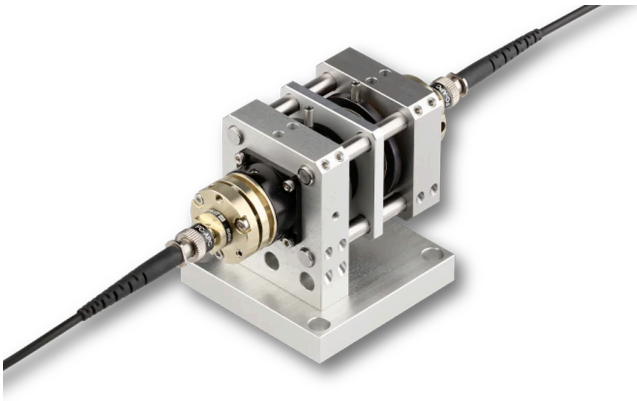


Fiber-to-fiber-coupler with two integrated wave plates

Compact, rugged and highly efficient opto-mechanical unit for interconnecting two fiber cables and adjusting the state of polarization



FEATURES

Fiber-to-fiber coupler with two integrated wave plates / retardation optics

- For single-mode or PM fiber cables
- As an option input polarizer
- adjustable half-wave plate and quarter-wave plate
- Compact, rugged, transportable and sealed opto-mechanical units
- Very high long-term stability, efficiency and reproducibility
- Can be used as interface between different types of single-mode fibers or connectors

DESCRIPTION

The fiber-to-fiber coupler type 48-MCS-029 is additionally equipped with two integrated wave plates / retardation optics.

Polarizer

As an option the system can be equipped with an input polarizer.

Wave plate

The two integrated wave plates can be chosen from available half-wave plates and a quarter-wave plates. A selection of wave-plates available on stock can be found [here](#). Dual wavelengths wave plates or achromatic wave plates are available on request.

Fiber couplers

A fundamental component of the Fiber-to-Fiber Coupler is the [Laser Beam Coupler](#), which is the input into the opto-mechanical unit collimating the input radiation and, finally, 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 fiber 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 Couplers site](#).

TECHNICAL DATA

Fiber-to-fiber-coupler with two integrated wave plates

Order code	48-MCS-029
Wavelengths	370 - 1700 nm (depends on coupling optics)
	monochromatic or achromatic optics*
	Different lens types available.
Wave plate	Half-wave and/or quarter-wave
Focal length	11 mm (standard)
Fiber type	single-mode or polarization-maintaining
Connector type	FC APC (standard)
Transmission	≥ 75 % @ 780 nm
Weight	xxx gr
	* Broadband systems on request

DOWNLOADS



[980129090612.pdf \(Dimensional drawing\).](#)



[Adjustment_SMS.pdf \(Manual\).](#)

ACCESSORIES

60EX-4	Eccentric key with a stroke of ± 0.5 mm.
9D-12	Screwdriver WS 1.2
50HD-15	Hex key WS 1.5

13BL1-13Iris diaphragm for fiber collimators with diameter Ø
25/28 mm

RELATED PRODUCTS

**POLARIZATION
ANALYZER SK010PA**Measurement tool for coupling into polarization-
maintaining fiber cables**LASER BEAM
COUPLERS SERIES
60SMS**for coupling into single-mode and polarization-
maintaining fiber cables**FIBER-TO-FIBER
COUPLER 60FF-T**Compact, rugged and highly efficient opto-
mechanical unit for interconnecting two fiber cables**FIBER-TO-FIBER-
COUPLER WITH ONE
INTEGRATED WAVE
PLATE**Compact, rugged and highly efficient opto-
mechanical unit for interconnecting two fiber cables
and adjusting the state of polarization**RETARDATION OPTICS**Retardation optics including low and zero order half-
wave and quarter-wave plates as well as dichroicThis is a printout of the page <https://sukhamburg.com/products/details/48-MCS-029> from 5/3/2024

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