

MS Series Photoelectric Sensors



M18 (18mm) Plastic with Background Suppression - DC

- Diffuse reflection with background suppression
- Plastic housing
- Axial cable or M12 quick-disconnect models
- NPN, PNP, N.O./N.C. selectable output
- IP67 rated



MS Series Photoelectric Sensors Selection Chart

Part Number	Price	Sensing Range	Output State	Logic	Connection	Wiring	Dimensions	Characteristic Curves
MS0-00-0A		50mm [1.97 in]	N.O./N.C. selectable	NPN/PNP selectable	2m [6.5 ft] axial cable	Diagram 1 or Diagram 2	Figure 1	Chart 1
MS0-00-0E					M12 [12mm] connector		Figure 2	Chart 1
MS1-00-0A		100mm [3.94 in]	N.O./N.C. selectable	NPN/PNP selectable	2m [6.5 ft] axial cable		Figure 1	Chart 2
MS1-00-0E					M12 [12mm] connector		Figure 2	Chart 2

Wiring Diagrams

Diagram 1

NPN Output

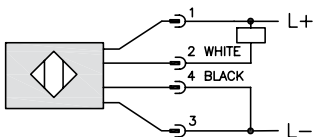
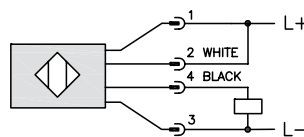


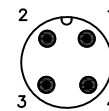
Diagram 2

PNP Output



Connector

M12 Connector



Note For Diagram 1 and Diagram 2: For N.O. – Brown 1 to L+ and Blue 3 to L-
For N.C. – Blue 3 to L+ and Brown 1 to L-

Dimensions

(inches/mm)

Figure 1

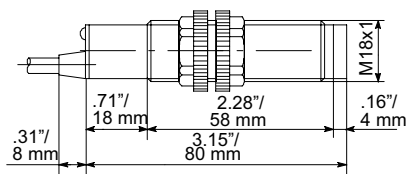
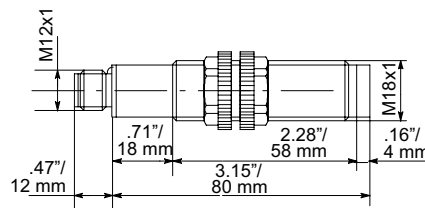


Figure 2



Switching Element Function

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

Characteristic curves

Chart 1 (MS0)

Background suppression

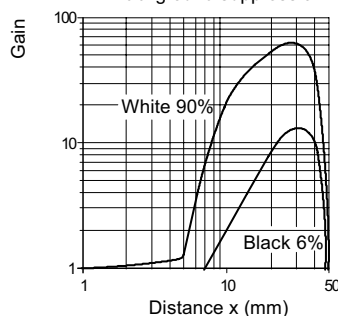
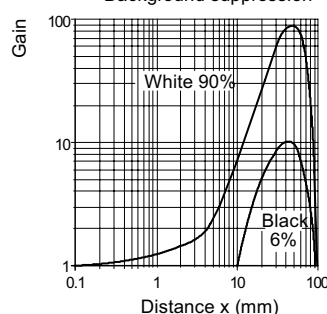


Chart 2 (MS1)

Background suppression



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

MS Series Photoelectric Sensors

MS Series Photoelectric Sensors Specifications		
MS Series Specifications	Standard Distance	Extended Distance
Type	Diffuse reflection with background suppression	
Sensing Distance	50mm ¹	100mm ¹
Light Spot Diameter	0.6 mm @ 50mm	0.9 mm @ 100mm
Emission	Infrared (880nm)	
Sensitivity	Fixed	
Output Type	NPN/PNP selectable; N.O./N.C. selectable	
Operating Voltage	10-30VDC	
No-load Supply Current	40mA	
Operating (Load) Current	≤ 100mA	
Off-state (Leakage) Current	≤ 10μA	
Voltage Drop	≤ 1.2 volt maximum at 100mA	
Switching Frequency	80Hz	
Ripple	≤ 10%	
Time Delay Before Availability (tv)	200ms	
Short-Circuit Protection	Yes (switch auto-resets after overload is removed)	
Operating Temperature	-25 to 70°C [-13 to 158°F]	
Protection Degree (DIN 40050)	IEC IP67	
LED Indicators - Switching Status	Red (output energized)	
Housing Material	Polybutylene Terephthalate (PBT) plastic housing, polycarbonate (PC) cable exit	
Lens Material	Plexiglass 7N	
Shock/Vibration	See terminology section	
Tightening Torque	1 N•m [0.74 lb-ft]	
Weight	150g [5.29 oz]	
Connectors	2m [6.5 ft] axial cable; M12 [12mm] connector	
Agency Approvals	CE	

¹With 100x100mm white matte paper

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.