

Presence Sensing Safety Devices

POC Type 4 Safety Light Curtains

GuardShield Micro 400

Micro 400 IP69K Light Curtains

The GuardShield Micro 400 is offered with the transmitter and receiver sealed in clear acrylic tubes with an environmental rating of IP69K. These IP69K Micro 400 light curtains are factory sealed and are ordered as pairs. They are offered in a 14 mm resolution in protected heights of 300 mm (11.8 in.), 600 mm (23.6 in.), 900 mm (35.4 in.) and 1200 mm (47.2 in.) with an operating range of five meters.

The required MSR 41 or MSR42 controllers maintain the IP20 rating and must be mounted in a suitable enclosure.

The Micro 400 IP69K transmitter and receiver are both offered with eight pin M12 connectors at the end of 500 mm (19.8 in.) integrated cables. The patchcords to connect the transmitter and receiver to the controller are the same cat. no. and are offered in 3 m (9.8 ft), 5 m (16.4 ft), and 8 m (26.2 ft) lengths.

These patchcords are configured on one end with M12 connectors, which mate to the integrated pigtail connectors and RJ45 connectors on the opposite end. These connectors plug into the MSR41 or MSR42 controller.



Areas of Use

- Light assembly machines/equipment
- Semi-conductor
- Micro-electronics
- Pharmaceutical
- Filling systems
- Clean rooms
- Food processing




Protected Height [mm (in.)]	Resolution [mm (in.)]	Number of Beams	Cat. No.
300 (11.8)	14 (0.55)	30	445L-P4C0300KD
600 (23.6)	14 (0.55)	60	445L-P4C0600KD
900 (35.4)	14 (0.55)	90	445L-P4C0900KD
1200 (47.2)	14 (0.55)	120	445L-P4C1200KD

Required Micro 400 Controller—Select One

	Mounting	Size	Cat. No.
 MSR41—ON/OFF	35 mm DIN Rail	22.5 mm	440R-P221AGS
 MSR42—Multi-functional module	35 mm DIN Rail	22.5 mm	440R-P226AGS-NNR

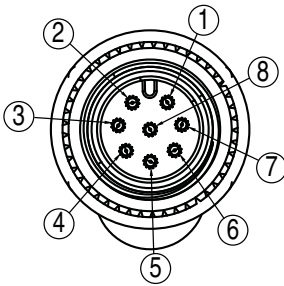
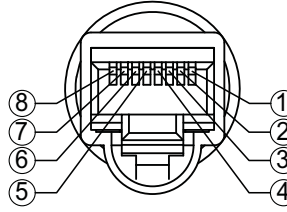
Optional Safety Relay Interfaces

Relay	Input Voltage	Reset	Outputs	Cat. No.
 MSR45E Safety Relay Expansion Model	Supplied by MSR41 or MSR42	Determined by MSR41 or MSR42	2 N.O.	440R-P4NANS

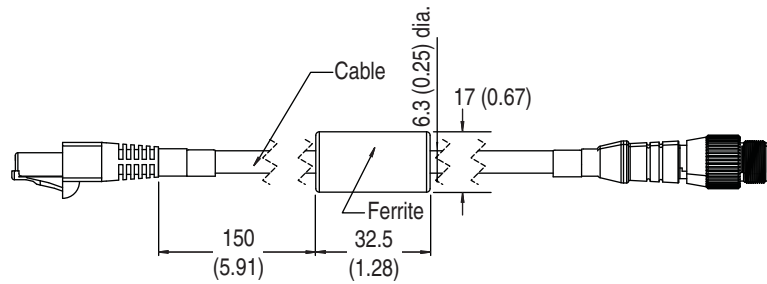
Possible Logic Interfaces

Description	Safety Outputs	Auxiliary Outputs	Terminals	Reset Type	Power Supply	Cat. Page No.	Cat. No.
Single-Function Safety Relays for 2 N.C. Contact Switch							
MSR127RP	3 N.O.	1 N.C.	Removable (Screw)	Monitored Manual	24V AC/DC	5-26	440R-N23135
MSR127TP	3 N.O.	1 N.C.	Removable (Screw)	Auto./Manual	24V AC/DC	5-26	440R-N23132
MSR126	2 N.O.	None	Fixed	Auto./Manual	24V AC/DC	5-24	440R-N23117

Standard Micro 400 Patchcords—Required (Transmitters and receivers both use 8-pin M12 to RJ45 patchcords)





Face View M12 Connector	Face View RJ45 Connector	Description	Cat. No.
 <p>Pinning table:</p> <p>1: blue 2: grey 3: green 4: white 5: black 6: pink 7: brown 8: yellow Shield: Braid wires</p>	 <p>Pinning table:</p> <p>1: blue 2: grey 3: green 4: white 5: black 6: pink 7: brown 8: yellow Shield: Braid wires</p>	1 m patchcord, PVC jacket	445L-AC8RJ1
		2 m patchcord, PVC jacket	445L-AC8RJ2
		3 m patchcord, PVC jacket	445L-AC8RJ3
		5 m patchcord, PVC jacket	445L-AC8RJ5
		8 m patchcord, PVC jacket	445L-AC8RJ8

Patchcord [mm (in.)]



Optional Safety Relay Interface (accessories for MSR41 or MSR42 Controllers)

The MSR41 or MSR42 can have up to three MSR45E safety relays inter-connected. Each module requires a ribbon cable connector to make the interconnection. The table shows the cat. no. for each ribbon cable connector as well as the optical interface for the programming of the MSR42. Programming of the MSR42 is only necessary for advanced operating modes or connection of additional devices.





Description	Description	Cat. No.
	Ribbon cable—for one MSR45E	440R-ACABL1
	Ribbon cable—for two MSR45Es	440R-ACABL2
	Ribbon cable—for three MSR45Es	440R-ACABL3
	USB optical interface software configuration tool used to configure the MSR42	445L-AF6150

Note: The configuration software can be downloaded at www.ab.com/safety.

2-Opto-electronics

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Optional Accessories


	Description	Cat. No.
	Adjustable 180° bracket kit (two per kit) supplied with each pair Two kits required per pair	445L-AF6143
	Flat bracket kit (two per kit) Two kits per pair	445L-AF6145
	Adjustable flat bracket (two per kit) Two kits required per pair	445L-AF6149
	IP69K mounting bracket kit (two kits per pair supplied with each pair)	445L-AF6160

2-Opto-electronics

Corner Mirror for Multi-Sided Guarding

Specially constructed glass mirrors for 2- and 3-sided safeguarding applications.

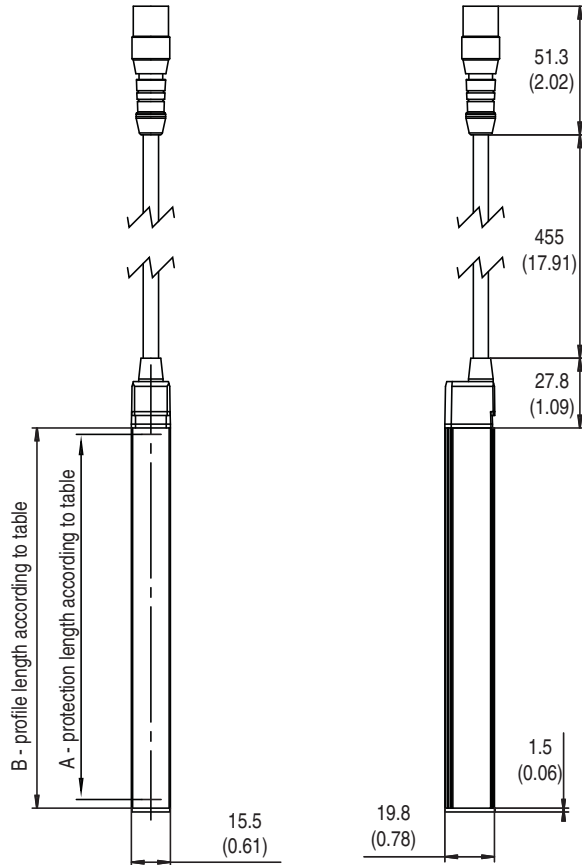
IMPORTANT Each mirror reduces maximum scan range by 10% per mirror.

GuardShield Micro 400 Protected Height [mm (in.)]	Narrow Mirror Short-Range 0...4 m	Cat. No.
150 (5.9)/300 (11.8)		440L-AM0750300
450 (17.7)		440L-AM0750450
600 (23.6)		440L-AM0750600
750 (29.5)		440L-AM0750750
900 (35.4)		440L-AM0750900
1050 (41.3)		440L-AM0751050
1200 (47.2)		440L-AM0751200

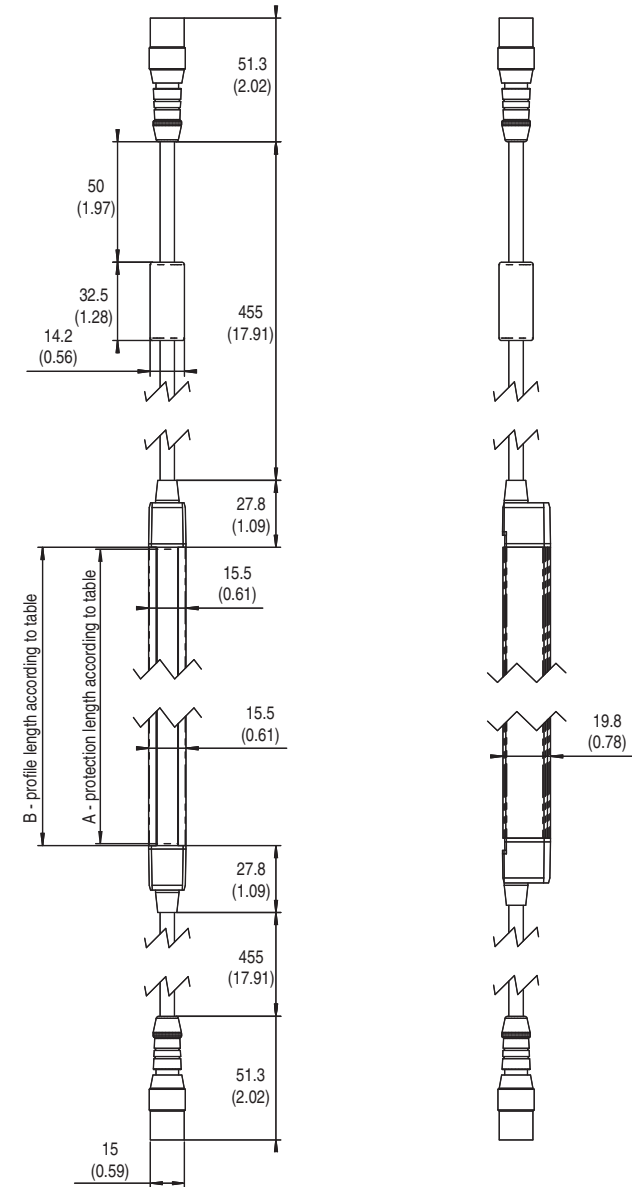
Approximate Dimensions

Dimensions are shown in mm (in.). Dimensions are not intended to be used for installation purposes.

Safety Light Curtains—Standard



Safety Light Curtains—Cascadable



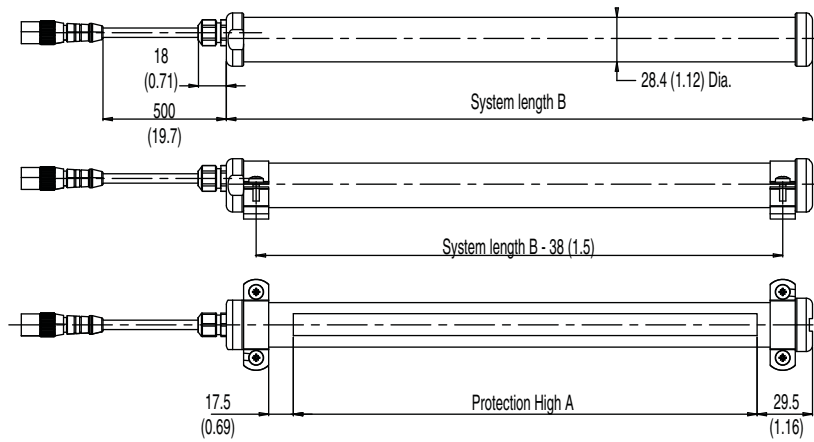
2-Opto-electronics

Type	A Protective Height [mm]	B Profile Length [mm]
445L-⊕4‡0150FB	150	151.5 ±0.3
445L-⊕4‡0300FB	300	301 ±0.3
445L-⊕4‡0450FB	450	451 ±0.3
445L-⊕4‡0600FB	600	601 ±0.3
445L-⊕4‡0750FB	750	751 ±0.3
445L-⊕4‡0900FB	900	901 ±0.3
445L-⊕4‡1050FB	1050	1051 ±0.3
445L-⊕4‡1200FB	1200	1201 ±0.3

⊕ P = Standard pair, C = Cascadable pair
 ‡ C = 14 mm, E = 30 mm

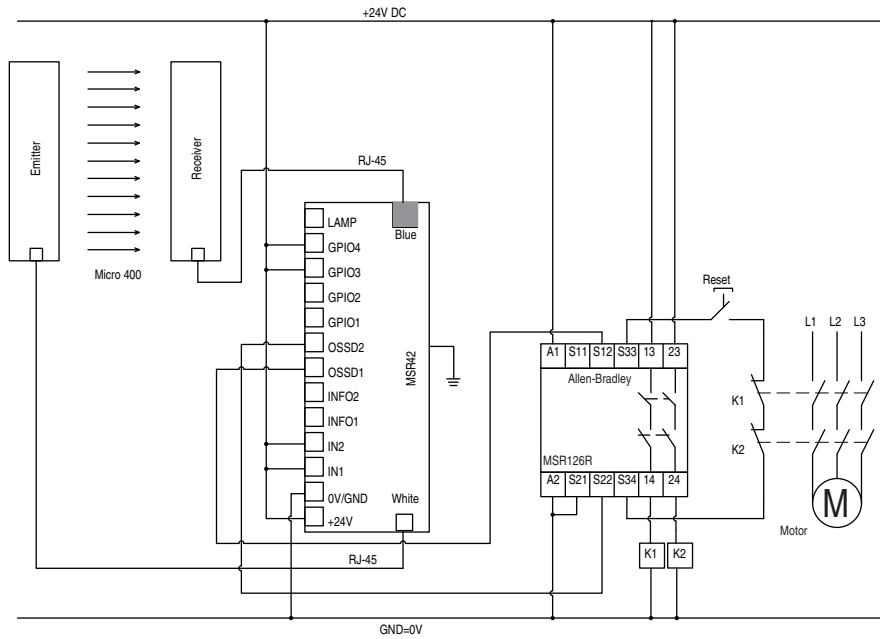
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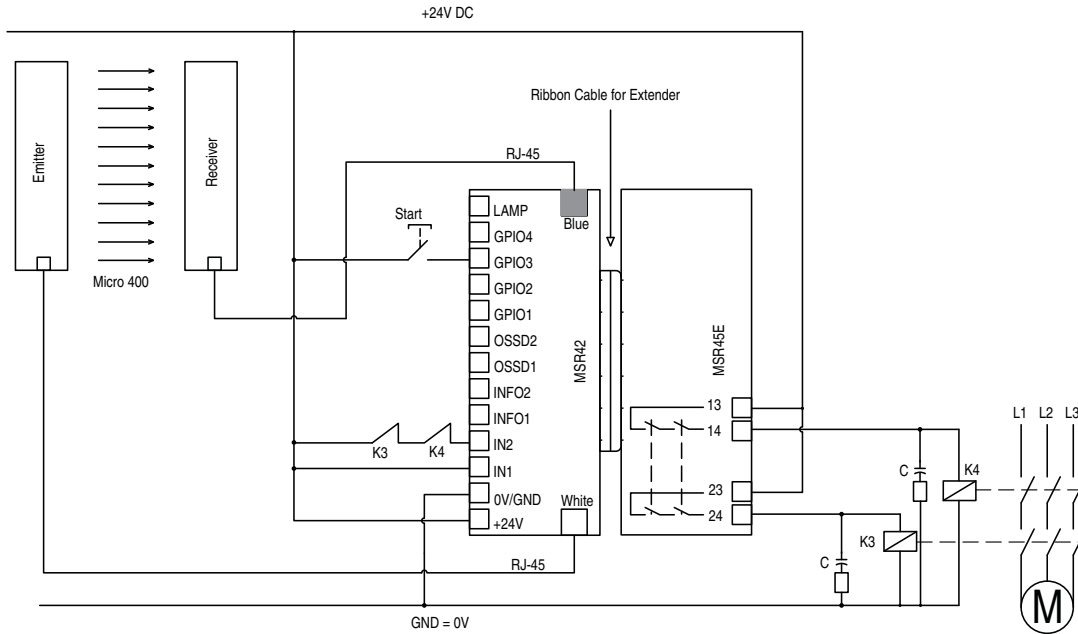
Wiring Diagram for Connection to MSR126 Relay

Wiring diagram is not intended to be used for installation purposes.



Micro 400 with MSR42 and MSR126R for Monitored Manual Reset with Monitored Output

Wiring Diagram for Connection to MSR45E Expansion Module



Micro 400 with MSR42 Add-on MSR45E for Manual Reset with Start Release

Wiring Diagram for Connection of MSR42 to Contactor if EDM Is Activated

