High-Speed Fiber-Optic Switch

SW-FOP-L

The High-Speed Fiber-Optic Switch, or SW-FOP-L, uses an advanced dual sensor for edge- and hole-detect pick-ups. The dual sensor is designed to be a precision registration mark sensor with 5µs repeatability, and a standard photoelectric sensor for any high speed application, in one package.

The High-Speed Fiber Optic Switch (SW-FOP-L) is not a replacement for the Fiber Optic Switch (SW-FOP) offered by AMS Controls. The Fiber Optic Switch is still available for purchase, but should be used in slower line-speed applications.

This high-speed switch has two key advantages over the SW-FOP:

1. Hole detection uses a line of light rather than a single point of light. This allows you to avoid length errors caused by the single point of light hitting an angled, curved, or shifted. Instead, the full line of light gives a wider range of detection. As soon as any part of the registration hole or notch crosses the line, the High-Speed Fiber Optic Switch registers the position.

2. The fiber optic cables are protected by a stainless steel flexible jacket. This offers extra protection not provided with a simple fiber optic switch and is much better for industrial uses.

SPECIFICATIONS

Supply Voltage
12 to 24 VDC
Polarity protected
Intended for Class 2 circuits

Current Requirements
45 milliamps (exclusive of load)

Response Time
Light/Dark = 10µs
Repeatability = 5µs

Output Transistors
NPN and (1) PNP sensor output transistors
Outputs sink or source up to 150 milliamps (current limit).
All outputs are continuously short circuit protected.

LED Light Source
White = Broadband Color Spectrum

Ambient Temperature
0° - 57° C (32° - 135° F)

Light Immunity
Responds to sensor's pulsed modulated light source – immune to most ambient light including indirect sunlight.

Maximum Sensing Range
7 in. (177.8mm)

Wiring

Brown	12-24 VDC
Blue	Ground
Black	PNP Output (Source)
White	NPN Output (Sink)
Gray	N/A
Shield	N/A

Included Items
- Sensor (enclosed in rugged steel box)
- 5' Fiber-Optic Cable (with stainless steel jacket)
- 25' Power and I/O Cable

DIMENSIONS

Ø 0.31"

4.00" 2.00" 3.00"

6.75"

3.00"

6.00"

7.50"

3/8" Flat Housing

0.50" 0.56"

.24" O.D. FLEXIBLE STAINLESS STEEL JACKETING

0.29" DIA

0.187" DIA

1.00"

0.56" 0.75" 0.25"

0.50" 0.75"

0.25" DIA

0.125" DIA

0.38"

0.032" FIBER BUNDLE

60"

1 1/2" Flat Housing

.50" .56"

.24" O.D. FLEXIBLE STAINLESS STEEL JACKETING

.29" DIA

.187" DIA

1.50"

.56" 1.25" .25"

1.00" 2.00"

.25" DIA

.190" DIA

1.50"

.010" FIBER BUNDLE

60 "