



Seal-Connect® Fiber Optic Connectors Catalog

FC AND ST DRY™ AND FC AND ST DRY™ HP SERIES

BEGIN >

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Connectors

Adapters

Bulkhead Feedthrough

Fiber Optic Cable,
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Assemblies

Dust Caps

Fiber Optic Extreme

Connectors

The FC connectors use a threaded position keyed coupling connection while the ST connectors feature a bayonet twist-lock (j-slot) connection. These connections, combined with the precision-machined zirconia ferrule/alignment sleeve, ensure perfectly reproducible termini alignment every time. When used with an FC adapter, ST adapter, or Permanent Bulkhead Feedthrough (PBF) respectively, the result is a hermetically sealed connection protected from wet environments and particulates that can irreversibly degrade optical fiber.

The DRY™ HP Series is intended for use in harsh environments where the assemblies are likely to be submerged in water or subjected to rain, ice, high humidity, or temperatures from -55°C to 85°C (-67°F to 185°F). All FC and ST connectors have passed stringent immersion and heat/humidity tests with minimal light loss.

These connections, combined with the precision-machined zirconia ferrule/alignment sleeve, ensure perfectly reproducible termini alignment every time.

Features and Benefits

Compatibility

- Universal threaded position keyed coupling works with single- and multi-mode fibers (FC)
- Universal bayonet twist-lock connection (ST)
- Connector kit is supplied without fiber. Assembly and termination, including polishing and crimping to cable jacket, to be performed by customer.

Environmentally Sealed

- No signal degradation
- Effective sealing action eliminates damage from moisture or particulate

Temperature- and Humidity-Resistant

- Clarity of signal
- Tested from -55°C to 85°C (-67°F to 185°F) and subjected to stringent heat/humidity with **0.5 dB maximum insertion loss**

Waterproof

- No water penetration to affect signal

Specifications

- Ferrules are precision-machined zirconia
- Boot fits 3mm OD optical cable
- Made from high-quality, corrosion-resistant materials
- FC DRY™ is nickel-plated brass; FC-DRY™ HP is 316 (ruggedized) series stainless steel
- **Typical light loss is less than 0.5 dB**

Fiber Optic Connector Kit Part Number

500 – C XX – X S – N01 – 000

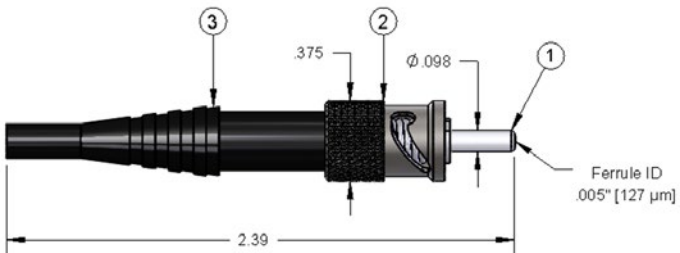
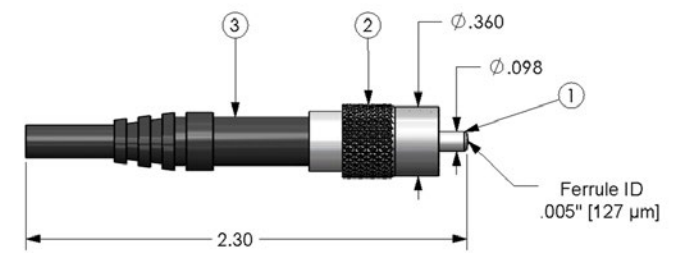
- 000 – No Fiber/Cable Length (Connector Kit)
- N01 – No Face Seal Option (Epoxy Seal Only)
- S – For use with 125 μm Cladding OD Fibers
- S – DRY™ HP, Stainless Steel Connector
- B – DRY™, Nickel-Plated Brass Connector
- FC – FC Type Connector
- ST – ST Type Connector
- C – Fiber Optic Connector
- 500 – Standard Fiber Optic Series

Connectors

- Adapters
- Bulkhead Feedthrough
- Fiber Optic Cable, Patch Cord and Pigtail Assemblies
- Dust Caps
- Fiber Optic Extreme

FC DRY™ and FC DRY™ HP Series Connector

ST DRY™ and ST DRY™ HP Series Connector



ITEM NO.	DESCRIPTION
1	Ferrule
2	FC Connector Body
3	Strain Relief Boot

ITEM NO.	DESCRIPTION
1	Ferrule
2	ST Connector Body
3	Strain Relief Boot

CONNECTOR KIT PART NUMBER	DESCRIPTION
500-CFC-SS-N01-000	FC DRY™ HP Connector with stainless steel body
500-CFC-BS-N01-000	FC DRY™ Connector with nickel plated brass body
500-CST-SS-N01-000	ST DRY™ HP Connector with stainless steel body
500-CST-BS-N01-000	ST DRY™ Connector with nickel plated brass body



Connectors

Adapters

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Dust Caps

Fiber Optic Extreme

Adapters

The FC adapters utilize a threaded coupling while the ST adapters feature a j-slot coupling; both adapter mate types are durable, watertight, and environmentally sealed. The keyed index and j-slot connections incorporated in the FC and ST Series respectively provide reproducible termini alignment every time.

The DRY™ Series is fabricated from nickel-plated brass and the DRY™ HP Series is fabricated from 316 series stainless steel. The ferrules and alignment sleeves are made of precision-machined zirconia. FC and ST adapters are available with or without face seals. FC adapters with face seals can be used as feedthroughs for bulkheads from .100 in. to .125 in. (2.54 mm to 3.17 mm) thick. ST adapters can be used as feedthroughs for bulkheads from .100 in. to .225 in. (2.54 mm to 5.71 mm) thick. When adapters are used as a feedthrough, one side must remain connected to maintain seal integrity.

**The FC and ST adapters are durable,
watertight, and environmentally sealed.**

Features and Benefits

Compatibility

- Universal threaded coupling (FC)
- Universal bayonet twist-lock (j-slot) connection (ST)
- Available with or without a face seal
- Works with single mode and multi-mode fibers

Environmentally Sealed (when mated with GT connector)

- No signal degradation
- Effective sealing action when mated with GT connector; eliminates damage from moisture or particulate
- Tested up to 500 mate/de-mate cycles

Temperature- and Humidity-Resistant (when mated with GT connector)

- Clarity of signal when mated with GT connector
- Tested from -55°C to 85°C (-67°F to 185°F) and subjected to stringent heat/humidity with 0.5 dB maximum insertion loss when connected

Waterproof

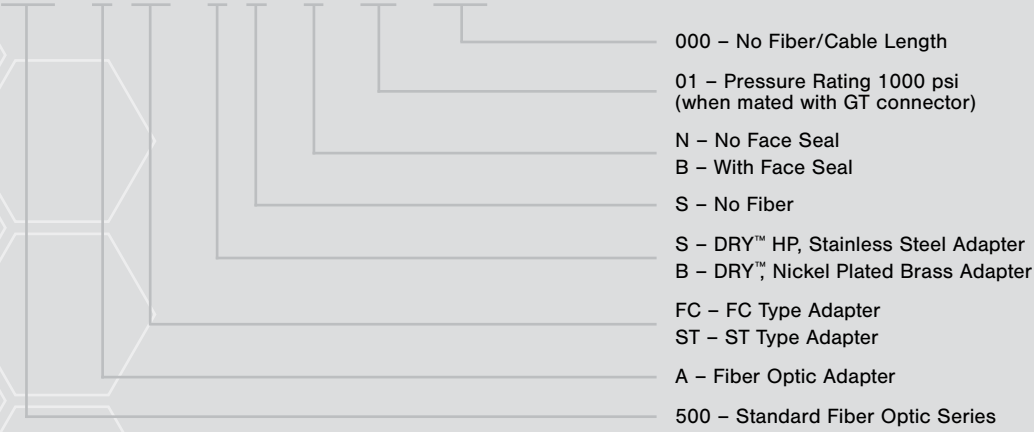
- No water penetration to affect signal when mated with GT connector

Specifications

- Ferrule alignment sleeves are precision-machined zirconia
- Made from high-quality, corrosion-resistant materials
- DRY™ Series is nickel-plated brass; DRY™ HP Series is 316 (ruggedized) series stainless steel

Fiber Optic Adapter Part Number

500 – A XX – X S – X – 01 – 000



Connectors

Adapters

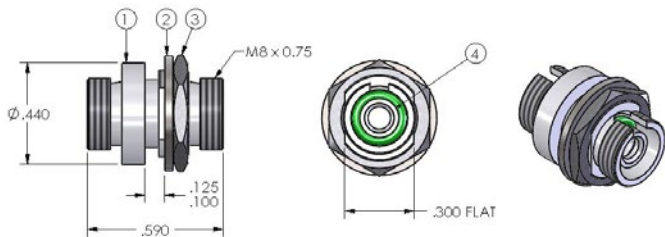
Bulkhead Feedthrough

Fiber Optic Cable,
Patch Cord and Pigtail
Assemblies

Dust Caps

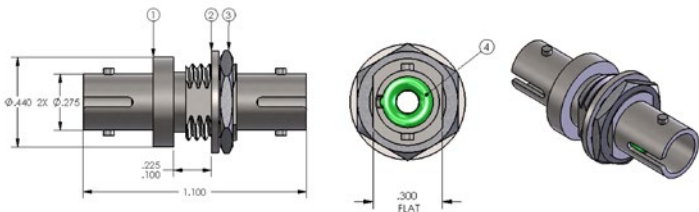
Fiber Optic Extreme

FC DRY™ and FC DRY™ HP Series Adapter



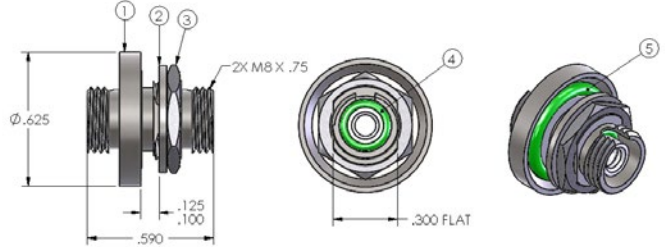
ITEM NO.	DESCRIPTION
1	FC Adapter Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring

ST DRY™ and ST DRY™ HP Series Connector



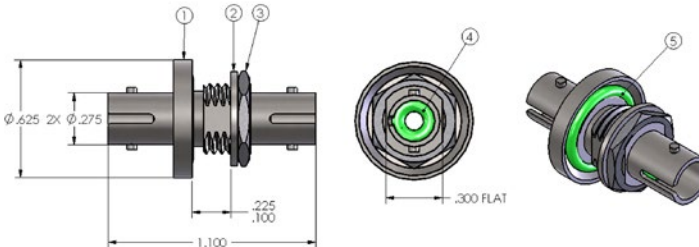
ITEM NO.	DESCRIPTION
1	ST Adapter Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring

FC DRY™ HP Series Adapter with Face Seal



ITEM NO.	DESCRIPTION
1	FC Adapter Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring

ST DRY™ HP Series Adapter with Face Seal



ITEM NO.	DESCRIPTION
1	ST Adapter Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring
5	O-Ring

CONNECTOR KIT PART NUMBER	DESCRIPTION
500-AFC-SS-N01-000	FC DRY™ HP Adapter with stainless steel body
500-AFC-BS-N01-000	FC DRY™ Adapter with nickel plated brass body
500-AST-SS-N01-000	ST DRY™ HP Adapter with stainless steel body
500-AST-BS-N01-000	ST DRY™ Adapter with nickel plated brass body
500-AFC-SS-B01-000	FC DRY™ HP Adapter with stainless steel body and face seal
500-AFC-BS-B01-000	FC DRY™ Adapter with nickel plated brass body and face seal
500-AST-SS-B01-000	ST DRY™ HP Adapter with stainless steel body and face seal
500-AST-BS-B01-000	ST DRY™ Adapter with nickel plated brass body and face seal

[Connectors](#)[Adapters](#)[Bulkhead Feedthrough](#)[Fiber Optic Cable,
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Bulkhead Feedthrough

Greene Tweed offers a series of FC-DRY™ HP PBF (permanent bulkhead feedthroughs) and ST-DRY™ HP PBF in standard, short, and right-angle configurations to provide optimum feedthrough choices for a variety of applications.

The FC-DRY™ HP hermetic, self-sealed PBF uses a threaded coupling while the ST-DRY™ HP hermetic, self-sealed PBF connectors feature a bayonet twist-lock (j-slot) for durable connections and exceptional performance. The design is based on the hermetic joining of an internal light conduit to zirconia ferrules, ensuring precision alignment to cable connectors. Light loss and back reflection are below 0.5 dB per connector.

All FC-DRY™ HP PBFs and ST-DRY™ HP PBFs are made from 316 series stainless steel with precision-machined zirconia ferrules. Once installed, the PBFs are hermetically sealed with or without connections. Connection and disconnection can be made without degradation of seal integrity.

The design is based on the hermetic joining of an internal light conduit to zirconia ferrules, ensuring precision alignment to cable connectors.

Features and Benefits

Compatibility

- Universal threaded coupling (FC)
- Universal bayonet twist-lock (j-slot) connection (ST)
- Works with single mode and multi-mode fibers

Environmentally Sealed

- 100% leak tested
- No signal degradation
- Hermeticity seal meets or exceeds 1E-7 cc/sec helium leak rate at 1 atm differential pressure.
- Permanent feedthrough is hermetically sealed with or without connectors
- Effective sealing action eliminates damage from moisture or particulate
- Tested up to 500 mate/de-mate cycles

Temperature- and Humidity-Resistant

- Clarity of signal
- Tested from -55°C to 85°C (-67°F to 185°F) and subjected to stringent heat/humidity with 0.5 dB maximum insertion loss

Waterproof

- No water penetration to affect signal

Specifications

- Ferrules and alignment sleeves are precision-machined zirconia
- 316 stainless steel construction (ruggedized)
- Typical light loss is less than 1.0 dB (0.5 dB/connection)

Fiber Optic Permanent Bulkhead Feedthrough (PBF) Part Number

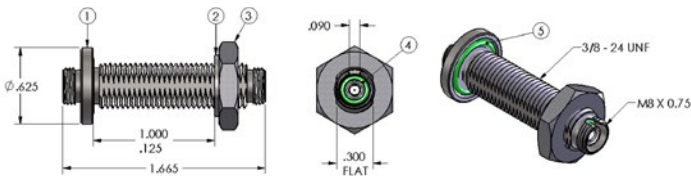
500 – X XX – S X – B 01 – 000

- 000 – No Optical Cable Length
- 01 – Pressure Rating to 1000 psi
- B – With Face Seal**
- 1 – 9/125 μ m Single-mode fiber**
- 2 – 50/125 μ m Multi-mode fiber**
- 3 – 62.5/125 μ m Multi-mode fiber**
- S – DRY™ HP, Stainless Steel PBF**
- FC – FC Type PBF
- ST – ST Type PBF**
- B – Standard PBF**
- S – Short PBF
- R – Right Angled PBF*
- 500 – Standard Fiber Optic Series**

*For right-angled PBF (500-RXX) parts, use the optical cable length designator to specify pigtail length.

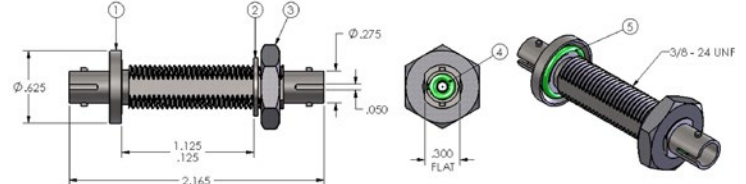
500-BST-S1-B02-000

FC DRY™ HP Series Permanent Bulkhead Feedthrough



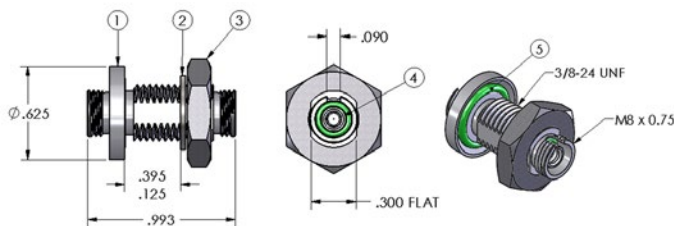
ITEM NO.	DESCRIPTION
1	FC DRY™ HP PBF Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring
5	O-Ring (Face Seal)

ST DRY™ HP Series Permanent Bulkhead Feedthrough



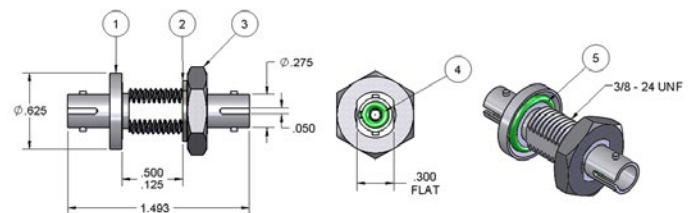
ITEM NO.	DESCRIPTION
1	ST DRY™ HP PBF Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring
5	O-Ring (Face Seal)

Short FC DRY™ HP Series Permanent Bulkhead Feedthrough



ITEM NO.	DESCRIPTION
1	FC Adapter Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring
5	O-Ring (Face Seal)

Short ST DRY™ HP Series Permanent Bulkhead Feedthrough



ITEM NO.	DESCRIPTION
1	ST SPBF Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring
5	O-Ring (Face Seal)

Connectors

Adapters

Bulkhead Feedthrough

Fiber Optic Cable,
Patch Cord and Pigtail
Assemblies

Dust Caps

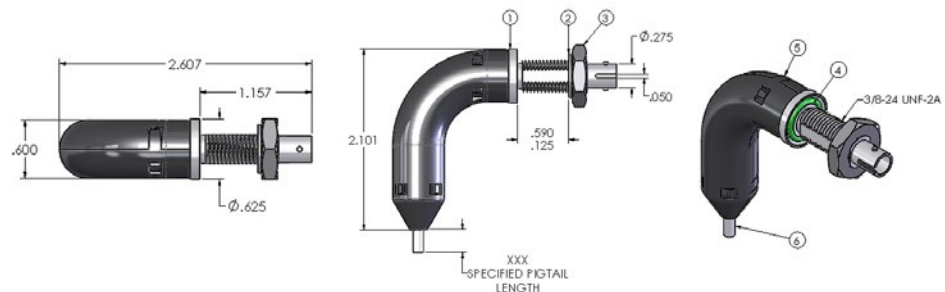
Fiber Optic Extreme

Right Angled FC DRY™ HP Series Permanent Bulkhead Feedthrough



ITEM NO.	DESCRIPTION
1	FC RPB Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring (Face Seal)
5	Right Angled Boot
6	3MM OD Optical Cable

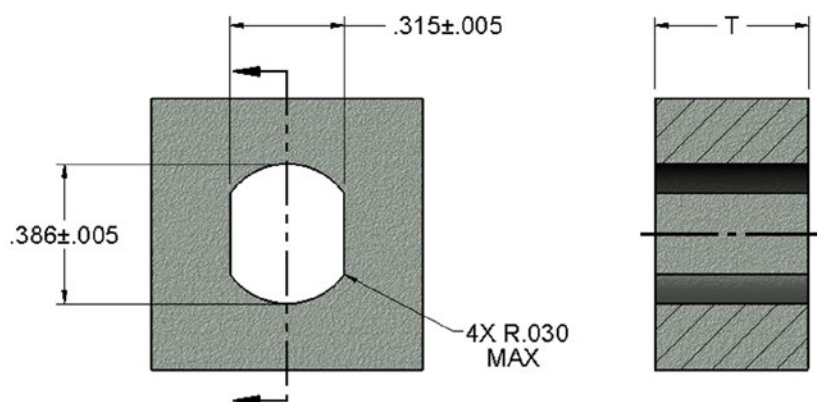
Right Angled ST DRY™ HP Series Permanent Bulkhead Feedthrough



ITEM NO.	DESCRIPTION
1	FC Adapter Body
2	Shake Proof Washer
3	Hex Nut
4	O-Ring (Face Seal)
5	Right Angled Boot
6	3MM OD Optical Cable

PBF PART NUMBER	DESCRIPTION	FIBER MODE (X)		
		9/125	50/125	62.5/125
500-BFC-SX-B01-000	FC DRY™ HP PBF with stainless steel body and face seal	1	2	3
500-BST-SX-B01-000	ST DRY™ HP PBF with stainless steel body and face seal			
500-SFC-SX-B01-000	FC DRY™ HP short PBF with stainless steel body and face seal			
500-SST-SX-B01-000	ST DRY™ HP short PBF with stainless steel body and face seal			
500-RFC-SX-B01-XXX	FC DRY™ HP right angle PBF with stainless steel body and face seal w/ 3 mm OD Pigtail Optical Cable			
500-RST-SX-B01-XXX	ST DRY™ HP right angle PBF with stainless steel body and face seal w/ 3mm OD Pigtail Optical Cable			

Adapter and PBF Mounting Details



ADAPTER/PBF	"T" (IN)
FC Adapter	.100/.125
ST Adapter	.100/.225
FC PBF	.125/1.000
ST PBF	.125/1.125
ST PBF	.125/.395
ST PBF	.125/.500
ST PBF	.125/.555
ST PBF	.125/.590

Recommended mounting detail for adapters and permanent bulkhead feedthroughs

Connectors

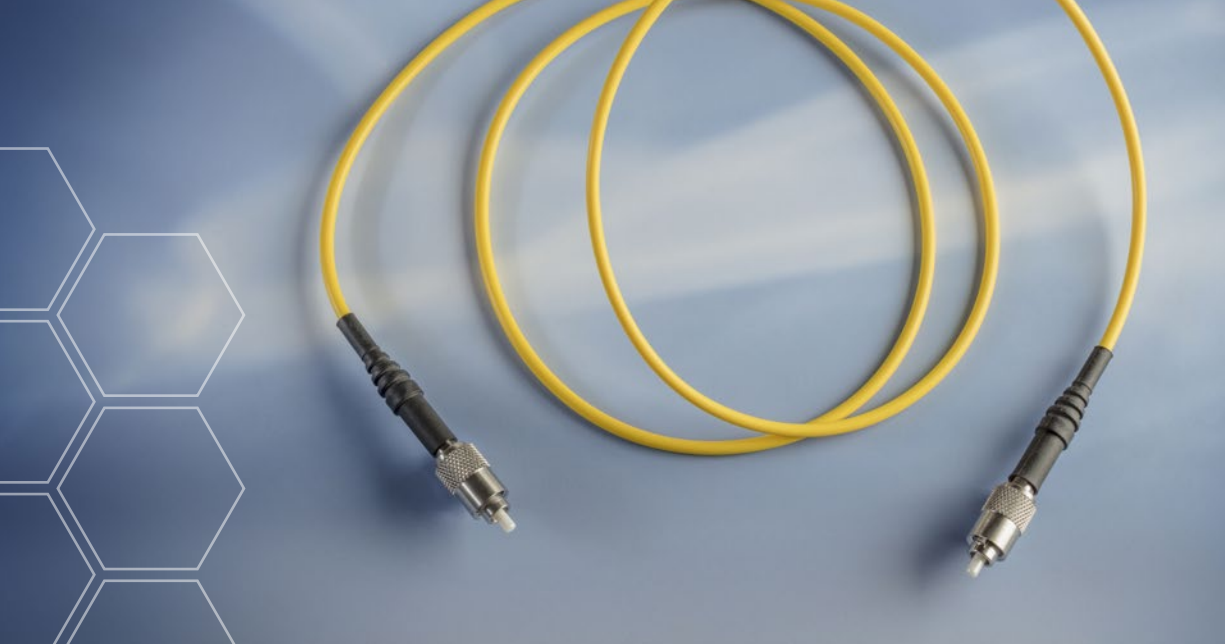
Adapters

Bulkhead Feedthrough

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Dust Caps

Fiber Optic Extreme

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Fiber Optic Cable, Patch Cord, and Pigtail Assemblies

Greene Tweed's single-fiber FC-DRY™ and FC-DRY-HP and ST-DRY™ and ST-DRY™-HP optical cables, patch cords, and pigtails are designed for interconnect applications. A 900 µm buffered fiber is surrounded by aramid yarn strength members and a 3 mm OD, flame-retardant PVC jacket. Dielectric strength members offer mechanical durability and the flame-resistant jacket meet requirements of the National Electrical Code® (NEC®) Article 770. FC and ST termination types are available in both single mode and multi-mode fiber.

Greene Tweed's single-fiber FC-Fiber Protec™ and ST-Fiber Protec™ patch cords, and pigtails are designed for interconnect applications. A 900 µm buffered fiber is surrounded by an armored stainless steel jacket to withstand crush and pressure situations while maintaining flexibility and durability in harsh environments or limited space.

Dielectric strength members offer mechanical durability and the flame-resistant jacket meet requirements of the National Electrical Code® (NEC®) Article 770.

Features and Benefits

Compatibility

- Available with Greene Tweed FC and ST terminations
- Available in single mode and multi-mode

Environmentally Sealed

- No signal degradation
- Effective sealing action eliminates damage from moisture or particulate

Temperature- and Humidity-Resistant

- Clarity of signal
- Tested from -55°C to 85°C (-67°F to 185°F) and subjected to stringent heat/humidity with 0.5 dB maximum insertion loss

Optical Cable PVC

- Good mechanical and environmental characteristics
- The mechanical and physical characteristics of the PVC outer jacket meet the requirement of relevant standards
- Aramid yarn material ensures good tensile strength
- 900 µm tight buffer helps to protect the fiber

Optical Cable Armored SS

- Good mechanical and environmental characteristics
- The mechanical and physical characteristics of the stainless-steel jacket provides durability and strength in harsh environments
- 900 µm tight buffer helps to protect the fiber

Waterproof

- No water penetration to affect signal

Specifications

- Ferrules are precision-machined zirconia
- Made from high-quality, corrosion-resistant materials
- FC-DRY™ is nickel-plated brass; FC-DRY™ HP is 316 series stainless steel (ruggedized)
- Typical light loss is less than 0.5 dB per connector

Fiber Optic Cable, Patch Cord, and Pigtail Assembly Part Number

500 – X XX – S X – N 01 – XXX.X

XXX – Fiber Optic Cable Length in Meters e.g.,
001 = 1 Meter, *001.5 = 1.5 Meters

01 – Pressure Rating to 1000 psi

N – No Bulkhead (Bulkhead Designator is Only
Specified in Adapter and PBF Component)

1 – 9/125 μ m Single-mode fiber
2 – 50/125 μ m Multi-mode fiber
3 – 62.5/125 μ m Multi-mode fiber

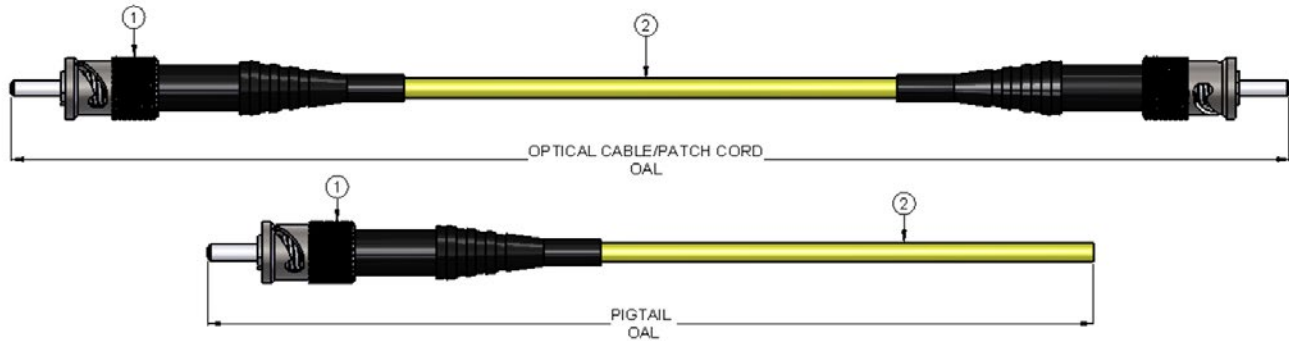
S – Stainless Steel (Ruggedized) Connector Material
S – Nickel Plated Brass

FC – FC Connector Termination
ST – ST Connector Termination

F – PVC Fiber Optic Cable/Patch Cord Assembly – 3 mm OD Cable
J – Armored SS Optic Cable/Patch Cord Assembly – 4 mm OD Cable (Green)
K – Armored SS Optic Cable/Patch Cord Assembly – 6.5 mm OD Cable (Green)
L – Armored SS Optic Cable/Patch Cord Assembly – 4 mm OD Cable (Yellow)
M – Armored SS Optic Cable/Patch Cord Assembly – 6.5 mm OD Cable (Yellow)
P – PVC Fiber Optic Pigtail Assembly

500 – Standard Fiber Optic Series Assembly Designator

*additional digit is only required for fractional lengths



Item No.	Description
1	AT or FC connector assembly
2	optical cable (single mode or multi-mode)

PBF PART NUMBER	DESCRIPTION	FIBER MODE (X)		
		9/125	50/125	62.5/125
500-FFC-SX-N01-XXX	FC DRY™ HP Optical Cable/Patch Cord Assembly – 3 mm OD Cable	1	2	3
500-FST-SX-N01-XXX	ST DRY™ HP Optical Cable/Patch Cord Assembly – 3 mm OD Cable			
500-JFC-SX-N01-XXX	FC Armored SS Optic Cable Assembly – 4 mm OD Cable (Green)			
500-JST-SX-N01-XXX	ST Armored SS Optic Cable Assembly – 4 mm OD Cable (Green)			
500-KFC-SX-N01-XXX	FC Armored SS Optic Cable Assembly – 6.5 mm OD Cable (Green)			
500-KST-SX-N01-XXX	ST Armored SS Optic Cable Assembly – 6.5 mm OD Cable (Green)			
500-LFC-SX-N01-XXX	FC Armored SS Optic Cable Assembly – 4 mm OD Cable (Yellow)			
500-LST-SX-N01-XXX	ST Armored SS Optic Cable Assembly – 4 mm OD Cable (Yellow)			
500-MFC-SX-N01-XXX	FC Armored SS Optic Cable Assembly – 6.5 mm OD Cable (Yellow)			
500-MST-SX-N01-XXX	ST Armored SS Optic Cable Assembly – 6.5 mm OD Cable (Yellow)			
500-PFC-SX-N01-XXX	FC Optical Pigtail Assembly – 3 mm OD Cable			
500-PST-SX-N01-XXX	ST Optical Pigtail Assembly – 3 mm OD Cable			

Connectors

Adapters

Bulkhead Feedthrough

**Fiber Optic Cable,
Patch Cord and Pigtail
Assemblies**

Dust Caps

Fiber Optic Extreme

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Dust Caps

The FC dust caps utilize a threaded coupling while the ST dust caps feature a j-slot coupling. Both adapter mate types are durable, watertight, and environmentally sealed to guarantee complete protection from wet environments and particulates. The keyed index and j-slot connections incorporated in the FC and ST Series respectively ensures accurate alignment between termini.

Features and Benefits

Compatibility

- Universal threaded coupling (FC)
- Universal bayonet twist-lock (j-slot) connection (ST)

Environmentally Sealed

(when mated with GT adapter or PBF)

- Effective sealing action when mated with GT adapter eliminates damage from moisture or particulates

Temperature- and Humidity-Resistant

- Tested from -55°C to 85°C (-67°F to 185°F) and subjected to stringent heat/humidity with 0.5 dB maximum insertion loss when connected

Waterproof

- No water penetration

Specifications

- Made from high-quality, corrosion-resistant materials
- DRY™ HP Series is 316 (ruggedized) series stainless steel

Both adapter mate types are durable, watertight, and environmentally sealed to guarantee complete protection from wet environments and particulates.

Fiber Optic Adapter Part Number

500 - D XX - S 0 - N01 - 000

- 000 – No Optical Fiber/Cable Length
- N01 – No Face Seal Option
- 0 – No Optical Fiber
- S – DRY™ HP, Stainless Steel
- FC – FC Type Adapter
- ST – ST Type Adapter
- D – Fiber Optic Dust Cap
- 500 – Standard Fiber Optic Series

Connectors

Adapters

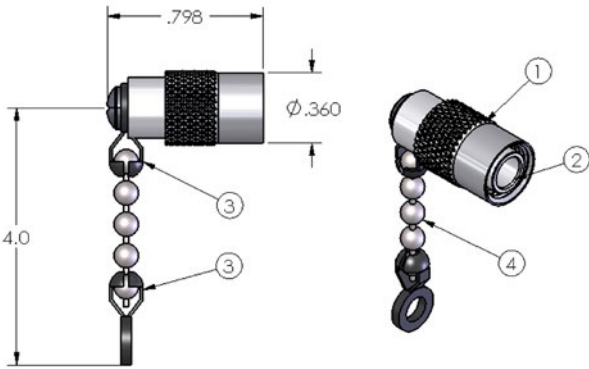
Bulkhead Feedthrough

Fiber Optic Cable,
Patch Cord and Pigtail
Assemblies

Dust Caps

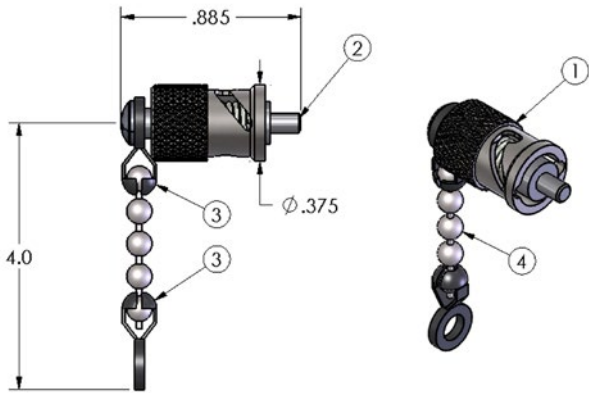
Fiber Optic Extreme

FC DRY™ HP Series Dust Cap



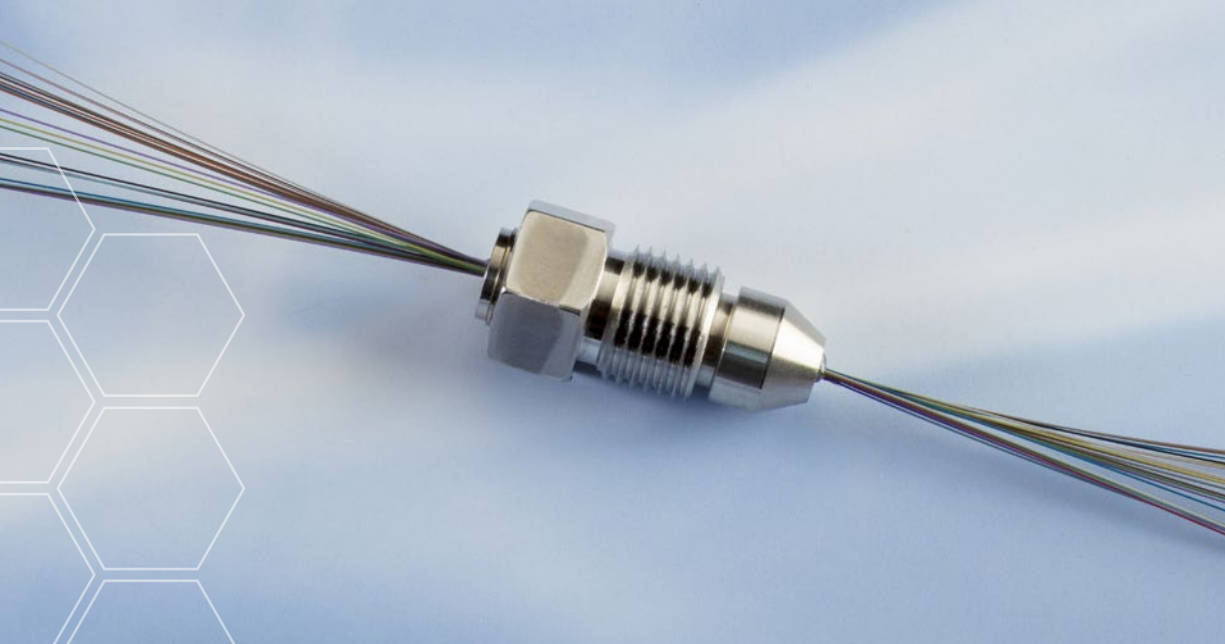
ITEM NO.	DESCRIPTION
1	FC Dust Cap Body
2	FC Plug
3	Coupling
4	Chain

ST DRY™ HP Series Dust Cap



ITEM NO.	DESCRIPTION
1	ST Dust Cap Body
2	ST Ferrule Stem
3	Coupling
4	Chain

DUST CAP PART NUMBER	DESCRIPTION
500-DFC-S0-N01-000	FC DRY™ HP Dust Cap (plug) with stainless steel body
500-DST-S0-N01-000	ST DRY™ HP Dust Cap (plug) with stainless steel body



Connectors

Adapters

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Patch Cord and Pigtail
Assemblies

Dust Caps

Fiber Optic Extreme

Fiber Optics for Data Transmission in Extreme Application Conditions

Developed for use in downhole oil drilling operations, Fiber Optic Extreme® – an optical connection system that ensures data transmission when exposed to extreme pressures and extreme temperatures – is capable of withstanding operating pressures of 25,000 psi and temperatures up to 347°F (175°C).

Fiber Optic Extreme Standard Parts

PART NUMBER	CHANNELS
Rated Pressure: 20000 psi Rated Temperature: -40°C to 150°C	
510-000-3920-00	1
510-000-3920-04	1
510-000-3920-13	4
510-000-3920-14	4
510-000-3920-15	3
510-000-3920-16	4
510-000-3920-17	4
510-000-3920-18	8
510-000-3920-19	16
510-000-3920-20	1
510-000-3920-21	2

PART NUMBER	CHANNELS
Rated Pressure: 10000 psi Rated Temperature: -40°C to 150°C	
510-000-3920-09	3
Rated Pressure: 10000 psi Rated Temperature: -40°C to 70°C	
510-000-3920	8
510-000-3920-01	12
510-000-3920-02	24
510-000-3920-03	24
510-000-3920-05	1
510-000-3920-06	2
510-000-3920-07	4
510-000-3920-08	24
510-000-3920-10	2
510-000-3920-11	4
510-000-3920-12	3

Custom

Greene Tweed has been a pioneer in the design of fiber optic connectors for use in harsh environments. In addition to the standard designs in this catalog, we offer custom, non-standard fiber mode, connector, adapter, PBF, and cable assembly configurations designed for your specific application. **Please consult with Greene Tweed engineering on your application for further details.**

CONTACT US:

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SEAL-CONNECT FIBER OPTIC CONNECTORS

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