

Fiber Polarization Controller



FEATURES:

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

APPLICATIONS:

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

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.

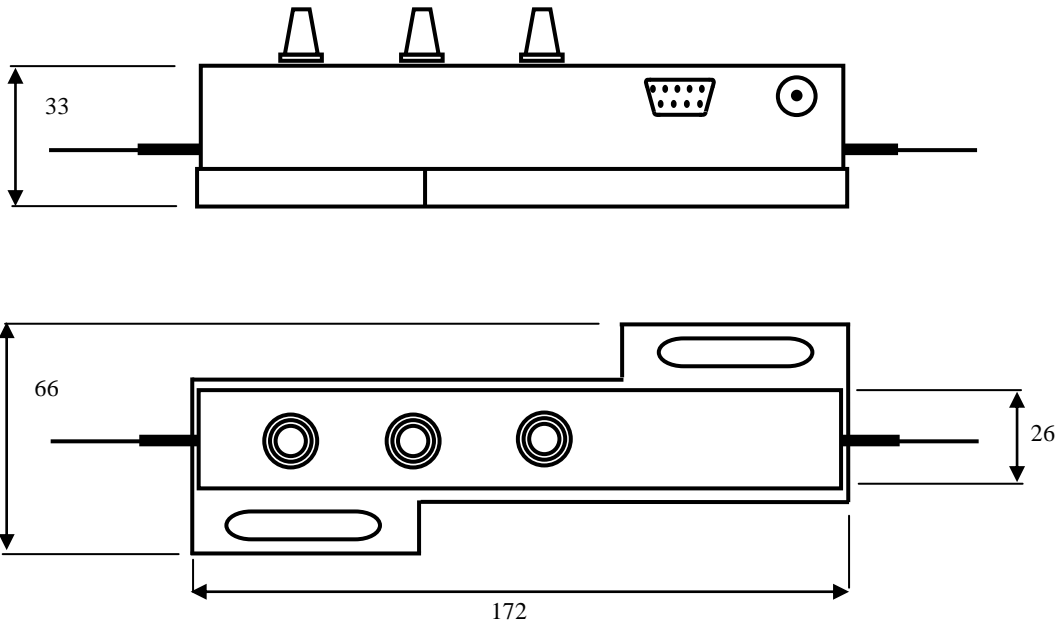
| SPECIFICATION: | Units | |
|---------------------------------------|----------------|--|
| Wavelength range | nm | 1300-1640 |
| Insertion Loss ¹ | dB | <0.8 |
| PMD | ps | <0.15 |
| Insertion loss variation ² | dB | <0.02 |
| Return Loss | dB | >70 |
| Maximum Voltage ³ | V | 10 |
| Scan rate ⁴ | deg./s | 150 |
| Operating Temperature Range | ⁰ C | -5 to 70 |
| Storage Temperature | ⁰ 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. |

Notes:

- Losses do not include connectors.
- The variation of output power for full coverage of the Poincaré Sphere.
- Analogue drive voltage, 0-10V gives 0-2π differential phase shift for the waveplate.
- 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.



ORDER CODE:

E | **P** | **C** | - |

Connectors:
 0 – none
 1 – FC/SPC
 2 – FC/APC