

HERMETIC BULKHEAD FIBER-OPTIC FEEDTHROUGHS

KTRAV-T12

Ruggedized Multichannel Hermetic Fiber-Optic Feedthroughs

The KTRAV-T12 ruggedized multichannel hermetic fiber-optic feedthroughs are designed with either a DN 40 KF flange for high vacuum applications or a DN 40 CF flange for ultra-high vacuum applications.

Standard configurations are available with 1 to 3 individual channels within one DN 40 KF flange or up to 4 channels within one DN 40 CF flange. Custom designs are also possible upon request; we offer different sizes of ISO, CF and KF flanges.

Every feedthrough channel is built with an internal fiber rod identical to the fiber used upstream and downstream for perfect matching of the optical characteristics of each line. The channels are soldered on the stainless steel 304L housing, ensuring a robust design in addition to low outgassing rates and helium leak rates.

These ruggedized multichannel hermetic fiber-optic feedthroughs can be made with FC/APC or FC/PC termination mounted with either polarization maintaining [PM] fibers, singlemode [SM] fibers, multimode [MM] graded-index [GI] fibers or step-index [SI] fibers with a cladding diameter of 125 μm . The SMA termination is offered with fibers with a core diameter from 100 μm to 400 μm .

Please contact us to discuss your specific requirements.



As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.
DTSKTRAVT12 September 2020

KEY FEATURES

- Ruggedized
- 10^{-8} mbar.l/s hermeticity
- UV-VIS-NIR wavelength ranges
- Up to 4 channels depending on the flange
- DN 40 CF or DN 40 KF flanges
- PM, SM and MM fibers
- FC/APC, FC/PC and SMA adapters

APPLICATIONS

- High vacuum
- Ultra-high vacuum

QUALITY

- ISO 9001:2015

KTRAV-T12

Ruggedized Multichannel Hermetic Feedthroughs

HERMETIC BULKHEAD FIBER-OPTIC FEEDTHROUGHS

STANDARD PRODUCT SPECIFICATIONS

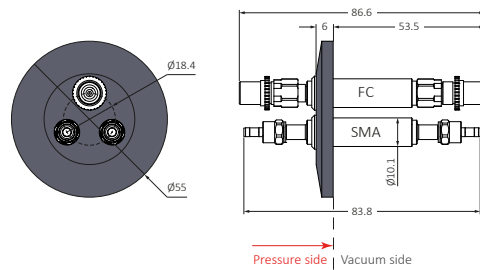
| Parameters | Mechanical specifications | |
|-----------------------------|---------------------------|---------------------------|
| Pressure | high-vacuum | ultra-high vacuum |
| Hermeticity | 10 ⁻⁸ mbar.l/s | 10 ⁻⁸ mbar.l/s |
| Flange | DN 40 KF | DN 40 CF |
| Number of channels | 1 to 3 | 1 to 4 |
| Operating temperature range | -55°C to +125°C | |
| Storage temperature range | -55°C to +200°C | |

| Parameters | Optical specifications | | |
|----------------------------|---|---|--|
| Adapter interface | FC/APC | FC/PC | SMA |
| Fiber type | PM, SM, GI 50/125, GI 62.5/125, LCH 50/125, LCH 105/125 | SM, GI 50/125, GI 62.5/125, LCH 50/125, LCH 105/125 | 100 to 400 μm core fibers, low OH, high OH, solarization resistant |
| Insertion loss | < 1.5 dB max. @1550 nm (0.7 dB typ. @1550 nm on SMF28) | < 1 dB max. @1550 nm (0.3 dB typ. @1550 nm on SMF28) | < 3 dB max. @850 nm (2 dB typ. @850 nm on 600 μm fiber) |
| Operating wavelength range | 200-2000 nm; depending on the fiber | | |

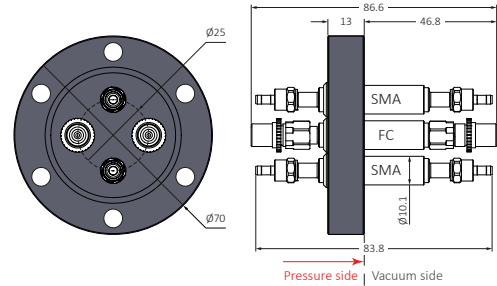
Every feedthrough is delivered with a helium leak detection test report. The helium test is realized in our facilities and is limited to 10⁻⁸ mbar.l/s by the test chamber.

MECHANICAL SCHEMES

DN 40 KF flange



DN 40 CF flange



ORDERING INFORMATION

Please note that in standard version, all the channels are identical in size, fiber type and connector. For unpaired channels, please contact our sales team.

Order code

| | | | | | | | | |
|-------|---|-----|---|---|--|---|---|---|
| KTRAV | - | T12 | - | - | - | - | - | - |
| | | | | flange type KF40 : DN 40 KF CF40 : DN 40 CF | fiber type fiber code according to our fiber's list DOCFL | | | |
| | | | | # of channels 1, 2, 3 or 4 with CF40 1, 2 or 3 with KF40 | connector type FC : FC/PC FCA : FC/APC narrow key SMA : SMA905 | | | |

Example : KTRAV-T12-CF40-4-FCA-PM980
(Ruggedized fiber-optic hermetic feedthrough with 4 channels of PM 980 fibers terminated with female adapter interfaces for narrow key FC/APC connectors, on a DN 40 CF flange)

As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

DTSKTRAVT12 September 2020