



SEACON ADVANCED PRODUCTS, LLC PRODUCT DATASHEET

OPTICAL FIBER PENETRATORS



4 channel and single channel optical fiber *PENETRATORS*

DESCRIPTION

SEACON Advanced Products single optical penetrator utilizes a modular concept which can be configured for specific customer requirements.

KEY FEATURES

- Single or multi-way fiber-optic penetrators or "optical feed-throughs"
- Qualified up to full operational differential pressure rating of 690 bar (10,000 psi) which is equivalent to 7,000m (23,000 feet) for a single channel and 3,200m (10,500 feet) for multi-channel versions
- Qualified with SMF-28 fiber but suitable for other single-mode or multi-mode fibers
- Boot seal, bend relief on entry and exit
- Suitable for use as a pressure barrier between a 1-atmosphere housing and external pressure environment
- Over 1,890 units sold worldwide
- Mean Time Between Failure (MTBF) of better than 4.8 million hours
- Provides a low-loss optical feed-through rated internally and externally for up to 10,000 psi
- Optical insertion loss of better than 0.1dB
- Optical back-reflection of better than -55dB
- Modular optical feed throughs
- Field installable and serviceable
- Operating temperature range rated from -60°C to +85°C (-76°F to +185°F)
- Field proven track record with over 32 million accumulated operating hours

DESIGN RATINGS

- Qualified to full operational differential pressure rating of 690 bar (10,000 psi) which is equivalent to 7,000m (23,000 feet)
- Suitable for use as a pressure barrier between a 1-atmosphere housing and external pressure environment
- Optical insertion loss of better than 0.1dB
- Optical back-reflection of better than -55dB
- Operating temperature range rated to that of the optical fiber, in this case SMF-28 rated from -60°C to +85°C (-76°F to +185°F)

SEACON

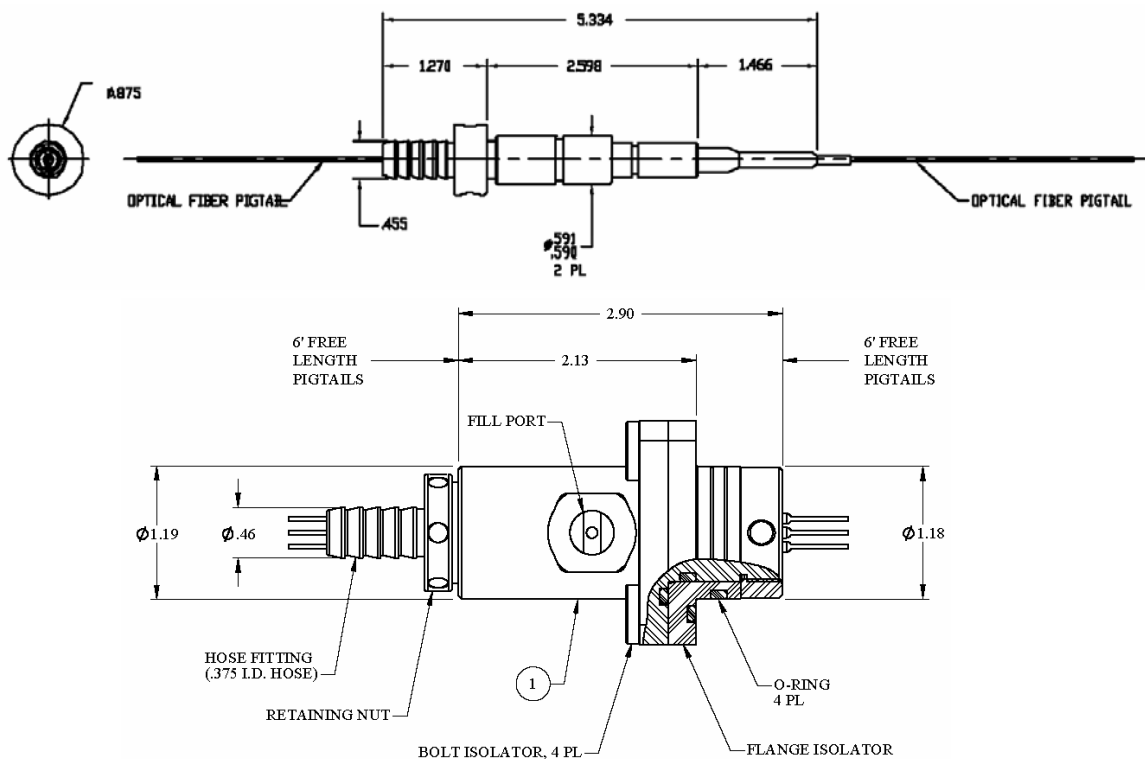
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QUALIFICATION TESTING

- Example of qualification testing for single channel detailed in SEACON Qualification Test Report SC-ENG-1026
- Example of qualification testing for multi channel detailed in SEACON Qualification Test Report SC-ENG-1046

TRACK RECORD AND RELIABILITY DATA

- Over 1,890 fiber-optic penetrators have been supplied to customers
- These now have accumulated operating hours of greater than 32 million hours
- These have a Mean Time Between Failure of better than 4.8 million hours



QUALITY

- SEACON Advanced Products, LLC operate a Quality Management System certified to ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007.



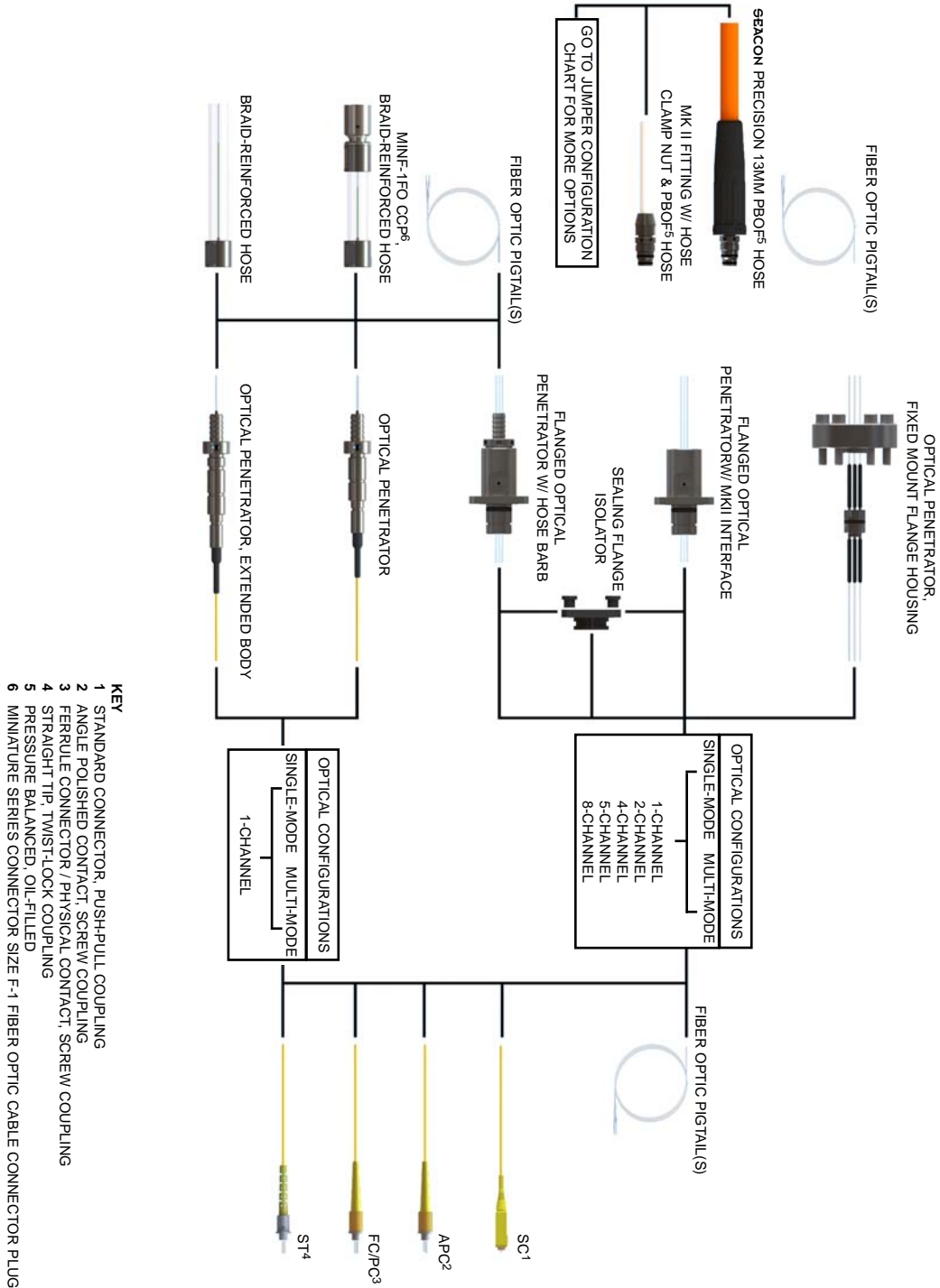
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OPTICAL PENETRATOR CONFIGURATION CHART



- KEY**
- 1 STANDARD CONNECTOR, PUSH-PULL COUPLING
 - 2 ANGLE POLISHED CONTACT, SCREW COUPLING
 - 3 FERRULE CONNECTOR / PHYSICAL CONTACT, SCREW COUPLING
 - 4 STRAIGHT TIP, TWIST-LOCK COUPLING
 - 5 PRESSURE BALANCED, OIL-FILLED
 - 6 MINIATURE SERIES CONNECTOR SIZE F-1 FIBER OPTIC CABLE CONNECTOR PLUG

