



StapleMate® Connectors

About StapleMate® Connectors

Amphenol Fiber Systems International (AFSI) has developed the next generation “longwall shield communications” deployable fiber optic connector. The StapleMate® connectors were developed in direct response to specific customer needs.

This revolutionary connector provides mining engineers with real-time data on the longwall shield, allowing them better control and faster response time in case of emergency. The StapleMate® connectors will allow the remote control unit to be located at greater distances from the longwall shields or above ground, providing a safer work environment.

Main Design Features

- Solid mechanism & robust construction
- Locked by a staple for quick disconnect
- Mechanical indexing of the alignment to avoid twisting
- Sealed design provides for a water tight seal
- Gold plated electrical contacts
- Electrical contacts; male and female with sealing o-rings
- Fiber optic contacts; male and female with sealing o-rings
- Guide pins in the insulator improves termini alignments

Features

- Up to eight channels with M29504/14 /15 termini
- Up to eight channels with 16AWG contacts
- Any combination of conductors and fiber optics in the same connector
- Standard hydraulic coupling
- Uses all standard staples
- Uses standard 3/8 hydraulic hose with crimp
- Available in a 37 deg. flare male style version
- Packing gland receptacle is available for XP use

Materials

- Ferrule: 2.0mm diameter ceramic ferrule
- Exterior parts: Brass or stainless steel
- Inserts: Polyetherimide
- Seals: Nitrile
- Sleeves: Precision captivated split zirconia sleeves

Applications

- Mining
- Oil, Gas and Geoscience
- Industrial

Options Available

- Plug with 37 deg. flare male end
- XP version socket 2” OD snap ring locking style
- XP 90° version available

Certifications

- Pending MSHA (Mining, Safety and Health Administration) certification
- Pending ATEX, IECEx, SANS and others
- Patent pending

Specifications for StapleMate®

Description

Operating Temperature
Water Pressure
Vibration
Shock

Measurement/Detail

-52° C to + 85° C
1 meter for 24 hours
TIA/EIA-455-11
EIA/TIA-455-14, Condition A

Electrical Contact Performance Data

Size Gauge 16 AWG [1.0 mm²]
Separation Forces 2.0 oz. [56.7 g] minimum
Current Rating 10 amps
Resistance 50 mΩ maximum at rated current

Fiber Optic Contact Performance Data

Insertion Loss (MM) Typical -0.4dB
Insertion Loss (SM) Typical -0.5dB

Crimp Tensile Strength:

Size 16 Crimp Barrel

Wire Size 16 AWG [1.0 mm²] 50 lb [22.7 kg] minimum
Wire Size 20 AWG [0.5 mm²] 20 lb [9.1 kg] minimum

Size 20 Crimp Barrel

Wire Size 20 AWG [0.5 mm²] 20 lb [9.1 kg] minimum
Wire Size 24 AWG [0.22 mm²] 8 lb [3.6 kg] minimum

Contact/Connector Performance Data

Contact Retention 20 lb [9.1 kg] minimum

Connector Performance Data

Mating Cycle Durability 500 cycles

Physical Properties

Water Absorption 24 hours @ 73°F; ASTM D 570

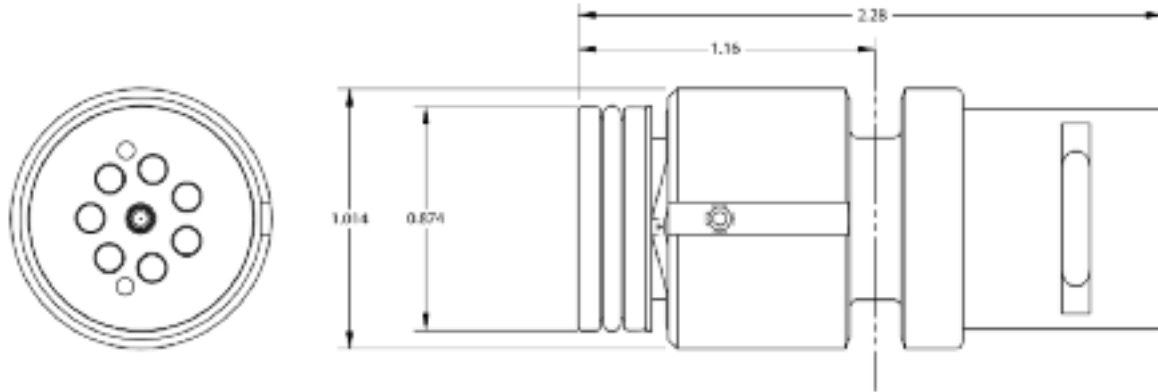
Thermal Properties

Flammability, UL94 V-0 @ 0.01" thick

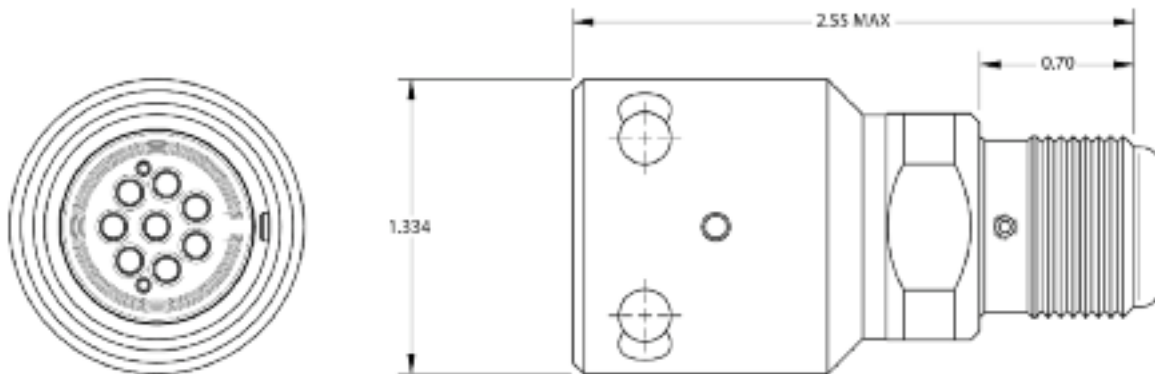
Materials

Connector Body Brass 360 Alloy
Insert Body ULTEM

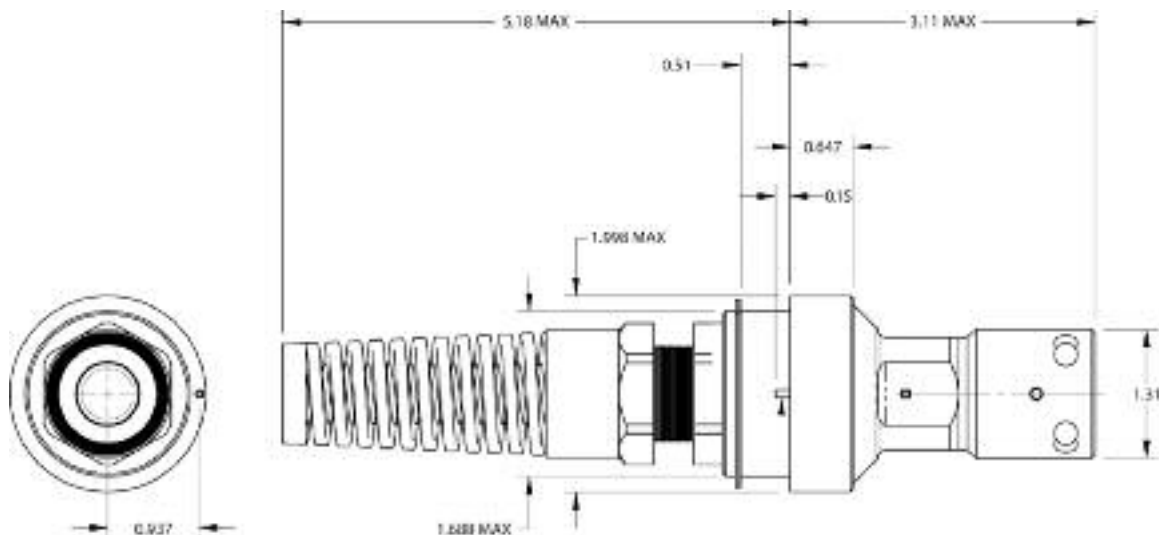
FS33-5000 StapleMate® 8-Channel Plug



FS33-5001 StapleMate® 8-Channel Receptacle



FS33-5002 StapleMate® 8-Channel Hybrid Receptacle Packing Gland



StapleMate® Part Numbers

FS33-5000	StapleMate® Brass 8-Channel Hybrid Plug
FS33-5001	StapleMate® Brass 8-Channel Hybrid Receptacle
FS33-5002	StapleMate® Brass 8-Channel Hybrid Receptacle Packing Gland
FS33-5003	StapleMate® Brass 8-Channel Hybrid Plug 37 Deg. Hyd Hose Type
FS33-5004	StapleMate® Brass 8-Channel Hybrid Plug Threaded End Male Type

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. Altogether, 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, please visit our web site at www.fibersystems.com

How to Order

For more information on how to order or to obtain a price quote on any of our StapleMate® products, please call us at 800.472.4225. For international calls please dial 214.547.2400 or email us at info@fibersystems.com