

## Polarization Controllers



### Electronically Addressed Polarization Controllers

The ProtoDel all-fiber optical State of Polarization (SOP) controller provides electronic variation of any arbitrary input SOP to any other state. The polarization controller can be configured to be operated manually through three external analog voltage supplies or computer controlled for application in auto-tracking systems.

### Mechanical Polarization Controllers

The ProtoDel mechanical polarization controller provides complete Poincare sphere coverage by adjusting the angles of the user-friendly paddles. The design utilizes three wave plates with fixed retardation and variable orientation angles to control the State of Polarization. The flexibility of the paddle design allows you to install a variety of fibers for use at different wavelengths. Additional options including integrated polarizers are available. These devices can be tailored to meet most application requirements. Please contact our technical design team to discuss specific requirements.



**ELECTRONIC**

**FEATURES:**

- All-fiber configuration
- Low insertion loss
- Low back reflection
- Electronically variable SOP
- No moving parts
- Large operating bandwidth
- Rugged packaging

**APPLICATIONS**

- Auto-tracking
- Optical transmission systems
- Measurement systems
- Optical fiber sensors
- Coherent optical systems
- Remote fiber system control

**SPECIFICATIONS:**

- Wavelength: nm 1290 -1580
- Speed: 1s for  $2\pi$  phase change
- Insertion loss (typical): <1.5dB
- PDL: <0.1dB
- Control: 0 to 5V
- $2\pi$  Rotation of Poincare sphere: 2.5V
- Rotational Speed 'on': <2.5 sec/ $2\pi$
- Rotational Speed 'off': <7.5 sec/ $2\pi$
- Drift max (deg/min):
  - Azimuth 0.35
  - Ellipticity 0.2
  - Poincare sphere 0.4
- Operating temperature: 0 to 50°C
- Power supply:  $\pm 12V$

**PACKAGING -MODULE:**

- Dimensions: 3U x 14HP
- Electronic connector:  
DIN41612 64w a/c plug
- Optical Connectors: FC/PC compatible

**MECHANICAL**

**FEATURES:**

- User friendly
- Low insertion loss
- Low cost
- Large operating bandwidth
- Low back reflection

**APPLICATIONS**

- DWDM Systems
- Optical transmission systems
- Measurement systems
- Optical fiber sensors
- Test and measurements
- PDL measurements set-up

**ORDERING INFORMATION:**

**P P C - M O** (Electronic)

**P P C - M E** (Mechanical)