

Electronic Polarization Controller



Product Overview

Based on the Phoenix Photonics polarization scanner, the controller offers the option of three section manual control or external analogue voltage control. Full state of polarization control is achieved by three cascaded variable fiber waveplates. The controller is all-fiber giving return loss, insertion loss and PDL advantages. Default condition is manual control through three independent adjustment knobs on the top of the device offering a direct replacement for the standard mechanical three-loop controller. Connection to three analogue voltages via a standard 9 pin D-type connector enables remote independent electronic control of each of the fiber sections. Control of each individual waveplate describes a complete circle on the Poincaré sphere. The unit allows any SOP to be generated from any arbitrary input SOP.

Features & Applications

FEATURES:

- Electronic and manual polarization control
- Simple operation
- Any output SOP achievable
- Low insertion loss
- High return loss
- High extinction ratio maintenance

EXAMPLE APPLICATIONS

- Polarization control
- State of polarization scanning
- Component testing
- Sensor systems
- Optical fiber polarimetry
- PMD emulation

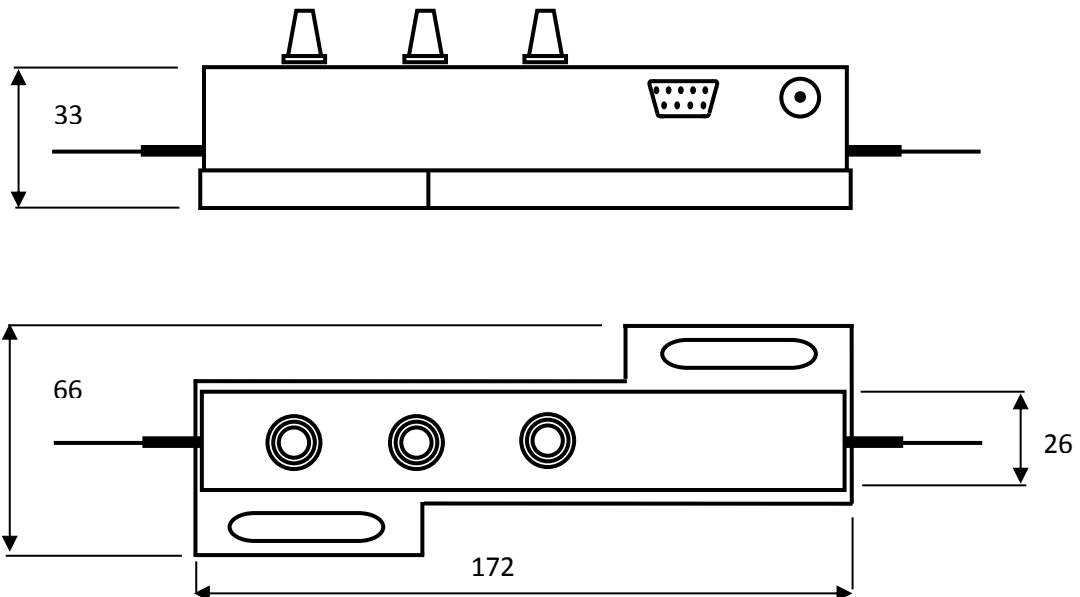
Wavelength range	nm	1300-1640
Insertion Loss ¹	dB	<0.8
PMD	ps	<0.15
Insertion loss variation ²	dB	<0.02
Return Loss	dB	>70
Maximum Voltage ³	V	10
Scan rate ⁴	deg./s	150
Operating Temperature Range	°C	-5 to 70
Storage Temperature	°C	-40 to +85
Fiber type		SMF28, 900µm buffer
Input & Output Fiber Lengths	mm	1000
Power		External mains 110V to 240V adapter to 15V/300mA DC.

Specification Notes

1. Losses do not include connectors.
2. The variation of output power for full coverage of the Poincaré Sphere.
3. Analogue drive voltage, 0-10V gives 0-2pi differential phase shift for the waveplate.
4. Scan rate is the rate of polarization change for a cycle of the Poincare sphere for each section

PACKAGING STYLE:

All dimensions are approximate and may vary slightly, dimensions in mm.



Ordering Information

E	P	C	-		-		-		-	
				Wavelength:		Cable type:		Connectors:		Polish:
				20 - 2000		0 - none		0 - none		0 - none
				15 - 1520 - 1620		1 - 900µm loose tube		1 - FC		1 - SPC
				13 - 1280 - 1350				2 - SC		2 - APC
				10 - 980 - 1080				3 - LC		

For more information please contact Phoenix sales:
sales@phoenixphotonics.com or visit us at
www.phoenixphotonics.com