



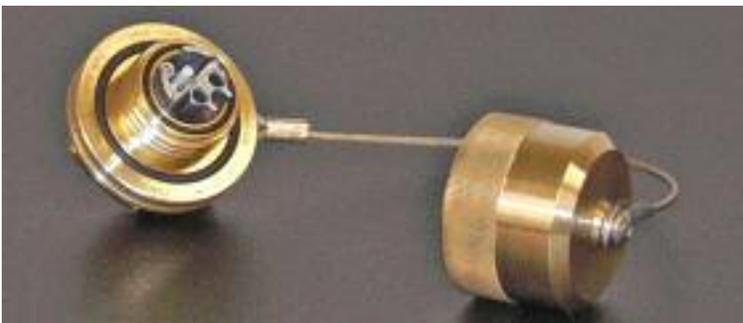
*GoldRush® Brass Plug*

## About GoldRush® Connectors

Amphenol Fiber Systems International (AFSI) has designed the next generation “longwall communications” deployable fiber optic connector. By responding to specific customer needs and leveraging the family of AFSI TFOCA-II® connectors, the GoldRush® series of fiber optic connectors was born. These innovative interconnect solutions have become an enabling technology for “digital mining.” AFSI’s GoldRush® connectors address specific mining requirements for the future of intelligent mining.

GoldRush® connectors are the only Mining Safety and Health Administration (MSHA) certified fiber optic connectors for use in underground mines under Title 30 CFR, Part 18.

The heart of the GoldRush® family of deployable fiber optic connectors is the TFOCA-II® termini, featuring “sealed” free floating termini. This revolutionary design enables GoldRush® connectors to seal against high humidity and moisture conditions while allowing full axial and orbital movement of the mated termini, providing the lowest possible insertion loss.



*GoldRush® Brass Panel Mount Receptacle*

## Features and Benefits

- **Hermaphroditic Design for Versatility** - Enables the GoldRush® plug to be daisy-chained or unreel from either end of a reel
- **Brass Construction** - Eliminates thermite concerns. Also available in stainless steel (for corrosive environments) and aluminum
- **4-Channel Connector Design** - Provides system flexibility
- **Optional Key Positions** - Four key positions (1, 2, 3 and universal) available, enabling segregation of mated plug/receptacles or plug/plug, through mechanical interface
- **Improved Cable Retention Strength** - Designed to meet 400 lb pull strength while protecting fibers from stress
- **Solid Core Alignment Sleeves** - More robust than split alignment sleeves
- **Removable End Cap** - Allows for easy field repair and cleaning
- **Commercial Ceramic Ferrule Technology** - Enables GoldRush® connectors to provision multimode and single mode interconnect with a variety of polishes including SPC and UPC
- **Field Repairable Using Existing Parts** - Additional connector components (other than termini) are not required to perform field repair

## Applications

- Mining
- Oil, Gas and Geoscience industries
- Industrial



*GoldRush® Brass Gland Receptacle*

### GoldRush Specifications

Parameter	Typical	Maximum
Insertion Loss (Multimode)	0.30dB	0.75dB
Insertion Loss (Single Mode)	0.40dB	0.75dB
Back Reflection (Single Mode-PC Polish)	-50dB	-40dB
Back Reflection (Single Mode-UPC Polish)	-50dB	-40dB
Operating Temperature	-46° C to + 71° C	
Storage Temperature	-52° C to + 85° C	
Mud	5 minute immersion, clean with water	
Water Pressure	1 meter for 24 hours	
Ice Crush/Freezing Water	Immersed and frozen in water for seven hours	
Humidity Immersion	TIA/EIA-455-5, 5 cycles	
Vibration (Operational)	TIA/EIA-455-11	
Shock	EIA/TIA-455-14, Condition A	
Cable Seal Flexing	100 cycles per TIA/EIA-455-1	
Twist	1,000 cycles per EIA/TIA-455-36	
Cable Retention	400 lb minimum per EIA/TIA-455-6 (applies to plug only)	
Impact	EIA/TIA-455-2	
Crush Resistance	450 lb minimum per EIA/TIA-455-26	
EMI Shielding Effectiveness (Receptacle Only)	> 60dB	

1. Some parameters qualified to existing TFOCA-II® design

### GoldRush® Part Numbers

#### Product Number

FS4H5000-Y-Z

FS4H5001-Z

FS4H5002-Z

#### Product Name

GoldRush® 4-Channel Brass Hermaphroditic Plug (MSHA Cert. No. 18-NXA050001-0)

GoldRush® 4-Channel Brass “D” Mount Jam Nut Receptacle (Not MSHA Certified)

GoldRush® 4-Channel Brass Packing Gland Receptacle (MSHA Cert. No. 18-NXA050001-0)

Y=H Cable Diameter Range .190 - .239	Z=1 Key Option 1, Grey
Y=F Cable Diameter Range .240 - .279	Z=2 Key Option 2, Blue
Y=A Cable Diameter Range .280 - .315	Z=3 Key Option 3, Red
Y=B Cable Diameter Range .316 - .346	Z=U Key “U”, Green
Y=G Cable Diameter Range .347 - .379	
Y=C Cable Diameter Range .380 - .423	
Y=D Cable Diameter Range .424 - .465	

#### MTFP1X00Y

#### TFOCA-II® Terminus

Product Number	X=Ferrule Type	Y=Crimp
MTFP1000	0=Multimode	Blank=W/O Crimp
MTFP1000C	0=Multimode	C=With Crimp
MTFP1100	1=Single mode	Blank=W/O Crimp
MTFP1100C	1=Single mode	C=With Crimp

MTFP1150

MTFP1175

MTFP0000

TFOCA-II® Alignment Sleeve, Multimode

TFOCA-II® Alignment Sleeve, Single mode

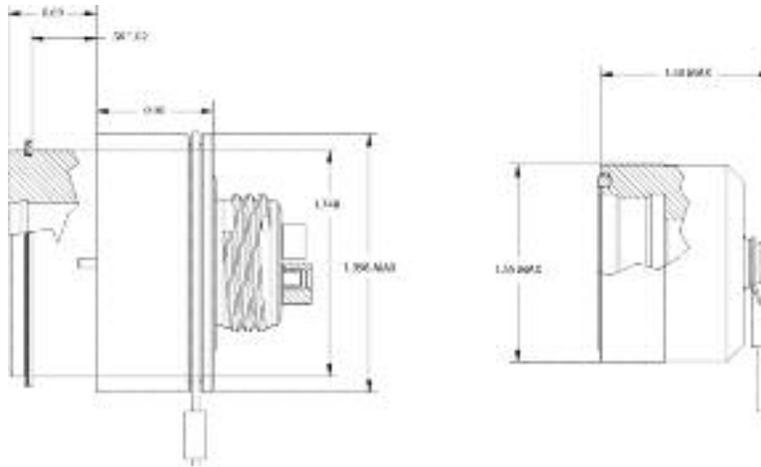
TFOCA-II® Dummy Terminus



GoldRush® Plug to Plug Cable Assembly on Hannay Reel

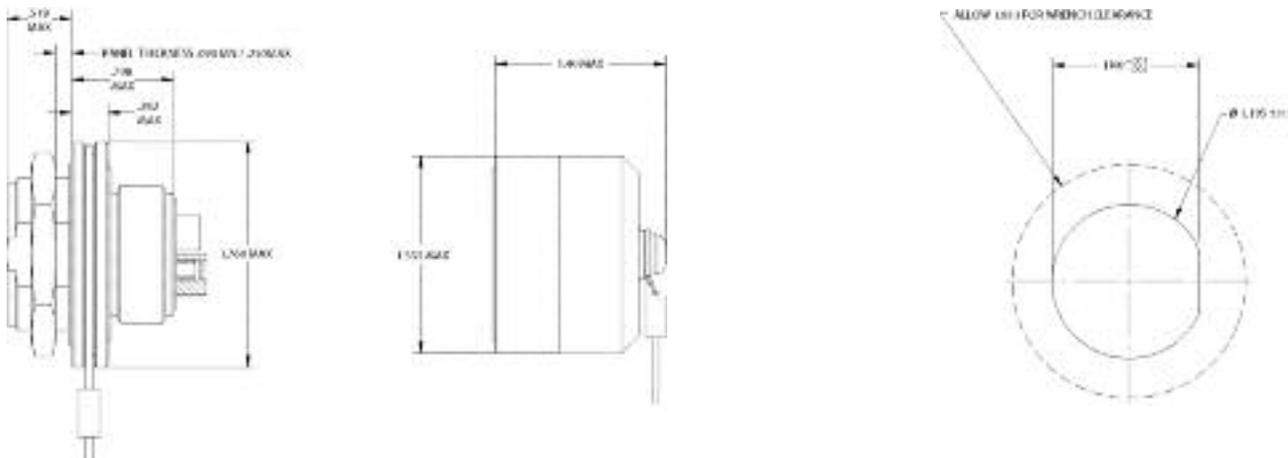
For fully warranted and qualified custom cable assemblies utilizing the GoldRush® product line, please contact Amphenol Fiber Systems International at 800-472-4225 or email us at [sales@fibersystems.com](mailto:sales@fibersystems.com)

## FS4H5002 GoldRush® 4-Channel Brass Packing Gland Receptacle (MSHA Cert. No. 18-NXA050001-0)

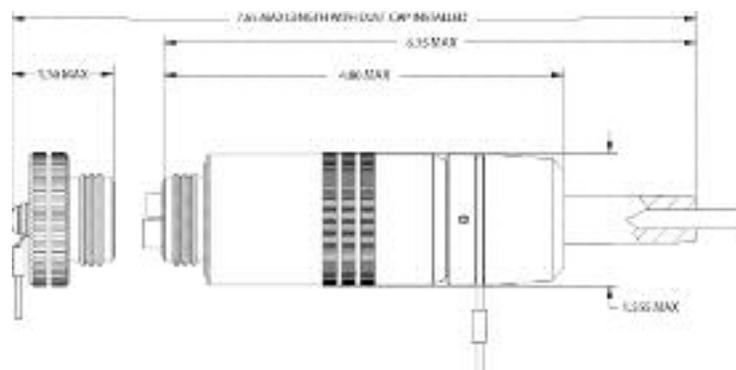


## FS4H5001 GoldRush® 4-Channel Brass "D" Mount Jam Nut Receptacle (Not MSHA Certified)

## GoldRush® 4-Channel Brass "D" Mount Jam Nut Receptacle Panel Cutout



## FS4H5000 GoldRush® 4-Channel Brass Hermaphroditic Plug (MSHA Cert. No. 18-NXA050001-0)



Drawings are not to scale. Measurements are in inches.



## How to Order

For more information on how to order or to obtain a price quote on our GoldRush® TFOCA-II®, call toll free (US only) at 800.472.4225, international calls please use 1.214.547.2400 or e-mail [sales@fibersystems.com](mailto:sales@fibersystems.com).

## About Amphenol Fiber Systems International

Amphenol Fiber Systems International (AFSI) designs, manufactures, markets and supports reliable and innovative fiber optic interconnect solutions that withstand the harsh environments of military, oil & gas, mining and broadcast applications. After more than a decade in business, AFSI continues to uphold its position as a global leader in fiber optic interconnect components and systems such as termini, M28876, MIL-ST, TFOCA and the TFOCA-II® connector, which AFSI developed and patented.

AFSI has delivered millions of fiber optic connectors worldwide. Whenever there is a need for superior, cost-effective fiber optic systems and products that will stand up to demanding operating environments, you can rely on AFSI for engineering know-how, top-quality products and expert technical support.

For more information about AFSI, visit [www.fibersystems.com](http://www.fibersystems.com).