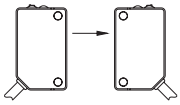
SA1E Miniature Photoelectric Switches

Key features:

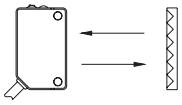
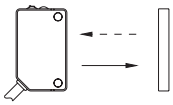
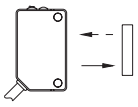
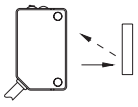
- Seven sensing methods: through-beam, polarized retroreflective, small beam reflective, diffuse, background suppression, convergent, and transparent.
- 2m cable type and M8 connector.
- NPN output, PNP output, light ON, dark ON can be selected.
- Coaxial polarized retro-reflective type (SA1E-X) available for sensing transparent objects.
- Background suppression (SA1E-B) type detects objects only, ignoring the background.
- Red LED available for easy alignment in long distance applications (SA1E-T, -P, -N, and -B)
- Convergent reflective type (SA1E-G) is ideal for detecting objects at a short distance with a background.
- Also available without sensitivity adjustment (SA1E-T, -P)
- Air blower mounting block for installing an air blower to clean the lens surface. Ideal to maintain a clean lens surface and sensor performance.
- UL Listed and CE marked
- IP67

Part Numbers

Photoelectric Switches

Sensing Method				Sensing Range	Connection	Cable Length	Operation Mode	Part No.	
								NPN Output	PNP Output
Through-beam	Infrared LED	w/Sensitivity Adjustment		10m	Cable	2m	Light ON	SA1E-TN1-2M	SA1E-TP1-2M
							Dark ON	SA1E-TN2-2M	SA1E-TP2-2M
					Connector	–	Light ON	SA1E-TN1C	SA1E-TP1C
							Dark ON	SA1E-TN2C	SA1E-TP2C
		w/o Sensitivity Adjustment		15m	Cable	2m	Light ON	SA1E-TN1-NA-2M	SA1E-TP1-NA-2M
							Dark ON	SA1E-TN2-NA-2M	SA1E-TP2-NA-2M
					Connector	–	Light ON	SA1E-TN1C-NA	SA1E-TP1C-NA
							Dark ON	SA1E-TN2C-NA	SA1E-TP2C-NA
	Red LED	w/Sensitivity Adjustment		10m	Cable	2m	Light ON	SA1E-TAN1-2M	SA1E-TAP1-2M
							Dark ON	SA1E-TAN2-2M	SA1E-TAP2-2M
					Connector	–	Light ON	SA1E-TAN1C	SA1E-TAP1C
							Dark ON	SA1E-TAN2C	SA1E-TAP2C
	Class 1 Laser	w/Sensitivity Adjustment		30m	Cable	2m	Light ON/ Dark ON	SA1E-LTN3-2M	SA1E-LTP3-2M
					Connector	–	Light ON/ Dark ON	SA1E-LTN3C	SA1E-LTP3C

Photoelectric Switches

Sensing Method				Sensing Range	Connection	Cable Length	Operation Mode	Part No.	
								NPN Output	PNP Output
Polarized Retroflective	Red LED	w/Sensitivity Adjustment	 (Note) Note: Maintain at least the distance shown in the ( ) between the SA1E photoelectric switch and reflector. Reflectors are not supplied and must be ordered separately. See the characteristics on page 219.	2.5m (100 mm) When using IAC-R5/R8 1.5m (100 mm) When using IAC-R6 1.3m (150 mm) When using IAC-RS2 1.0m (150 mm) When using IAC-RS1 0.8m (100 mm) When using IAC-R5/R8□	Cable	2m	Light ON	SA1E-PN1-2M	SA1E-PP1-2M
							Dark ON	SA1E-PN2-2M	SA1E-PP2-2M
					Connector	–	Light ON	SA1E-PN1C	SA1E-PP1C
							Dark ON	SA1E-PN2C	SA1E-PP2C
		w/o Sensitivity Adjustment		3.0m (100 mm) When using IAC-R5/R8 2.0m (100 mm) When using IAC-R6 1.4m (150 mm) When using IAC-RS2 1.1m (150 mm) When using IAC-RS1 1.0m (100 mm) When using IAC-R7□	Cable	2m	Light ON	SA1E-PN1-NA-2M	SA1E-PP1-NA-2M
							Dark ON	SA1E-PN2-NA-2M	SA1E-PP2-NA-2M
					Connector	–	Light ON	SA1E-PN1C-NA	SA1E-PP1C-NA
							Dark ON	SA1E-PN2C-NA	SA1E-PP2C-NA
	Class 1 Laser	w/Sensitivity Adjustment		10m	Cable	2m	Light ON/ Dark ON	SA1E-LPN3-2M	SA1E-LPP3-2M
					Connector	–	Light ON/ Dark ON	SA1E-LPN3C	SA1E-LPP3C
Diffuse-reflective	Infrared LED	w/Sensitivity Adjustment		700 mm	Cable	2m	Light ON	SA1E-DN1-2M	SA1E-DP1-2M
							Dark ON	SA1E-DN2-2M	SA1E-DP2-2M
					Connector	–	Light ON	SA1E-DN1C	SA1E-DP1C
							Dark ON	SA1E-DN2C	SA1E-DP2C
Small-beam Reflective	Red LED	w/Sensitivity Adjustment		50 to 150 mm	Cable	2m	Light ON	SA1E-NN1-2M	SA1E-NP1-2M
							Dark ON	SA1E-NN2-2M	SA1E-NP2-2M
					Connector	–	Light ON	SA1E-NN1C	SA1E-NP1C
							Dark ON	SA1E-NN2C	SA1E-NP2C
Background Suppression	Red LED	w/Sensing Range Adjustment		20 to 200 mm 20 to 200 mm Adjustable Sensing Range	Cable	2m	Light ON	SA1E-BN1-2M	SA1E-BP1-2M
							Dark ON	SA1E-BN2-2M	SA1E-BP2-2M
					Connector	–	Light ON	SA1E-BN1C	SA1E-BP1C
							Dark ON	SA1E-BN2C	SA1E-BP2C
	Class 1 Laser	w/Sensitivity Adjustment		20 to 300 mm 20 to 300 mm Adjustable Sensing Range	Cable	2m	Light ON/ Dark ON	SA1E-LBN3-2M	SA1E-LBP3-2M
					Connector	–	Light ON/ Dark ON	SA1E-LBN3C	SA1E-LBP3C