

No. ISH1528B

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SA2E SERIES

MINIATURE PHOTOELECTRIC SWITCHES

TYPE SA2E- B□ 3-※M (Background suppression)

Output ┘ Cable length

1. Applicable standard
 - JIS C8201-5-2
 - IEC60947-5-2
 - EN60947-5-2

2. Operating conditions
 - (1) Operating temperature -30 to +55°C (No freezing)
 - (2) Operating humidity 35 to 95%RH (No condensation)
 - (3) Storage temperature -40 to +70°C (No freezing)
 - (4) Extraneous Light immunity Sunlight: 40,000 lx maximum, Incandescent light: 10,000 lx maximum
 - (5) Altitude 2,000m maximum

3. Rating
 - (1) Power voltage 12V DC to 24V DC (ripple 10% maximum)
(With reverse polarity protection)
 - (2) Operating limit 10V DC to 30V DC
 - (3) Current draw 20mA maximum

4. Construction
 - (1) Outside view See attached sheet
 - (2) Connection 0.2mm² φ 3.5mm 3-core cable
 - (3) Cable length— (※) 2(2m)
 - (4) Degree of protection IP67 (IEC 60529)
 - (5) Materials Housing: PBT , Lens: PMMA , Operation cover : PC ,
Adjustment trimmer : POM
 - (6) Indicator Operation indicator : amber , Stable label indicator : green
 - (7) Weight (Approx) 50g (cable length 2m)

5. General specifications
 - (1) Insulation resistance Between live parts and mounting bracket :20MΩ minimum
(with a 500V DC megger)
 - (2) Dielectric strength Between live parts and mounting bracket:1,000V AC,1 minute
 - (3) Vibration resistance 10 to 55Hz , double amplitude 1.5mm
55 to 500Hz , acceleration 90m/ s²
sweep cycle duration 5min. duration of endurance 30min.
in each of the 3 axes.
 - (4) Shock resistance 1,000m/s² 3 shocks in each of 3 axes (6 directions)

6. Performance

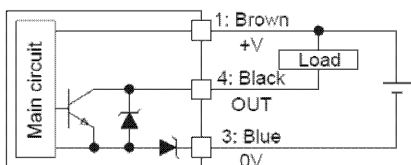
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|---------------------------------|--|
| (1) Method of sensing | Background suppression |
| (2) Detectable object | Opaque |
| (3) Light source element | Red LED |
| (4) Sensing range | 10 to 350mm white paper (200mm×200mm) |
| (5) Adjustable setting distance | 20 to 350mm white paper (200mm×200mm) |
| (6) Type of output— (□) | |

N : NPN open collector	Rated maximum voltage : 30V DC maximum , Rated operational : 100mA maximum
P : PNP open collector	Voltage drop : 2.0V maximum (100mA maximum), 1.2V maximum (10mA maximum) short circuit protection , reverse output polarity protection

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|------------------------------|--|
| (7) Response time | 0.5ms maximum |
| (8) Operation | Light on Dark on selector |
| (9) Sensing distance setting | Multi-turn (7 no.) potentiometer |
| (10) Interfarence prevention | up to 2 units can be installed in close. |

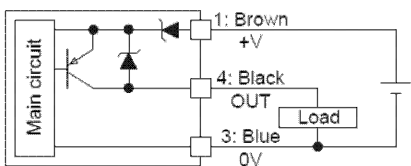
• WIRING DIAGRAM

NPN Output Type



12 to 24 V DC

PNP Output Type



12 to 24 V DC