





No. ISH1531

Date: March 5, 2021

SA2E SERIES**MINIATURE PHOTOELECTRIC SWITCHES**TYPE SA2E-D  3  -C (Diffuse-Reflective)Output  Sensing range Approved by K.YasukawaChecked by S.OkamotoWritten by H.Okamura

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) Extrinsic 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 Plug-in M8 connector (4 PIN)
 - (3) Degree of protection IP67 (IEC 60529)
 - (4) Materials Housing: PBT , Lens: PMMA , Operation cover : PC ,
Adjustment trimmer : POM
 - (5) Indicator Operation indicator : amber , Stable level indicator : green
 - (6) Weight (Approx) 20g

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

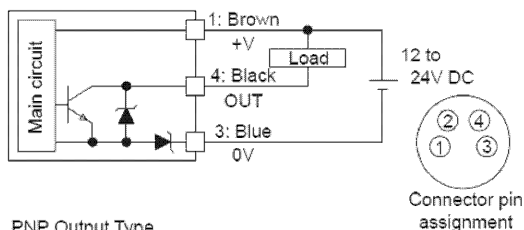
- (1) Method of sensing Diffuse-Reflective
- (2) Detectable object Opaque
- (3) Light source element/Sensing range — (◎) L (Infrared LED / Sensing range 1m white paper 200mm×200mm)
M (Red LED / Sensing range 500mm white paper 200mm×200mm)
S (Infrared LED / Sensing range 100mm white paper 200mm×200mm)
- (4) 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

- (5) Response time 0.5ms maximum
- (6) Operation Light on Dark on selector
- (7) Sensitivity adjustment 1 turn potentiometer-240 degrees
- (8) Interference prevention up to 2 units can be installed in close.

• WIRING DIAGRAM

NPN Output Type



PNP Output Type

