

INSTRUCTION SHEET

Photoelectric Switch SA1E Series (Transparent Object Sensing)

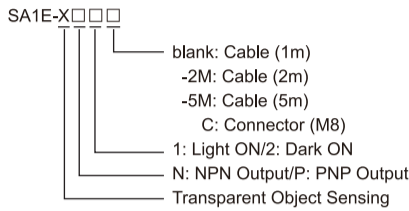
Confirm that the delivered product is what you have ordered. Read this instruction sheet to make sure of correct operation. Make sure that the instruction sheet is kept by the end user.

SAFETY PRECAUTIONS

CAUTION

Caution notices are used where inattention might cause personal injury or damage to equipment.

1 Type

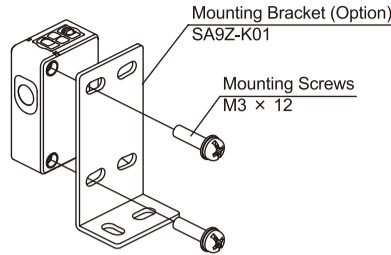


2 Specifications

Table with 2 columns: Specification Name and Value. Includes Detection System (Coaxial Retro-Reflection), Power Voltage (12 to 24V DC), Current Consumption (20 mA), Detection Range (2m), Control Output (Open collector output), Protection Circuit (Reverse polarity protection), Interference prevention (2 units can be installed in close proximity), Ambient Temperature (Operating: -25 to 55 °C), Ambient Humidity (Operating: 35 to 85% RH), Degree of protection (IP67), Material (Housing: PBT, Lens: PMMA), Cable (φ 3.5 mm, 3-core, 0.2 mm²).

3 Installation

- Do not apply excessive impact on the sensor during the installation process... To install the sensor, tighten the mounting screws to a torque of 0.4 to 0.5N・m.



4 Notes for Operation

- Use an optional reflector (IAC-R9, IAC-R10, or IAC-R11). Do not use the sensor during the transient time of 200 ms after turning on the power. If the sensor and the load are connected to different power supplies, the sensor must always be turned on first.

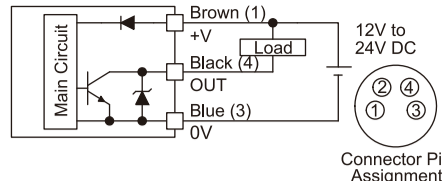
CAUTION

- Do not connect the sensor to AC power supply, so as to prevent explosion and burning.

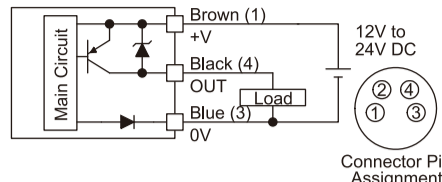
5 Wiring

- Turn off the power before wiring. Connect correctly to prevent damage. The power voltage must not exceed the rated range. When using a switching power supply, be sure to ground the FG (frame ground) terminal.

NPN Output Type



PNP Output Type



6 Adjustment

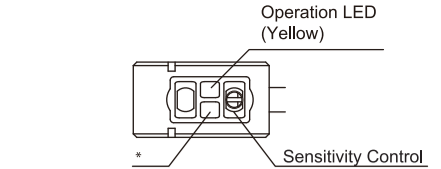
Optical Axis Alignment (For Light ON)

Install the reflector perpendicularly to the optical axis. Move the SA1E photoelectric switch up, down, right and left to find the range where the operation LED turns on.

Sensitivity Adjustment (For Light ON)

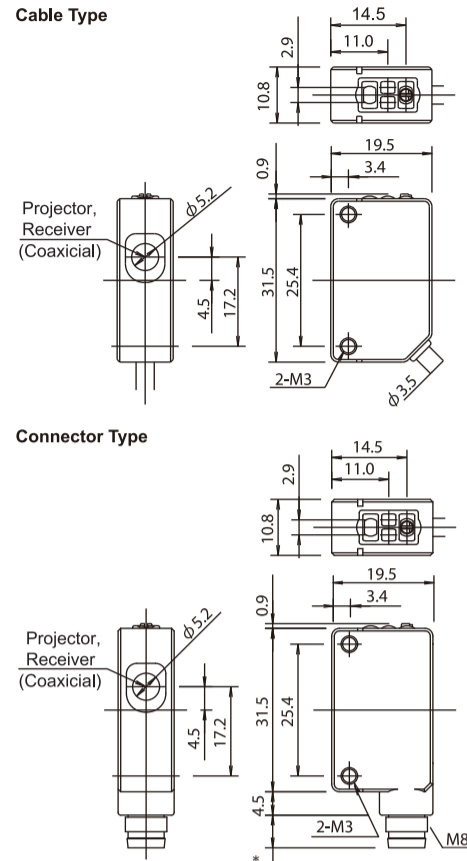
- Sensitivity is set to the maximum at the factory before shipment. Referring to the table below, adjust the sensitivity. The table explains the status of operation LED when the operation mode is set to light ON.

Table with 4 columns: Step, Photoelectric Switch Status, Sensitivity Control, Adjusting Procedure. Includes diagrams for Receiving light, Light is interrupted, and determining point C.



*: Stable LED is not provided on this product.

7 Dimensions (All dimensions in mm)



*: The connector length is 18 mm when a connector cable of right angle type (SA9Z-CM8K-4L□) is attached.

IDEC CORPORATION

Manufacturer: IDEC CORPORATION 2-6-64, Nishimiyahara, Yodogawa-ku, Osaka 532-0004, Japan. EU Authorized Representative: APEM SAS. UK Authorized Representative: APEM COMPONENTS LIMITED.

取扱説明書

アンプ内蔵光電センサ SA1Eシリーズ (透明体検出形)

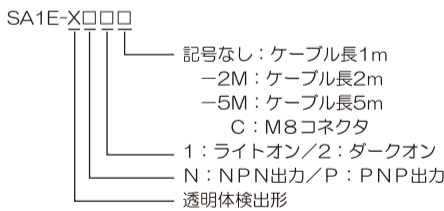
この度は、IDEC製品をお買い上げいただき、ありがとうございます。ご注文の製品に間違いがないかご確認のうえ、この取扱説明書の内容をよくお読みいただき、正しくご使用ください。

安全上のご注意

注意

上記の表示は、取扱いを誤った場合、人が傷害を負うか物的損害が発生する可能性があることを表しています。

1 形番構成

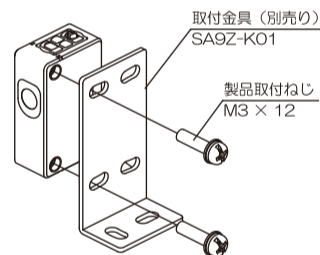


2 一般仕様

Table with 2 columns: Specification Name and Value. Includes Detection Method (Coaxial Retro-Reflection), Power Voltage (DC12~24V), Current Consumption (20 mA), Detection Range (2m), Control Output (NPN/PNP Open Collector Output), Protection Circuit (Reverse polarity protection), Ambient Temperature (Operating: -25~+55°C), Ambient Humidity (Operating: 35~85%RH), Degree of protection (IP67), Material (Case: PBT, Lens: PMMA), Cable (φ3.5mm, 3-core, 0.2mm²).

3 取付け

- 製品取付けねじの締め付けトルクは0.4~0.5N・mとしてください。製品取付け時に、取付けねじを過度に締め付けたり、製品をハンマ



4 使用上のご注意

- リフレクタは、別売りの専用タイプ(IAC-R9,R10,R11)をご使用下さい。電源リセット時間は200ms以下ですので、電源投入後200ms経過してからご使用ください。

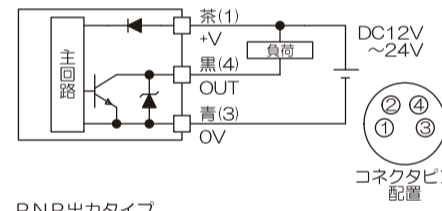
注意

- 交流電源を印加しないでください。破裂や焼損の恐れがあります。

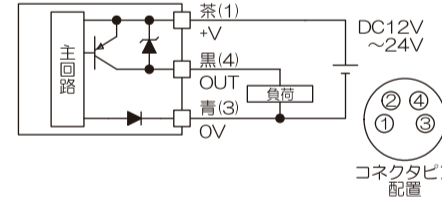
5 配線

- 配線作業は、必ず電源を切った状態で行ってください。誤配線は内部回路の破損の原因となりますので入出力回路接続例を参考にして配線してください。

NPN出カタイプ



PNP出カタイプ



6 調整

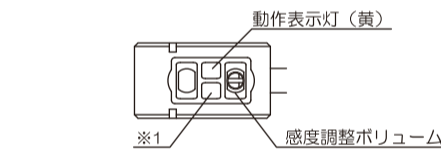
□光軸調整 (ライトON動作の場合)

リフレクタを光軸に垂直な面に固定し、光電スイッチの後方からリフレクタを見て、投光の赤色スポット光がリフレクタの中央位置になるように設置してください。

□感度調整手順 (ライトON動作の場合)

製品出荷時の感度調整ボリュームは、Max.に設定されていますので、下表の手順で調整を行ってください。

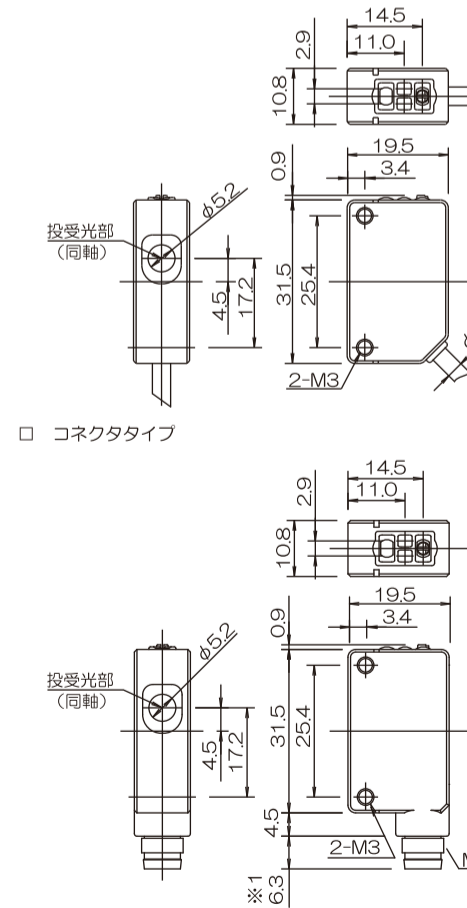
Table with 4 columns: Order, Output Status, Sensitivity Control, Adjustment Procedure. Includes diagrams for Light ON, Light OFF, and determining point C.



*1 本品には、安定表示灯はついていません。

7 各部の名称・寸法

□ ケーブルタイプ



*1 ライトアングルタイプのコネクタケーブル (SA9Z-CM8K-4L□) を取り付けると、コネクタの高さは18mmとなります。

IDEC 株式会社

本社 〒532-0004 大阪市淀川区西宮原2-6-64 TEL.06-6398-2500

取扱説明書でご不明な点が御座いましたら、下記の技術問い合わせ窓口へお問い合わせ下さい。お問い合わせ時間：9:00~12:00/13:00~17:00 (土・日曜日、祝日および弊社休日を除く)

【技術問い合わせ窓口】 0120-992-336 ■携帯電話・PHSの場合は050-8882-5843