SensorsX
SX-DHOF Series

Built-in Amplifier Slot-Type (U-Groove) Photoelectric Sensor

28 / 58 / 68 Series Slot-Type Photoelectric Sensors



■ PRODUCT OVERVIEW

The SX-DHOF Series slot-type photoelectric sensors are built-in amplifier through-beam sensors designed for reliable object detection in compact automation equipment. The series includes 28, 58, and 68 housing types, with 5 mm slot width for the 28/58 Series and 6 mm slot width for the 68 Series. With resin-molded construction, NPN/PNP outputs, NO + NC operation, visible status indication, and built-in protection circuits, the series provides flexible installation options for small-part detection, positioning, packaging machinery, and general industrial automation applications.

■ KEY FEATURES

◆ Seamless Resin-Molded Body One-piece resin-molded construction integrates the optical window and housing to improve dust and moisture resistance.	◆ 3 Standard Protection Circuits Reverse power-supply connection, reverse output connection, and output short-circuit protection standard on all models.
◆ Adjustable Detection Position Emitter/receiver alignment marks allow easy adjustment of the detection point.	◆ Multi-Direction Indicator Visibility Status indicator is readable from both the top and the side of the housing.
◆ Series-Specific Screw Mounting 28 Series supports M2 or M3 mounting. 58, 68, and 68W Series use M3 mounting; use the specified washers and tightening torque.	◆ Reinforced Cable Strain Relief Seamless, resin-reinforced cable entry with a flex-resistant cable option improves resistance to cable fatigue damage.
◆ Compact, Mounting-Compatible Design Small footprint with good indicator visibility; 68W variants provide mounting-compatible design options.	◆ Side-by-Side Mounting 28/58 Series bodies can be mounted side by side without interference from gasket edges.

■ ORDERING / NAMING REFERENCE

Complete model number example: SX-DHOF-28KNCMMB2M

Product Series	
28	Ultra-Compact '28' Series
58	Compact, Direct-Lead '58' Series
68	Compact, Connector '68' Series
68W	Compact, Connector '68W' Series

Application (Housing) Type	
K	'K'-type housing
T	'T'-type housing

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L	'L'-type housing
U	'U'-type housing
F	'F'-type housing
R	'R'-type housing
Y	'Y'-type housing

Output Type	
N	NPN (standard)
P	PNP

Output State	
C	Complementary Light-ON and Dark-ON outputs

Indicator Mode	
M	Illuminated when light is received; off when the beam is interrupted (standard)
S	Off when light is received; illuminated when the beam is interrupted

Electrical Connection	
M	Direct lead-wire (standard) *[Requires Product Series = 28 or 58]*
T	Terminal / connector *[Requires Product Series = 68 or 68W]*

Wire Material	
B	Standard cable (28/58: standard PVC direct lead; 68/68W: standard connector cable)
R	Flex-resistant cable (28/58: fixed 1 m; 68/68W connector cable: 1 m / 2 m / 3 m / 5 m)

Cable Length	
1M	1 m (3.3 ft)
2M	2 m (6.6 ft) (standard)
3M	3 m (9.8 ft)
5M	5 m (16.4 ft), 68 / 68W connector cable only

■ 28 SERIES — SELECTION TABLE

Type	NPN Models Standard / Inverted Indicator	PNP Models Standard / Inverted Indicator	Sensing Distance
K-type	SX-DHOF-28KNCMMB2M SX-DHOF-28KNCSMB2M	SX-DHOF-28KPCMMB2M SX-DHOF-28KPCSMB2M	5 mm (0.20 in) through-beam slot
L-type	SX-DHOF-28LNCMMB2M SX-DHOF-28LNCSMB2M	SX-DHOF-28LPCMMB2M SX-DHOF-28LPCSMB2M	5 mm (0.20 in) through-beam slot
U-type	SX-DHOF-28UNCMMB2M SX-DHOF-28UNCSMB2M	SX-DHOF-28UPCMMB2M SX-DHOF-28UPCSMB2M	5 mm (0.20 in) through-beam slot
F-type	SX-DHOF-28FNCMMB2M SX-DHOF-28FNCSMB2M	SX-DHOF-28FPCMMB2M SX-DHOF-28FPCSMB2M	5 mm (0.20 in) through-beam slot
R-type	SX-DHOF-28RNCMMB2M SX-DHOF-28RNCSMB2M	SX-DHOF-28RPCMMB2M SX-DHOF-28RPCSMB2M	5 mm (0.20 in) through-beam slot

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Each type is also available with inverted indicator logic (Power-ON off / Sensing-ON illuminated) — order code suffix "S" in place of "M" at the Indicator Mode position, e.g., SX-DHOF-28KNCSMB2M.

■ 28 SERIES — RATING TABLE

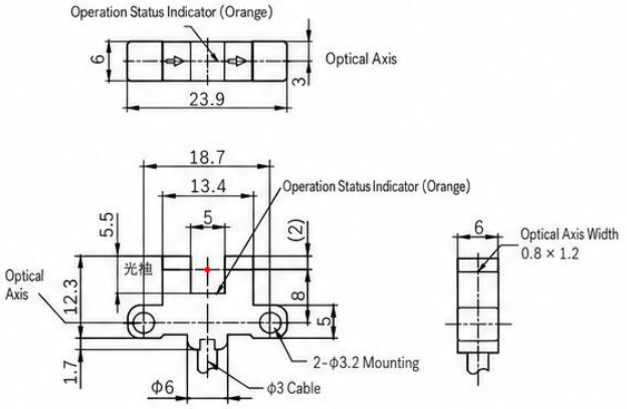
Sensing	
Sensing Distance	5 mm (0.20 in) through-beam slot
Minimum Detectable Object	0.8 × 1.2 mm (0.03 × 0.05 in), opaque
Hysteresis (Differential Travel)	< 0.05 mm (0.002 in)
Repeatability	< 0.01 mm (0.0004 in)
Power	
Supply Voltage	5 – 24 V DC ±10%, ripple P-P ≤ 10%
Current Consumption	< 15 mA
Output	
Output Action	Complementary Light-ON and Dark-ON outputs
Load Current — NPN / PNP	≤ 50 mA max. sink/source
Applied Voltage (between output and 0 V)	≤ 24 V DC
Residual (Saturation) Voltage	< 2 V at 50 mA; < 1 V at 16 mA
Circuit Protection	Reverse power-supply connection, reverse output connection, output short-circuit
Response Time	Light-ON ≤ 20 µs; Dark-ON ≤ 80 µs (max. response frequency 3 kHz)
Indicator	Orange LED
Environmental	
Pollution Degree	3
Ingress Protection	IP64 (IEC)
Operating Ambient Temperature	−25 to +55 °C (−13 to +131 °F)
Storage Temperature	−30 to +80 °C (−22 to +176 °F), non-condensing, non-freezing
Operating Humidity	5 – 85% RH
Storage Humidity	5 – 95% RH
Ambient Light Immunity	Sunlight: 10,000 lux; Incandescent: 3,000 lux
Dielectric Strength	AC 1000 V, 1 min, between all power terminals and housing
Insulation Resistance	≥ 20 MΩ at 250 V DC, between all power terminals and housing
Vibration Resistance	10 – 55 Hz, 1.5 mm double amplitude, 2 h per axis (X, Y, Z)
Shock Resistance	500 m/s², 3 shocks per axis (X, Y, Z)
Optical & Materials	
Light Source	Infrared LED, peak wavelength 940 nm
Housing Material	PBT; Lens Cover: PC
Standard Cable	2 m (6.6 ft), 0.1 mm² × 4-core
Approx. Weight	≈ 26.4 – 27 g (0.93 – 0.95 oz), varies slightly by housing type

■ 28 SERIES — DIMENSIONS

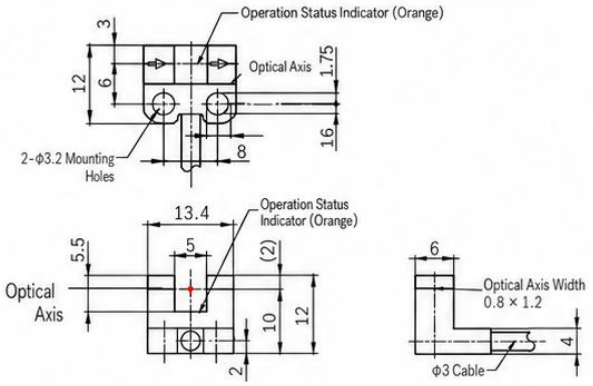
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Unit: mm

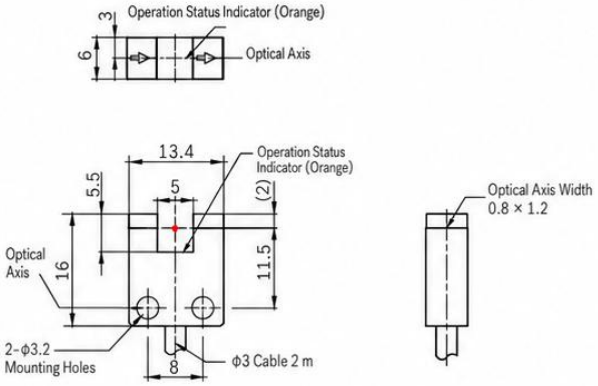
SX-DHOF-28K Slot Sensor



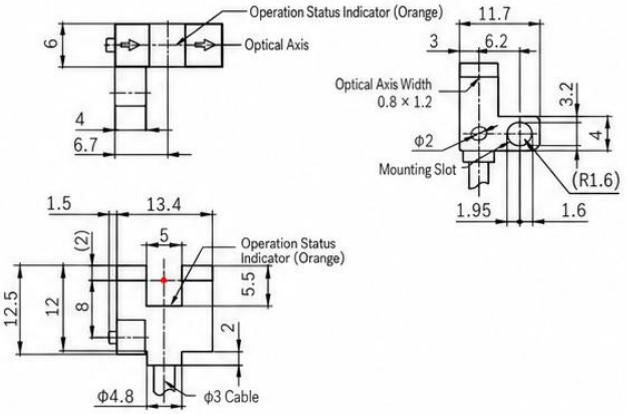
SX-DHOF-28L Slot Sensor



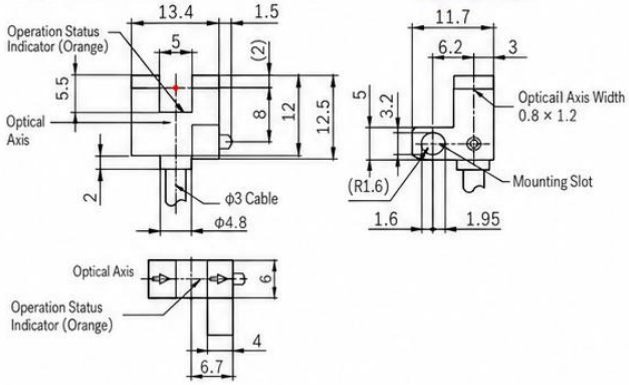
SX-DHOF-28U Slot Sensor



SX-DHOF-28F Slot Sensor



SX-DHOF-28R Slot Sensor



Type	Length	Width	Height	Mounting Holes	Optical Axis / Notes
K-type	23.9 mm (0.94 in)	13.4 mm (0.53 in)	12.3 mm (0.48 in)	2 × Ø3.2 mm (0.13 in)	0.8 × 1.2 mm (0.03 × 0.05 in); cable strain relief Ø6 mm (0.24 in), Ø3 mm (0.12 in) cable
L-type	≈ 13.4 mm (0.53 in)	≈ 12 mm (0.47 in)	≈ 12 mm (0.47 in)	2 × mounting slots	0.8 × 1.2 mm (0.03 × 0.05 in)
U-type	16 mm (0.63 in)	13.4 mm (0.53 in)	≈ 6 mm (0.24 in)	2 × Ø3.2 mm (0.13 in)	0.8 × 1.2 mm (0.03 × 0.05 in); 2 m lead cable
F-type	≈ 13.4 mm (0.53 in)	≈ 12.5 mm (0.49 in)	≈ 11.7 mm (0.46 in)	Ø2 mm (0.08 in), R1.6 mm corner	0.8 × 1.2 mm (0.03 × 0.05 in); cable strain relief Ø4.8 mm (0.19 in)

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Type	Length	Width	Height	Mounting Holes	Optical Axis / Notes
R-type	≈ 13.4 mm (0.53 in)	≈ 12.5 mm (0.49 in)	≈ 11.7 mm (0.46 in)	Ø4.8 mm (0.19 in) strain relief	0.8 × 1.2 mm (0.03 × 0.05 in); mirror image of F-type

Note: Dimensions are provided for reference only. For tooling or final installation design, use the detailed dimensional drawings and applicable tolerances.

■ 58 SERIES — SELECTION TABLE

Type	NPN Models Standard / Inverted Indicator	PNP Models Standard / Inverted Indicator	Sensing Distance
K-type	SX-DHOF-58KNCMMB2M SX-DHOF-58KNCSMB2M	SX-DHOF-58KPCMMB2M SX-DHOF-58KPCSMB2M	5 mm (0.20 in) through-beam slot
T-type	SX-DHOF-58TNCMMB2M SX-DHOF-58TNCSMB2M	SX-DHOF-58TPCMMB2M SX-DHOF-58TPCSMB2M	5 mm (0.20 in) through-beam slot
L-type	SX-DHOF-58LNCMMB2M SX-DHOF-58LNCSMB2M	SX-DHOF-58LPCMMB2M SX-DHOF-58LPCSMB2M	5 mm (0.20 in) through-beam slot
Y-type	SX-DHOF-58YNCMMB2M SX-DHOF-58YNCSMB2M	SX-DHOF-58YPCMMB2M SX-DHOF-58YPCSMB2M	5 mm (0.20 in) through-beam slot
F-type	SX-DHOF-58FNCMMB2M SX-DHOF-58FNCSMB2M	SX-DHOF-58FPCMMB2M SX-DHOF-58FPCSMB2M	5 mm (0.20 in) through-beam slot
R-type	SX-DHOF-58RNCMMB2M SX-DHOF-58RNCSMB2M	SX-DHOF-58RPCMMB2M SX-DHOF-58RPCSMB2M	5 mm (0.20 in) through-beam slot

■ 58 SERIES — RATING TABLE

Sensing	
Sensing Distance	5 mm (0.20 in) through-beam slot
Minimum Detectable Object	0.8 × 1.2 mm (0.03 × 0.05 in), opaque
Hysteresis (Differential Travel)	< 0.05 mm (0.002 in)
Repeatability	< 0.01 mm (0.0004 in)
Power	
Supply Voltage	5 – 24 V DC ±10%, ripple P-P ≤ 10%
Current Consumption	< 15 mA
Output	
Output Action	Complementary Light-ON and Dark-ON outputs
Load Current — NPN / PNP	≤ 50 mA max. sink/source
Applied Voltage (between output and 0 V)	≤ 24 V DC
Residual (Saturation) Voltage	< 2 V at 50 mA; < 1 V at 16 mA
Circuit Protection	Reverse power-supply connection, reverse output connection, output short-circuit
Response Time	Light-ON ≤ 20 µs; Dark-ON ≤ 80 µs (max. response frequency 3 kHz)
Indicator	Orange LED
Environmental	
Pollution Degree	3
Ingress Protection	IP64 (IEC)
Operating Ambient Temperature	−25 to +55 °C (−13 to +131 °F)
Storage Temperature	−30 to +80 °C (−22 to +176 °F), non-condensing, non-freezing

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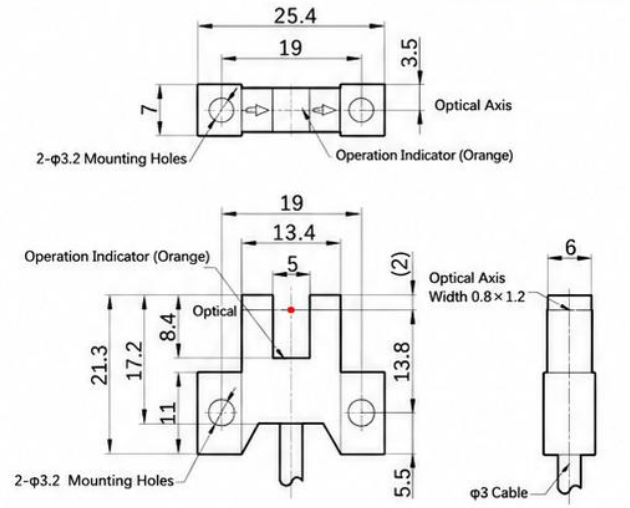
Operating Humidity	5 – 85% RH
Storage Humidity	5 – 95% RH
Ambient Light Immunity	Sunlight: 10,000 lux; Incandescent: 3,000 lux
Dielectric Strength	AC 1000 V, 1 min, between all power terminals and housing
Insulation Resistance	≥ 20 MΩ at 250 V DC, between all power terminals and housing
Vibration Resistance	10 – 55 Hz, 1.5 mm double amplitude, 2 h per axis (X, Y, Z)
Shock Resistance	500 m/s², 3 shocks per axis (X, Y, Z)
Optical & Materials	
Light Source	Infrared LED, peak wavelength 940 nm
Housing Material	PBT; Lens Cover: PC
Standard Cable	2 m (6.6 ft), 0.1 mm² × 4-core
Approx. Weight	≈ 26.8 – 27.0 g (0.95 oz), varies slightly by housing type

■ 58 SERIES — DIMENSIONS

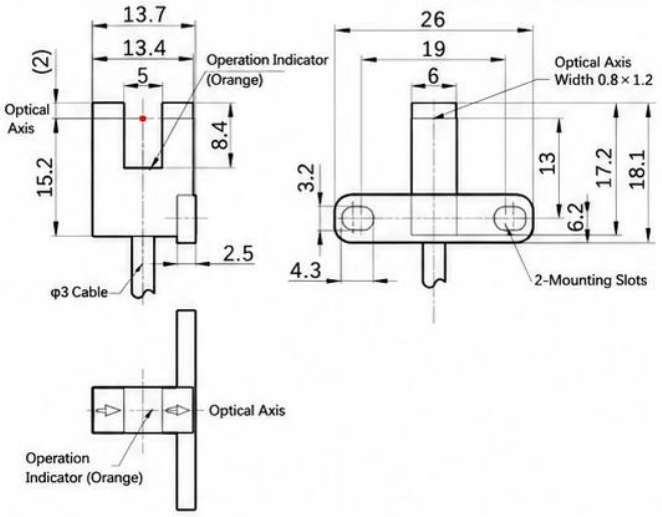
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Unit: mm

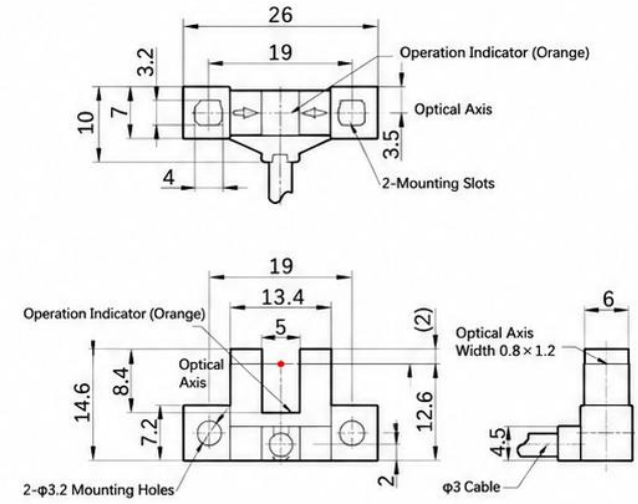
SX-DHOF-58K Slot Type Sensor



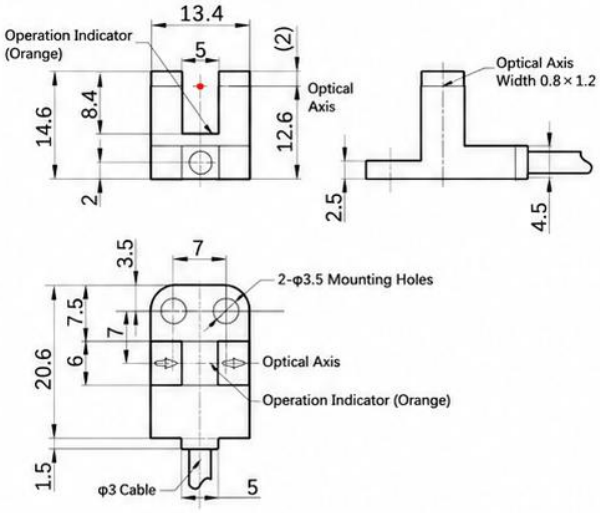
SX-DHOF-58T Slot Type Sensor



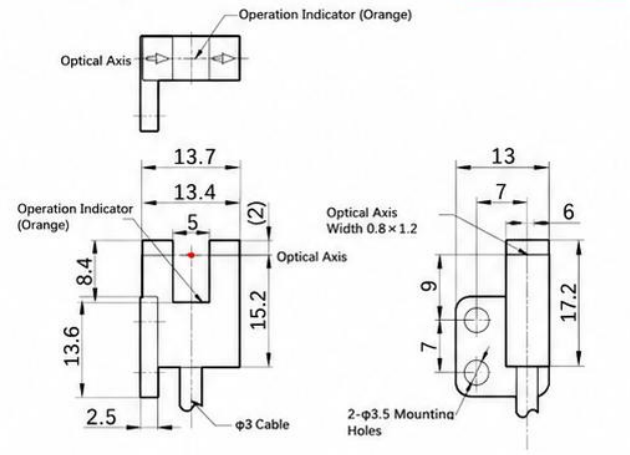
SX-DHOF-58L Slot Type Sensor



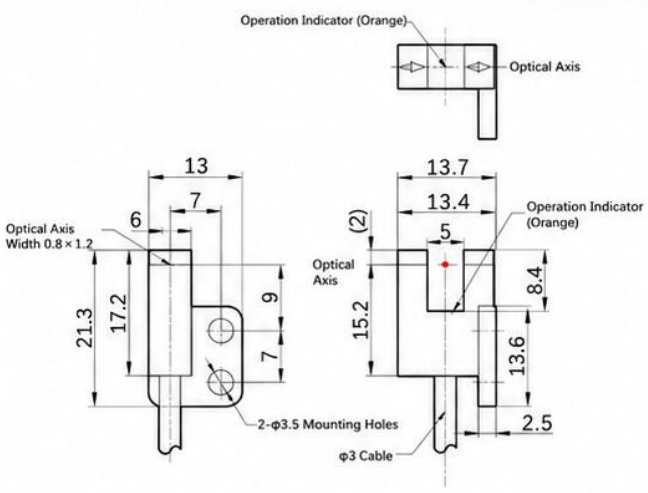
SX-DHOF-58Y Slot Type Sensor



SX-DHOF-58F Slot Type Sensor



SX-DHOF-58R Slot Type Sensor



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Type	Length	Width	Height	Mounting Holes	Optical Axis / Notes
K-type	25.4 mm (1.00 in)	21.3 mm (0.84 in)	7 mm (0.28 in)	2 × Ø3.2 mm (0.13 in) [flush] / 2 × Ø3.8 mm (0.15 in) [alt. view]	Cable strain relief Ø6 mm (0.24 in), Ø3 mm (0.12 in) cable
T-type	26 mm (1.02 in)	18.1 mm (0.71 in)	13.7 mm (0.54 in)	2 × mounting slots	0.8 × 1.2 mm (0.03 × 0.05 in); strain relief Ø4.3 mm / Ø3.2 mm (0.17 / 0.13 in)
L-type	26 mm (1.02 in)	14.6 mm (0.57 in)	7 mm (0.28 in)	2 × Ø3.2 mm (0.13 in)	0.8 × 1.2 mm (0.03 × 0.05 in)
Y-type	20.6 mm (0.81 in)	13.4 mm (0.53 in)	14.6 mm (0.57 in)	2 × Ø3.5 mm (0.14 in)	0.8 × 1.2 mm (0.03 × 0.05 in)
F-type	21.3 mm (0.84 in)	13.7 mm (0.54 in)	13.0 mm (0.51 in)	2 × Ø3.5 mm (0.14 in)	0.8 × 1.2 mm (0.03 × 0.05 in)
R-type	21.3 mm (0.84 in)	13.7 mm (0.54 in)	13.0 mm (0.51 in)	2 × Ø3.5 mm (0.14 in)	0.8 × 1.2 mm (0.03 × 0.05 in); mirror image of F-type

Note: Dimensions are provided for reference only. The K-type mounting-hole callouts include both Ø3.2 mm and Ø3.8 mm views as shown in the dimensional drawings.

■ 68 SERIES — SELECTION TABLE

Type	NPN Models Standard / Inverted Indicator	PNP Models Standard / Inverted Indicator
K-type	SX-DHOF-68KNCMTB2M SX-DHOF-68KNCSTB2M	SX-DHOF-68KPCMTB2M SX-DHOF-68KPCSTB2M
T-type	SX-DHOF-68TNCMTB2M SX-DHOF-68TNCSTB2M	SX-DHOF-68TPCMTB2M SX-DHOF-68TPCSTB2M
T-type ("68W")	SX-DHOF-68WTNCMTB2M SX-DHOF-68WTNCSTB2M	SX-DHOF-68WTPCMTB2M SX-DHOF-68WTPCSTB2M
L-type	SX-DHOF-68LNCMTB2M SX-DHOF-68LNCSTB2M	SX-DHOF-68LPCMTB2M SX-DHOF-68LPCSTB2M
Y-type	SX-DHOF-68YNCMTB2M SX-DHOF-68YNCSTB2M	SX-DHOF-68YPCMTB2M SX-DHOF-68YPCSTB2M
F-type	SX-DHOF-68FNCMTB2M SX-DHOF-68FNCSTB2M	SX-DHOF-68FPCMTB2M SX-DHOF-68FPCSTB2M
F-type ("68W")	SX-DHOF-68WFNCMTB2M SX-DHOF-68WFNCSTB2M	SX-DHOF-68WFPCMTB2M SX-DHOF-68WFPCSTB2M
R-type	SX-DHOF-68RNCMTB2M SX-DHOF-68RNCSTB2M	SX-DHOF-68RPCMTB2M SX-DHOF-68RPCSTB2M
R-type ("68W")	SX-DHOF-68WRNCMTB2M SX-DHOF-68WRNCSTB2M	SX-DHOF-68WRPCMTB2M SX-DHOF-68WRPCSTB2M

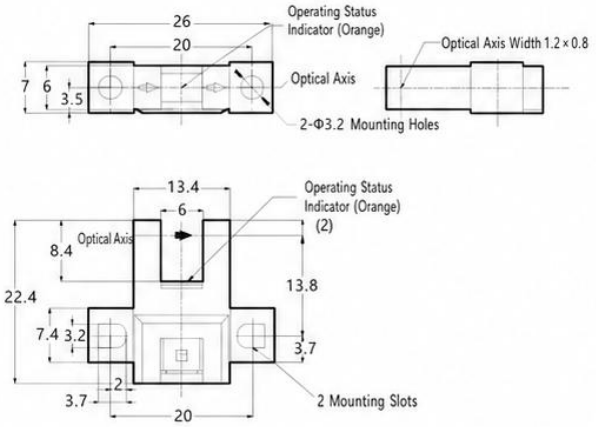
All 68 / 68W Series types are also available with inverted indicator logic (Indicator Mode code "S" in place of "M"), e.g., SX-DHOF-68KNCSTB2M. Connection is via mating connector. A standard 2 m connector cable is supplied; see Accessories — Connector Cable.

■ 68 SERIES — DIMENSIONS

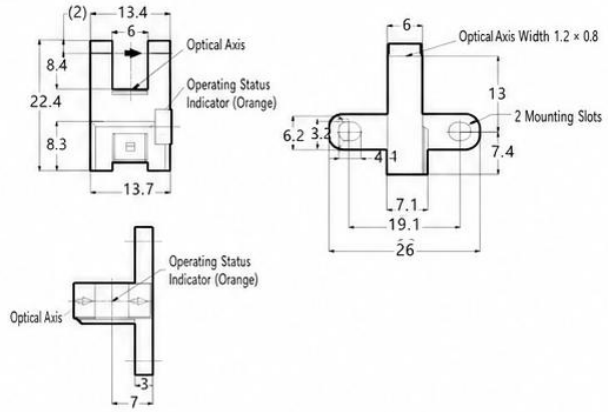
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Unit: mm

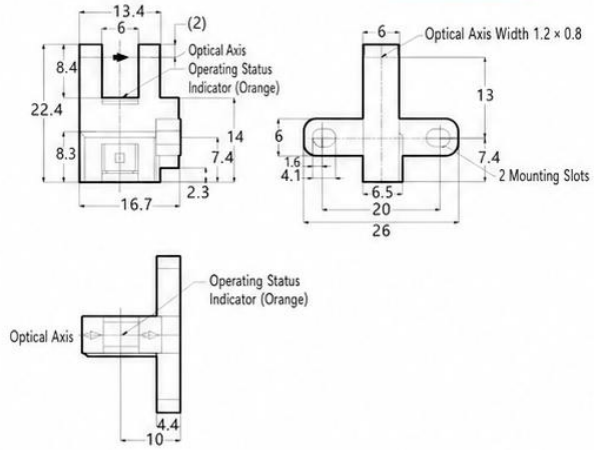
SX-DHOF-68K Slot Type Sensor



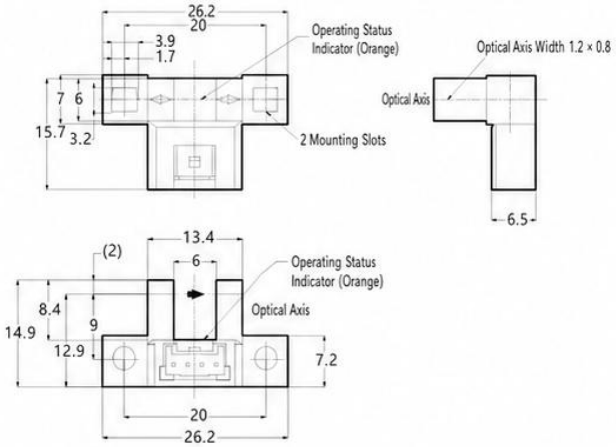
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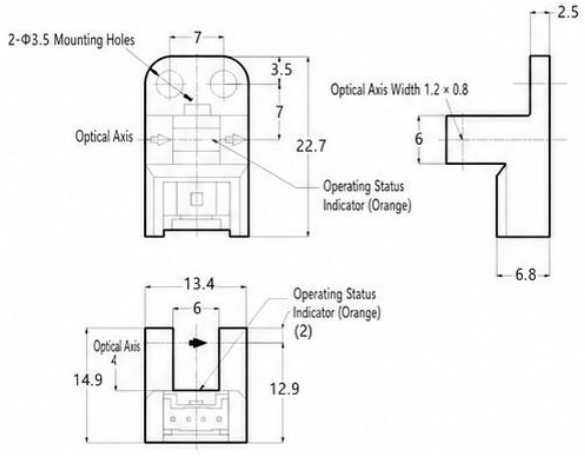
SX-DHOF-68WT Slot Type Sensor



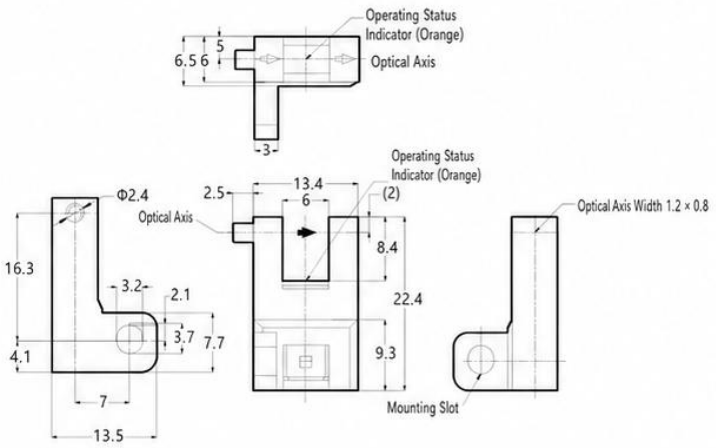
SX-DHOF-68L Slot Type Sensor



SX-DHOF-68Y Slot Type Sensor



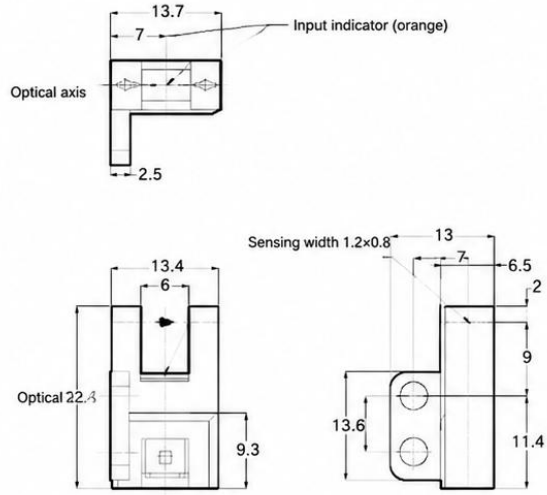
SX-DHOF-68F Slot Type Sensor



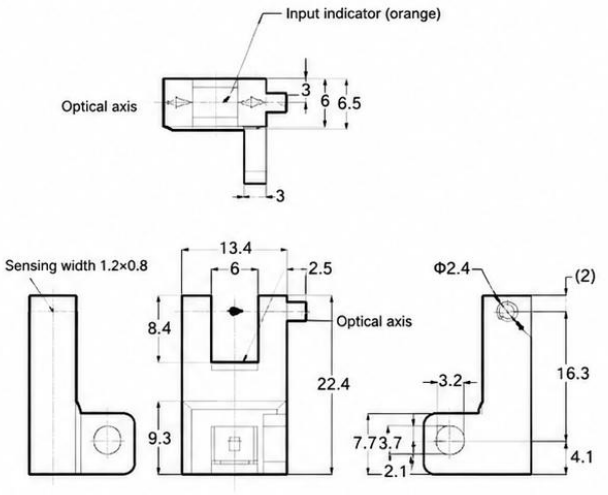
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Unit: mm

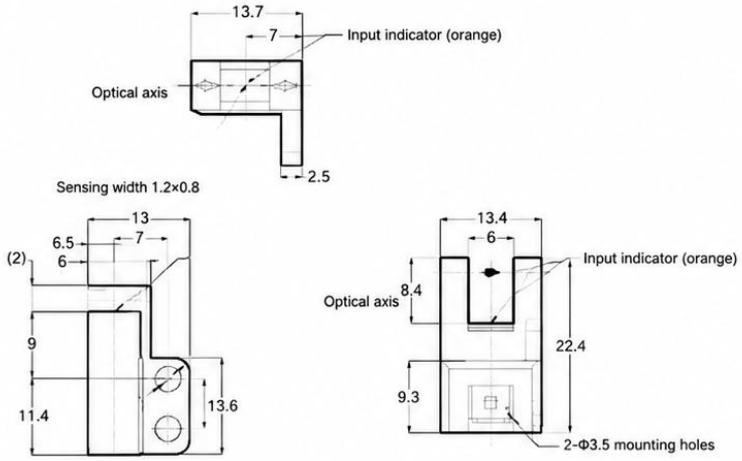
SX-DHOF-68WF Slot Type Sensor



SX-DHOF-68R Slot Type Sensor



SX-DHOF-68WR Slot Type Sensor



Type	Length	Width	Height
K-type	26 mm (1.02 in)	22.4 mm (0.88 in)	7 mm (0.28 in)
T-type	26 mm (1.02 in)	22.4 mm (0.88 in)	13.7 mm (0.54 in)
T-type ("68W")	26 mm (1.02 in)	22.4 mm (0.88 in)	16.7 mm (0.66 in)
L-type	26.2 mm (1.03 in)	15.7 mm (0.62 in)	14.9 mm (0.59 in)
Y-type	22.7 mm (0.89 in)	13.4 mm (0.53 in)	14.9 mm (0.59 in)
F-type	22.4 mm (0.88 in)	13.4 mm (0.53 in)	13.5 mm (0.53 in)
F-type ("68W")	22.4 mm (0.88 in)	13.4 mm (0.53 in)	13.0 mm (0.51 in)
R-type	22.4 mm (0.88 in)	13.4 mm (0.53 in)	13.5 mm (0.53 in)
R-type ("68W")	22.4 mm (0.88 in)	13.4 mm (0.53 in)	13.0 mm (0.51 in)

Note: Dimensions are provided for reference only. Optical axis width is 0.8 × 1.2 mm (0.03 × 0.05 in), consistent with the 28/58 Series.

■ 68 SERIES — RATING TABLE

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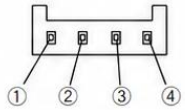
Note: The 68 Series uses a 6 mm sensing slot and IP40 ingress protection. Other listed electrical and environmental ratings follow the 68 Series specification table below.

Sensing	
Sensing Distance	6 mm (0.24 in) through-beam slot
Minimum Detectable Object	0.8 × 1.2 mm (0.03 × 0.05 in), opaque
Hysteresis (Differential Travel)	< 0.05 mm (0.002 in)
Repeatability	< 0.01 mm (0.0004 in)
Power	
Supply Voltage	5 – 24 V DC ±10%, ripple P-P ≤ 10%
Current Consumption	< 15 mA
Output	
Output Action	Complementary Light-ON and Dark-ON outputs
Load Current — NPN / PNP	≤ 50 mA max. sink/source
Applied Voltage (between output and 0 V)	≤ 24 V DC
Residual (Saturation) Voltage	< 2 V at 50 mA; < 1 V at 16 mA
Circuit Protection	Reverse power-supply connection, reverse output connection, output short-circuit
Response Time	Light-ON ≤ 20 µs; Dark-ON ≤ 80 µs (max. response frequency 3 kHz)
Indicator	Orange LED
Environmental	
Pollution Degree	3
Ingress Protection	IP40 (IEC)
Operating Ambient Temperature	−25 to +55 °C (−13 to +131 °F)
Storage Temperature	−30 to +80 °C (−22 to +176 °F), non-condensing, non-freezing
Operating Humidity	5 – 85% RH
Storage Humidity	5 – 95% RH
Ambient Light Immunity	Sunlight: 10,000 lux; Incandescent: 3,000 lux
Dielectric Strength	AC 1000 V, 1 min, between all power terminals and housing
Insulation Resistance	≥ 20 MΩ at 250 V DC, between all power terminals and housing
Vibration Resistance	10 – 55 Hz, 1.5 mm double amplitude, 2 h per axis (X, Y, Z)
Shock Resistance	500 m/s², 3 shocks per axis (X, Y, Z)
Optical & Materials	
Light Source	Infrared LED, peak wavelength 850 nm
Housing Material	PBT; Lens Cover: PC
Connection	Mating connector; standard 2 m, 0.2 mm² × 4-core connector cable supplied
Approx. Weight	≈ 3 g (0.11 oz), sensor only

■ 68 SERIES — WIRING / TERMINAL ASSIGNMENT

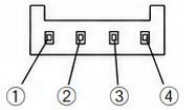
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■ Terminal Arrangement (PU-68 Series) NPN



Terminal No.	Name
①	+V
②	Output 1: ON when light is received
③	Output 2: ON when light is blocked
④	0V

■ Terminal Arrangement (PU-68 Series) PNP

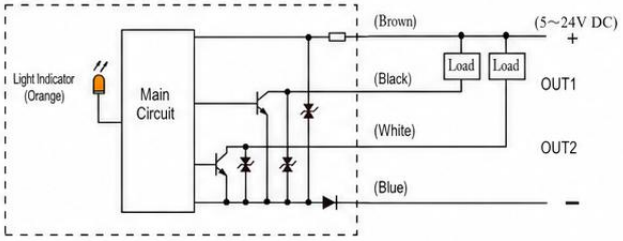
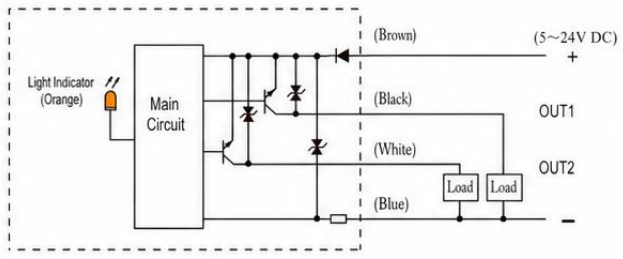


Terminal No.	Name
①	+V
②	Output 1: ON when light is received
③	Output 2: ON when light is blocked
④	0V

Terminal No.	Function
①	+V
②	Output 1 — ON when receiving light
③	Output 2 — ON when light is blocked
④	0 V

■ OUTPUT OPERATION / CIRCUIT SUMMARY

■ Output Circuit Diagram

Operating Mode	Connection Type	Timing Diagram	Output Circuit
Light-ON	NO+NC	Light Status: Light received / Light blocked Operation Indicator (Orange LED): ON / OFF NC-TR Output: ON / OFF NO-TR Output: ON / OFF	NPN  Note: Be sure to insulate any unused output wires.
Dark-ON	NO+NC	Light Status: Light received / Light blocked Operation Indicator (Orange LED): ON / OFF NC-TR Output: ON / OFF NO-TR Output: ON / OFF	
Light-ON	NO+NC	Light Status: Light received / Light blocked Operation Indicator (Orange LED): ON / OFF NC-TR Output: ON / OFF NO-TR Output: ON / OFF	PNP  Note: Be sure to insulate any unused output wires.
Dark-ON	NO+NC	Light Status: Light received / Light blocked Operation Indicator (Orange LED): ON / OFF NC-TR Output: ON / OFF NO-TR Output: ON / OFF	

Item	Description
Output Action	Complementary Light-ON and Dark-ON outputs
Light-ON Output	Output ON when receiving light
Dark-ON Output	Output ON when light is blocked
Circuit Type	NPN and PNP output circuit configurations are supported

■ MOUNTING

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Applicable Series / Screw Size	Washers	Tightening Torque
28 Series — M2	1× spring washer + Ø4.3 mm (0.17 in) flat washer	0.15 N·m (1.33 lbf·in)
28 / 58 / 68 / 68W Series — M3	1× spring washer + Ø6 mm (0.24 in) flat washer	0.5 N·m (4.43 lbf·in)

■ CABLE EXTENSION

Extension Cable Conductor Cross-Section	Max. Additional Cable Length (Without Voltage Verification)
0.08 – 0.1 mm² (AWG 28–27)	5 m (16.4 ft)
0.2 mm² (24 AWG)	10 m (32.8 ft)
0.3 mm² (22 AWG)	20 m (65.6 ft)

When using cable with a conductor cross-section of 0.3 mm² (AWG 22) or greater, the total cable length may be extended up to 100 m (328 ft). Account for voltage drop and maintain at least 4.5 V DC at the sensor end.

■ ACCESSORIES — CONNECTOR CABLE (68 SERIES)

Item	Length Options	Description
Connector Cable (standard; 2 m supplied)	2 m supplied; 1 m / 3 m / 5 m optional	0.2 mm² × 4-core rubber-insulated cable with single-side connector; cable OD ≈ Ø3 mm (0.12 in)
Connector Cable (flex-resistant; optional)	1 m / 2 m / 3 m / 5 m	0.2 mm² × 4-core rubber-insulated cable with single-side connector; cable OD ≈ Ø3 mm (0.12 in)
Connector	—	Housing: 10 pcs; Terminals: 40 sets

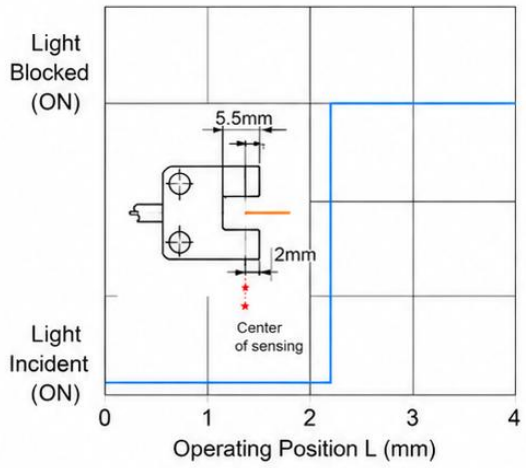
Connection Method: Insert the mating connector straight into the sensor connector until fully seated. A standard 2 m connector cable is supplied with the 68 / 68W Series sensor.

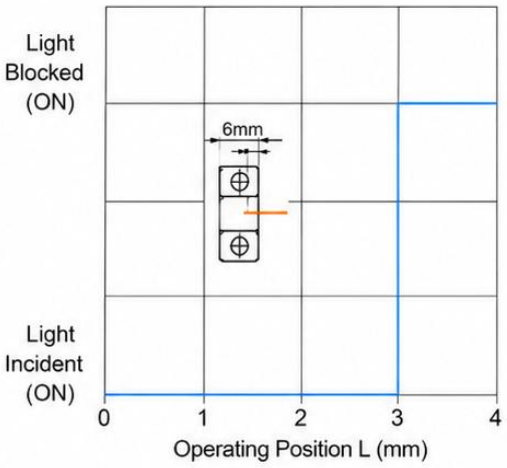
■ ENGINEERING DATA

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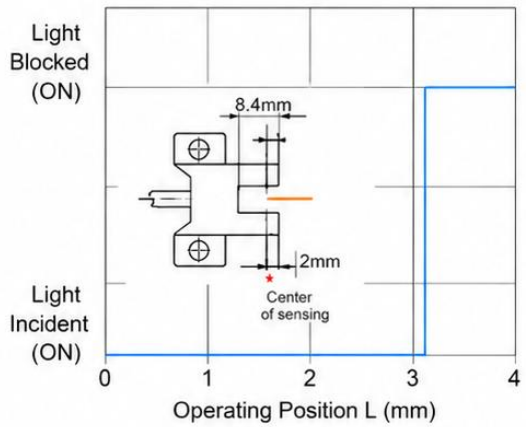
■ Detection Position Characteristics

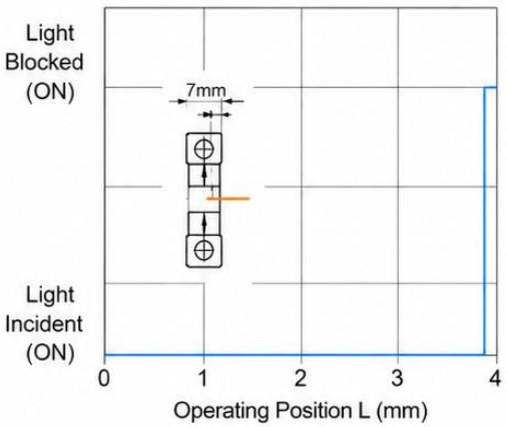
SX-DHOF-28 SERIES



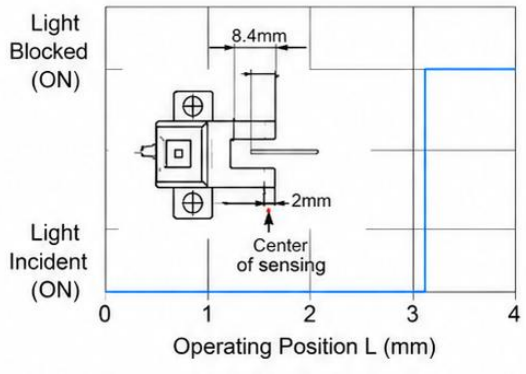


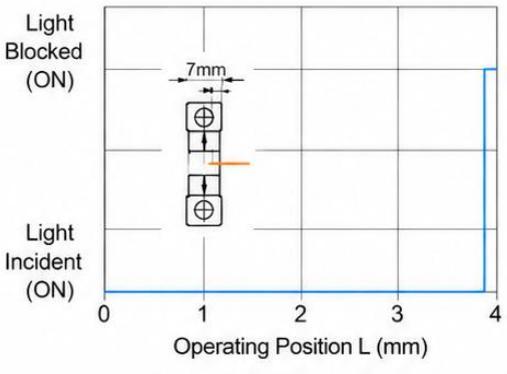
SX-DHOF-58 SERIES





SX-DHOF-68 SERIES





■ SAFETY & USAGE NOTES

Safety Precautions

- Do not use this product as a safety device for direct or indirect protection of human life. For personnel-safety applications, use products compliant with applicable safety standards such as OSHA, ANSI, IEC, or other relevant regulations.
- Do not use in the presence of flammable, explosive, or corrosive gases.
- Do not disassemble, repair, or modify this product.

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- Supply voltage must remain within the rated range (5 – 24 V DC ±10%).
- Do not exceed the rated load.

Usage Notes

- Confirm wiring is correct and power is off before connecting.
- Avoid impact or compressive loading on the sensing face and its surroundings during mounting and use.
- Keep supply voltage within the rated range at all times.
- If powered from a switching supply, ground the supply's frame-ground (F.G.) terminal.
- If noise-generating equipment (e.g., switching regulators or inverters) is installed nearby, ground that equipment's frame to F.G.
- Do not allow the sensor to contact thinner or other solvents.
- Do not route sensor wiring in the same conduit as, or parallel with, high-voltage lines; doing so may induce false operation.
- Do not use for approximately 50 ms after power-on (power-up transient period).
- With cable conductors of 0.3 mm² (AWG 22) or greater, total cable length may be extended up to 100 m (328 ft). Maintain at least 4.5 V DC at the sensor end.
- Do not forcibly bend or pull on the sensor's cable/connector.
- Avoid installation in locations with heavy oil mist or dust; corrosive gases; direct or indirect splash of water, oil, or chemicals; or strong outdoor/sunlight illumination.
- Unless otherwise specified, performance values are measured at an ambient temperature of +23 °C (+73 °F).
- At ambient temperatures above +50 °C (+122 °F), mount the sensor on a metal base.
- Below −10 °C (+14 °F), the cable becomes less flexible; avoid bending it to prevent conductor damage.
- Prevent direct sunlight from entering the receiver window.
- For flex-resistant cable versions, repeated bending is permitted only in the designated moving section. Do not apply tensile force at the fixed cable exit.
- In high-noise environments, use grounding, shielding, and appropriate cable routing; if necessary, connect a noise-suppression capacitor between +V and 0 V.
- Insert connectors straight and fully. Do not insert them at an angle or apply excessive force.

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