

Specifications (DC)

U: EP SERIES

Sensing Mode Item	DC					
	Opposed Mode	Retroreflective	Diffuse Mode	Convergent	Glass Fiber	Plastic Fiber
Sensing Range	See each mode					
Hysteresis	—					
Operating Voltage	10~30V DC					
Ripple	< 10%					
Voltage Drop	<2.0V at 150mA					
Max Load Current	150mA					
No Load Current	<25mA					
Min. Load Current	5mA					
Leakage Current	<1mA					
Output Configuration	Bipolar: One current sourcing (PNP) and one current sinking (NPN) open-collector transistor					
Environmental Rating	Meets NEMA standards 1, 2, 3s, 4, 12, and 13; IEC IP66 when assembled to sensor head					
Indicators	Red indicator LED on rear or sensor is "on" when the load is energized					
Transient Protection	Yes					
Reverse Polarity Protection	Yes					
Short Circuit Protection	Yes					
Over Load Current Protection	>180mA					
Output Response Time	10ms or 1ms(High-speed type)					
Construction	Reinforced thermoplastic polyester housing, totally encapsulated, o-ring sealing, acrylic lenses, and stainless screws.					
Enclosure Rating	IP66					
Operating Conditions	Temperature: 0°...50°C, Maximum relative humidity: 90% at 50°C (non-condensing)					
EMC	IEC 60947-5-2, Parts 7.2.6.1. 2. 3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)					
Voltage Withstand Ability	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure					
Insulation Resistance	>20MΩ, with 500V DC megger between all supply terminals connected together and enclosure					
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30 min					
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each					
Cable	2m or 9m 5.8φ 4X0.5 (Emitter :2X0.5) PVC.					
Pigtail Type	See Pigtail Series or our Cables & Connectors catalogue.					

Specifications (AC)

Sensing Mode Item	AC					
	Opposed Mode	Retroreflective	Diffuse Mode	Convergent	Glass Fiber	Plastic Fiber
Sensing Range	See each mode					
Hysteresis	<20 % of sensing distance (only for diffuse mode)					
Operating Voltage	24~240V AC (50/60HZ)					
Output Configuration	SPST MOSFET solid-state relay with either normally closed or normally open contact 2-wire or 3-wire hookup (by type number)					
Voltage Drop	<10V at 200mA					
Max Load Current	≤200mA					
No Load Current	≤1.7mA					
Min. Load Current	≥5mA					
Leakage Current	≤1.7mA					
Transient Protection	Yes					
Short Circuit Protection	Yes					
Over Load Current Protection	≥220mA					
Response Time	10 ms					
Construction	Reinforced thermoplastic polyester housing, totally encapsulated, o-ring sealing, acrylic lenses, and stainless screws.					
Indicators	Red indicator LED on rear or sensor is "on" when the load is energized					
Enclosure Rating	IP66					
Operating Temperature	Temperature: 0°to +50°C, Maximum relative humidity: 90% at 50°C					
EMC	IEC 60947-5-2, Parts 7.2.6.1. 2. 3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)					
Voltage Withstand Ability	IEC 60947-5-2, Part 8.3.3.4 or 1500VAC for one min, between all supply terminals connected together and enclosure					
Insulation Resistance	>20MΩ, with 1500V AC megger between all supply terminals connected together and enclosure					
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30 min					
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each					
Cable	2m or 9m 5.8 φ 2x0.5 or 3x0.5 (Emitter of thru-beam mode :2x0.5) PVC.					
Pigtail Type	See page Pigtail Series or our Cables & Connectors catalogue					

Specifications (AC/DC)

U: EP SERIES

Sensing Mode Item	AC/DC					
	Opposed Mode	Retroreflective	Diffuse Mode	Convergent	Glass Fiber	Plastic Fiber
Sensing Range	See each mode					
Hysteresis	<20 % of sensing distance (only for diffuse mode)					
Operating Voltage	12~240VDC / 24~240V AC					
Output Configuration	SPST MOSFET solid-state relay with either normally closed or normally open contact ; 2-wire hookup					
Voltage Drop	<10V @ 200mA					
Max Load Current	≤ 200mA					
No Load Current	≤ 25mA					
Min. Load Current	≥ 5mA					
Leakage Current	≤ 1.7mA					
Transient Protection	Yes					
Short Circuit Protection	Yes					
Over Load Current Protection	≥ 220mA					
Response Time	10 ms					
Construction	Reinforced thermoplastic polyester housing, totally encapsulated, o-ring sealing, acrylic lenses, and stainless screws.					
Indicators	Red indicator LED on rear or sensor is "on" when the load is energized					
Enclosure Rating	IP66					
Operating Temperature	Temperature: 0° to +50°C, Maximum relative humidity: 90% at 50°C					
EMC	IEC 60947-5-2, Parts 7.2.6.1, 2, 3 or RFI > 3V/m (in 30-1000MHZ), EFT > 1KV, ESD > 4KV (contact)					
Voltage Withstand Ability	IEC 60947-5-2, Part 8.3.3.4 or 1500VAC for one min, between all supply terminals connected together and enclosure					
Insulation Resistance	> 20MΩ, with 1500V AC megger between all supply terminals connected together and enclosure					
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x, y and z directions for 30 min					
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x, y and z directions for six times each					
Cable	2m or 9m 5.8 φ 2x0.5 PVC.					
Pigtail Type	See page Pigtail Series or our Cables & Connectors catalogue					