Fiber Optics

SEDI•ATI fibres optiques

LASER COMPONENTS

HERMETIC BULKHEAD FIBER-OPTIC FEEDTHROUGHS

KTRAV-M12

Hermetic Fiber Optic Feedthroughs for Vacuum and Pressure up to 1000 bars

The KTRAV-M12 hermetic fiber-optic feedthroughs are suitable for vacuum and pressure applications up to 1000 bars. They ensure a high level of hermeticity better than 10^{-8} mbar.l/s.

They are built with an internal fiber rod identical to the fiber used upstream and downstream.

They can be made with **polarization maintaining** [PM] fibers as well as with any singlemode [SM] fibers. They can also come with multimode [MM] graded index [GI] fibers or step index [SI] fibers.

For fibers with a cladding diameter of 125 µm maximum, they can be terminated with **FC/APC** or FC/PC connectors. For core diameters up to 1000 µm, they come with SMA termination.

As an option, the KTRAV-M12 hermetic fiber-optic feedthroughs can be qualified according to standard NF EN 60079-1 European ATEX Zone 2 Category 3 (d IIIG IIc ; explosive environment).

Please contact us to discuss your specific requirements.

KEY FEATURES

- From vacuum to 1000 bars
- 10^{-8} mbar.l/s hermeticity
- Broad wavelength range
- Single-channel
- PM, SM or MM fibers
- FC/APC, FC/PC or SMA adapters

APPLICATIONS

- Vacuum
- Pressure
- Explosive environments

QUALITY

- ISO 9001:2015
- Optional ATEX Zone 2 Cat. 3 qualification

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

DTSKTRAVM12 September 2020

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HERMETIC BULKHEAD FIBER-OPTIC FEEDTHROUGHS

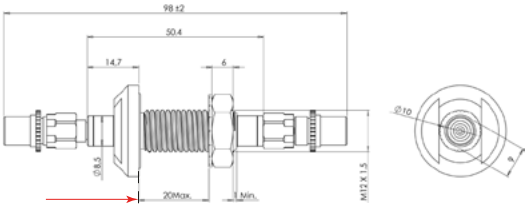
STANDARD PRODUCT SPECIFICATIONS

Parameters	KTRAV-M12		
Pressure	from vacuum to 500 bars @125°C or to 1000 bars @20°C (can also stand 1000 bars at 200°C in incursion)		
Hermeticity	10^{-8} mbar.l/s		
Sealing technology	epoxy		
Housing material	stainless steel 304L		
Panel drilling diameter	12.2 mm $^{0/+0,3}$		
Panel thickness	1 mm min.; 20 mm max.		
Tightening torque	25 Nm max.		
Operating wavelength range	200-2000 nm; depending on the fiber		
Operating temperature range	-55°C to +125°C		
Storage temperature range	-55°C to +200°C		
Adapter interface	FC/APC	FC/PC	SMA
Fiber type	PM SM MM GI 50 and 62.5 µm core MM SI with 125 µm cladding diameter	PM SM MM GI 50 and 62.5 µm core MM SI with 125 µm cladding diameter	MM SI up to 1000 µm core
Insertion loss	< 1.5 dB max. @1300 nm (0.7 dB typ. @1300 nm on SMF28)	< 1 dB max. @1300 nm (0.3 dB typ. @1300 nm on SMF28)	< 3 dB max. @850 nm (2 dB typ. @850 nm on 600 µm fiber)

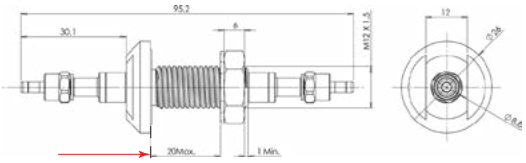
Every feedthrough is delivered with a helium leak detection test report. The helium test is realized in our facilities and is limited to 10^{-8}mbar.l/s by the test chamber.

MECHANICAL SCHEMES

FC/PC and FC/APC versions



SMA version



ORDERING INFORMATION

Order code

KTRAV	-	*connector type* FC : FC/PC FCA : FC/APC SMA : SMA905	-	M12	-	*fiber type* fiber code according to our fiber's list DOCFL

Example : KTRAV-FCA-M12-SMF28
(Fiber optic hermetic feedthrough with SMF28 fibers terminated with FC/APC connectors)

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