

Datenblatt

Optische Sensoren E3Z-G Serie

E3Z-G



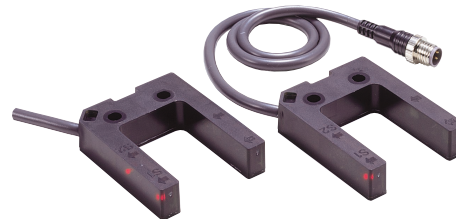
Bezeichnung	E3Z-G
Bauform	Gabelförmig
Gehäuse	PBT
Reflexionslichtschranken mit Polarisationsfilter	-
Einweglichtschranke	25 mm
Reflexionslichttaster (energetisch)	-
Reflexionslichttaster mit Hintergrundausblendung	-
Versorgungsspannung	12 - 24 VDC
Schutzart	IP64
Betriebstemperatur	-25°C ... 55°C

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Grooved-type Photoelectric Sensor

E3Z-G

- Grooved design eliminates the need for optical axis adjustment.
- Two-axis models also available.
- Ideal for detection and positioning for cranes and conveyor systems in automated warehouses.



Ordering Information

■ Sensor Unit

Sensing method	Appearance	Connection method	Sensing distance	Number of optical axes	Model	
					NPN output	PNP output
Through-beam		Pre-wired (0.5/2 m)		1	E3Z-G61	E3Z-G81
		Junction connector			E3Z-G61-M3J	E3Z-G81-M3J
		Pre-wired (0.5/2 m)		2	E3Z-G62	E3Z-G82
		Junction connector			E3Z-G62-M3J	E3Z-G82-M3J

Note: Models with a 0.5-m cable are available. When ordering, specify the cable length by adding the code "0.5M" to the model number (e.g., E3Z-G61 0.5M).

■ Accessories (Order Separately)

Sensor I/O Connector

Cable specifications	Appearance	Type of cable		Model
Standard cable	Straight	2 m	Four-core cable	XS3F-M421-402-A
		5 m		XS3F-M421-405-A
	L-shape	2 m		XS3F-M422-402-A
		5 m		XS3F-M422-405-A

Specifications

■ Ratings/Characteristics

Sensing method	Through beam (grooved type)				
	Number of optical axes	1		2	
NPN output	E3Z-G61	E3Z-G61-M3J	E3Z-G62	E3Z-G62-M3J	
PNP output	E3Z-G81	E3Z-G81-M3J	E3Z-G82	E3Z-G82-M3J	
Sensing distance	25 mm (distance between arms of groove)				
Light source (wave length)	Infrared LED (940 nm)				
Power supply voltage	12 to 24 VDC±10% including 10% (p-p) max. ripple				
Current consumption	25 mA max.		40 mA max.		
Control output	Load power supply voltage: 26.4 VDC max. Load current: 100 mA max. (Residual voltage: 1 V max.) L-ON/D-ON selectable (With 2-axis models, L-ON or D-ON can be selected for each axis.)				
Circuit protection	Protection from reversed power supply connection, output short-circuits, and mutual interference.				
Response time	Operation or reset: 1 ms max.				

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Item	Sensing method Number of optical axes NPN output PNP output	Through beam (grooved type)			
		1		2	
		E3Z-G61	E3Z-G61-M3J	E3Z-G62	E3Z-G62-M3J
Ambient illumination (receiver side)		Incandescent lamp: 3,000 lux max. Sunlight: 10,000 lux max.			
Ambient temperature		Operating: -25 to 55°C/Storage: -40 to 70°C (with no icing or condensation)			
Ambient humidity		Operating: 35% to 85%/Storage: 35% to 95% (with no condensation)			
Insulation resistance		20 MΩ min. at 500 VDC between lead wires and case			
Dielectric strength		1,000 VAC, 50/60 Hz for 1 min between lead wires and case			
Vibration resistance (destruction)		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions			
Shock resistance (destruction)		500 m/s ² 3 times each in X, Y, and Z directions			
Enclosure rating		IP64 (IEC60529)			
Connection method		Pre-wired cable (length: 2 m or 0.5 m)	Junction connector	Pre-wired cable (length: 2 m or 0.5 m)	Junction connector
Indicator		Operation indicator (orange)			
Weight (packed state)		Pre-wired models (with 2-m cable): 65 g Models with junction connectors: 30 g			
Material		ABS			
Accessories		Instruction sheet			

Operation

■ Output Circuits (NPN Output)

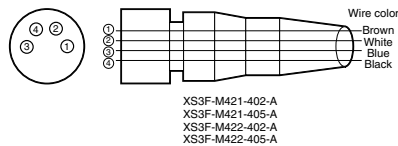
No. of optical axes/model	Output transistor status	Timing chart	Mode selector	Output circuit
1 axis E3Z-G61 E3Z-G61-M3J	Light ON		LIGHT ON (L/ON)	<p>Connecting Pin Arrangement</p> <p>Note: Pin 2 is not used.</p>
	Dark ON		DARK ON (D/ON)	
2 axes E3Z-G62 E3Z-G62-M3J	Light ON		LIGHT ON (L/ON)	<p>Connector Pin Arrangement</p>
	Dark ON		DARK ON (D/ON)	

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■ **Output Circuits (PNP Output)**

No. of optical axes/model	Output transistor status	Timing chart	Mode selector	Output circuit
1 axis E3Z-G81 E3Z-G81-M3J	Light ON	Incident Interrupted Operation indicator (orange) ON Output transistor ON Load (relay) Operate Reset (Between brown and black)	LIGHT ON (L/ON)	<p>Connector Pin Arrangement</p> <p>Note: Pin 2 is not used.</p>
	Dark ON	Incident Interrupted Operation indicator (orange) ON Output transistor ON Load (relay) Operate Reset (Between brown and black)	DARK ON (D/ON)	<p>Connector Pin Arrangement</p>
2 axes E3Z-G82 E3Z-G82-M3J	Light ON	Incident Interrupted Operation indicator (orange) ON Output transistor ON Load (relay) Operate Reset (Between brown and black)	LIGHT ON (L/ON)	<p>Connector Pin Arrangement</p>
	Dark ON	Incident Interrupted Operation indicator (orange) ON Output transistor ON Load (relay) Operate Reset (Between brown and black)	DARK ON (D/ON)	<p>Connector Pin Arrangement</p>

Structure of Sensor I/O Connector

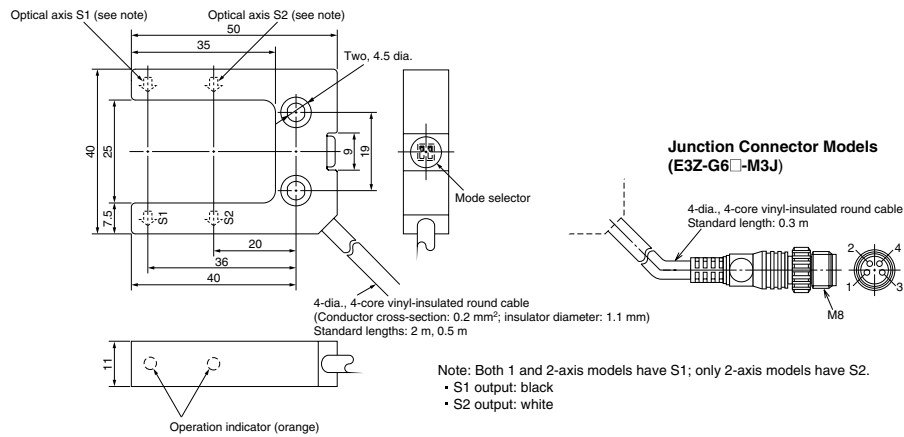


Classification	Wire color	Connector pin number	Use	
			1-axis models	2-axis models
DC	Brown	1	Power supply (+V)	
	White	2	---	Output 2 (S2)
	Blue	3	Power supply (0 V)	
	Black	4	Output	Output 1 (S1)

Note: Pin 2 of 1-axis models is not used.

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Dimensions



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
 To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. E320-E1-1 **In the interest of product improvement, specifications are subject to change without notice.**

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