

2-Paddle Fiber Polarization Controller



Description

FIRSOL 2-Paddle Fiber Polarization Controller is designed for manual adjustment of the state of polarization (SOP) in single mode fiber systems. By winding the fiber around two independently rotatable paddles, controlled bend-induced birefringence is introduced into the fiber, allowing each paddle to function as an adjustable fractional wave plate. Rotating the paddles changes the orientation of the induced birefringence and enables flexible control and optimization of the output polarization state. Its compact all-fiber design provides simple operation, low optical loss, and stable polarization adjustment, making it suitable for fiber lasers, fiber optic sensing, optical communication, interferometry, test and measurement, and laboratory research.

Features

- Convert Between Linear, Circular, and Elliptical Polarization States
- Operates over Full Fiber Bandwidth
- High Stability and Reliability

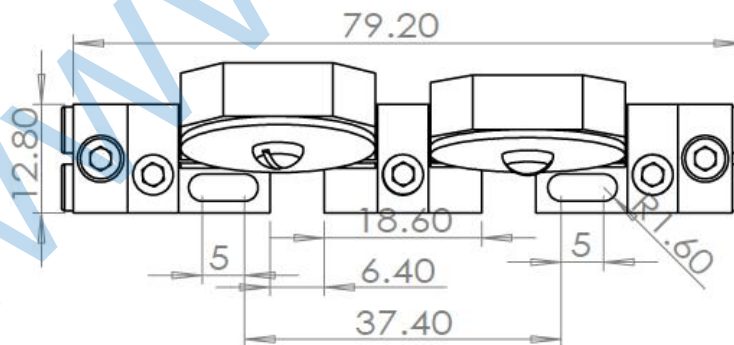
Applications

- Fiber Laser
- Fiber Optic Sensing
- Fiber Optic Communication

Specifications @18mm Loop Diameter

Parameter	Unit	Value					
Fiber Type	-	None	460-HP	630-HP	780-HP	1060-XP	SMF-28e
Operating Wavelength Range	nm	N/A	450-600	600-770	780-970	980-1600	1260-1650
Design Wavelength	nm	N/A	488	633	780	1060	1550
Mode Field Diameter	μm	N/A	3.5±0.5 @515nm	4.0±0.5 @630nm	5.0±0.5 @850nm	6.2±0.5 @1060nm	9.7±0.5 @1550nm
NA (Numerical Aperture)	-	N/A	0.13	0.13	0.13	0.14	0.14
Loop Configuration	-	N/A	3-2	3-1	4-1	2-4	1-2
Total Length	m	N/A	2.5				
Cable Diameter	μm	N/A	900				
Bend Loss	dB	N/A	≤0.1				
Loop Diameter	mm	18					
Product Dimensions	mm	L79.2 x W12.8					

Product Dimensions



Ordering Information

☐ nm	☐
Fiber Type	Connector
None	None
460-HP	FC/PC
630-HP	FC/APC
780-HP	
1060-XP	
SMF-28e	
Custom	