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# Series 7/16 Coaxial Connectors



## DESCRIPTION

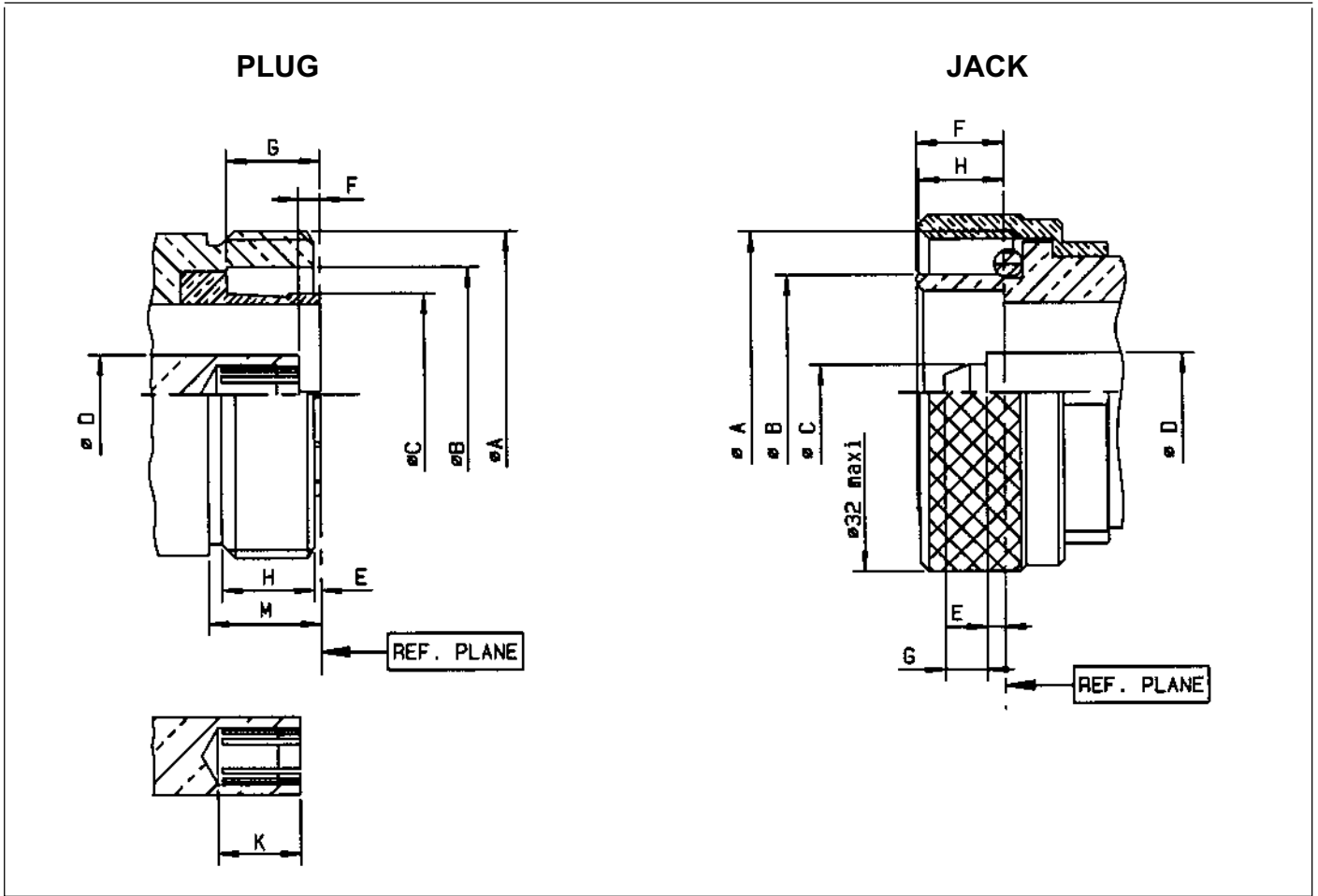
The 7/16 series name comes from the metric dimensions of the connector interface: 7mm OD of inner contact, 16 mm ID of outer contact. 7/16 connectors are designed for use in communications systems with power levels of 100 watts per channel. RF coaxial connectors are the most important element in the cable system.

They can be applied to the connection with RF Coaxial Cables in RF circuits of communication equipment and electronic instruments, and can be interchangeable with those that meet the specification of IEC169-4.

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# Type 7/16 INTERFACE



LETTER	mm		inch	
	min.	max.	min.	max.
A DIA	M29 x 1.5		M29 x 1.5	
B DIA	22.5	22.7	.885	.893
C DIA	17.9	17.96	.704	.707
D DIA	6.95	7	.273	.275
E	0.5	0.7	.019	.027
F	1.77	2.07	.069	.081
G	8.2	8.4	.322	.330
H	8.25	8.75	.324	.344
K	7.25	7.55	.285	.297

LETTER	mm		inch	
	min.	max.	min.	max.
A DIA	M29 x 1.5		M29 x 1.5	
B DIA	20.8	21	.818	.826
C DIA	4.97	5.03	.195	.198
D DIA	6.95	7	.273	.275
E	1.47	1.77	.057	.069
F	7.4	7.8	.291	.307
G	3.6	4	.141	.157
H	7.3	7.8	.287	.307

Interface dimensions conformable to the standards:

International: IEC 61169-4  
 Europe: CECC 22190  
 Germany: DIN 47223, VG 95250

IP rating (interface, mated) IP68

# TECHNICAL DATA



ELECTRICAL DATA	
Impedance	50 Ohm
Frequency range	DC 0 — 7.5 GHz
Dielectric withstanding voltage	2,700 volts rms
V.S.W.R.	straight connectors: 1.2 max 0-5 GHz; right angle connectors: 1.25 max 0-5 GHz
Insulation resistance	$\geq 5 \times 1000 \text{ M}\Omega$
Contact resistance	Center Contact 0.4 m $\Omega$ Outer Contact 1.5 m $\Omega$
RF leakage	$\geq 128 \text{ dB}$

MECHANICAL DATA	
Mating	M29x1.5 threaded coupling
Connector Durability (matings)	$\geq 500$

MATERIAL DATA	
Body and Outer Contacts	Brass per ASTM-B16, silver or white bronze plated
Insulator	PTEF PER ASTM-D1457
Gasket	Silicone rubber (weatherproof), ZZ-R-75
Protective Coating	Clear chromate (on silver plating)

ENVIRONMENTAL	
Temperature Range	TFE: -65°C to +165°C
Mechanical Shock	IEC 68, part 2-27
Immersion	IEC 529, IP68
Corrosion	IEC68
Vibration	IEC68

# CABLE CONNECTORS

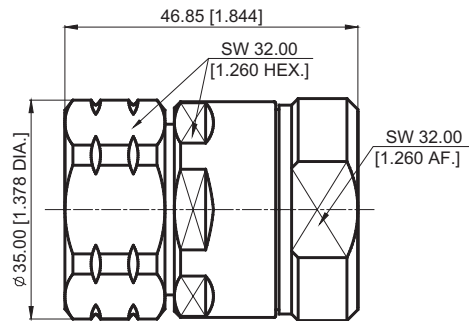


## Straight cable plugs (male)



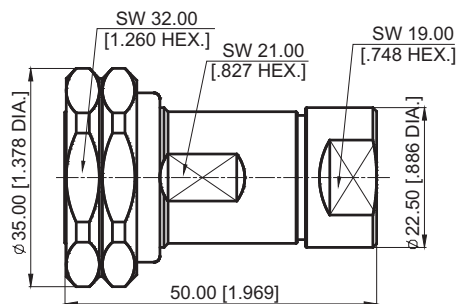
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-03-4M25-001	7/8" RF Cable	Sliver	Albaloy/Nickel	A01	

- > Cable entry clamp
- > Centre contact plugged



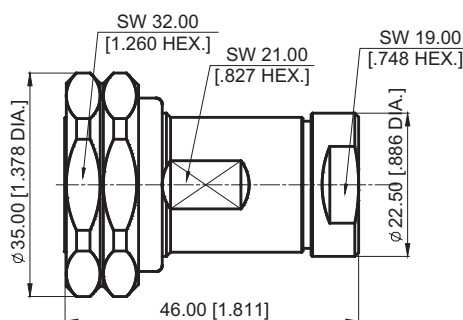
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-03-4M26-002	1/2" RF Cable	Sliver	Albaloy/Nickel	A02	

- > Cable entry clamp
- > Centre contact plugged



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-03-4M26-003	1/2" Super Flexible RF	Sliver	Albaloy/Nickel	A03	

- > Cable entry soldered
- > Centre contact plugged



# CABLE CONNECTORS

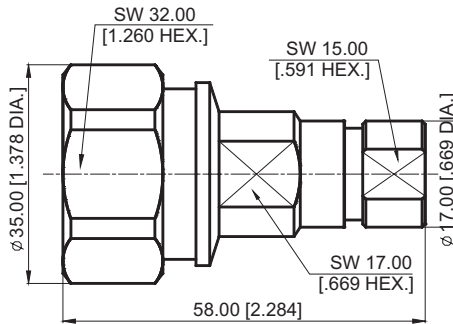


## Straight cable plugs (male)



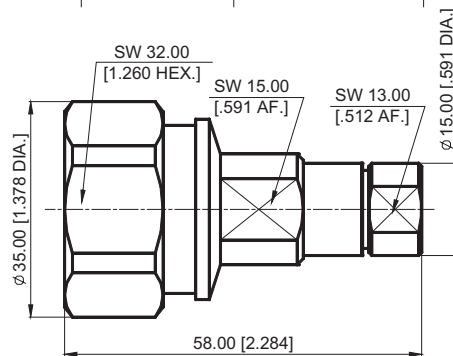
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-03-4M24-004	1/4" RF Cable	Sliver	Albaloy/Nickel	A02	

- > Cable entry clamp
- > Centre contact plugged



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-03-4M24-005	1/4" Super Flexible RF	Sliver	Albaloy/Nickel	A03	

- > Cable entry clamp
- > Centre contact plugged



# CABLE CONNECTORS

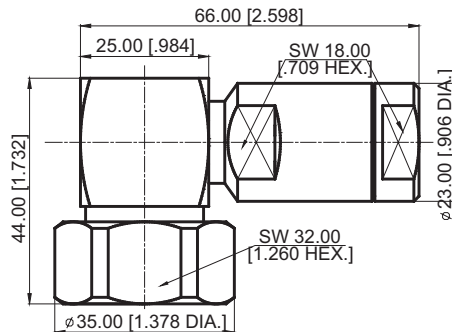


## Right angle cable plugs (male)



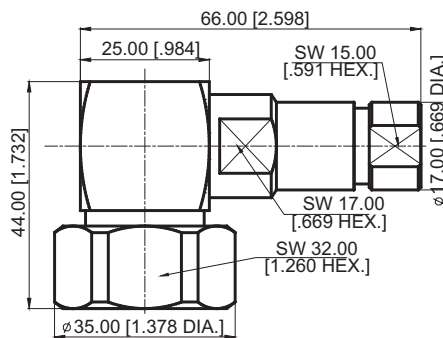
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-13-4M26-006	1/2" RF Cable	Silver	Albaloy/Nickel	A02	

- > Cable entry clamp
- > Centre contact plugged



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-13-4M24-007	1/4" RF Cable	Gold	Albaloy/Nickel	A02	

- > Cable entry clamp
- > Centre contact plugged



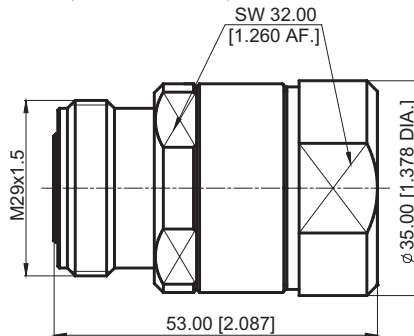
# CABLE CONNECTORS



## Straight cable jacks (female)

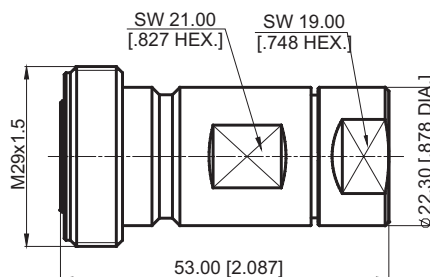
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-02-4M25-008	7/8" RF Cable	Sliver	Albaloy/Nickel	A01	

- > Cable entry clamp
- > Centre contact plugged



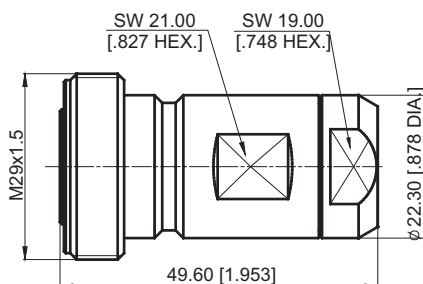
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-02-4M26-009	1/2" RF Cable	Sliver	Albaloy/Nickel	A02	

- > Cable entry clamp
- > Centre contact plugged



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-02-4M26-010	1/2" Super Flexible RF	Sliver	Albaloy/Nickel	A03	

- > Cable entry clamp
- > Centre contact plugged





# CABLE CONNECTORS

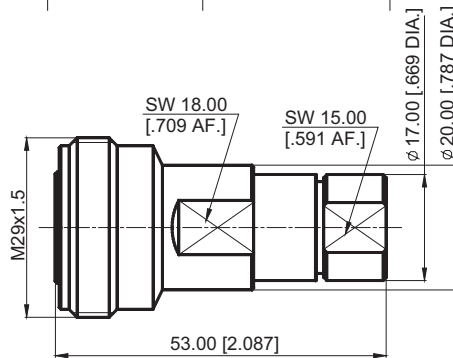


## Straight cable jacks (female)



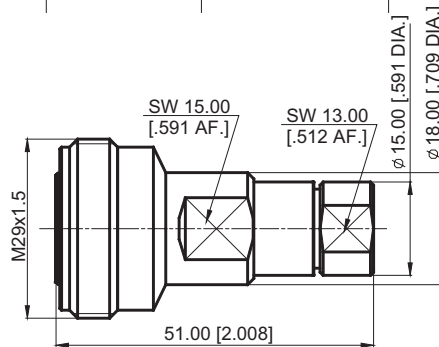
P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-02-4M24-011	1/4" RF Cable	Sliver	Albaloy/Nickel	A02	

- > Cable entry clamp
- > Centre contact plugged



P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-02-4M24-012	1/4" Super Flexible RF	Sliver	Albaloy/Nickel	A03	

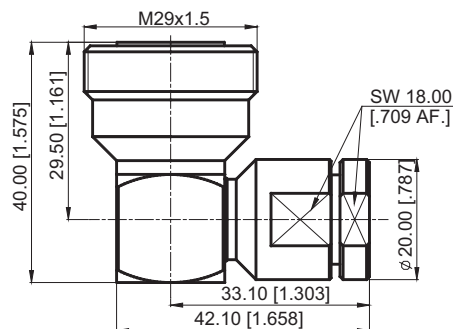
- > Cable entry clamp
- > Centre contact plugged



## Right Angle cable jacks (female)

P/N	Cable Type	Finish		Assembly Instruction	Notes
		Center	Body		
94-12-4M24-013	1/4" RF Cable	Sliver	Albaloy/Nickel	A02	

- > Cable entry clamp
- > Centre contact plugged



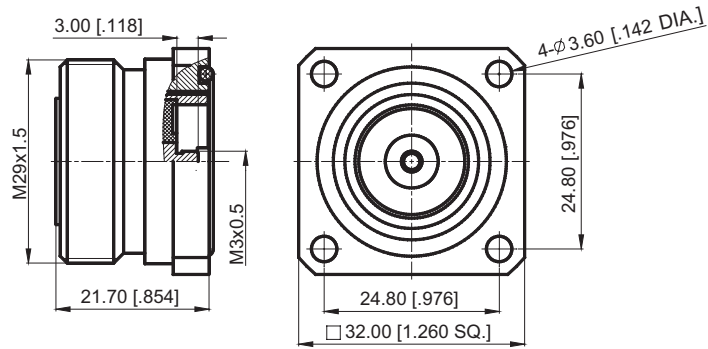
# RECEPTACLES CONNECTORS



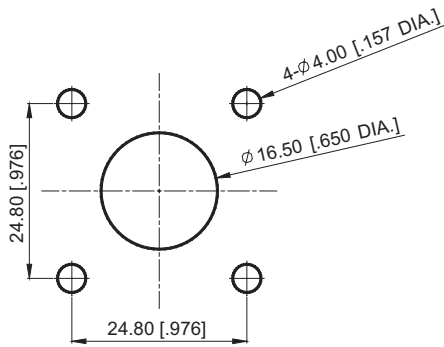
Receptacles, jacks(female)



P/N	Mount Hole	Finish		Notes
		Center	Body	
94-02-8F8-014	M01	Silver	Albaloy/Nickel	



## MOUNTING HOLES

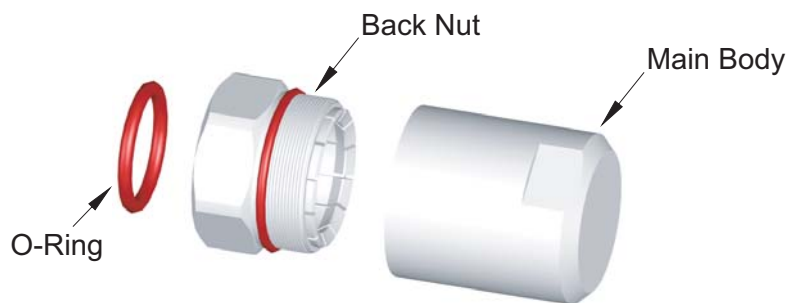


M01

# ASSEMBLY INSTRUCTIONS

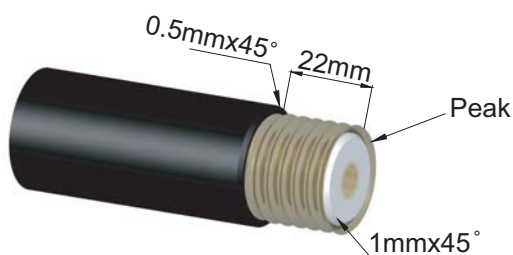


## A01

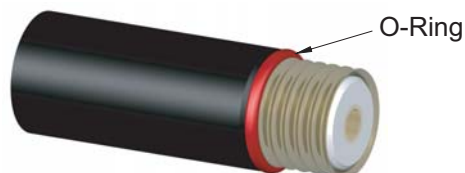


P/N	Cable Type	Stripping Length (mm [in])	Recommended Coupling Torque
94-03-4M25-001	7/8" RF Cable	See Figure	800N·cm
94-02-4M25-008			

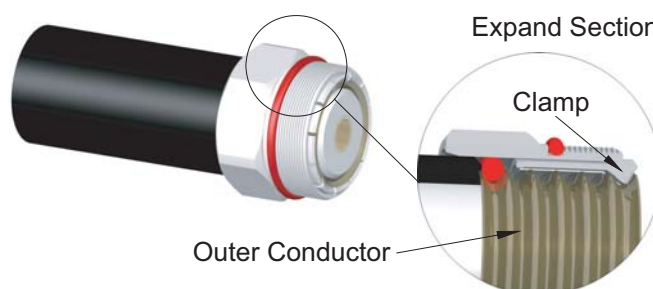
- Stripping dimensions as shown, Several problems should be paid attention in stripping:
    - The end of the outer conductor's stripping should be on the wave peak.
    - The end surface of the dielectric should be chamfered to  $1\text{mm} \times 45^\circ$ .
    - Removing the burr at the inner conductor's inside lip
    - The end of the jacket surface should be chamfered to  $0.5\text{mm} \times 45^\circ$ .
    - Removing impurities such as copper scale and burr at the end of the cable surface.



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



- 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.



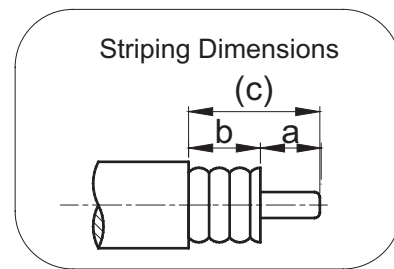
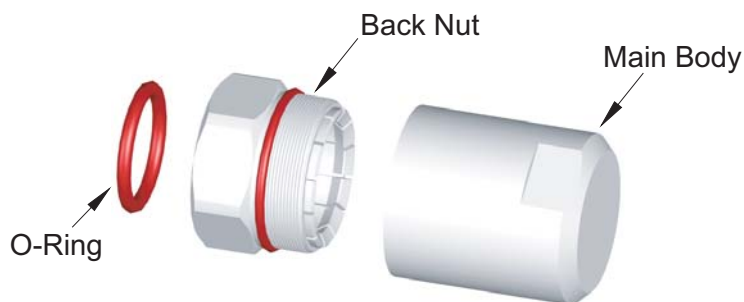
- Combine the main body and back nut by screwing as shown.
  - Keep the back nut and the cable motionless, then tighten the main body and back nuts with a wrench.



# ASSEMBLY INSTRUCTIONS

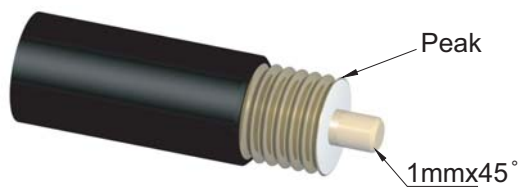


## A02

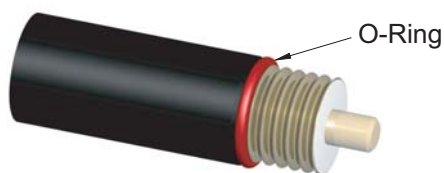


P/N	Cable Type	Stripping Length (mm [in])			Recommended Coupling Torque
		a	b	c	
94-03-4M26-002	1/2" RF Cable	10 [.394]	15 [.591]	25 [.984]	800N·cm
94-13-4M26-006					
94-02-4M26-009					
94-03-4M24-004	1/4" RF Cable	8 [.315]	12 [.472]	20 [.787]	
94-13-4M24-007					
94-02-4M24-011					
94-12-4M24-013					

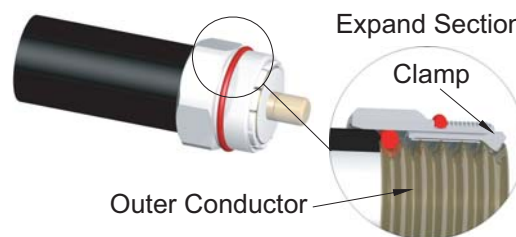
- Stripping dimensions as table, Several problems should be paid attention in stripping:
    - (a) The end of the outer conductor's stripping should be on the wave peak.
    - (b) Inner conductor should be chamfered to 1mmx45°.
    - (c) Removing impurities such as copper scale and burr at the end of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



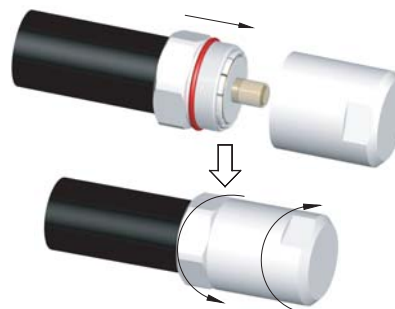
- Put the O-ring in the trough of the cable as shown.



- 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.



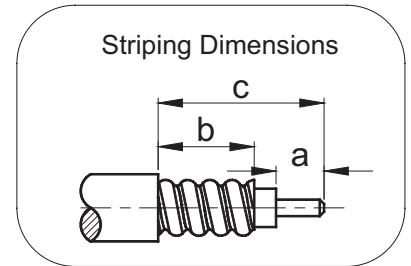
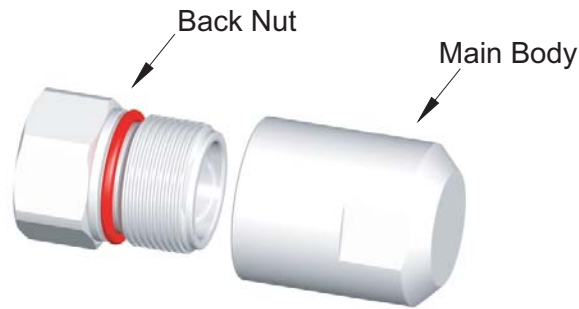
- Combine the main body and back nut by screwing as shown.
  - Keep the back nut and the cable motionless, then tighten the main body and back nuts with a wrench.



# ASSEMBLY INSTRUCTIONS



## A03

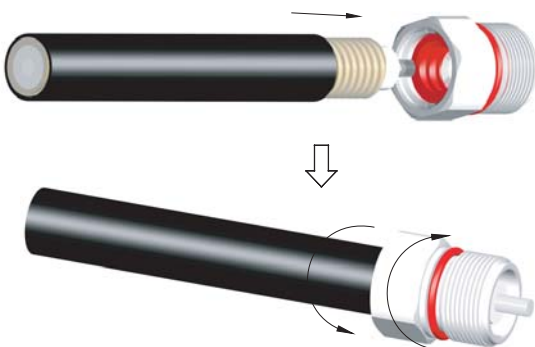


P/N	Cable Type	Stripping Length (mm [in])			Recommended Coupling Torque
		a	b	c	
94-03-4M26-003	1/2" Super Flexible RF	7 [.276]	15 [.591]	27 [1.063]	800N·cm
94-02-4M26-010					
94-03-4M24-005	1/4" Super Flexible RF	8 [.315]	9 [.354]	19 [1.063]	
94-02-4M24-012					

- Stripping dimensions as table, Several problems should be paid attention in stripping:
  - (a) Do not damage the outer conductor.
  - (b) Deburr cable inner conductor.



- Screw manually the back nut onto the cable outer conductor until stop.



- Combine the main body and back nut by screwing as shown, then tighten the main body and back nut with a wrench.

