

- M18 PHOTOELECTRIC SENSORS FOR EASY MOUNTING
- DURABLE METAL HOUSING FOR ALL APPLICATIONS
- QUICK-CONNECT FOR EASY INSTALLATION
- AVAILABLE IN PNP, NPN AND AC MODELS
- AVAILABLE IN DIFFUSE, RETROREFLECTIVE AND THRU-BEAM
- NEW: AVAILABLE LASER MODELS

# M18 PHOTOELECTRIC SENSORS SPECIFICATIONS

**DIFFUSE**

**POLARIZED REFLECTIVE**

**THRU-BEAM**

**BACKGROUND SUPPRESSION**

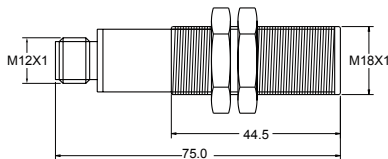
**LASER DIFFUSE**



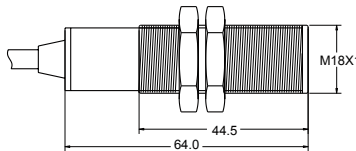
SENSING DISTANCE	500 mm	1 m	15 m	100 mm	350 mm
LIGHT EMISSION	Infrared LED (880 nm)	RED LED (660 nm)	Infrared LED (880 n)	RED LED (680 nm)	Red Laser: Class 1 - EN 60825-1
POWER SUPPLY	10-30 V DC / 20-250 V AC Models			10-30 V DC	
CURRENT CONSUMPTION	30 mA Max. / 5 mA Max AC Models				35 mA Max.
MAX. CURRENT LOAD	200 mA / 300 mA AC Models			100 mA Max.	
VOLTAGE DROP	2.5 V Max. / 10 V AC Models			2 V Max.	
RESPONSE TIME	1.5 ms			1 ms	333 microseconds
HOUSING MATERIAL	Nickel-Plated Brass / Stainless Steel Available - PMMA or PBT Lens				
MECHANICAL PROTECTION	IP67				
<b>Quick Connect (Dimensions)</b>	M18 x 75 mm	M18 x 75 mm	M18 x 75 mm	M18 x 71.5 mm	M18 x 71.5 mm
DC Emitter			M18B-T015MD-EX9Q4LE		
PNP - Light On/Dark On	M18B-D0500P-CX9Q4UE	M18B-L1000P-CX9Q4UE-PF	M18B-T015MP-CX9Q4UE	M18B-D0100P-CX6Q4UE-BS	M18B-D0350P-CX8Q4UE-LSR
NPN - Light On/Dark On	M18B-D0500N-CX9Q4UE	M18B-L1000N-CX9Q4UE-PF	M18B-T015MN-CX9Q4UE	M18B-D0100N-CX6Q4UE-BS	M18B-D0350N-CX8Q4UE-LSR
AC Emitter			M18B-T015MA-EX9Q4LM		
AC - Light On	M18B-D0500A-LX9Q4UM	M18B-L1000A-LX9Q4UM-PF	M18B-T015MA-LX9Q4UM		
AC - Dark On	M18B-D0500A-DX9Q4UM	M18B-L1000A-DX9Q4UM-PF	M18B-T015MA-DX9Q4UM		
<b>Pre-wired Cable (Dimensions)</b>	M18 x 64 mm	M18 x 64 mm	M18 x 64 mm	M18 x 57 mm	M18 x 57 mm
DC Emitter			M18B-T015MD-EX9C4U2		
PNP - Light On/Dark On	M18B-D0500P-CX9C4U2	M18B-L1000P-CX9C4U2-PF	M18B-T015MP-CX9C4U2	M18B-D0100P-CX9C4U2-BS	M18B-D0350P-CX8C4U2-LSR
NPN - Light On/Dark On	M18B-D0500N-CX9C4U2	M18B-L1000N-CX9C4U2-PF	M18B-T015MN-CX9C4U2	M18B-D0100N-CX9C4U2-BS	M18B-D0350N-CX8C4U2-LSR
AC Emitter			M18B-T015MA-EX9C3L2		
AC - Light On	M18B-D0500A-LX9C3U2	M18B-L1000A-LX9C3U2-PF	M18B-T015MA-LX9C3U2		
AC - Dark On	M18B-D0500A-DX9C3U2	M18B-L1000A-DX9C3U2-PF	M18B-T015MA-DX9C3U2		

NOTE: Specifications subject to change without notification.

**QUICK CONNECT**



**PRE-WIRED**



M18 PHOTOELECTRICS ARE A VERSATILE AND ECONOMICAL STYLE FOR MANY SENSING APPLICATIONS. THE METAL HOUSING IS DURABLE AND THE STANDARD M18 SIZE IS EASY TO MOUNT FOR A QUICK INSTALLATION AND RELIABLE OPERATION.



IP69K STAINLESS STEEL  
PHOTOELECTRIC SENSORS

**HTM**<sup>TM</sup>  
**SENSORS**



- DURABLE STAINLESS STEEL IP69K PHOTOELECTRIC SENSOR
- IP69K FOR WASHDOWN AREAS, AND AROUND CHEMICALS AND OIL
- RUGGED HOUSING FOR AUTOMOTIVE APPLICATIONS
- HIGH QUALITY CONSTRUCTION AND PERFORMANCE
- AVAILABLE IN CLEAR OBJECT AND LASER BGS
- AVAILABLE IN BGS, RETROREFLECTIVE AND THRU-BEAM

# IP69K STAINLESS STEEL PHOTOELECTRIC SENSORS SPECIFICATIONS

## CLEAR OBJECT DIFFUSE

## POLARIZED REFLECTIVE

## THRU-BEAM

## BACKGROUND SUPPRESSION

## LASER BACKGROUND SUPPRESSION

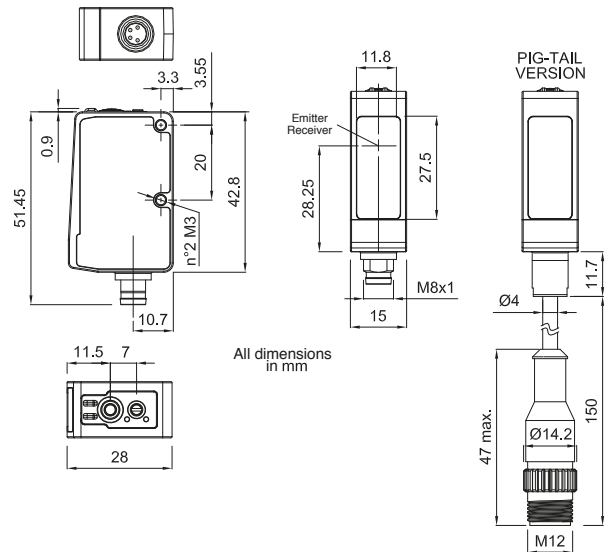


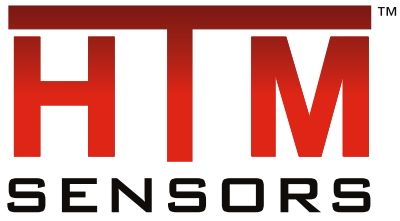
SENSING DISTANCE	300 mm	5 m	25 m	50 - 300 mm	20 - 200 mm
SETTING	Pushbutton Teach	Adjustment Trimmer	Adjustment Trimmer	Adjustment Trimmer	Adjustment Trimmer
LIGHT EMISSION	Red LED (660 nm)	RED LED (660 nm)	RED LED (660 nm)	RED LED (660 nm)	Red Laser: Class 2-EN 60825-1
POWER SUPPLY	12-30 VDC				
CURRENT CONSUMPTION	35 mA	35 mA	15 mA Max. Emitter, 20 mA Max. Receiver	35 mA	35 mA Max.
MAX. CURRENT LOAD	100 mA (overload protection)				
VOLTAGE DROP	< 2 V				
RESPONSE TIME	500 $\mu$ s	500 $\mu$ s	500 $\mu$ s	1 ms	333 microseconds
SWITCHING FREQUENCY	1 kHz	1 kHz	1 kHz	500 Hz	5 kHz
HOUSING MATERIAL	Stainless Steel / PC Lens				
MECHANICAL PROTECTION	IP69K				
OPERATING TEMPERATURE	-10 °C - +55 °C				
VIBRATION	0.5 mm amplitude, 10-55 Hz frequency per axis (EN60068-2-6)				
SHOCK RESISTANCE	11 ms (30 G) 6 shocks per axis (EN60068-2-27)				
CONNECTION	M8 4-pin Quick-Connect				
DC Emitter			H80-TBPS-E25P-M08-4QD		
PNP - Light On/Dark On	H80-CODS-0300P-M08-4QD	H80-PRRS-5000P-M08-4QD	H80-TBPS-R25P-M08-4QD	H80-BGSS-0300P-M08-4QD	H80-LBGS-0200P-M08-4QD
NPN - Light On/Dark On	H80-CODS-0300N-M08-4QD	H80-PRRS-5000N-M08-4QD	H80-TBPS-R25N-M08-4QD	H80-BGSS-0300N-M08-4QD	H80-LBGS-0200N-M08-4QD

NOTE: Specifications subject to change without notification.



HIGH PERFORMANCE PHOTOELECTRIC SENSORS MADE OF STAINLESS STEEL AND CONFORM TO IP69K ARE IDEAL FOR APPLICATIONS WHERE A RUGGED AND SEALED UNIT IS REQUIRED FOR RELIABLE AND LONG-LASTING SENSING.





- LONG RANGE PHOTOELECTRIC SENSORS
- RUGGED DESIGN FOR MANY APPLICATIONS
- BUILT-IN TIMERS AND DELAYS FOR RELIABLE OUTPUTS
- AVAILABLE IN PNP, NPN, AND AC MODELS
- AVAILABLE WITH DC OR AC QUICK-CONNECT OR PRE-WIRED MODELS
- AVAILABLE IN LONG RANGE DIFFUSE, RETROREFLECTIVE OR THRU-BEAM

# RP74 PHOTOELECTRIC SENSORS SPECIFICATIONS



OPERATING RANGE	61 m (200 ft.)	3.04 m (10 ft.)	9.14 m (30 ft.)	Depends on fiber	1.20 m (3.9 ft.)
LIGHT EMISSION	Infrared LED (880 nm)	Infrared LED (880 nm)	RED LED (660 nm)	Infrared LED (880 nm)	RED LED (660 nm)
POWER SUPPLY	10-40 VDC or 12-240 VDC/24-240 VAC				
CURRENT CONSUMPTION	35 mA Max.				
INDICATOR LEDES	Green: Power, Yellow: Output, Red: Margin				
SATURATION VOLTAGE	2.5 V Max.				
OUTPUT CURRENT	DC Models 250 mA / Relay Models 10 A at 120 VAC / 5 A at 240 VAC				
RESPONSE TIME	NPN/PNP: 5 ms, SPDT Relay: 23 ms				
TIMING OPTIONS	No Delay, On Delay, Off Delay, One-shot (for Models with Timing Delay)				
TIME SETTINGS	Adjustable, 0.1...15 s (for Models with Timing Delay)				
MECHANICAL PROTECTION	IP67				
HOUSING MATERIAL	Glass Fiber Reinforced Plastic, Cover Gasket Material: Neoprene				
LENS MATERIAL	Acrylic				
OPERATING TEMPERATURE	-25...+55 °C (-13...+131 °F)				
STORAGE TEMPERATURE	-40...+55 °C (-40...+131 °F)				
REFERENCE STANDARD	EN 60947-5-2				

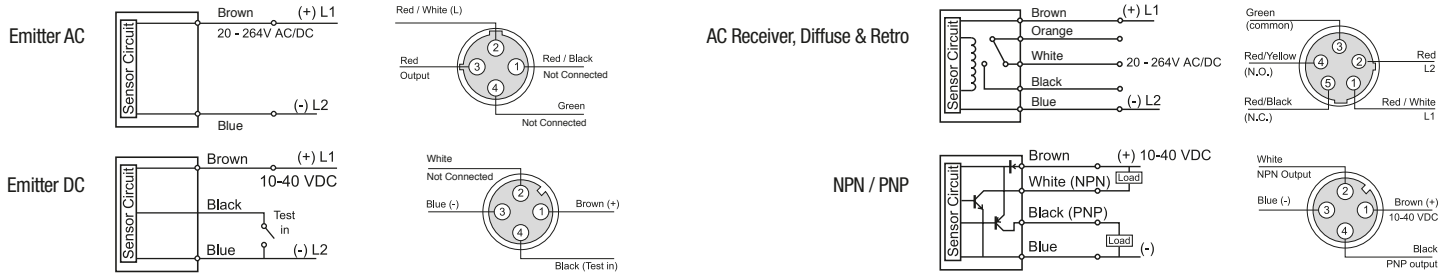
**DC Models** (10-40 VDC) M12 - Recommended Mating Cable: part # R-FS4TZ-V075 (straight), R-FA4TZ-V075 (right angle)

Emitter	RP74-T061MD-EY9Q4LE				
NPN / PNP - with timing	RP74-T061MD-CY9Q4UE-TN	RP74-D3040D-CY9Q4UE-TN	RP74-L9140D-CY6Q4UE-TN	RP74-FGFD-CY9Q4UE-TN	RP74-S1200D-CY6Q4UE-TN

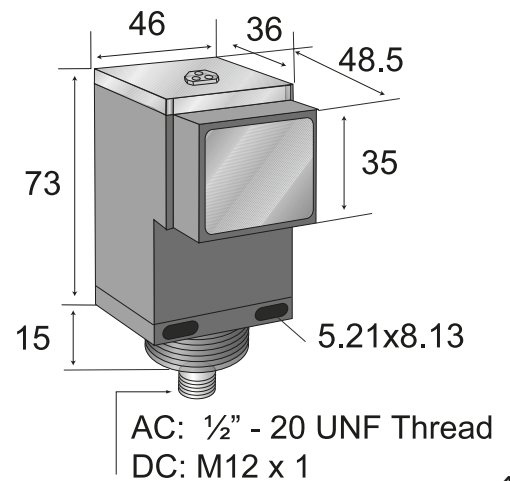
**AC Models** (12-240 VDC/24-240 VAC) ½"-20 UNF - Recommended Mating Cable: part # U-FS5TA-V105 (straight), U-FA5TA-V105 (right-angle) AC Emitter - U-FS4TAV105 (straight), U-FA4TAV105 (right angle)

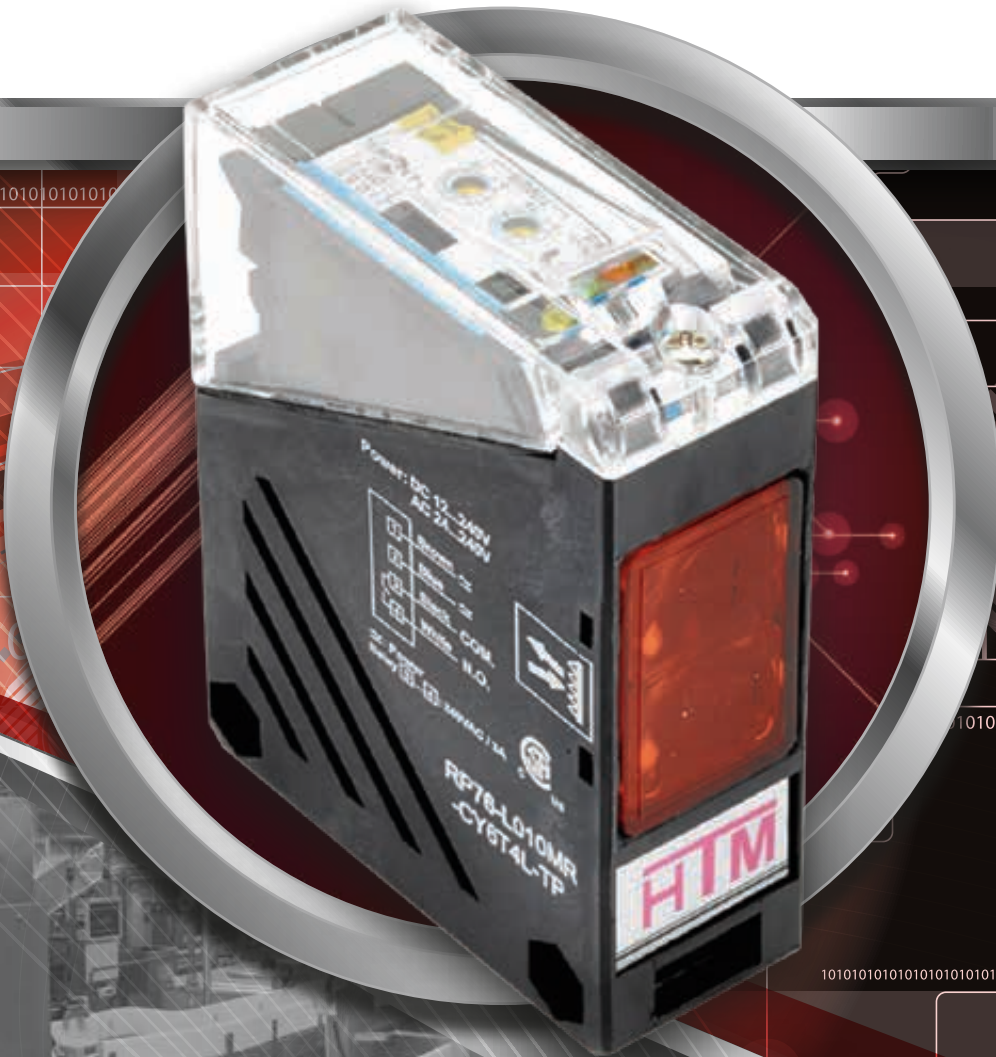
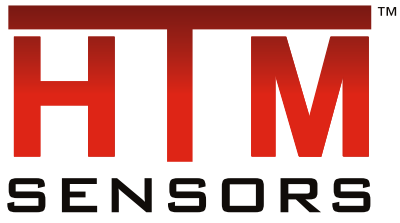
Emitter	RP74-T061MA-EY9Q4LM				
SPDT Relay - with timing	RP74-T061MR-CY9Q5LM-TN	RP74-D3040R-CY9Q5LM-TN	RP74-L9140R-CY6Q5LM-TN	RP74-FGFR-CY9Q5LM-TN	RP74-S1200R-CY6Q5LM-TN

NOTE: Specifications subject to change without notification.



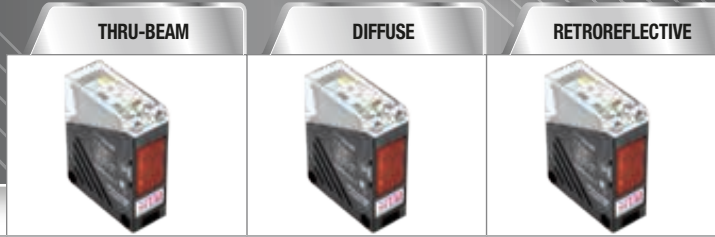
LONG RANGE PHOTOELECTRIC SENSORS ARE IDEAL FOR SENSING OVER LONG DISTANCES, AND COME WITH A RUGGED HOUSING FOR A VARIETY OF APPLICATIONS.



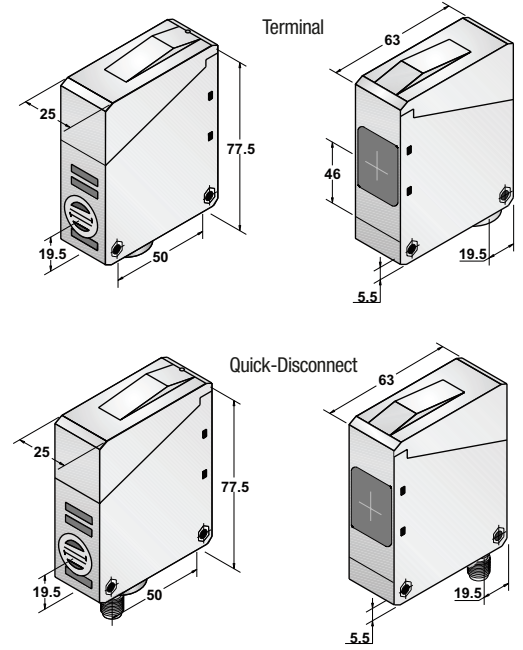


- LONG RANGE PHOTOELECTRIC SENSORS
- RUGGED DESIGN FOR MANY APPLICATIONS
- BUILT-IN TIMERS AND DELAYS FOR RELIABLE OUTPUTS
- AVAILABLE IN PNP, NPN, AND AC AND DC MODELS
- AVAILABLE WITH DC OR AC QUICK-CONNECT OR TERMINAL MODELS
- AVAILABLE IN LONG RANGE DIFFUSE, RETROREFLECTIVE OR THRU-BEAM

# RP76 PHOTOELECTRIC SENSORS SPECIFICATIONS



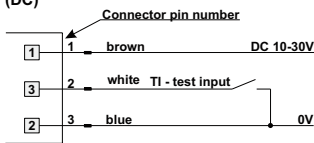
OPERATING RANGE	28 m (91.8 ft.)	0.3 m (11.8 in.)	10 m (32.8ft.)
LIGHT EMISSION	Infrared LED (880 nm)	Infrared LED (880 nm)	RED LED (660 nm)
POWER SUPPLY	DC: 10-30 VDC / AC: 20-250 VAC		
CURRENT CONSUMPTION	DC: <35 mA (no load) / AC: <2 VA		
INDICATOR LEDES	Green: Power, Yellow: Output, Red: Margin/SCP		
TIMING OPTIONS	No Delay, On Delay, Off Delay, One-shot (for Models with Timing Delay)		
TIME SETTINGS	Adjustable, 0.1...15 s (for Models with Timing Delay)		
MECHANICAL PROTECTION	IP66 / NEMA 4		
CIRCUIT PROTECTION	Reverse polarity protected (DC Models also have outputs short circuit and over current protected)		
HOUSING MATERIAL	Glass Fiber Reinforced Plastic		
LENS MATERIAL	Acrylic		
OPERATING TEMPERATURE	-25...+55 °C (-13...+131 °F)		
STORAGE TEMPERATURE	-40...+55 °C (-40...+131 °F)		
REFERENCE STANDARD	IEC 60947-5-2		



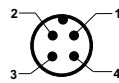
DC Models			
Emitter	RP76-T028MD-EY9T4L		
NPN - Timing Delay	RP76-T028MN-CY9T4U-T	RP76-D0300N-CY9T4U-BT	RP76-L010MN-CY6T4U-TP
PNP - Timing Delay	RP76-T028MP-CY9T4U-T	RP76-D0300P-CY9T4U-BT	RP76-L010MP-CY6T4U-TP
AC Models			
Emitter	RP76-T028MA-EY9T4L		
SPST Relay - Timing Delay	RP76-T028MR-CY9T4L-T	RP76-D0300R-CY9T4L-BT	RP76-L010MR-CY6T4L-TP

NOTE: Specifications subject to change without notification.

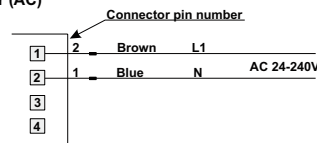
### Emitter (DC)



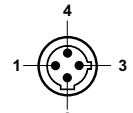
### M12 Euco QD



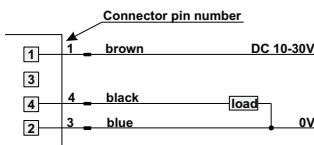
### Emitter (AC)



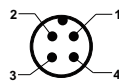
### M12 Micro QD



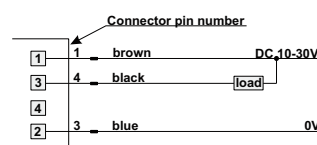
### PNP



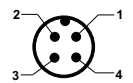
### M12 Euco QD



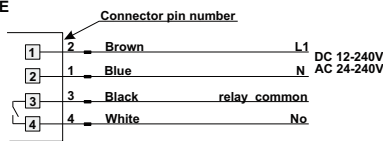
### NPN



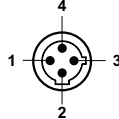
### M12 Euco QD



### AC TYPE



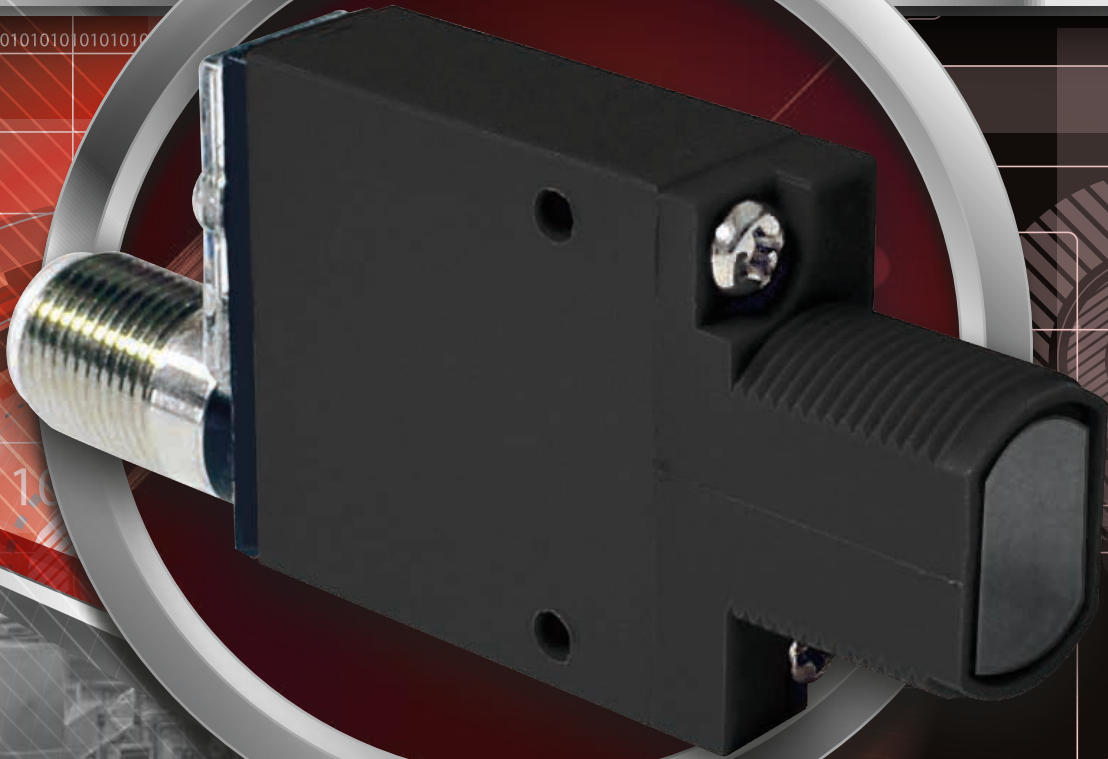
### M12 Micro QD



LONG RANGE PHOTOELECTRIC SENSORS ARE IDEAL FOR SENSING OVER LONG DISTANCES, AND COME WITH A RUGGED HOUSING FOR A VARIETY OF APPLICATIONS.



**HTM**<sup>TM</sup>  
**SENSORS**



- MP SERIES PHOTOELECTRIC SENSORS FOR UNIVERSAL MOUNTING
- MOUNTS ON STANDARD OR FLAT BRACKET
- LONG RANGE - UP TO 30 m
- AVAILABLE IN DIFFUSE, RETROREFLECTIVE, THRU-BEAM, CONVERGENT AND FIBER OPTIC MODES
- COMPACT SIZE

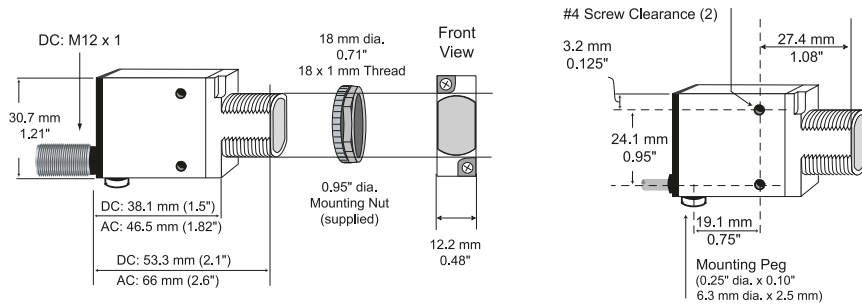
# MP SERIES PHOTOELECTRIC SENSORS SPECIFICATIONS



SENSING DISTANCE	380 mm	2 m	30 m	43 mm	Depends on fiber used
LIGHT EMISSION	Infrared LED (880 nm)	RED LED (650 nm)	Infrared LED (880 nm)	RED LED (650 nm)	Infrared LED (880 nm)
POWER SUPPLY	10-30 V DC / 20-250 V AC Models				
CURRENT CONSUMPTION	DC Models - 25 mA Max. / AC Models - 25 mA Max (1.7 mA Max. for Emitter)				
OUTPUT CONFIGURATION	DC Models - Bipolar: One current sourcing (PNP) and one current sinking (NPN) open-collector transistor AC Models - SPST MOSFET solid-state relay with either N.O. or N.C. contact (light/dark operate selectable: 3-wire hook-up)				
MAX. CURRENT LOAD	DC Models - 150 mA / AC Models - 200 mA				
VOLTAGE DROP	DC Models - <2.0 V @ 150 mA / AC Models - <10 V @ 200 mA				
RESPONSE TIME	DC Models - 1 ms / AC Models - 8 ms (4 ms for Retroreflective Models)				
ADJUSTMENTS	LIGHT/DARK Operate sensitivity adjustment switch				
HOUSING MATERIAL	Reinforced thermoplastic polyester housing, totally encapsulated o-ring sealing, acrylic lenses and stainless steel screws				
ENVIRONMENT	-20 °C to +70 °C (-4 °F to 158 °F) ; Max. 90% RH @ 50 °C				
MECHANICAL PROTECTION	IP67 (IEC)				
CONNECTION	DC Models - M12 - Recommended Mating Cable: part # R-FS4TZ-V075 (straight), R-FA4TZ-V075 (right-angle) / AC Models - 2 m Cable				
REFERENCE STANDARD	IEC 60947-5-2				

DC Models - Quick Connect					
Emitter			MP-T030MD-EX9Q4LE		
NPN / PNP	MP-D0380D-CX9Q4UE	MP-L2000D-CX6Q4UE-PF	MP-T030MD-CX9Q4UE	MP-C0043D-CX6Q4UE	MP-TGFD-CX9Q4UE
AC Models - PreWired Cable					
Emitter			MP-T3000A-EX9C2L2		
SPST, Solid State	MP-D0380A-CX9C3U2	MP-L2000A-CX6C3U2-PF	MP-T3000A-CX9C3U2	MP-C0043A-CX6C3U2	MP-DGFA-CX9C3U2

NOTE: Specifications subject to change without notification.



THE MP SERIES IS A SIMPLE, VERSATILE AND ECONOMICAL PHOTOELECTRIC SENSOR WITH AN EASY M18 MOUNTING STYLE AND A VARIETY OF SENSING FUNCTIONS.



H30 PHOTOELECTRIC SENSORS  
WITH I/O LINK

**HTM**<sup>TM</sup>  
SENSORS



 **IO-Link**



- MINIATURE HOUSING
- SENSITIVITY ADJUSTMENT VIA POTENTIOMETER
- IO-LINK FOR PROCESS OPTIMIZATION
- EXCELLENT BLACK/WHITE BEHAVIOR
- IMMUNITY TO MUTUAL INTERFERENCES

# H30 PHOTOELECTRIC SENSORS WITH I/O LINK SPECIFICATIONS



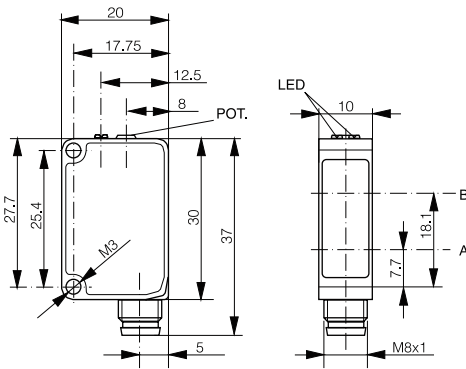
SENSING RANGE TYP. MAX.	30 m	1.5 m	8 m	300 mm	5 m
LIGHT SOURCE	N/A	Red LED 630 nm	Red LED 630 nm	PinPoint Red LED 640 nm	Red LED 630 nm
LIGHT SPOT SIZE (DISTANCE)	N/A	∅ 15 mm @ 500 m / ∅ 26 mm @ 1 m	∅ 30 mm @ 1 m / ∅ 140 mm @ 6 m	∅ 6 mm @ 100 m / ∅ 10 mm @ 300 m	∅ 40 mm @ 1 m
INDICATOR LED	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green
SUPPLY VOLTAGE RANGE (UB)	10-30 V DC				
IO-LINK	✓	✓	✓	✓	✓
SHORT CIRCUIT PROTECTION	✓	✓	✓	✓	✓
REVERSE POLARITY PROTECTION	✓	✓	✓	✓	✓
RESPONSE TIME <sup>1</sup>	<= 500 µs (normal) / <= 1 ms / <= 250 µs	<= 340 µs (normal) / <= 1 ms / <= 100 µs	<= 340 µs (normal) / <= 1 ms / <= 100 µs	<= 500 µs (normal) / <= 1 ms / <= 250 µs	<= 340 µs (normal) / <= 1 ms / <= 100 µs
OUTPUT TYPE	PNP Complementary				
OPERATION MODE	Light On or Dark on Selectable wiring				
HOUSING MATERIAL	ABS				
LENS MATERIAL	PMMA				
IP RATING	IP67				
CABLE OR CONNECTOR	4-Pin M8 Male QD				
<b>PART NUMBERS</b>					
DC Emitter QD	H30-TTX-30000D-M8-3QD				
PNP	H30-TRX-30000P-M8-4QD	H30-DIF-1500P-M8-4QD	H30-RET-8000P-M8-4QD	H30-BGS-0300P-M8-4QD	H30-COD-5000P-M8-4QD
NPN	H30-TRX-30000N-M8-4QD	H30-DIF-1500N-M8-4QD	H30-RET-8000N-M8-4QD	H30-BGS-0300N-M8-4QD	H30-COD-5000N-M8-4QD
DC Emitter Pre-wired	H30-TTX-30000D-2M				
PNP Pre-wired	H30-TRX-30000P-2M	H30-DIF-1500P-2M	H30-RET-8000P-2M	H30-BGS-0300P-2M	H30-COD-5000P-2M
NPN Pre-wired	H30-TRX-30000N-2M	H30-DIF-1500N-2M	H30-RET-8000N-2M	H30-BGS-0300N-2M	H30-COD-5000N-2M

NOTE: Specifications subject to change without notification. <sup>1</sup>By default, "Normal" mode. "Fine" and "Fast" modes selectable via IO-Link.

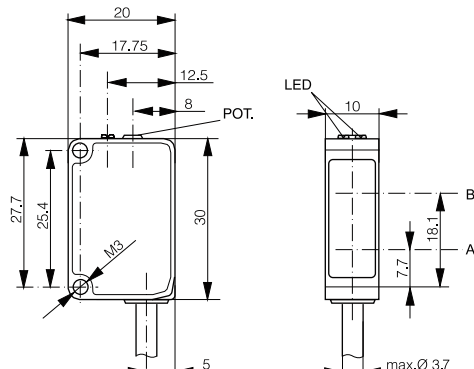
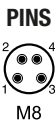
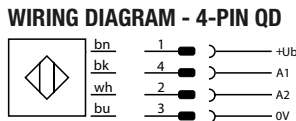


### IO-LINK FUNCTIONALITIES

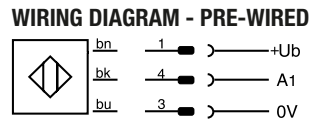
IO-Link version: 1.0	SIO mode: Supported	Process data: Detection state & stability alarm	Baudrate: COM2 (38.4 kBaud)
Special functions: Output configuration, output timing, sensor mode, detection counter, event flags, maximum and actual sensor temperature			



A: emitter axis B: receiver axis



A: emitter axis B: receiver axis



PHOTOELECTRIC SENSORS WITH VISIBLE LED ENSURE RELIABLE AND EXTENDED SENSING RANGES FOR LIMITED SPACES, WITH IP67 ENCLOSURE RATING AND ARE ECOLAB-APPROVED FOR USE IN HYGIENIC AREAS. IO-LINK COMMUNICATION FOR PROCESS OPTIMIZATION.