



E58 Series Photoelectric Sensors

Overview

All models in the E58 series offer incredible excess gain, which is a measurement of how much sensing power a photoelectric sensor has available beyond the power required to detect an object. Excess gain of 1.00 at a given range means there is just enough sensing power to detect an object under perfect conditions. Dust, dirt, oils, and debris can settle in the air or on the lens and reduce light transmission. As the level of contamination increases, more excess gain is needed to push through contamination in the environment.

The E58 series will report less "false trips" and "lock-ons" common in dusty or wet environments. The bottom line: higher long-term reliability in the worst applications.

M30 (30mm) Stainless Steel – DC and AC/DC units

- Diffuse reflective with background suppression, retroreflective, polarized reflective, and through-beam styles
- AC micro 1/2in-20 UNF thread or M12 quick-disconnect models; purchase cable separately
- Complete overload protection
- IP69 rated



M30 Stainless Steel Photoelectric Sensors

Part Number	Price	Sensing Range	Switching Frequency	Light Emission	Operating Voltage	Logic	Output Function	Connection Type	Wiring	Drawing Link
Diffuse Reflective with Background Suppression										
E58-30DP150-GLP	\$-05hjd:	150mm	100 Hz	Visible red	15-30 VDC/ 20-132 VAC	solid state relay	Light-on	3-wire, 4-pin AC micro 1/2in-20 UNF thread	Diagram 2	PDF
E58-30DP150-GDP	\$-05hje:	[5.90 in]				solid state relay	Dark-on		Diagram 2	PDF
E58-30DPS280-GLP	\$-05hjf:	280mm				solid state relay	Light-on		Diagram 2	PDF
E58-30DPS280-GDP	\$-05hjk:	[11.02 in]				solid state relay	Dark-on		Diagram 2	PDF
E58-30DP150-HLP	\$-05hjp:	150mm	625 Hz		10-30 VDC	NPN/PNP	Light-on	4-wire, 4-pin M12 quick-disconnect	Diagram 4	PDF
E58-30DP150-HDP	\$-05hjq:	[5.90 in]				NPN/PNP	Dark-on		Diagram 4	PDF
E58-30DPS280-HLP	\$-05hjt:	280mm				NPN/PNP	Light-on		Diagram 4	PDF
E58-30DPS280-HDP	\$-05hju:	[11.02 in]				NPN/PNP	Dark-on		Diagram 4	PDF
*Retroreflective										
E58-30RS18-GLP	\$-05hj9:	18m [59.05 ft]	100 Hz	Visible red	15-30 VDC/ 20-132 VAC	solid state relay	Light-on	3-wire, 4-pin AC micro 1/2in-20 UNF thread	Diagram 2	PDF
E58-30RS18-GDP	\$-05hja:					solid state relay	Dark-on		Diagram 2	PDF
E58-30RS18-HLP	\$-05hjj:		625 Hz		10-30 VDC	NPN/PNP	Light-on	4-wire, 4-pin M12 quick-disconnect	Diagram 4	PDF
E58-30RS18-HDP	\$-05hjl:					NPN/PNP	Dark-on		Diagram 4	PDF
*Purchase reflector separately										
*Polarized Reflective										
E58-30RP10-GLP	\$-05hjb:	10m [32.80 ft]	100 Hz	Visible red	15-30 VDC/ 20-132 VAC	solid state relay	Light-on	3-wire, 4-pin AC micro 1/2in-20 UNF thread	Diagram 2	PDF
E58-30RP10-GDP	\$-05hjc:					solid state relay	Dark-on		Diagram 2	PDF
E58-30RP10-HLP	\$-05hjn:		625 Hz		10-30 VDC	NPN/PNP	Light-on	4-wire, 4-pin M12 quick-disconnect	Diagram 4	PDF
E58-30RP10-HDP	\$-05hjo:					NPN/PNP	Dark-on		Diagram 4	PDF
*Purchase reflector separately										
Through-beam Emitters										
E58-30TS250-GAP	\$-05hj6:	250m [820.21 ft]	N/A	Visible red	15-30 VDC/ 20-132 VAC	N/A	N/A	2-wire, 4-pin AC micro 1/2in-20 UNF thread	Diagram 1	PDF
E58-30TS250-HAP	\$-05hjj:				10-30 VDC			2-wire, 4-pin M12 quick-disconnect	Diagram 3	PDF
Through-beam Receivers										
E58-30TD250-GDP	\$-05hj8:	250m [820.21 ft]	100 Hz	N/A	15-30 VDC/ 20-132 VAC	solid state relay	Dark-on	3-wire, 4-pin AC micro 1/2in-20 UNF thread	Diagram 2	PDF
E58-30TD250-GLP	\$-05hj7:					solid state relay	Light-on		Diagram 2	PDF
E58-30TD250-HLP	\$-05hjh:		625 Hz		10-30 VDC	NPN/PNP	Light-on	4-wire, 4-pin M12 quick-disconnect	Diagram 4	PDF
E58-30TD250-HDP	\$-05hji:					NPN/PNP	Dark-on		Diagram 4	PDF

Warning: These products are not safety sensors and are not suitable for use in personal safety applications.

Mounting Bracket

Mounting Bracket			
Part Number	Price	Description	Drawing Link
E58KAM30	\$-5hjs:	Eaton mounting bracket, right-angle, vertical and horizontal adjustment, stainless steel. For use with 30mm sensors.	PDF





E58 Series Photoelectric Sensors Specifications



M30 Stainless Steel Photoelectric Sensors Specifications				
Sensor type	Diffuse Reflective with Background Suppression	Retroreflective	Polarized Reflective	Through-beam
Optimum Sensing Range	DP150 models: 1 to 6in [26 to 150mm] DPS280 models: 1 to 9in [26 to 228 mm]	1 to 40 ft [0.03 to 12m]	1 to 20 ft [0.03 to 6m]	0.1 to 300 ft [0.03 to 90m]
Light Spot Diameter (Distance)	DP150 models: 0.75 in [19mm] diameter at 6in [150mm] DPS280 models: 1.0 in [26mm] diameter at 11.0 in [280mm]	6in [150mm] diameter at 20ft [6m]		33in [830mm] diameter at 25ft [7.6 m]
Emission	Visible Red			
Sensitivity	N/A			
Output Types	NPN/PNP or solid state relay			
Operating Voltage	HDP, HLP, HAP: 10-30 VDC GDP, GLP, GAP: 15-30 VDC / 20-132 VAC			
No Load Supply Current	≤ 30mA	≤ 15mA		
Operating (Load) Current	GLP, GDP 300mA HLP, HDP 100mA			Emitters: N/A Receivers: GLP, GDP 300mA HLP, HDP 100mA
Off-state (Leakage) Current	DC/AC Models: 250 µA typical: 500 µA maximum DC Only Models: 10 µA maximum			
Response Time	DC/AC Models: AC operation 10ms DC Operation 2ms DC Only Models: 1.6ms			
Switching Frequency	GLP, GDP 100Hz ; HLP, HDP 625Hz			
Ripple	N/A			
Voltage Reversal Protection	Yes			
Short-circuit Protection ¹	Sensor will turn off immediately when a short or overload is detected (LED indicator will flash)			
Operating Temperature	-40 to 55°C [-40 to 131°F]			
Protection Degree	IP69			
Shock/Vibration	Vibration: 30g over 20Hz to 2 kHz; shock: 100g for 3ms 1/2 sinewave pulse			
LED Indicators	Output status: red			
Housing Material	303 Stainless Steel			
Lens Material	Glass			
Tightening Torque	100 in-lbs max			
Weight	6g [0.21 oz]			
IO-Link	N/A			
Connectors	4-pin AC micro 1/2in-20 UNF thread or 4-pin M12 quick-disconnect			
Agency Approvals	cULus, CE for DC models only - not DC/AC			

¹ Turn power OFF and back ON to reset. Sensor will reset when short is removed.



E58 Series Photoelectric Sensors Specifications

Wiring Diagrams

20–132 Vac
50/60 Hz
or 15–30 Vdc

Thru-beam source

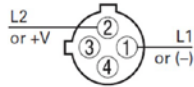


Diagram 1
Emitter

All others

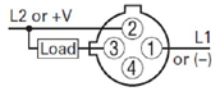


Diagram 2
4-wire Solid
State Output

10–30 Vdc

Thru-beam source

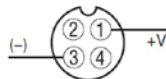


Diagram 3
Emitter

All others
(NPN and PNP)

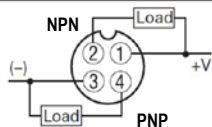


Diagram 4
4-wire PNP/NPN
Output

Connector Cables

Connector Cables				
Part Number	Price	Description	Gauge	Pin-Out Diagram
<u>CSAS4F4CY2202</u>	\$05qk:	AC Micro connector cable for quick-disconnect photoelectric sensors, straight female, AC 4-pin/4-wire, PVC, 6 feet (2 meter) length, 1/2" - 20 UNF thread	22	1-Red/Black 2-Red/White 3-Red 4-Green
<u>CSAS4F4CY2205</u>	\$-05ql:	AC Micro connector cable for quick-disconnect photoelectric sensors, straight female, AC 4-pin/4-wire, PVC, 16.4 feet (5 meter) length, 1/2" - 20 UNF thread	22	1-Red/Black 2-Red/White 3-Red 4-Green
<u>CSDS4A4CY2202</u>	\$,05td:	DC Euro (Micro) connector cable for quick-disconnect photoelectric sensors, straight female, DC 4-pin/4-wire, PVC, 6 feet (2 meter) length	22	1-Brown 2-White 3-Blue 4-Black
<u>CSDS4A4CY2205</u>	\$,05te:	DC Euro (Micro) connector cable for quick-disconnect photoelectric sensors, straight female, DC 4-pin/4-wire, PVC, 16.4 feet (5 meter) length	22	1-Brown 2-White 3-Blue 4-Black

Connector Cables Specifications

	Micro Style
Jacket Material	PVC
Contact Material	Gold-plated copper alloy
Coupling Nut Material	Zinc die-cast epoxy-coat
O-ring	Nitrile rubber
Cable	PVC insulation and jacket, stranded copper conductors
Cable Strain Relief	35 pounds minimum
Voltage Rating	320 V (24 VDC for LED plugs)
Current Rating	4A
Contact Resistance	5mΩ max
Isolation Resistance	1000MΩ min
Protection	IP67
Temperature Range	-25 to 90°C
Cable Diameter (3/C = 3 Conductor)	22 AWG PVC: 4/C: 0.21 inch [5.3 mm] 5/C: 0.20 inch [5.1 mm]
Bend Radius	Minimum recommended bend radius is 12X cable diameter



[CSDS4A4CY2205](#)



[CSAS4F4CY2205](#)