datasheet

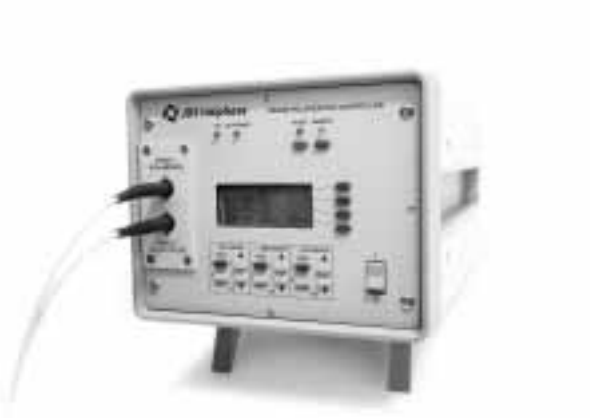
Polarization Controllers

PR Series

JDS Uniphase Polarization Controllers provide an efficient way of creating any polarization state at any point along a single-mode fiber. The unit can be used as part of a polarization-state analyzer. The polarization controllers can be combined with other instruments to complete a measurement test system, such as erbium-doped fiber amplifier (EDFA) and single-mode component testing for polarization sensitivity.

This controller provides more accurate polarization control than a simple fiber coil design. Changes to the state of polarization are produced by three optical elements: a high extinction ratio polarizer, a quarter-wave retardation plate, and a half-wave retardation plate. Each element can be controlled locally from the front panel or through the GPIB and RS232 interfaces.

The polarization controller has two ports for in-line connection in a test system.The ports are equipped with connectorized fiber pigtails.



Key Features & Benefits

Complete polarization control

Output polarized to greater than 40 dB

Accurate manipulation of polarization state

GPIB and RS232 remote control

CE and cULus compliant

Applications

Polarization sensitivity measurements for single-mode fiberoptic components

EDFA signal-to-noise measurements

Analysis of polarization state changes

Compensation for changes in birefringence in systems

Technical Specifications

PARAMETER[1]	PR2000	PR2070
Operating wavelength range	1530-1560 nm	1200-1600 nm
Insertion loss[2]	1.5 dB	3.0 dB
Insertion loss variation with wavelength[2]	± 0.1 dB	± 0.1 dB
Insertion loss variation with rotation[2]	± 0.1 dB	± 0.35 dB
Extinction ratio[3]	> 40 dB	> 40 dB
Maximum optical input power	100 mW	100 mW
Fast axis alignment accuracy at home position	< ± 1°	< ± 2°
Angular accuracy	± 0.03°	± 0.03°
Rotational resolution	0.075°	0.075°
Maximum rotational speed	144 degrees/second (24 RPM)	144 degrees/second (24 RPM)
Return loss	> 45 dB	> 40 dB
Power supply	100-240 V AC, 50-60 Hz	
Power consumption	30 VA	
Fiber type	single-mode 9/125 µm with a 3 mm jacket, 1.5 m pigtails	
Dimensions W x H x D	18.5 x 14.7 x 31.2 cm	
Weight	7 kg	
Operating temperature	10 to 40 °C	
Storage temperature	- 40 to 60 °C	
Humidity	maximum 95 % RH from 10 to 40 °C	

1. The state of polarization (S.O.P.) is accurately controlled exiting the PR2000's optical elements. The absolute S.O.P. exiting the launch fiber is subject to fiber conditions.
2. For linearly polarized light aligned with internal polarizer's axis.
3. Measured with a (> 45 dB) polarized narrow spectral line source.

Sample Order: PR2000+1FA

PR20 ☐ 0+1 ☐ ☐

code	model
0	1550 nm
7	1310 and 1550 nm

code	connector type
FP	FC/HPC
FA	FC/APC
NC	No connector

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Indicate your requirements by selecting one option from each configuration table. Print the corresponding codes in the available boxes to form your part number.

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