

HE Series Photoelectric Sensors

M8 (8mm) through-beam series



M8 miniaturized HEE and HER series through-beam sensors are available with NPN or PNP, and N.O. or N.C. outputs.

In the PNP models, the load is connected between the output (black wire) and the negative (blue wire).

In the NPN models, the load is connected between the output (black wire) and the positive (brown wire).

In the Normally Open models, the output is ON when the target is present (beam interrupted); in the Normally Closed models, the output is On when the target is absent (beam free).

Features

- M8 small dimension housing
- LED status indicator for all models
- Complete protection against electrical damage
- IP67 protection
- Strong stainless steel housing
- Fast switching frequency 10 kHz
- Sensing distance: 1 meter
- Supply voltage: 10 - 30 VDC
- NPN or PNP, N.O. or N.C. models



8mm diameter Through-beam Photoelectric Sensors Selection Chart									
Part Number	Price	Voltage Range	Sensing Range	Switching Frequency	Sensing Beam	Through-Beam Component	Output Type	Connection Type	Wiring
HEE-00-3A		10 to 30VDC	3,28 ft. (1m)	10kHz	Infrared	Emitter		1 meter cable	Diagram 3
HER-AP-3A						Receiver	PNP N.O.		Diagram 2
HER-CP-3A						Receiver	PNP N.C.		Diagram 2
HER-AN-3A						Receiver	NPN N.O.		Diagram 1
HER-CN-3A						Receiver	NPN N.C.		Diagram 1
HEE-00-3F						Emitter			Diagram 3
HER-AP-3F						Receiver	PNP N.O.	Diagram 2	
HER-CP-3F						Receiver	PNP N.C.	Diagram 2	
HER-AN-3F						Receiver	NPN N.O.	Diagram 1	
HER-CN-3F						Receiver	NPN N.C.	Diagram 1	

Wiring diagram

Diagram 1
NPN output

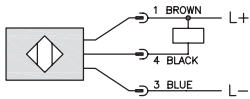


Diagram 2
PNP output

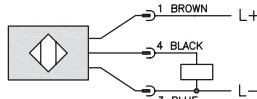
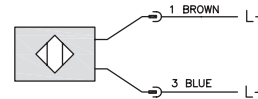
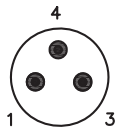


Diagram 3
Emitter



Connector

M8 Connector



Switching Element Function

	Through-beam and Reflective Models	Diffuse Reflective Models
Light on	N.C.	N.O.
Dark on	N.O.	N.C.

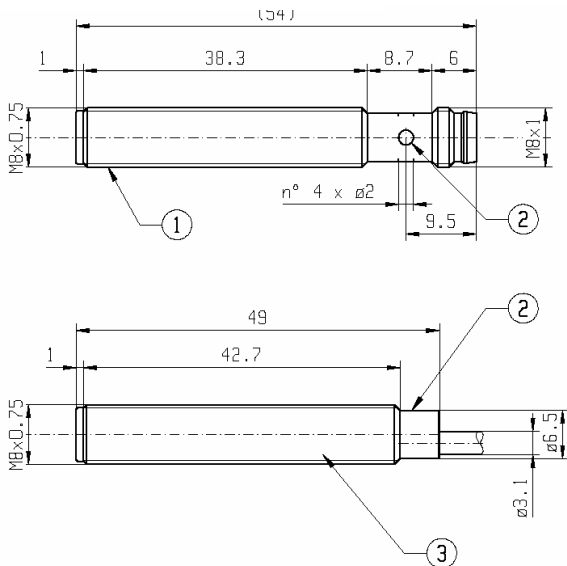
Warning: These products are not safety sensors and are not suitable for use in personal safety applications.

HE Series Photoelectric Sensors

HEE/HER Series Photoelectric Sensors Specifications	
Type	Through-Beam
Sensing Distance	1m (3.28 ft) /Ex. Gain = 2
Light Spot Diameter	See chart
Emission	Infrared
Sensitivity	Fixed
Output Types	PNP/NPN N.O./ N.C.
Operating Voltage	10 - 30 VDC
No Load Supply Current	25mA
Operating (Load) Current	100mA
Off-state (Leakage) Current (max)	<10 μ A @ 30VDC
Voltage Drop	1 Volt
Switching Frequency	10 kHz
Ripple	\leq 10%
Time Delay Before Availability (tv)	100ms
Short-circuit Protection	Yes
Operating Temperature	13°F to 122°F (-25°C to +50°C)
Protection Degree	IP67
LED Indicators - Switching Status	Yellow Output State
Housing Material	Stainless Steel
Lens Material	Polymethyl methacrylate (PMMA)
Shock/Vibration	See terminology section
Tightening Torque	5 Nm (3.69 lb-ft)
Weight	30.9 g (1.09 oz)
Connectors	1 meter cable; 8mm quick-disconnect
Agency Approvals	CE

Dimensions

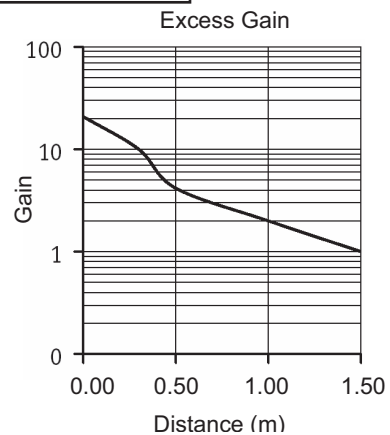
(mm)



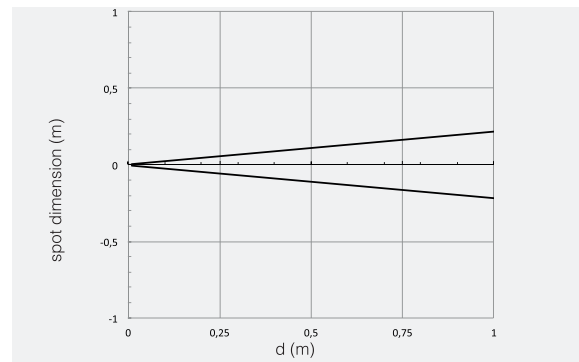
- ① M8 x 0.75 threaded cylindrical housing M8 connector exit
- ② Yellow LED (output state indicator HER - Supply Indicator HEE)
- ③ M8 x 0.75 threaded cylindrical housing cable exit

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

Characteristic curve chart



Spot dimension chart



Accessories for 8mm Sensors

Axial Mounting Bracket

Mounting bracket, axial, zinc-plated steel. For use with 8mm sensors. Has two mounting holes (use 3 mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

Accessories for 8mm Sensors				
Part Number	Price	Description	Drawing Link	Weight [lb]
<u>ST08A</u>		Micro Detectors mounting bracket, axial, zinc plated steel. For use with 8mm sensors.	<u>PDF</u>	0.04



ST08A

Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel. For use with 8mm sensors. Has two mounting holes (use 3mm screws) and allows the rotation of an optical axis for right-beam-angle-adaptor sensors. Hexagonal nuts not included.

Accessories for 8mm Sensors				
Part Number	Price	Description	Drawing Link	Weight [lb]
<u>ST08C</u>		Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 8mm sensors.	<u>PDF</u>	0.04



ST08C

Accessories for 8mm Sensors

Right-angle Mounting Bracket

Mounting bracket, right-angle, plastic. For use with 8mm sensors.



OPT2101

Accessories for 8mm Sensors				
Part Number	Price	Description	Drawing Link	Weight [lb]
OPT2101		Wenglor mounting bracket, right-angle, plastic. For use with 8mm sensors.	PDF	0.02

Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment. For use with 8mm sensors. Available in all stainless steel or with an aluminum head and stainless steel mounting plate.



OPT2112 & OPT2113

Accessories for 8mm Sensors						
Part Number	Price	Description	Mounting Head	Mounting Plate	Drawing Link	Weight [lb]
OPT2112		Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 8mm sensors.	Aluminum	304 Stainless Steel	PDF	0.14
OPT2113		Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 8mm sensors.	304 Stainless Steel	304 Stainless Steel	PDF	0.26

Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).

Mounting Rods and Brackets

Mounting Rods

304 Stainless steel rods for mounting swivel brackets OPT2112 - OPT2127. Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.

Mounting Rods for OPT2112-2127 Swivel Mounting Brackets				
Part Number	Price	Description	Drawing Link	Weight lb (g)
OPT2109		Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	PDF	0.41 (185.97)
OPT2110		Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	PDF	0.60 (272.16)
OPT2111		Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	PDF	0.98 (444.52)



Right-angle Mounting Bracket

Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.

Right-angle Mounting Brackets for 12mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb (g)
OPT2108		Wenglor mounting bracket, right-angle, nickel plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	PDF	0.07 (31.8)

