50FY

- **Type 3 interlocking guard according to EN 954**
- **Monitor up to 6 doors**
- **Sensing distance up to 2.5 mm / 0.098 in. depending upon the offset adjustment**

Dimensions in millimeters / inches, meters / feet, weights in kg / lbs

Specifications	Sensors and magnets	Amplifier
Power supply voltage	10-12 Vdc	100 to 128 Vac, 50/60 Hz
Power consumption	20 mA	3 VA max.
Output switching capacity	-	2 safety relays with guided-contacts (5A/120 Vac, 2 NO in series)
Material	Corrosion resistant plastic	Stainless steel
Dimensions	Sensors & magnets: 12.7x39.4x33/0.50x1.55x1.30	57.9x203.2x135.1/2.28x8x5.32
Operating temperature	-40 to 85°C / -40 to 185°F	-40 to 70°C / -40° to 158°F
Sealing	IP 67 / NEMA , 3, 4, 4X, 12, 13 and washdown	To be installed in an IP 54 enclosure
Status indicators	LED indicators on the amplifier	
Sensing distance	2.5 mm/0.09 in. (offset: 0 mm)	-
	1.3 mm/0.05 in. (offset: 3.8 mm/0.14 in.)	-
	0 mm (offset: 7.5 mm/0.29 in.)	-
Electrical connection	4-leads prewired (2, 4 or 15 m/6.56, 13.12 or 49.2 ft)	Terminal strip

Ordering information (1)

Hall effect sensors:

50FY41-6 (cable length 2 m / 6.56 ft)
50FY41-12 (cable length 4 m / 13.12 ft)
50FY41-50 (cable length 15 m / 49.2 ft)

Magnet actuators:

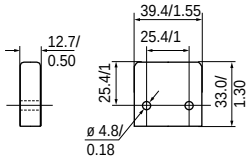
52FY31

Safety amplifier:

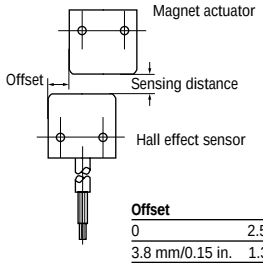
FYQLA1-140R-3

(1) Order one set of sensor and magnet per door, and up to 6 sets per amplifier.

Magnet actuator (52FY31)

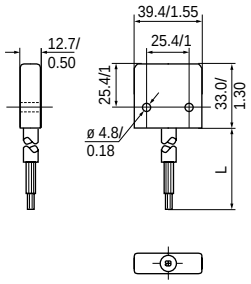


Offset/Sensing distance



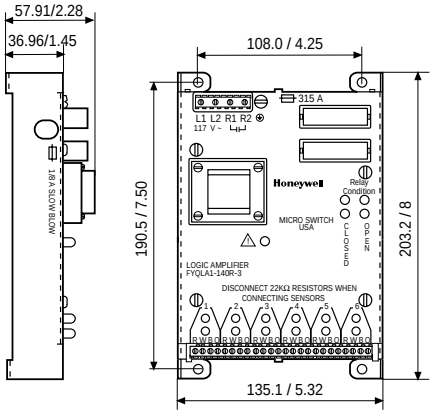
Offset	Sensing distance
0	2.5 mm/0.09 in.
3.8 mm/0.15 in.	1.3 mm/0.05 in.
7.5 mm/0.26 in.	0

Hall effect sensors (50FY41-❑)

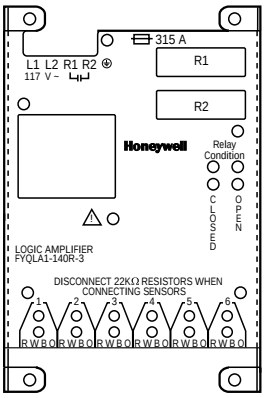


Listing	Cable length
50FY41-6	2 m/ 6.56 ft
50FY41-12	4 m/ 13.12 ft
50FY41-50	15 m/ 49.2 ft

Safety amplifier



Status indicators



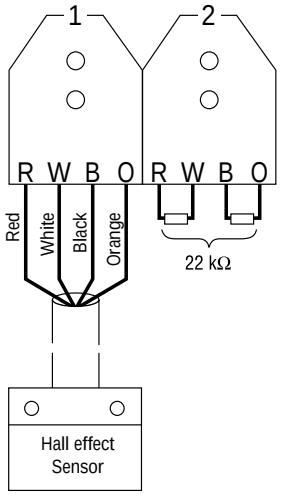
Logic amplifier output status

LED Status	Output Status	Machine operation
Relays condition (green) CLOSED (red) OPEN	ON	Enable
Relays condition (green) CLOSED (red) OPEN	OFF	Disable

Failure detection

LED Status	System operation
⚠ ● (red)	Normal operation
⚠ ☼ (red)	Failure detection (or sensor misalignment detected)

Wiring instructions



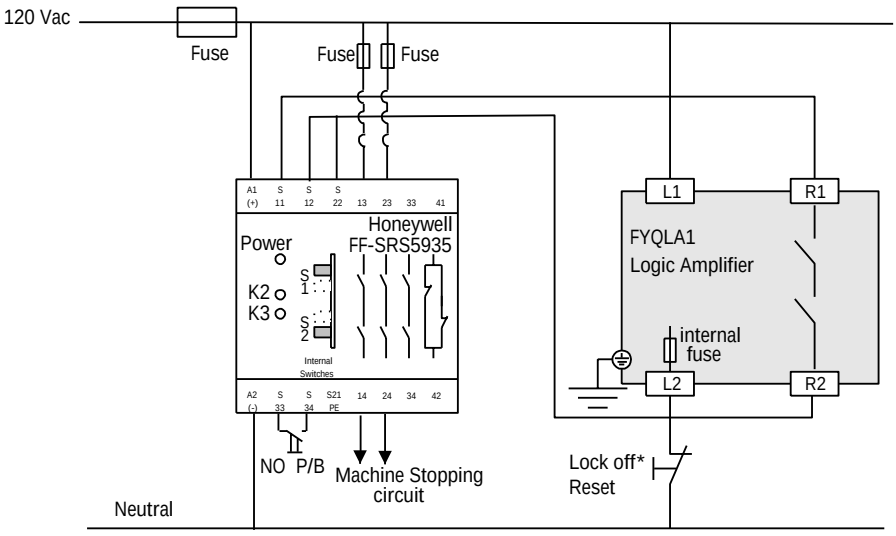
R (+) = Red positive
B (-) = Black negative
W (NO output) = White
O (NC output) = Orange

• If less than six 50FY41 sensors are being used, install 22 kΩ resistors between W and R and a second between O and B for each terminal set unwired. The resistors are necessary for correct operation of the amplifier. Ten 22 kΩ resistors are supplied.

Sensor output status (red LEDs number 1 to 6)

LED Status	Sensors operation
1 R W B O	- Normal operation - Each Hall effect sensor produces a signal - The door is closed - The machine operation is enabled
1 R W B O	- Normal operation - None of the Hall effect sensors produce a signal - The door is open - The machine operation is disabled
1 R W B O	- Improper operation - Only one out of two Hall effect sensors produces a signal - Either the door is not correctly closed or the sensor has a failure - The machine operation is disabled

● Light Off ☼ Light On ☼ Flickering light



Amplifier supply

• Connect nominal voltage leads to the amplifier terminals labeled L1 (neutral) and L2 (phase).

• The NO output contact R1/R2 must be connected directly to the machine stop command or if necessary to an emergency stop module.

* Reset push-button to use only after control unit lock off when sensor misalignment detected.

** Internal switches FF-SRS5935:

S1: Without cross-fault monitoring

S2: Manual restart