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Quick Selection Guide

RightSight™ Compact Rectangular



Sensing Modes (Max Distance)	Polarized Retroreflective	3m (10ft)
	Standard Diffuse	500mm (20in)
	Background Suppression	50mm (2.0in) 100mm (3.9in)
	Transmitted Beam	30m (98ft)
	Infrared Glass Fiber Optic	Depends on Fiber Optic selected.
Operating Voltage	12–24V DC	24–240V AC/DC (50/60Hz)
Output	NPN PNP	Power MOSFET
Connections	Cable Micro quick-disconnect	
Features	Complementary outputs for DC versions, 1200 psi (8270kPa) washdown, standard 18mm mounting options, fully short-circuit protected across entire voltage range for AC version	
Selection Criteria	Page Number	1–25

Series 9000—On/Off and Timing



Sensing Modes	ClearSight™ Clear Object Detection	1.2m (4ft)			
	Retroreflective	9.15m (30ft)			
	Polarized Retroreflective	5m (16ft)			
	Standard Diffuse	1.5m (5ft)			
	Long Range Diffuse	3m (10ft)			
	Transmitted Beam	61m (200ft) 152m (500ft)			
	Visible Red Plastic Fiber Optic	Depends on Fiber Optic selection.			
	Infrared Glass Fiber Optic	Depends on Fiber Optic selection.			
Operating Voltage	10–40V DC	10–55V DC, 20–40V AC (50/60Hz)	70–264V AC/DC (50/60Hz)	45–264V DC, 40–264V AC (50/60Hz)	
	Output	NPN & PNP	SPDT EM Relay	Solid State Isolated N.O.	
	Connections	Cable Micro quick-disconnect Mini quick-disconnect			
	Features	L.O./D.O. switch, sensitivity adjustment, alignment and diagnostic indicators, timing functions, 1200 psi (8270kPa) washdown			
Selection Criteria	Page Number	1–33			

Series 9000—Diagnostic



Sensing Modes (Max Distance)	Retroreflective	9.14m (30ft)
	Polarized Retroreflective	5m (16ft)
	Standard Diffuse	1.5m (5ft)
	Transmitted Beam	61m (200ft) 152m (500ft)
Operating Voltage	10–30V DC	90–264V AC (50/60Hz) 95–264VDC
Output	Selectable NPN/PNP, N.O./N.C., Dynamic/Static	N.O. Relay or N.C. Relay Diagnostic SPST N.O./N.C. Relay
Connections	Cable Micro quick-disconnect Mini quick-disconnect	
Features	Diagnostic output (dynamic and static) L.O./D.O. switch, sensitivity adjustment, alignment and diagnostic indicators, timing functions, 1200 psi (8270kPa) washdown	
Selection Criteria	Page Number	1–47

Series 9000—DeviceNet™ Network Compatible



Sensing Modes (Max Distance)	ClearSight™ Clear Object Detection	1.2m (4ft)
	Retroreflective	9.14m (30ft)
	Polarized Retroreflective	5m (16ft)
	Standard Diffuse	1.5m (5ft)
	Transmitted Beam	61m (200ft) 152m (500ft)
Operating Voltage	10–30V DC	
Output	DeviceNet Standard CAN High/CAN Low	
Connections	Cable Micro quick-disconnect Mini quick-disconnect	
Features	DeviceNet Network compatibility, L.O./D.O. switch, sensitivity adjustment, alignment and diagnostic indicators, timing functions, 1200 psi (8270kPa) washdown	
Selection Criteria	Page Number	1–55

Series 9000—Darkroom



Sensing Modes (Max Distance)	Retroreflective	9.14m (30ft)
	Standard Diffuse	0.91m (3ft)
	Transmitted Beam	30m (100ft)
	Infrared Glass Fiber Optic	Depends on Fiber Optic selected.
Operating Voltage	10–40V DC	70–264V AC/DC 50/60Hz
Output	NPN and PNP	SPDT EM Relay
Connections	Cable Micro quick-disconnect Mini quick-disconnect	
Features	Emits less than 0.002mlux visible light at 25.4mm (1in) from sensor, L.O./D.O. switch, sensitivity adjustment, alignment and diagnostic indicators, 1200 psi (8270kPa) washdown	
Selection Criteria	Page Number	1–62

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Series 10,000—High Performance



Sensing Modes (Max Distance)	ClearSight™ Clear Object Detection	1.2m (4ft)
	Retroreflective	9.14m (30ft)
	Polarized Retroreflective	4.57m (15ft)
	Standard Diffuse	2.74m (8ft)
	Visible Red Plastic Fiber Optic	Depends on Fiber Optic selected.
	Infrared Glass Fiber Optic	Depends on Fiber Optic selected.
	Green Glass Fiber Optic	Depends on Fiber Optic selected.
Operating Voltage	10–30V DC	
Output	NPN, PNP, and Diagnostic NPN or PNP	
Connections	Cable Micro quick-disconnect Mini quick-disconnect	
Features	LCD display, pushbutton interface, adjustable sensitivity, selectable and hysteresis, ControWatch™ Automatic Gain Control System, MarginView™ Dynamic Margin Display, L.O./D.O. selection, autojitter crosstalk avoidance, output and stability indicators, 1200 psi (8270kPa) washdown	
Selection Criteria	Page Number	1–68

42BC—Long Range Background Suppression



Sensing Modes (Max Distance)	Background Suppression	1m (39.3in) 2m (78.7in)
Operating Voltage	10–24V DC ±10%	24–240V AC/DC (50/60Hz) ±10%
Output	NPN/PNP Selectable SPST N.O. Relay	
Connections	Terminals	
Features	Stability and output indicators, L.O./D.O. switch	
Selection Criteria	Page Number	1–78

Series 5000—Red Line



Sensing Modes (Max Distance)	Retroreflective	6.09m (20ft)
	Polarized Retroreflective	6.09m (20ft)
	Standard Diffuse	1.5m (5ft)
Operating Voltage	120V AC (50/60Hz) 240V AC (50/60Hz)	
Output	SPDT EM Relay AC/DC Solid State FET (SP–N.O.) AC Solid State TRIAC (SP–N.O.)	
Connections	Cable Terminal	
Features	Modular design, output indicator, L.O./D.O. switch	
Selection Criteria	Page Number	1–85

Series 5000—Blue Line



Sensing Modes (Max Distance)	Retroreflective	10m (33ft)
	Polarized Retroreflective	6.09m (20ft)
	Standard Diffuse	2.1m (7ft)
	Infrared Fiber Optic	Depends on Glass Fiber Optics selected, see page 1-232.
	Visible Red Fiber Optic	Depends on Glass or Plastic Fiber Optics selected, see page 1-232 and 1-232.
	Fixed Focus Diffuse	50mm (2in) Focal Point—Infrared or Visible Red
	Wide Angle Diffuse	500mm (20in)—Infrared 160mm (6.3in)—Visible Red
Operating Voltage	10–30V DC	
Output	NPN and PNP	
Connections	Cable Terminal	
Features	Modular design, L.O./D.O. switch, output indicator	
Selection Criteria	Page Number	1-89

Series 5000—Green Line



Sensing Modes (Max Distance)	Retroreflective	10m (33ft)
	Polarized Retroreflective	6.09m (20ft)
	Standard Diffuse	3.06m (10ft)
	Transmitted Beam	170.6m (560ft)
	Infrared Plastic Fiber Optic	Depends on Fiber Optic selected.
	Visible Red Glass Fiber Optic	Depends on Fiber Optic selected.
	Fixed Focus Diffuse	50mm (2in) Focal Point—Infrared or Visible Red
	Wide Angle Diffuse	500mm (20in)—Infrared 160mm (6.3in)—Visible Red
Operating Voltage	20–30V DC 20–30V AC 40–54V AC/DC	102–132V AC 204–254V AC (All AC 50/60Hz)
Output	SPDT EM Relay SP-N.O. FET SS Relay SP-N.O. AC Power TRIAC SS Relay NPN and PNP	
Connections	Terminal Mini quick-disconnect	
Features	Modular design, L.O./D.O. switch, output indicator, plug-in output and timing modules	
Selection Criteria	Page Number	1-96

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Series 5000—Analog Output



Sensing Modes (Max Distance)	Retroreflective	4.57m (15ft)
	Standard Diffuse	1.5m (5ft)
	Infrared Fiber Optic	Depends on Fiber Optic.
	Visible Red Fiber Optic	Depends on Fiber Optic.
	Fixed Focus Diffuse	50mm (2in) Focal Point— Infrared Visible Red
	Wide Angle Diffuse	500mm (20in)—Infrared 160mm (6.3in)—Visible Red
Operating Voltage	22–28V DC	
Output	Voltage (1–10V DC) or current (1–20mA) and 2 adjustable NPN setpoint outputs	
Connections	Cable Terminal	
Features	Modular design, 2 set point outputs with indicators	
Selection Criteria	Page Number	1–110

Series 5000—Background Suppression



Sensing Modes (Max Distance)	Background Suppression	300mm (12in)
Operating Voltage	10–30V DC	20–30V DC 20–30V AC (50–60Hz) 40–54V AC (50–60Hz) 102–132V AC (50–60Hz) 204–264V AC (50–60Hz)
Output	NPN and PNP	SPDT EM Relay SP–N.O. FET SS Relay SP–N.O. AC Power TRIAC SS Relay
Connections	Cable (DC) Terminal (AC/DC) Mini quick-disconnect	
Features	Modular design, L.O./D.O. switch, output indicator, one photohead with timing	
Selection Criteria	Page Number	1–117

Series 5000—Intrinsically Safe



Sensing Modes (Max Distance)	Retroreflective	10m (33ft)
	Polarized Retroreflective	6.09m (20ft)
	Standard Diffuse	2.1m (7ft)
	Infrared Fiber Optic	
	Fixed Focus Diffuse	50mm (2in) Focal Point— Infrared
	Wide Angle Diffuse	500mm (20in)—Infrared
Operating Voltage	13–29.5V DC	
Output	NPN and PNP	
Connections	Terminal	
Features	Modular design, L.O./D.O. switch, Intrinsically Safe design	
Selection Criteria	Page Number	1–121