

Fringe Control System

DATA OPTICS, INC.

115 HOLMES ROAD • YPSILANTI MICHIGAN 48198-3020
(800)321-9026 (734)483-8228 Fax:(734)483-9879



Fringe Control System FC-400

Data Optics has introduced a new active-feedback Fringe Control System with state-of-the-art stability, dynamic range and functionality. This system, the FC-400, is intended to be used in interferometric and holographic applications where active-feedback fringe stabilization can be achieved with path-length compensation.

Specifications

Controller

- Dynamic Range of 1000:1
- Locking Stability of $\lambda/20$ typical
- Frequency Response of DC to 500 Hz with standard 5 gram mirror
- Response Roll-off of 10 to 500 Hz, adjustable
- Feedback Control Adjustments
 - Gain via 10-turn precision potentiometer
 - Damping via 10-turn precision potentiometer
 - Zero via Up/ Down pushbutton controls
- Optical Power Level Display – 2 digit numerical
- Mirror Position Display – 20 element bar graph
- Monitor Output of ± 3.5 VDC at 400 Ohms via backpanel BNC Connector
- Power Requirements of 120/240 VAC, 0.5/0.25 A at 50/60 Hz

Detector Head

- Bi-cell photodiode detector assembly
- Detector Spectral Range of 400 to 1050 nm (20% of S_{max})
- Detector separation of 0.100"
- Detector aperture size of 0.036" diameter
- Connector – 9-pin "D" connector, 8 foot cord

Mirror (Feedback) Head

- Bimorph movement with ± 5 micron total travel
- Mirror diameter up to 15 mm
- High performance, special application and standard mirrors available
- Connector – BNC, 8 foot cord