

Photoelectric Sensors/Controls

Fiber Optic—Miniature Sensors

FE7C-F Series



GENERAL INFORMATION

Since these sensors are self-contained, no separate amplifier is needed for signal conditioning. A mounting bracket is included to simplify mounting and alignment.

All FE7C sensors contain a LED alignment indicator. In DC units, the indicator is also a function indicator. When sufficient light level is being received, the indicator light is green. As the light level decreases to 150% of the minimum operating level, the indicator turns red.

Use plastic cables for visible red scanning. A cutter is provided to cut plastic cables to the desired length.

FEATURES

- Diffuse and thru scan types (see scan distance chart)
- Self-contained either AC or DC operation
- Visible red or infrared light source
- Sealing: NEMA 12 and IP64
- Alignment indicator
- False pulse protection
- Synchronous detection
- Light or dark operated selectable (DC)
- Short circuit and reverse polarity (DC) protection
- Prelead 2 m (6,56 ft.) cable termination
- Plastic cable can be cut to desired length in the field to suit individual application requirements
- Ease of installation

FOR A COMPLETE SENSOR

Required

- Fiber optic sensor – FE7C-FRT2-M
- Appropriately rated power supply for DC devices
- Cable to fit application

Optional

- Control base

INSTALLATION/WIRING

Instruction Sheet PK 9079 is included with each sensor, and is also available upon request.

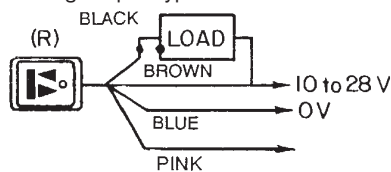
AC Type

Load Is Directly Connected

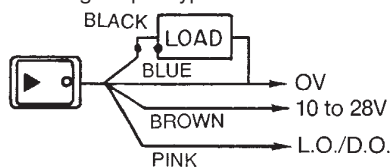


DC Type

Standard Relay Or Solenoid Sinking Output Type



Sourcing Output Type



ORDER GUIDE SENSOR HOUSING

Description	Catalog Listing
DC Sensor Units	Visible Red
L.O./D.O. (light operated/dark operated) sourcing output	FE7C-FRF6-M
L.O./D.O. (light operated/dark operated) sinking output	FE7C-FRC6-M
AC Sensor Units	Visible Red
D.O. (dark operated)	FE7C-FRU2-M
L.O. (light operated)	FE7C-FRT2-M

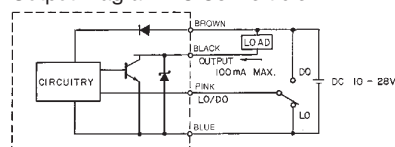
CABLES (For additional listings see Fiber Optic Cables) Page C51.

Description	Catalog Listing
	Visible Red (plastic)
Thru scan (pair)	HPF-T003-H
Diffuse scan (bifurcated)	HPF-D002-H

RECOMMENDED SCAN DISTANCE (CLEAN AIR)

		Diffuse	Thru
AC	Red	0.79 in. (2 cm)	2.0 in. (5 cm)
DC	Red	0.79 in. (2 cm)	2.0 in. (5 cm)

Output Diagram DC Convertible



Photoelectric

Photoelectric Sensors/Controls

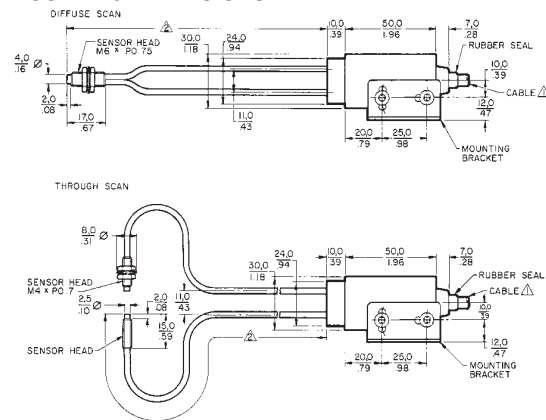
FE7C-F Series

Fiber Optic-Miniature Sensors

SPECIFICATIONS

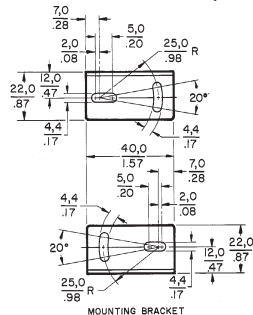
Maximum Scanning Distance (in clean air)		See scan distance chart on previous page	
Supply Voltage		85 to 250 VAC, 50/60 Hz.	10 to 28 VDC; 10% max. power supply ripple
Power Dissipation		0.375 VA max. (excluding load)	0.56 watts max. (excluding load)
Current Consumption		1.5 mA max. (excluding load)	20 mA max. (excluding load)
Output	Load Current	5 to 100 mA	100 mA max.
	Voltage Drop	10 VAC max.	1 VDC max. @ 100 mA sinking
	Leakage Current (Off state)	1.5 mA max. (100 VAC load @ 10 K Ω)	
Maximum Rate of Operation		600 operations/minute	15,000 operations/minute
Typical Response Time	On	30 msec. (50 msec. max.)	1 msec. (2 msec. max.)
	Off	30 msec. (50 msec. max.)	1 msec. (2 msec. max.)
Circuit Protection		False pulsing, Short circuit (DC), Reverse polarity (DC)	
Temperature Range		Amplifier -4°F to 140°F (-20°C to 60°C)	
Sealing		NEMA 12 and IP64	
Housing		Case ABS resin	
Mounting		Horizontal or vertical side mounting brackets included	
Weight		4.5 ozs. (128 g)	
Logic		Built-in ON-OFF (immediate response) control	

MOUNTING DIMENSIONS

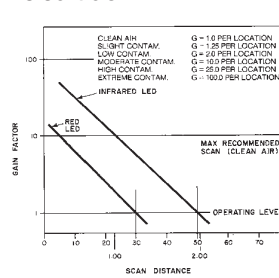


- 1 Cable terminations: 0.245 in. dia. x 78.74 in. (6.2 mm x 2 m)
Wire gage: AC 20 AWG, DC 22 AWG
- 2 Fiber optic cable: 2m
- 3 Screwdriver provided for listings with sensitivity adjustments

MOUNTING BRACKET (Included)



THRU SCAN EXCESS GAIN



DIFFUSE SCAN EXCESS GAIN

