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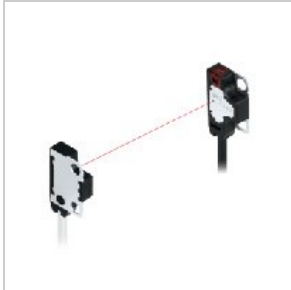
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EX-Z13FA-P | Ultra-minute Photoelectric Sensor EX-Z

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*Photo may vary from actual product.

RoHS compliant

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Product Number	EX-Z13FA-P
Part Number	EX-Z13FA-P
Product	Ultra-minute Photoelectric Sensor
Details	Thru-beam [Front sensing]
Product name	Ultra-minute Photoelectric Sensor EX-Z

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As of December 19, 2018
Specifications and design of the products are subject to change without notice for the product improvement.

Spec Detail

Item	Specifications
Product Number	EX-Z13FA-P
Part Number	EX-Z13FA-P
CE marking directive compliance	EMC Directive, RoHS Directive
Output operation	Light-ON
Sensing range	500 mm 19.685 in
Min. sensing object	ø1.0 mm ø0.039 in opaque object (Completely beam interrupted object)(Setting distance between emitter and receiver: 500 mm 19.685 in)
Repeatability(perpendicular to sensing axis)	0.05 mm 0.002 in or less
Supply voltage	12 to 24 V DC ±10 % Ripple P-P 10 % or less
Current consumption	Emitter: 10 mA or less Receiver: 10 mA or less
Output	PNP open-collector transistor - Maximum source current: 20 mA - Applied voltage: 30 V DC or less (between output and +V) - Residual voltage: 1.5 V or less (at 20 mA source current)
Output:Short-circuit protection	Incorporated
Response time	0.5 ms or less
Operation indicator	Orange LED (Lights up when the sensing output is ON)

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Stability indicator	Green LED (Lights up under the stable light received condition or the stable dark condition)
Protection	IP67 (IEC)
Ambient temperature	-10 to +55 °C 14 to +131 F (No dew condensation or icing allowed), Storage: -30 to +70 °C -22 to +158 F
Ambient humidity	35 to 85 % RH, Storage: 35 to 85 % RH
Ambient illuminance	Incandescent light: 5,000 lx at the light-receiving face
Voltage withstandability	1,000 V AC for one min. between all supply terminals connected together and enclosure
Insulation resistance	20 MΩ or more, with 250 V DC megger between all supply terminals connected together and enclosure
Vibration resistance	10 to 500 Hz frequency, 3 mm 0.118 in amplitude in X, Y and Z directions for two hours each
Shock resistance	500 m/s ² acceleration (50 G approx.) in X, Y and Z directions for three times each
Emitting element	Red LED (Peak emission wavelength: 650 nm 0.026 mil , modulated)
Grounding	Floating
Material	Enclosure: PBT Lens: Polycarbonate Metallic part: Stainless steel (SUS304)(SUS301 for rear side of front sensing type)
Cable	0.1 mm ² 3-core (emitter: 2-core) cabtyre cable, 2 m 6.562 ft long Note:The bending-resistant cable type has a 0.1 mm ² 3-core (thru-beam type emitter: 2-core) bending-resistant cabtyre cable, 2 m 6.562 ft long.
Cable extension	Extension up to total 50 m 164 ft is possible with 0.3 mm ² , or more, cable (both emitter and receiver) .
Weight	Net weight (each emitter and receiver) : 15 g approx. Gross weight: 35 g approx.
Accessory	M2 mounting screws: 1 set (front sensing type: 6 mm 0.236 in in length; side sensing type: 10 mm 0.394 in in length)
Remark	Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +23 °C 73 F .

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Accessories (Option)

		
Product Number MS-EXZ-1	Product Number MS-EXZ-2	Product Number MS-EXZ-4
Part Number MS-EXZ-1	Part Number MS-EXZ-2	Part Number MS-EXZ-4
Product name Mounting bracket	Product name Mounting bracket	Product name Universal sensor mounting bracket

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