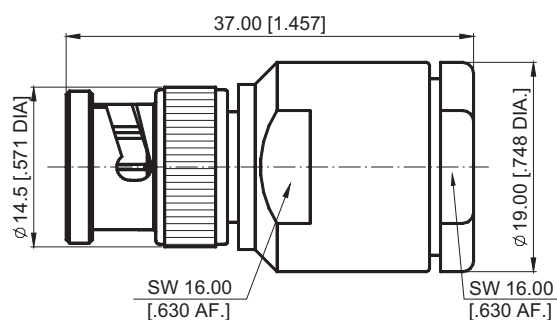
RG214

Gold

Nickel

A05

- > Cable entry clamp
- > Centre contact soldered



CABLE CONNECTORS



Right angle cable plugs (male)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

10-13-1M04-015

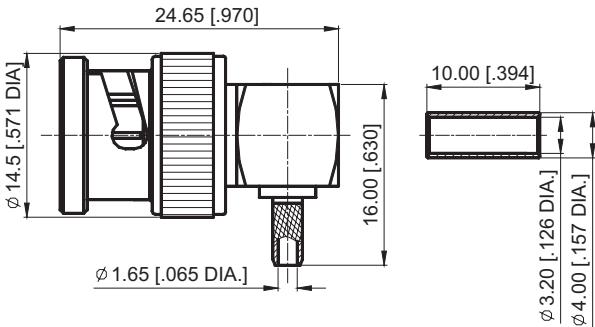
LMR100/RG174/RG316

Gold

Nickel

A04

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		

10-13-1M18-016

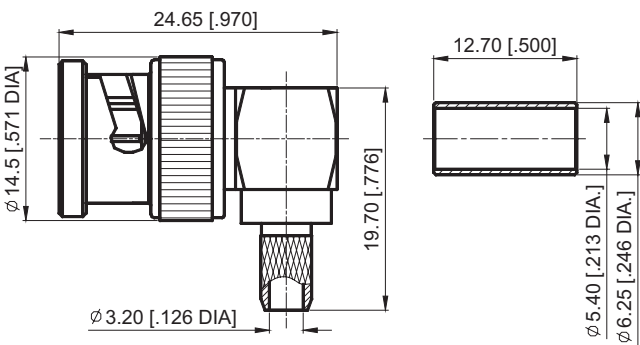
LMR195/RG58

Gold

Nickel

A04

- > Cable entry crimp
- > Centre contact soldered



CABLE CONNECTORS

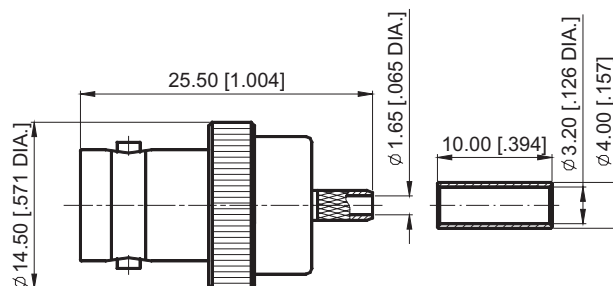


Straight cable jacks (female)



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
10-02-1M04-019	LMR100/RG174/RG316	Gold	Nickel	A02	

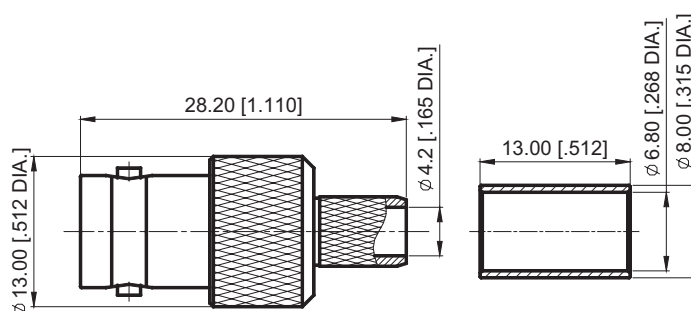
> Cable entry crimp



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
10-02-1M18-020	LMR195/RG58	Gold	Nickel	A03	

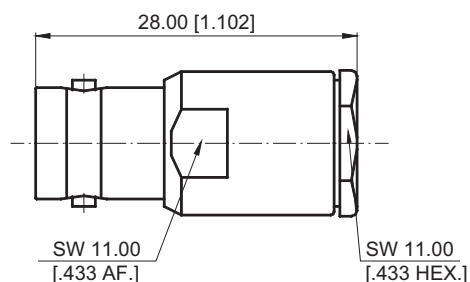
> Cable entry crimp

> Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
10-02-4M18-021	LMR195/RG58	Gold	Nickel	A05	

> Cable entry clamp



CABLE CONNECTORS

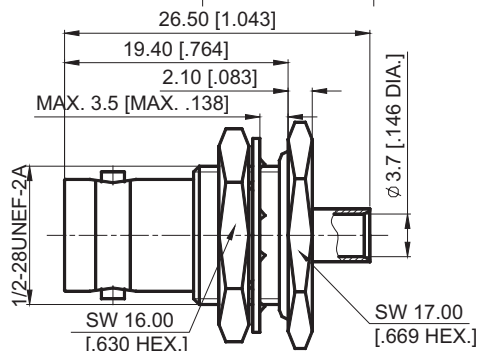


Straight bulkhead cable jacks (female)



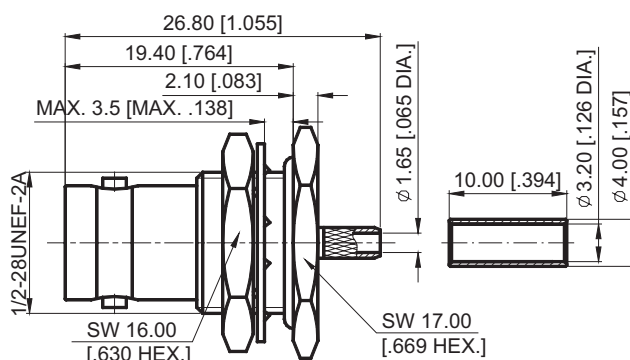
P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
10-02-2M06-022	Semi-rigid .141/RG402	Gold	Nickel	A01	M01

- > Cable entry solder
- > Centre contact soldered



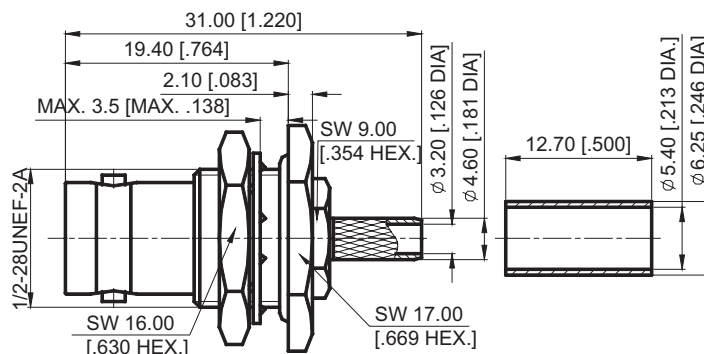
P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
10-02-1C04-023	LMR100/RG174/RG316	Gold	Nickel	A02	M01

- > Cable entry crimp



P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
10-02-1C18-024	LMR195/RG58	Gold	Nickel	A03	M01

- > Cable entry crimp
- > Centre contact soldered



CABLE CONNECTORS

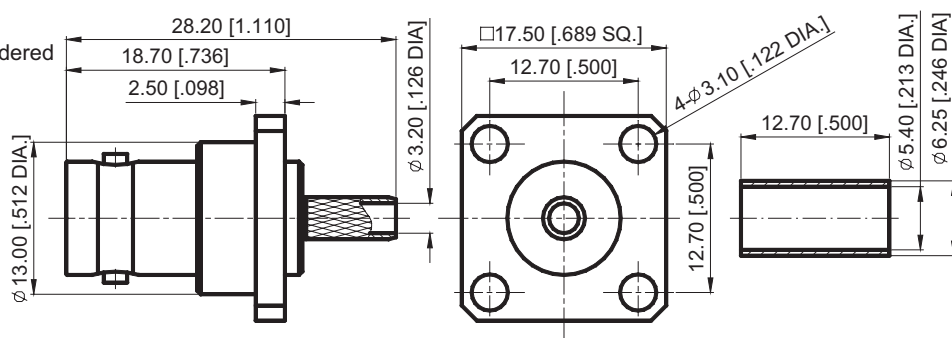


Straight panel cable jacks (female)



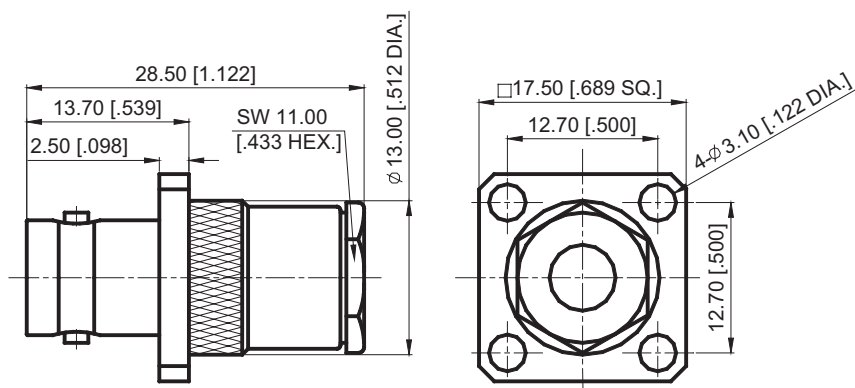
P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
10-02-1F18-025	LMR195/RG58	Gold	Nickel	A03	M02

- > Cable entry crimp
- > Centre contact soldered



P/N	Cable Type	Finish		Assembly Instruction	Mount Hole
		Center	Body		
10-02-4F04-026	LMR100/RG174/RG316	Gold	Nickel	A05	M02

- > Cable entry clamp



RECEPTACLES WITH SOLDER END



Receptacles, jacks (female)



P/N	Mount Hole	Finish		Notes
		Center	Body	

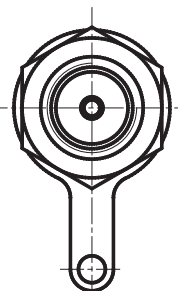
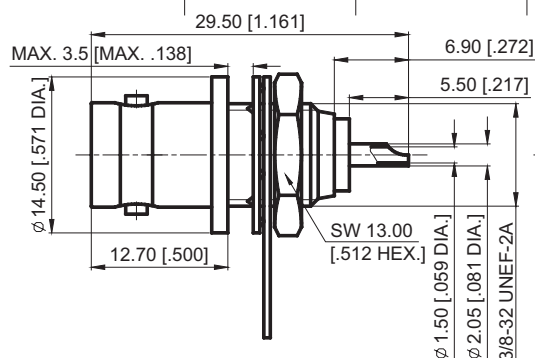
10-02-8A1-027

M03

Gold/Silver

Nickel

> Bulkhead mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	

10-02-8A1-028

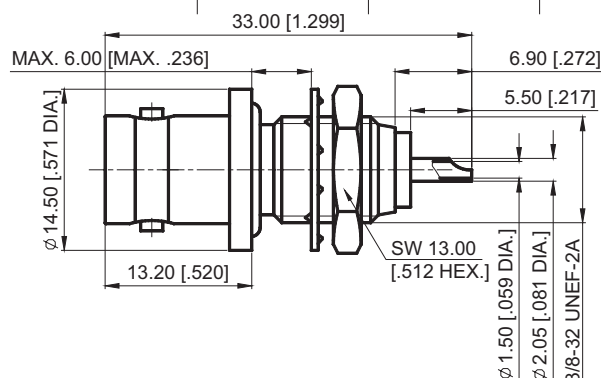
M03

Gold/Silver

Nickel

With panel seal

> Bulkhead mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	

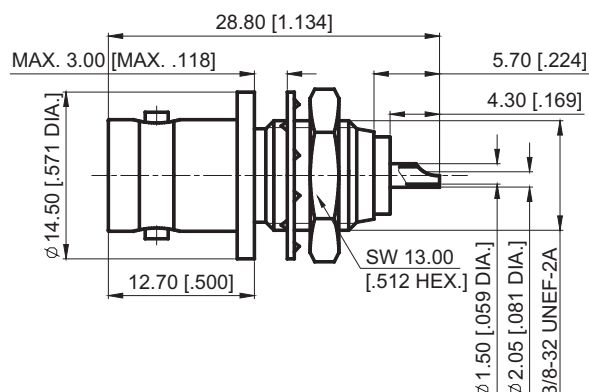
10-02-8A1-029

M03

Gold

Nickel

> Bulkhead mounted



RECEPTACLES WITH SOLDER END

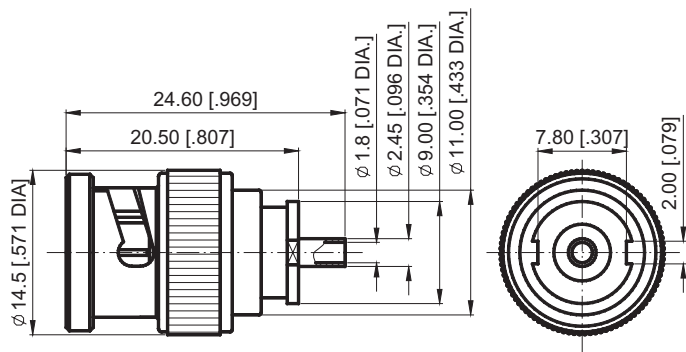


Receptacles, plugs (male)



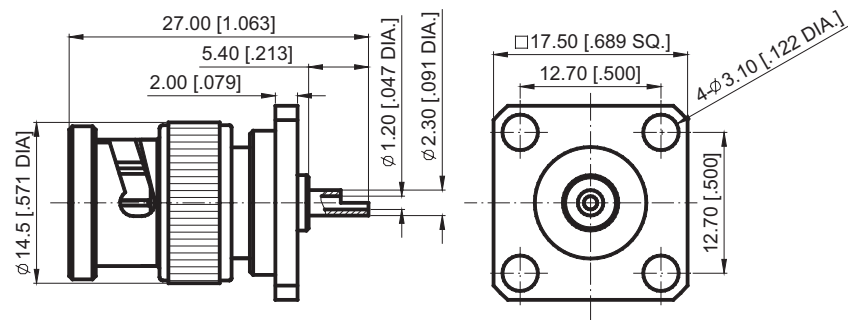
P/N	Mount Hole	Finish		Notes
		Center	Body	
10-03-8J1-030	M04	Gold/Silver	Nickel	

> Panel mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	
10-03-8J1-031	M02	Gold/Silver	Nickel	

> Panel mounted



RECEPTACLES WITH SOLDER END



Receptacles, jacks (female)



P/N	Mount Hole	Finish		Notes
		Center	Body	

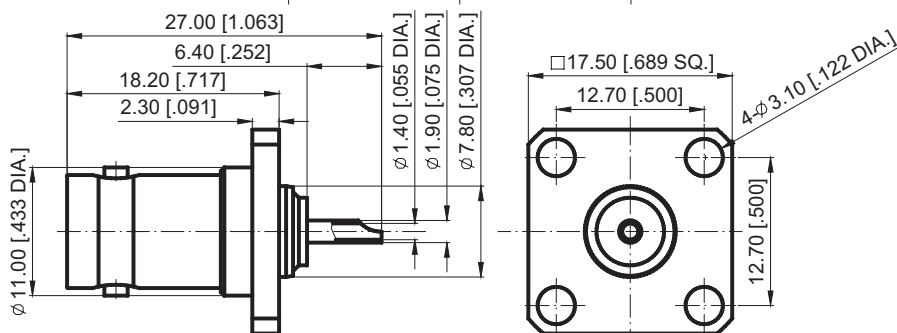
10-02-8F1-044

M02

Gold/Silver

Nickel

> Panel mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	

10-02-8F1-045

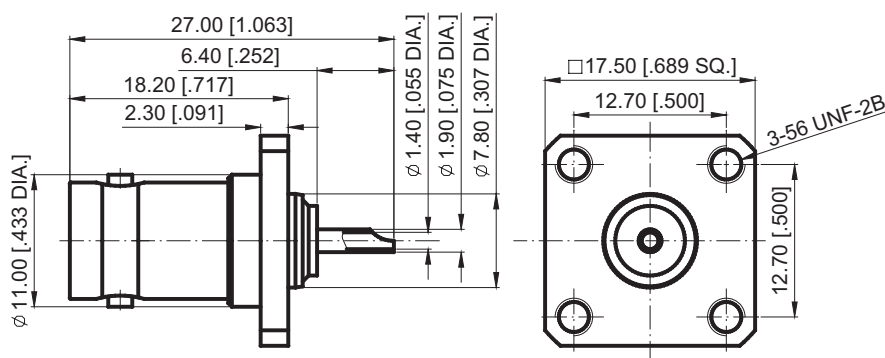
M02

Gold/Silver

Nickel

Also can mounting with screws ISO M2.5

> Panel mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	

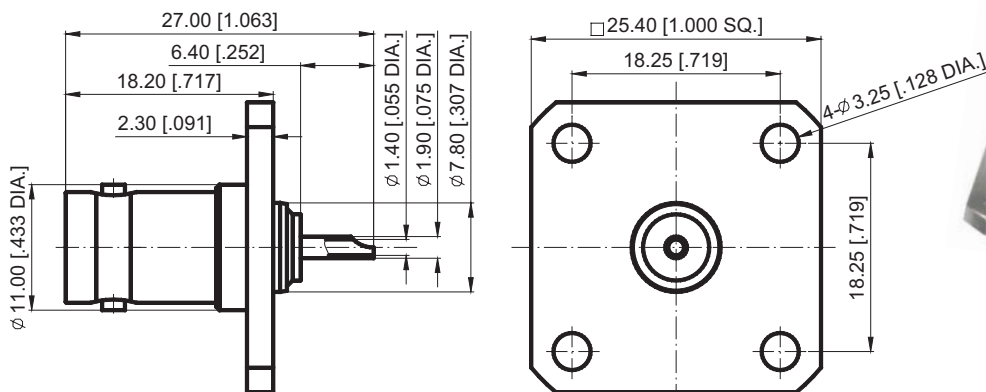
10-02-8F1-046

M05

Gold

Nickel

> Panel mounted



PCB CONNECTORS

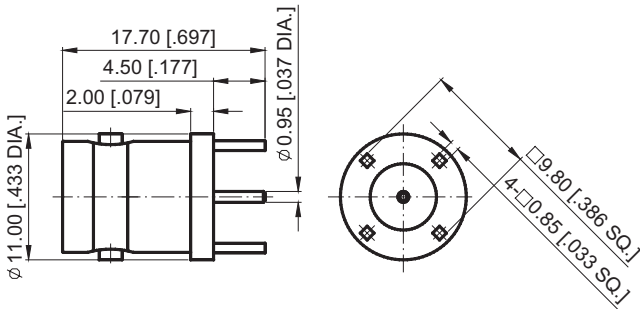


Straight/ Right Angle PCB jacks (female)



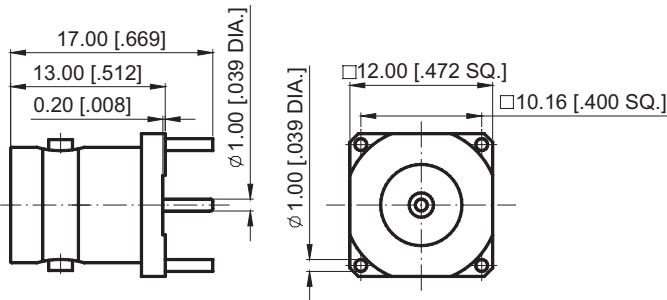
P/N	Mount Hole	Finish		Notes
		Center	Body	
10-02-5M8-032	M06	Gold/Silver	Nickel	

> PCB mounted



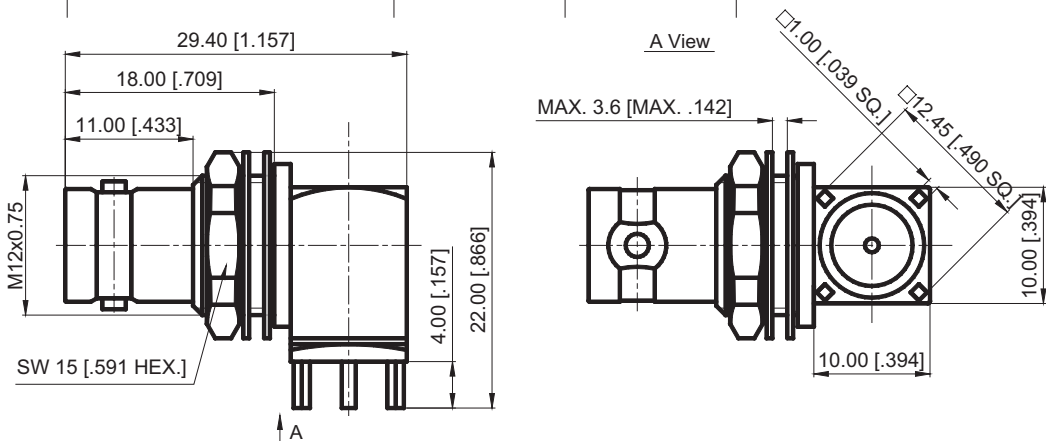
P/N	Mount Hole	Finish		Notes
		Center	Body	
10-02-5M8-033	M07	Gold/Silver	Nickel	

> PCB mounted



P/N	Mount Hole	Finish		Notes
		Center	Body	
10-12-5M8-034	M08	Gold	Nickel	

> PCB mounted



PROTECTIVE CAPS



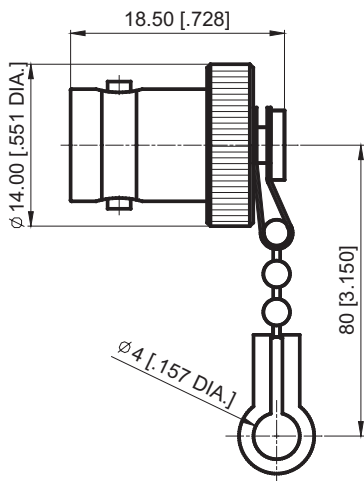
✓ RoHS

P/N	Finish	Notes
-----	--------	-------

10-02-9N-035

Nickel

> Protective cap for plugs (males)

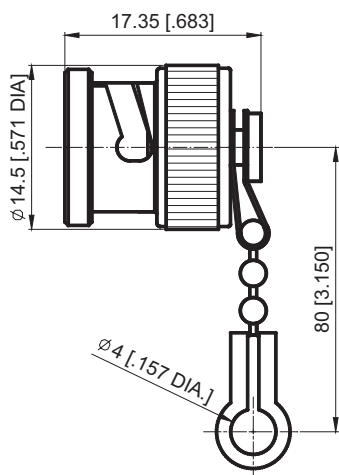


P/N	Finish	Notes
-----	--------	-------

10-03-9N-036

Nickel

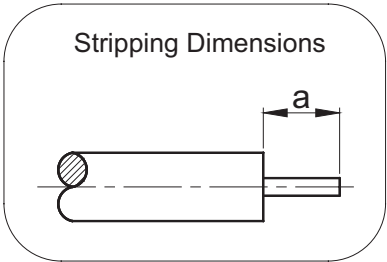
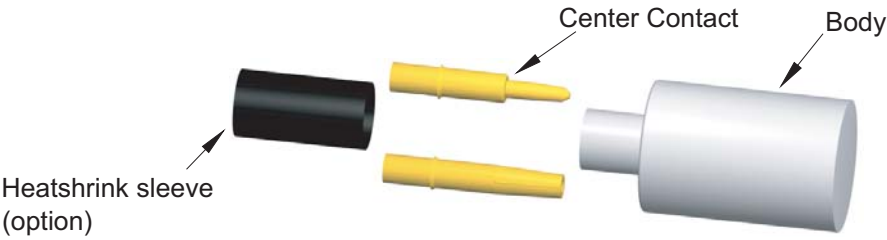
> Protective cap for jacks (females)



ASSEMBLY INSTRUCTIONS



A01



P/N	Cable Type	Stripping Length (mm [in]) a	Notes
10-03-2M06-001	Semi-rigid .141/RG402	4.0 [.157]	
10-03-2M11-002	Semi-rigid .086/RG405	3.5 [.138]	
10-02-2M06-022	Semi-rigid .141/RG402	4.0 [.157]	

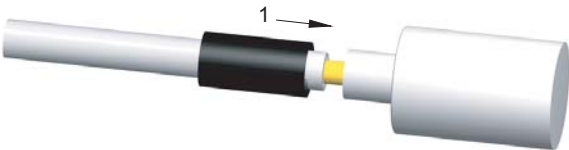
1. • Slide the heatshrink sleeve onto the cable (option).
• Strip the cable as Stripping Dimensions.



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



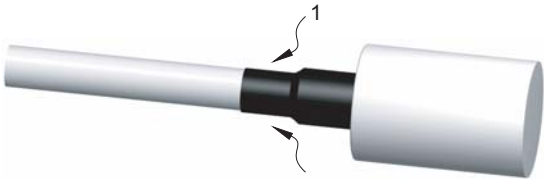
3. • Slide the cable into the body until it stops.



4. • Solder the body onto the cable.



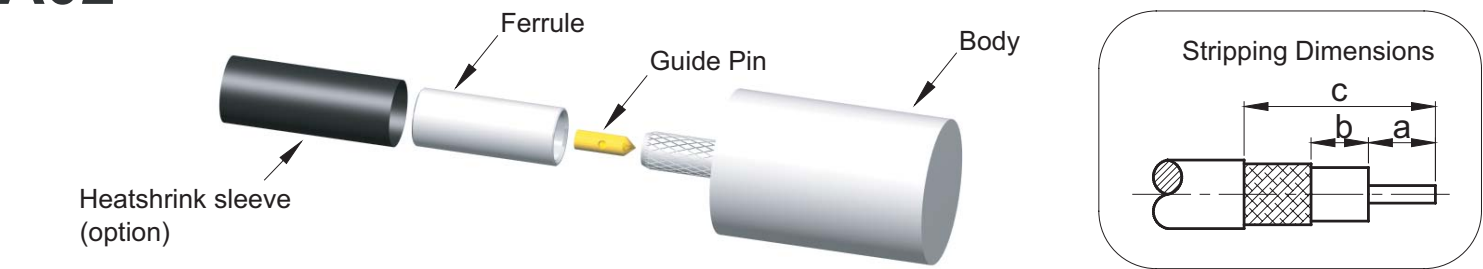
5. • Slide the heatshrink sleeve over the body and heatshrink it in place (option).



ASSEMBLY INSTRUCTIONS



A02



P/N	Cable Type	HEX. Crimp Tool (mm [in])	Stripping Length (mm [in])		
			a	b	c
10-03-1M04-004	LMR100/RG174/RG316	3.25 [.128]	3 [.118]	2.5 [.098]	10.5 [.413]
10-02-1M04-019					
10-02-1C04-023					

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.



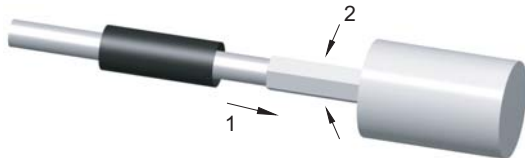
3. • Fan the braid.



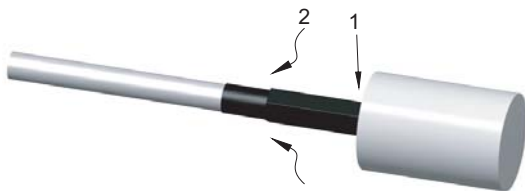
4. • Slide the cable into the body until stops.



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

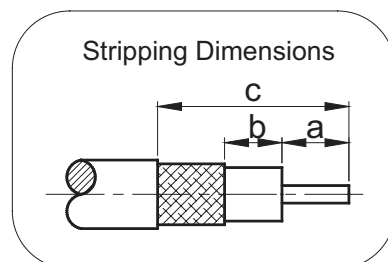
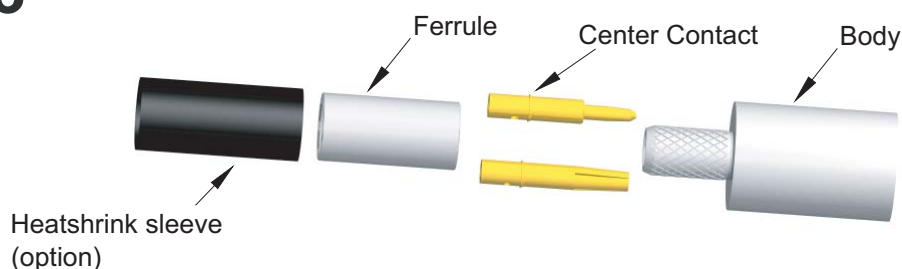


6. • Cut the excess of braid if necessary.
• Slide the sleeve over the ferrule and heatshrink it in place (option).



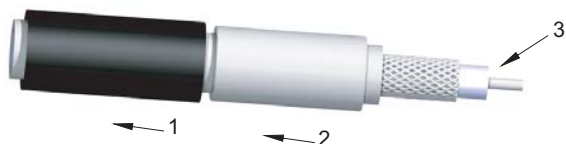
ASSEMBLY INSTRUCTIONS

A03



P/N	Cable Type	HEX. Crimp Tool (mm [in])	Stripping Length (mm [in])		
			a	b	c
10-03-1M18-003	LMR195/RG58	5.41 [.213]	3 [.118]	2 [.079]	10.5 [.413]
10-02-1C18-024			3.5 [.138]	2.5 [.098]	12 [.472]
10-02-1F18-025					
10-02-1M18-020					
10-03-1M10-005	LMR240	6.80 [.268]	3 [.118]	2.5 [.098]	13.5 [.531]
10-03-1M01-006	LMR400	10.9 [.429]	4.5 [.177]		16.5 [.650]

- 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.



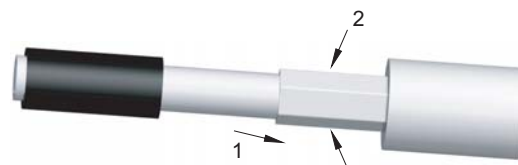
- Fan the braid.



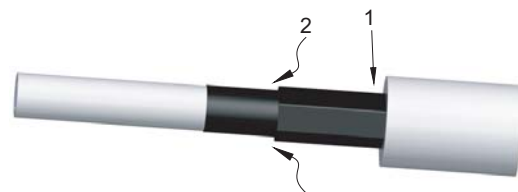
- Slide the cable into the body until stops.



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



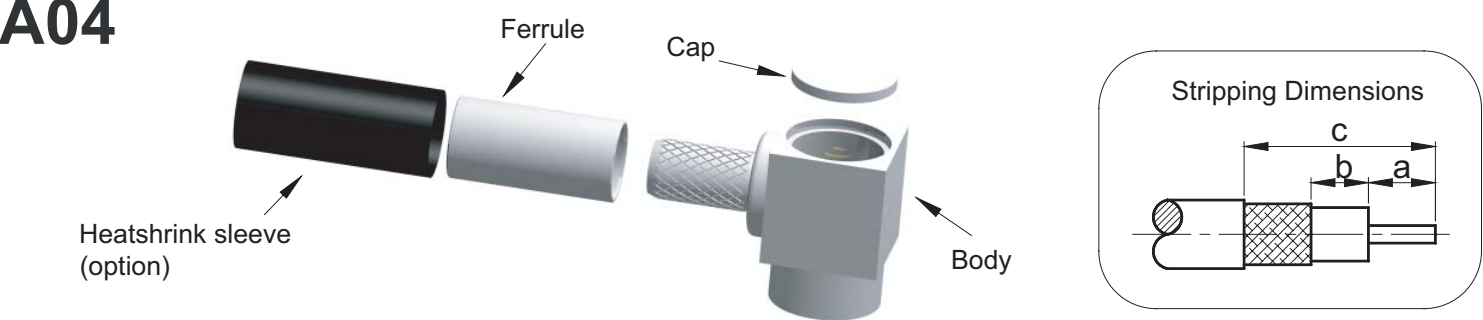
- Cut the excess of braid if necessary.
Slide the sleeve over the ferrule and heatshrink it in place (option).



ASSEMBLY INSTRUCTIONS



A04



P/N	Cable Type	HEX. Crimp Tool (mm [in])	Stripping Length (mm [in])		
			a	b	c
10-13-1M04-015	LMR100/RG174/RG316	3.25 [.128]	1.5 [.059]	3 [.118]	13 [.512]
10-13-1M18-016	LMR195/RG58	5.41 [.213]	2 [.079]	3.5 [.138]	16 [.630]

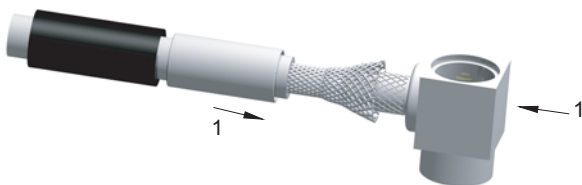
1. • Slide the heatshrink sleeve onto the cable (option).
• Slide the ferrule onto the cable.
• Strip the cable as Stripping Dimensions.



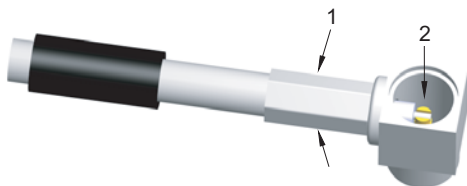
2. • Fan the braid.



3. • Push the body under the braid.
• Slide the ferrule over the braid.



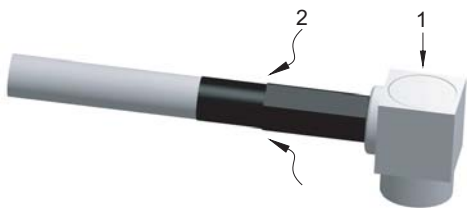
4. • Crimp the ferrule with crimping tool (see table).
• Solder the inner conductor.



5. • Place the cap into the body.



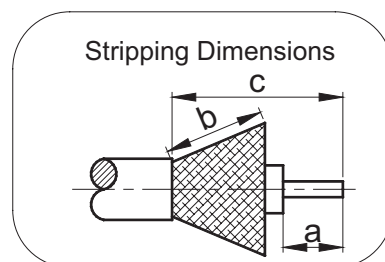
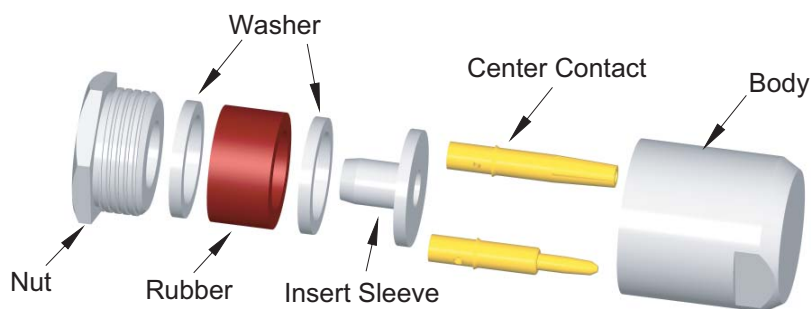
6. • Press on the cap until stops.
• Slide the sleeve over the ferrule and heatshrink it in place (option).



ASSEMBLY INSTRUCTIONS

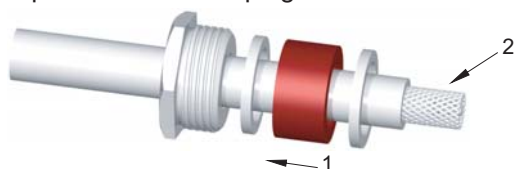


A05

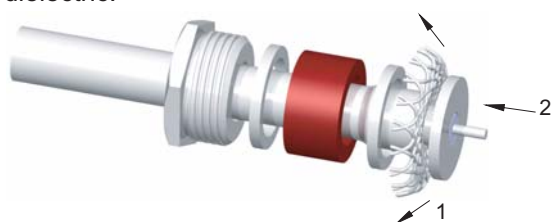


P/N	Cable Type	Stripping Length (mm [in])			Recommended Coupling Torque
		a	b	c	
10-03-4M04-011	LMR100/RG174/RG316	3 [.118]	5 [.197]	5 [.197]	450N·cm
10-02-4F04-026					
10-03-4M18-012	LMR195/RG58				
10-02-4M18-021					
10-03-4M09-013	RG214	3.5 [.138]	8 [.315]	8 [.315]	

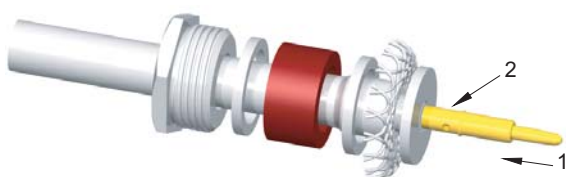
- Slide the nut, the washer, the rubber and another washer onto the cable.
- Strip the cable as Stripping Dimensions.



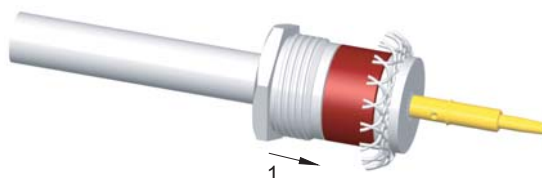
- Fold the braid back.
- Insert the insert sleeve into the cable (under the braid) until the back surface flush with the cable dielectric.



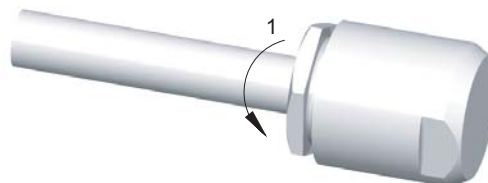
- Slide the center contact on until it bottom against the cable dielectric.
- Solder the center contact.



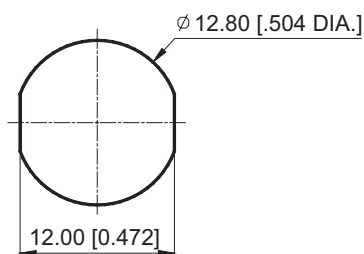
- Slide the nut over the cable assembly.



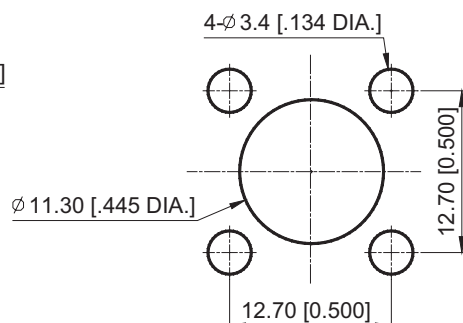
- Screw sub-assembly into the body with wrench, recommended coupling torque see table.



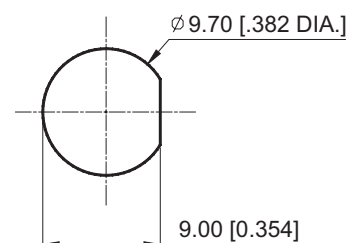
MOUNTING HOLES



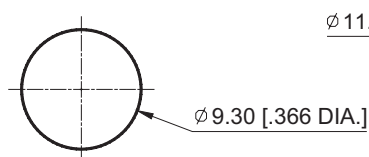
M01



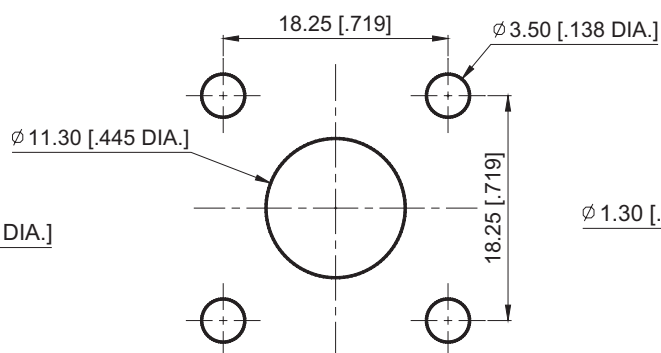
M02



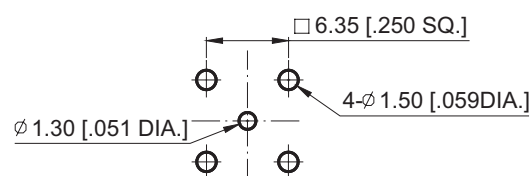
M03



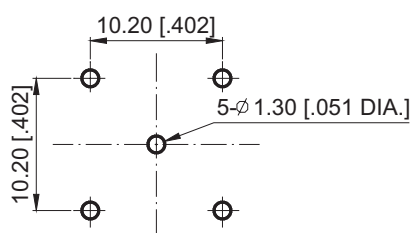
M04



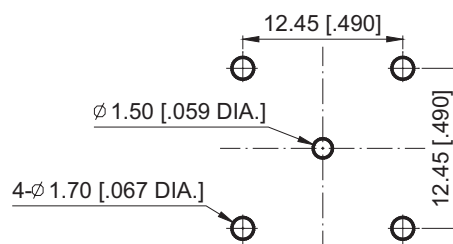
M05



M06



M07



M08