Description

Amphenol offers standard and weatherproof F connectors for regular and quadshield versions of all popular cable types. The weatherproof connectors available today are expensive and require special boots, tools and installation methods. The lower cost weather-resistant alternatives utilize silicon gel as the water barrier and fail to pass the SCTE water immersion test. Amphenol meets the industry's needs by providing a cost-effective weatherproof connector which meets SCTE's stringent water immersion test.

Background

The standard hexagonal crimp F connector has been the staple product used in cable drop applications for years. The basic design has changed very little over its 40 year existence. In the 1990s, the introduction of weatherproof drop fittings made their mark by promising reduced system maintenance and service calls, resulting in better customer service. These connectors also provided better shielding properties to prevent signal leakage, which is regulated by the FCC. A less reliable alternative to the weatherproof connector is the weather resistant connector. These connectors use standard hex crimp tools but fill the connectors with silicone gel as a water barrier. These connectors do not pass the SCTE immersion test but do offer more protection than a standard connector. These connectors were roughly two times the cost of traditional F fittings.

Amphenol's Weatherseal connector uses a round crimp to seal the cable/connector interface and two O-rings to seal the nut/collar and port interfaces. The round crimp prevents water migration at the cable/connector interface. The crimp is achieved using standard round crimp tools. These tools can be purchased from Amphenol, major CATV distributors or direct from the tool manufacturer. The nut and port interface are sealed using two polyethylene O-rings. No additional boots, grease, nuts or heat shrink is necessary, thus eliminating the need for specialized installation procedures. With Amphenol's drop connectors, all the installer needs to do is prepare the cable, push the connector on, and crimp for a reliable weatherproof connection.

Features/Benefits

- Available for all popular drop cable types: RG 59, 6, 7 and 11 series.
- One piece - for easy, low cost installation.
- Weatherproof - both at cable attachment and at mating face - no additional sleeves or sealing compounds needed - mating face seal built in.
- Excellent cable retention - 40 lb. minimum pull-off force.
- Designed and manufactured to meet or exceed BELLCORE (TA-NWT-001503) and SCTE specifications. Meets SCTE water immersion test.
- Economic alternative to compression type designs. Inexpensive installation tooling.

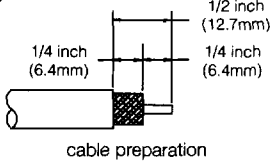
Type F

SPECIFICATIONS

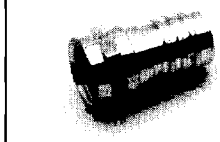
Impedance:	75 ohms
Frequency Range:	DC - 3 GHz
RF Leakage:	-100 dB min. @ 1 GHz
Temperature Range:	-40°F to -140°F (-40°C to +60°C)
Weatherproof:	At cable attachment and at mating face, with built in mating face seal
Coupling Nuts and Bodies:	Brass

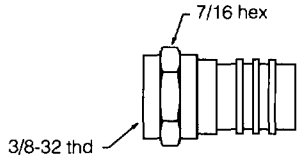
Plating:	Crimp ring: Nickel Coupling nuts: ASTROPLATE®
Mating:	3/8-32 threaded coupling
Mating Torque:	20 in.-lb. recommended
Cable Attachment:	Radial braid-crimp
Cable Retention:	40 lb. min.

Fig. 1



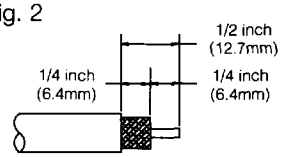
cable preparation



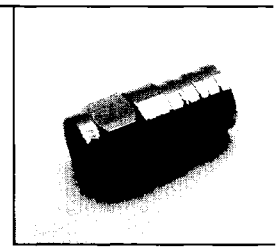


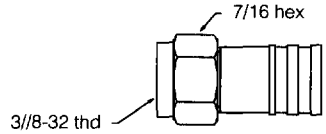
Standard F Feedthru
531-F59R **531-F6R**
531-F59Q **531-F6Q**

Fig. 2



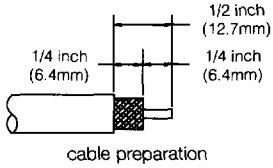
cable preparation



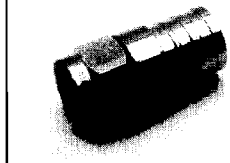


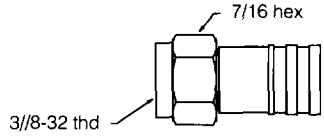
Weatherseal F Feedthru
531-WF59R
531-WF59Q

Fig. 3



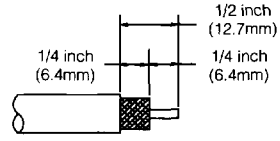
cable preparation



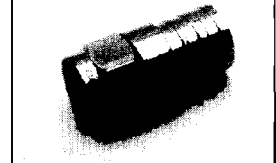


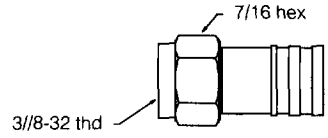
Weatherseal F Feedthru
531-WF6R
531-WF6Q

Fig. 4



cable preparation

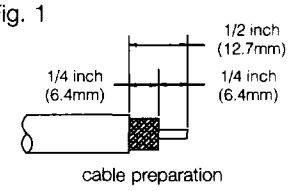


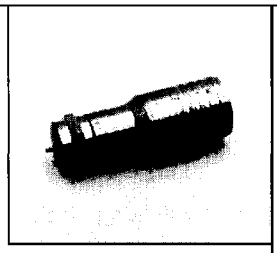


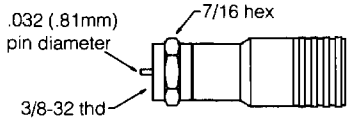
Weatherseal F Feedthru
531-WF7R
531-WF7Q

Amphenol Number	Connector Description	Cable Type	Plating	Crimp Tool	Fig
531-F59R **531-F59Q**	Standard male CATV-F connector with weatherproof braid-crimp cable attachment	59 Series CATV coaxial cables	Astroplate®	CR-596QL (.324 hex)	1
531-F6R **531-F6Q**		6 Series CATV coaxial cables	Astroplate®	CR-596QL (.360 hex)	
531-WF59R **531-WF59Q**	Male CATV-F connector with weatherproof braid - crimp cable attachment	59 Series CATV coaxial cables	Astroplate®	531-CR596R	2
531-WF6R **531-WF6Q**	Male CATV-F connector with weatherproof braid - crimp cable attachment	6 Series CATV coaxial cables	Astroplate®	531-CR596R	3
531-WF7R **531-WF7Q**	Male CATV-F connector with weatherproof braid - crimp cable attachment	7 Series CATV coaxial cables	Astroplate®	531-CR711R	4

Fig. 1

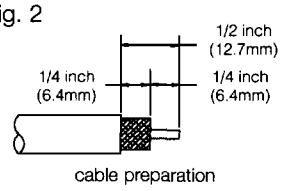


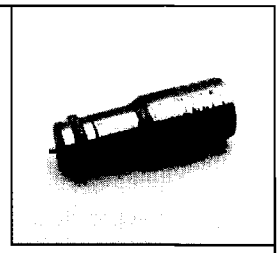


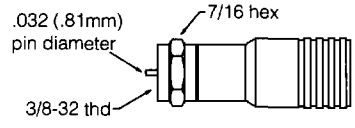


Standard F Pin
531-F7RP
531-F7QP

Fig. 2

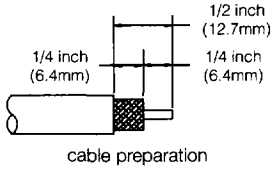


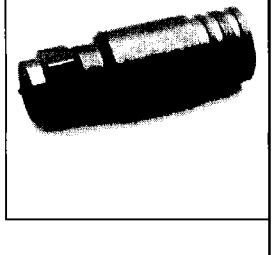


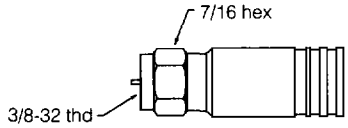


Standard F Pin
531-F11RP
531-F11QP

Fig. 3

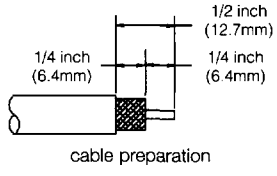


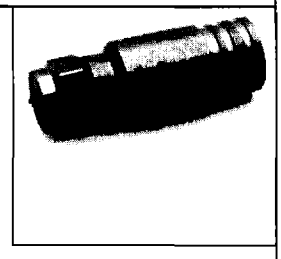


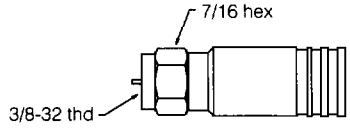


Weatherseal F Pin
531-WF7RP
531-WF7QP

Fig. 4



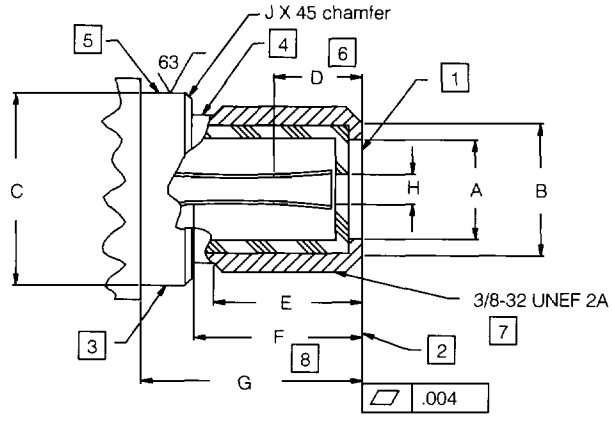




Weatherseal F Pin
531-WF11RP
531-WF11QP

Amphenol Number	Connector Description	Cable Type	Plating	Crimp Tool	Fig
531-F7RP **531-F7QP**	Male CATV-F pin connector with weatherproof braid - crimp cable attachment	7 Series CATV coaxial cables	Astroplate®	531-CR7 (.410 hex)	1
531-F11RP **531-F11QP**	Male CATV-F pin connector with weatherproof braid - crimp cable attachment	11 Series CATV coaxial cables	Astroplate®	531-CR11 (.475 hex)	2
531-WF7RP **531-WF7QP**	Male CATV-F pin connector with weatherproof braid - crimp cable attachment	7 Series CATV coaxial cables	Astroplate®	531-CR711R	3
531-WF11RP **531-WF11QP**	Male CATV-F pin connector with weatherproof braid - crimp cable attachment	11 Series CATV coaxial cables	Astroplate®	531-CR711R	4

IPS-SP-400
Recommended "F" Port

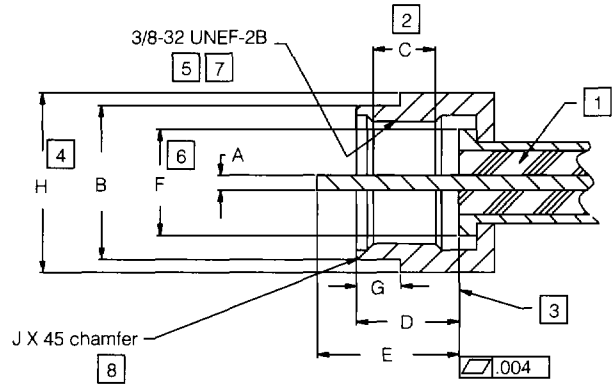


Description	DIM	mm		in		Notes
		min	max	min	max	
Face opening inner diameter	A	4.32	6.10	.170	.240	
Face outer diameter	B	7.11	8.00	.280	.315	
Base outer diameter	C	9.40	11.05	.370	.435	
Center conductor contact to face length	D	—	5.08	—	.200	6
Port threaded length	E	8.26	8.89	.325	.350	
Center contact depth	F	9.65	—	.380	—	8
Sealing surface to face length	G	12.07	13.21	.475	.520	
Center conductor guide inner diameter	H	—	1.73	—	.068	
Chamfer break	J	0.25	0.76	.010	.030	

NOTES:

1. Dielectric must not protrude beyond reference plane after installation
2. Reference plane after installation on standard port tightened to 30 inch lbs and removed
3. No castin glines permitted
4. Thread relief not to exceed 1 full thread
5. Finish required for port seal ring
6. Dimension to point of positive contact of terminal
7. ANSI specification B1.1 (major dia 0.368/0.374)
8. Limit of clearance for maximum center conductor
9. Recommended center conductor 0.0513 in maximum

IPS-SP-401
Recommended "F" Plug



Description	DIM	mm		in		Notes
		min	max	min	max	
Cable center conductor diameter	A	0.56	1.07	.022	.042	
Nut outer diameter	B	10.41	11.05	.410	.435	
Nut threaded length	C	—	—	—	—	2
Mandrel face depth to nut leading edge	D	4.45	6.10	.175	.240	
Center conductor to mandrel face length	E	6.35	9.53	.250	.375	
Mandrel face outer diameter	F	7.11	—	.280	—	6
Nut to dealing sleeve interface length	G	1.78	4.45	.070	.175	
Maximum envelope dimension	H	—	12.90	—	.508	4
Chamfer break	J	—	0.25	—	.010	8

NOTES:

1. Dielectric must not protrude beyond reference plane
2. Minimum 4 threads
3. Reference plane after installation on standard port, tightened to 30 inch pounds and removed
4. Maximum envelope dimension
5. Maximum 1 thread lead-in
6. Minimum diameter of reference plane
7. ANSI specification B1.1
8. Radius optional
9. Connectors must withstand a minimum torque of 60 inch pounds without damage per IPS-TP-400