

# Photoelectric Sensors

## E3F2

### Threaded Cylindrical Photoelectric Sensors with Built-in Amplifier for Use as an Optical Proximity Switch

- M18 DIN-sized cylindrical housing
- Housing materials: plastic, nickel plated brass and stainless steel
- Axial and radial types (with integrated 90°-optics)
- Enclosure rating IP67
- DC switching types with connectors for easy maintenance
- Full metal plug-in type
- Sensing distance separate types: 7 m, 10 m
- Retroreflective polarizing types: 2 m, 4 m
- Background suppression type: 10 cm
- Long detection distance (0.3 m, 1 m) with sensitivity adjuster for diffuse type
- Wide-beam characteristics (10 cm) for diffuse type
- Wide operating voltage range (10 to 30 VDC or 24 to 240 VAC)
- Short-circuit and reverse connection protection (DC switching type)
- UL and CSA approved (AC switching types)
- UL listed (DC switching types)

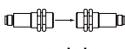
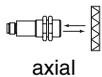
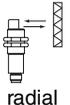


# Ordering Information

## ■ DC-Switching Models

### Housing Material: Plastic

**Note:** Shaded models are normally stocked.

Sensing method		Appearance	Connection method	Sensing distance	Model			
					PNP output	NPN output		
Through-beam	Multi purpose		pre-wired	7 m	<b>E3F2-7B4</b>	<b>E3F2-7C4</b>		
			M12 connector		<b>E3F2-7B4-P1</b>	<b>E3F2-7C4-P1</b>		
	- precision detection <sup>(*)</sup> - test input		pre-wired	10 m	<b>E3F2-10B4</b>	<b>E3F2-10C4</b>		
			M12 connector		<b>E3F2-10B4-P1</b>	<b>E3F2-10C4-P1</b>		
Retro-reflective (incl. reflector E39-R1 or E39-R1S)	Non-polarizing (without MSR function)		pre-wired	0.1 - 2 m <sup>(2)</sup>	<b>E3F2-R2B4</b>	<b>E3F2-R2C4</b>		
			M12 connector		<b>E3F2-R2B4-P1</b>	<b>E3F2-R2C4-P1</b>		
	Polarizing (with MSR function)		Fixed sensitivity	pre-wired	0.1 - 4 m <sup>(3)</sup>	<b>E3F2-R4B4F</b>	<b>E3F2-R4C4F</b>	
				M12 connector		<b>E3F2-R4B4F-P1</b>	<b>E3F2-R4C4F-P1</b>	
	Adjustable sensitivity		pre-wired		<b>E3F2-R4B4</b>	<b>E3F2-R4C4</b>		
			M12 connector		<b>E3F2-R4B4-P1</b>	<b>E3F2-R4C4-P1</b>		
	Polarizing (with MSR function)				pre-wired	0.1 - 2 m <sup>(2)</sup>	<b>E3F2-R2RB41</b>	<b>E3F2-R2RC41</b>
					M12 connector		<b>E3F2-R2RB41-P1</b>	<b>E3F2-R2RC41-P1</b>
Diffuse reflective	Fixed sensitivity Wide-beam characteristics		pre-wired		0.1 m	<b>E3F2-DS10B4-N</b>	<b>E3F2-DS10C4-N</b>	
			M12 connector			<b>E3F2-DS10B4-P1</b>	<b>E3F2-DS10C4-P1</b>	
	Adjustable sensitivity		pre-wired	0.3 m	<b>E3F2-DS30B4</b>	<b>E3F2-DS30C4</b>		
			M12 connector		<b>E3F2-DS30B4-P1</b>	<b>E3F2-DS30C4-P1</b>		
			pre-wired	1 m	<b>E3F2-D1B4</b>	<b>E3F2-D1C4</b>		
			M12 connector		<b>E3F2-D1B4-P1</b>	<b>E3F2-D1C4-P1</b>		
Adjustable sensitivity		pre-wired	0.3 m	<b>E3F2-DS30B41</b>	<b>E3F2-DS30C41</b>			
		M12 connector		<b>E3F2-DS30B41-P1</b>	<b>E3F2-DS30C41-P1</b>			
Background suppression	Fixed sensing distance		pre-wired	10 cm	<b>E3F2-LS10B4</b>	<b>E3F2-LS10C4</b>		
			M12 connector		<b>E3F2-LS10B4-P1</b>	<b>E3F2-LS10C4-P1</b>		

\*1) with slit E39-ES18

\*2) with reflector E39-R1

\*3) with reflector E39-R1S

**Note:** Standard cable length is 2 m. Models provided with a 5 m long cable are available. When ordering, specify the cable length by adding the length of the cable (e.g. E3F2-R2RB4 2M or E3F2-R2RB4 5M). For other cable length please contact your OMRON sales representative.