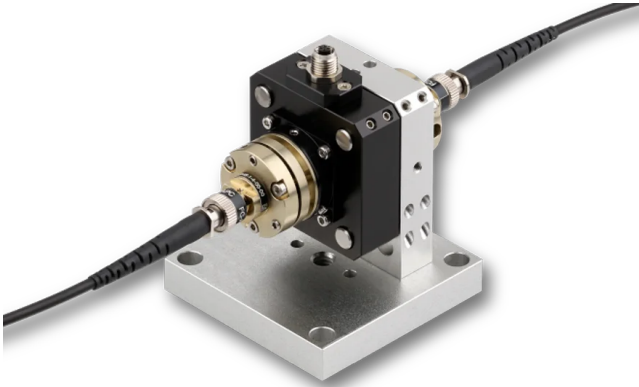


Fiber-coupled electro-magnetic shutter 48EMS-0



FEATURES

Fiber-coupled electro-magnetic laser shutter

- With single-mode, PM or multimode fiber cables
- Min. 25 million cycles
- Compatible to the 'multicube' System
- Bistable, operating frequency max. 15 Hz
- Min. exposure time 11 ms
- Controlled by TTL signals (flank control)
- Electrical connection type M8, 4 pin female
- Suitable shutter controller SK97121 (not included)
- Compact, rugged, transportable and sealed opto-mechanical units
- Very high long-term stability, efficiency and reproducibility
- Can be used as an interface between different types of fibers or connectors

Please note: This is not a laser safety shutter according to EN 60825. Additional laser safety measures may be necessary.



DESCRIPTION

The fiber-coupled electro-magnetic shutter 48EMS-0 is a shutter that can be controlled by means of a TTL signal (flank-controlled).
An appropriate controller is available separately.

Fiber-coupled setup

The electromagnatic shutter is fiber-coupled using two [Laser Beam Couplers](#), one of which serves as the input into the opto-mechanical unit collimating the input radiation and a second coupler that couples the radiation back into the second fiber cable. The stability of the total Fiber-to-Fiber Coupler is determined by the [stability](#) of the Laser Beam Coupler.

Depending on the choice of [lens type](#) (monochromatic or achromatic) within the Laser Beam Couplers, the system can either be used for a single wavelength or for a wavelength range.

Coupling focal length

The best focal length for the 60SMS Laser Beam Couplers used in these systems is f' 11 - 12 mm. If the effective numerical apertures of the two fibers used with this system are different, you have to use two Laser Beam Couplers with different focal lengths.

Configuration

For selecting the 60SMS Laser Beam Couplers please refer to the [60SMS Laser Beam Coupler webpage](#).

If you want to use the electro-magnetic shutter in a free beam setup, please refer to [48EMS-6](#).

TECHNICAL DATA

Fiber-coupled electro-magnetic shutter 48EMS-0

Order code	48EMS-0
Wavelengths	370 - 1700 nm (depends on coupling optics)
	monochromatic or achromatic optics*
	different lens types available.
	* broadband systems on request
Focal length	11 -12 mm (standard)
	depends on coupling optics and fiber cable
Fiber type	single-mode, polarization-maintaining
	or multimode
Connector type	FC APC (standard)
	bistable
Control	TTL (edge-triggered)
Electrical connector type	M5 (4 pin, female)
Voltage to switch	10.7 V DC
Coil resistance	8 Ohm
Shutter timing	
Min. exposure time	11 ms

Max. operating frequency	15 Hz (continuous)
Max. operating frequency	45 Hz (burst mode)
Operating temperature	-10 - +65°C
Suitable shutter controller	SK97121C
Lifetime	min. 25 million cycles
Weight	xxx gr

DOWNLOADS



[980911310501.pdf \(Dimensional drawing\)](#)

ACCESSORIES

FIBER CABLES SMC	Single-mode fiber cables
FIBER CABLES PMC	Polarization-maintaining fiber cables
FIBER CABLES MMC	Multimode fiber cables
SHUTTER CONTROL UNIT SK97121C	for electro-magnetic shutters type 48EMS

RELATED PRODUCTS

LASER BEAM COUPLERS SERIES 60SMS	for coupling into single-mode and polarization-maintaining fiber cables
ELECTRO-MAGNETIC SHUTTER 48EMS-6	
MULTICUBE COMPONENTS	Multicube Components like mounting plates, cubes etc.

This is a printout of the page <https://sukhamburg.com/products/details/48EMS-0> from 4/30/2024

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