

S2Z SERIES

The new **S2Z** Maxi series offers 4 models, with basic optic functions:

- **through beam**
- **polarized retroreflex**
- **diffuse proximity**
- **background suppression**

Versions with **continuous** and free-voltage **Vac.** Adjustable **timing versions** are also available.

SPDT relay and bipolar transistor NPN/PNP open collector outputs are also offered.

Terminal block connection simplifies and speeds-up installation. The **heavy-duty plastic housing** guarantees excellent resistance in the most severe working conditions.



HIGHLIGHTS

- IP67 mechanical protection
- Timing versions
- Terminal block connection
- Versions with continuous and multi-voltage power supply
- Anti-interference system
- Shock-resistant housing ideal for severe working conditions

APPLICATIONS

Conveyors



Automatic warehouses



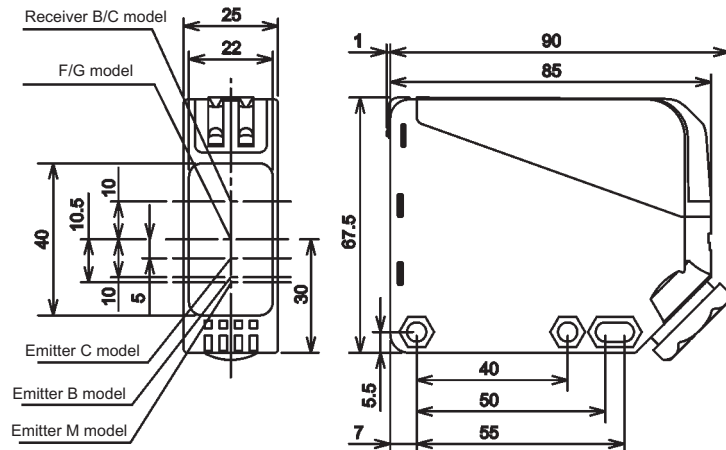
Automotive industry



SETTING

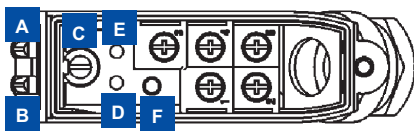
The **M model** presents a **multi-turn adjustment screw** for the adjustment of the background suppression distance through a mechanical variation of the optic triangulation angle. The **other models have a mono-turn electronic trimmer** that adjusts the sensitivity and the sensor operating distance. The operating distance increases, rotating the screws in a clockwise direction. The **output activation and deactivation delay time can be adjusted by a trimmer** that can vary from 0.1 to 5 sec. and the sensor functioning mode can be selected thanks to a **ten-position selector**.

DIMENSIONS



mm

INDICATORS

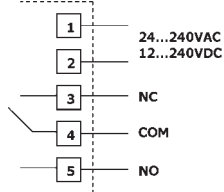


- A** OUTPUT LED (yellow)
- B** STABILITY LED (green)
- C** Adjustment screw (only M model)
- D** Sensitivity trimmer (B/C/F/G model)
- E** Timing control
- F** Operating mode selector

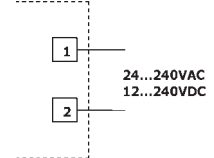
CONNECTIONS

MULTI-VOLTAGE MODELS

S2Z...B/C/F/M

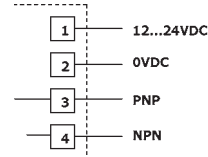


S2Z...G

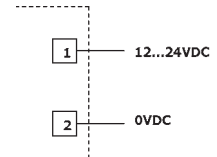


CONTINUOUS MODELS

S2Z...B/C/F/M



S2Z...G



TECHNICAL DATA

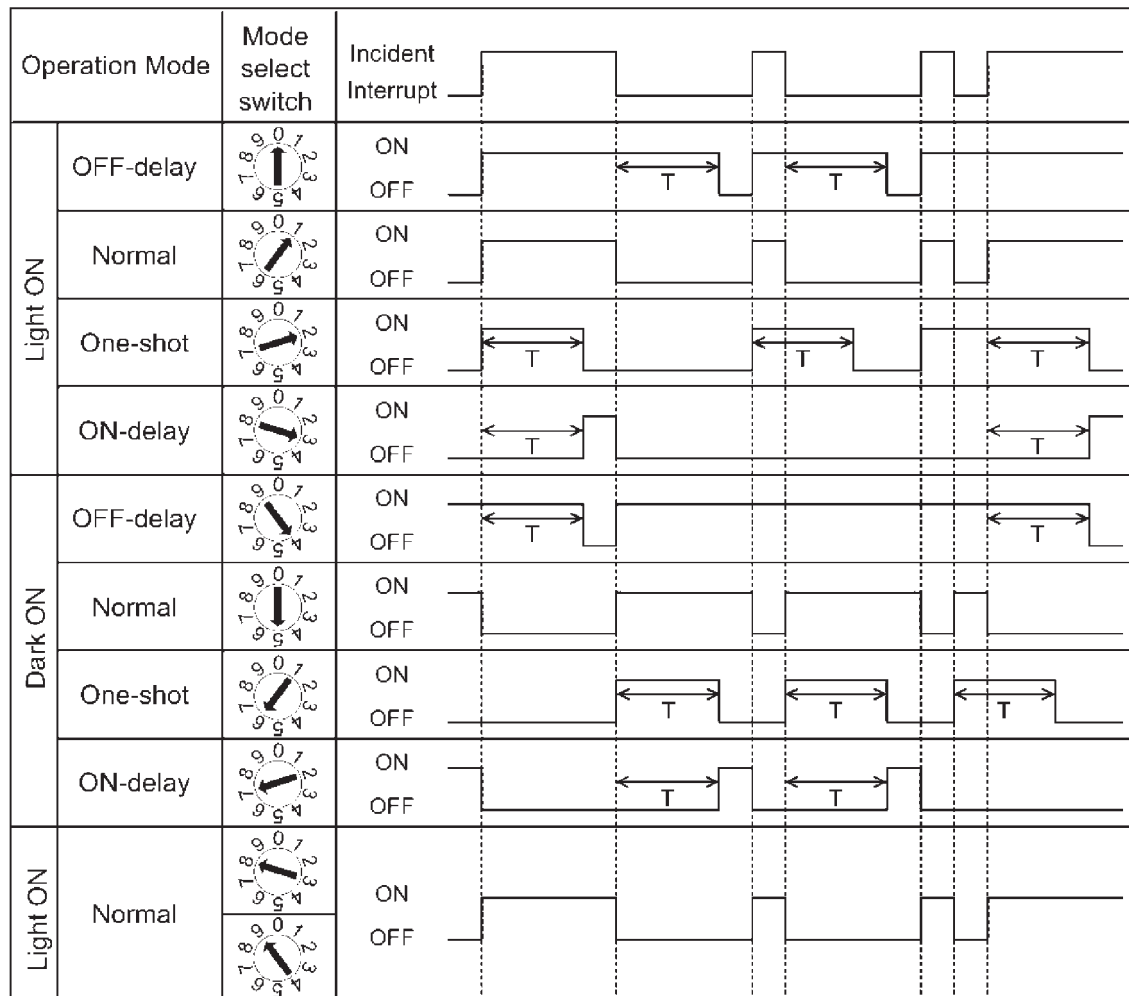
| COMMON SPECIFICATIONS | S2Z-F/G | S2Z-B | S2Z-C | S2Z-M |
|--|---|-----------|--------|--------------------------------------|
| Emission type: | IR LED | red LED | IR LED | |
| Operating distances (typical values): | 50m | 0.2...7m | 1m | 0.2...2m |
| Setting: | Mono-turn sensitivity trimmer | | | Multi-turn distance adjustment screw |
| White/Black difference (90% / 4%) | | | | < 35% |
| Hysteresis on 90% white: | | | | ≤ 20% |
| Indicators: | OUTPUT LED (yellow) STABILITY LED (green) | | | OUTPUT LED (yellow) |
| Operating temperature: | -25...50°C | | | |
| Storage temperature: | -40...70°C | | | |
| Dielectric strength: | 500Vac 1 min between electronics and housing | | | |
| Insulating resistance: | >20MΩ 500 Vdc between electronics and housing | | | |
| Ambient light rejection: | according to EN 60947-5-2 | | | |
| Vibrations: | 0.5mm width, 10 ... 55Hz frequency, for each axis (EN60068-2-6) | | | |
| Shock resistance: | 11ms (30G) 6 shocks for each axis (EN60068-2-27) | | | |
| Housing material: | PBT | | | |
| Lens material: | PC/PET | PMMA | PC/PET | PMMA/PC |
| Mechanical protection: | IP67 (IEC / EN60529) / NEMA TYPE 1 (For UL / c-UL) | | | |
| Connections: | Terminal block (recommended cable diameter between 8 and 10 mm) | | | |
| MULTI-VOLTAGE MODELS | S2Z-F/G | S2Z-B | S2Z-C | S2Z-M |
| Power supply: | 24...240Vac / 12...240Vdc | | | |
| Ripple: | 10% max | | | |
| Consumption (output current excluded): | 3VA max (G model) | 3VA max | | |
| | 3VA max (F model) | | | |
| Outputs: | SPDT electromagnetic relay: 250Vac, 30Vdc | | | |
| Output current: | 3A (resistance load) | | | |
| Response time: | 20ms max | | | |
| Switching frequency: | 25Hz | | | |
| Weight: | 115g (G mod) 130g (F mod) | | 130g | |
| CONTINUOUS MODELS | S2Z-F/G | S2Z-B | S2Z-C | S2Z-M |
| Power supply: | 12...24Vdc | | | |
| Ripple: | 10% max | | | |
| Consumption (output current excluded): | 20mA max (G model) | 30mA max. | | |
| | 25mA max (F model) | | | |
| Outputs: | PNP and NPN open collector | | | |
| Output current: | 100 mA (resistance load) | | | |
| Output saturation voltage: | 2.4V max | | | |
| Response time: | 1ms max | | | |
| Switching frequency: | 500Hz | | | |
| Weight: | 105g (G mod) 110g (F mod) | | 110g | |



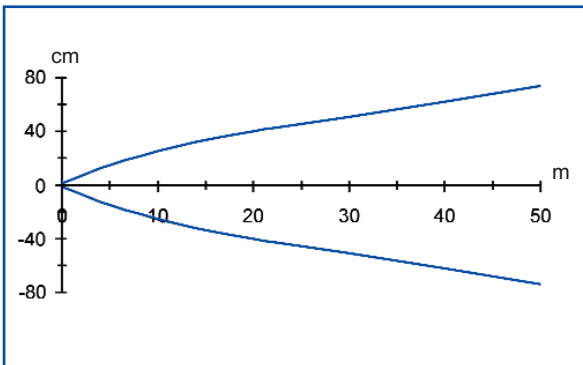
TIMING FUNCTION DIAGRAM

Four selectable timing functions: one shot, ON delay, OFF delay and normal mode. The functions can be **adjusted**, using a **trimmer**, from 0.1 to 5 seconds.

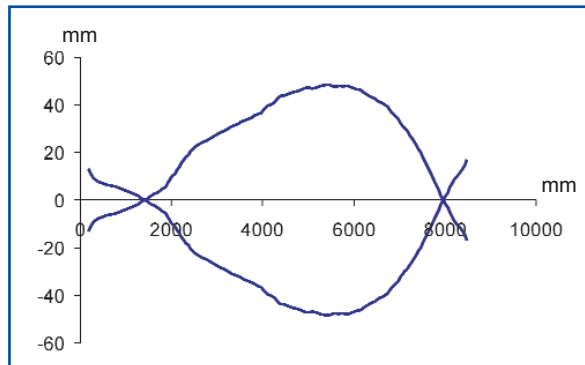
The timing functions can be particularly useful in applications where the output signal pulse has to be modified.



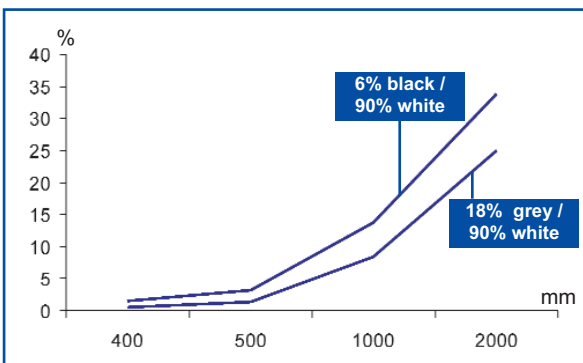
DETECTION DIAGRAMS



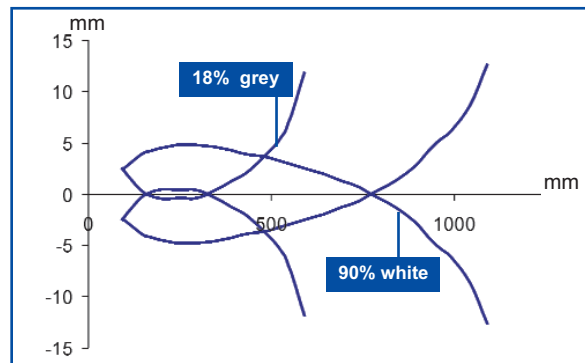
Through beam



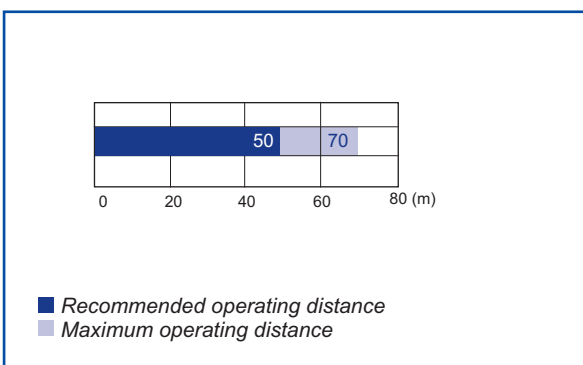
Polarized retroreflex on R2 reflector



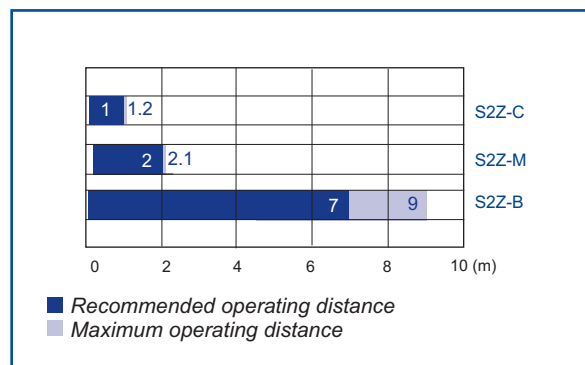
Background suppression



Diffuse proximity



Through beam



Other models

MODEL SELECTION AND ORDER INFORMATION

| MODEL | POWER SUPPLY | DELAY | OUTPUT | N° ORDER |
|------------------|--------------|-------|--------------------|-----------|
| S2Z-PA-1-B01-RX | Vac/Vdc | | Relay | 95B051000 |
| S2Z-PA-1-B06-RX | Vac/Vdc | • | Relay | 95B051010 |
| S2Z-PA-5-B01-OX | Vdc | | PNP/NPN transistor | 95B051020 |
| S2Z-PA-5-B06-OX | Vdc | • | PNP/NPN transistor | 95B051030 |
| S2Z-PA-1-M01-RX | Vac/Vdc | | Relay | 95B051040 |
| S2Z-PA-1-M06-RX | Vac/Vdc | • | Relay | 95B051050 |
| S2Z-PA-5-M01-OX | Vdc | | PNP/NPN transistor | 95B051060 |
| S2Z-PA-5-M06-OX | Vdc | • | PNP/NPN transistor | 95B051070 |
| S2Z-PA-1-C01-RX | Vac/Vdc | | Relay | 95B051080 |
| S2Z-PA-1-C06-RX | Vac/Vdc | • | Relay | 95B051090 |
| S2Z-PA-5-C01-OX | Vdc | | PNP/NPN transistor | 95B051100 |
| S2Z-PA-5-C06-OX | Vdc | • | PNP/NPN transistor | 95B051110 |
| S2Z-PA-1-FG01-RX | Vac/Vdc | | Relay | 95B051130 |
| S2Z-PA-1-FG06-R | Vac/Vdc | • | Relay | 95B051140 |
| S2Z-PA-5-FG01-OX | Vdc | | PNP/NPN transistor | 95B051160 |
| S2Z-PA-5-FG06-OX | Vdc | • | PNP/NPN transistor | 95B051170 |



The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.