⊙DATALOGIC™

S8-PR…T53
Polarised retroreflex for transparents with threshold auto-adjustment

INSTRUCTION MANUAL

CONTROLS

OUTPUT LED (yellow)
The yellow LED indicates the output status.

READY LED (green)
The green LED ON indicates normal functioning.

SET PUSH-BUTTON
The acquisition procedure is activated by pressing the SET push-button.
The control obtained with the SET push-button can be made externally with the REMOTE input.

LIGHT/DARK TRIMMER
The light/dark mode is selected by a monoturn trimmer.

Please refer to "SETTING" paragraph for the correct use procedures.

WARNING: the maximum mechanical rotation range of the trimmer is 240°.Do not force over of the maximum and minimum positions.

INSTALLATION

The sensor can be positioned by means of the two housing holes using two screws (M3x18 or longer, 0.8Nm maximum tightening torque) with washers.
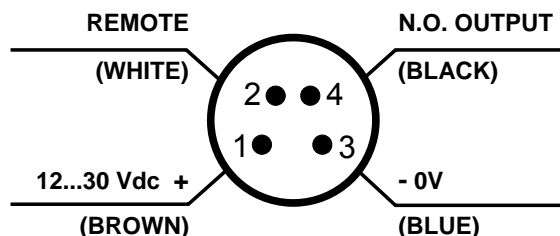Various orientable fixing brackets to ease the sensor positioning are available (please refer to the accessories listed in the general catalogue).
The operating distance is measured from the front surface of the sensor optics.

CONNECTIONS

M8 connector

REMOTE (WHITE) — 2
N.O. OUTPUT (BLACK) — 4
12...30 Vdc + (BROWN) — 1
- 0V (BLUE) — 3

TECHNICAL DATA

Power supply:	12 … 30 Vdc
Ripple:	2 Vpp max.
Consumption (output current excluded):	30 mA max
Outputs / Alarm output:	PNP or NPN N.O.; pull up/down resistance = 47 KΩ; 30 Vdc max. *(short-circuit protection)*
Output current:	100 mA (overload protection)
Output saturation voltage:	≤ 2 V
Response time:	250 us
Switching frequency:	2 KHz
Emission type:	RED (660 nm)
Operating distance (typical values):	2 m (EG2) on R2 reflector
Regulations	SET push-button
LIGHT/DARK selection:	Monoturn trimmer
Indicators:	OUTPUT LED (yellow) / READY LED (green)
Operating temperature:	-10 … 55 °C
Storage temperature:	-20 … 70 °C
Dielectric strength:	▢: 1500 Vac 1 min. between electronics and housing
Insulating resistance:	>20 MΩ 500 Vdc between electronics and housing
Ambient light rejection:	according to EN 60947-5-2
Vibrations:	0.5 mm amplitude, 10 … 55 Hz frequency, for each axis (EN60068-2-6)
Shock resistance:	11 ms (30 G) 6 shocks for each axis (EN60068-2-27)
Housing material:	ABS
Lens material:	Window in glass; lens in PC
Mechanical protection:	IP67
Connections:	M8 4-pole connector
Weight:	12 g. max. connector version / 50 g. pig-tail version

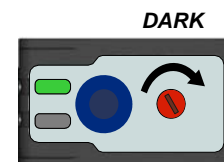## SETTINGS

LIGHT/DARK MODE SETTING

Light mode setting
Rotate trimmer in an anti-clockwise direction to set the LIGHT mode (output ON with the reflector).

LIGHT
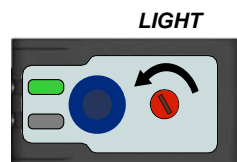
Dark mode setting
Rotate trimmer in a clockwise direction to set the DARK mode (output ON in presence of the object).

DARK

SENSITIVITY ADJUSTMENT

Alignment and sensitivity adjustment
- Position and align the sensor and the reflector on opposite side at the desired distance.
- Move the sensor vertically and horizontally to determine the powering on and powering off points of the yellow LED (OUT) and fix the sensor in the middle of these two points.
- Press SET push-button until the green READY LED turns off. The sensor adjusts the sensitivity. If the READY LED turns permanently ON the acquisition was successful. If the LED blinks the acquisition failed due to insufficient contrast. Press SET and the sensor returns to the previous setting. Verify alignment between sensor and reflector and the operative distance before repeating the procedure from the beginning. If the signal that returns from the reflector is too high (saturated), the sensor sets the sensitivity to minimum and functions normally, however signalling this condition by the READY LED blinking slowly. In this case the sensor may not detect some transparent objects. You can press SET for 1s to make the READY LED stop blinking.

Control:
- Enter object laterally in the detection area and check that the yellow LED turns ON (in dark mode).
- Remove object and check that the yellow LED turns OFF immediately (in dark mode).
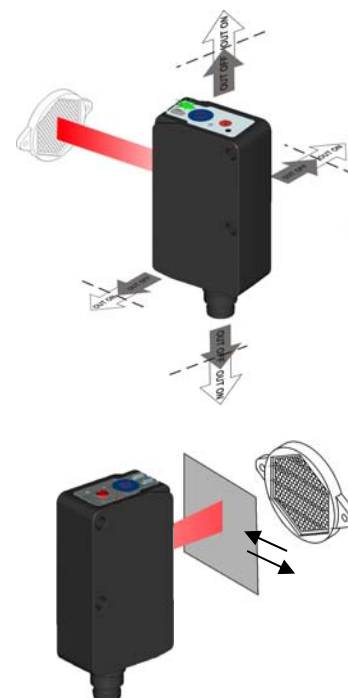
KEYLOCK FUNCTION (keyboard lock)

The KEYLOCK function (keyboard lock) allows to deactivate the keyboard avoiding accidental changes in the sensor setting.
If at sensor powering the REMOTE wire is connected to +Vdc for at least 1 s., the *keyboard lock* function is activated and the push-buttons are no longer active.
To deactivate the *keyboard lock*, the sensor must be turned off and repowered with the REMOTE wire not connected or connected to GND.

THRESHOLD AUTO-ADJUSTMENT FUNCTION

The sensor provides threshold auto-adjustment function. If the received signal decreases/ increases due to dirty optical lens or reflector, or for cleaning, the sensor automatically adjusts the commutation threshold to avoid continuous cleaning of optical parts (after 1 minute of low/high signal). If the received signal is too low to be adjusted by the sensor the output turns on and it is necessary to clean the optical parts.
At sensor powering, if the received signal is a lot higher than the switching threshold (e.g. after reflector cleaning), the sensor after 1s automatically adjusts the switching threshold.
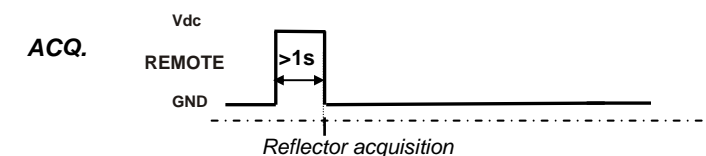
DIMENSIONS

mm
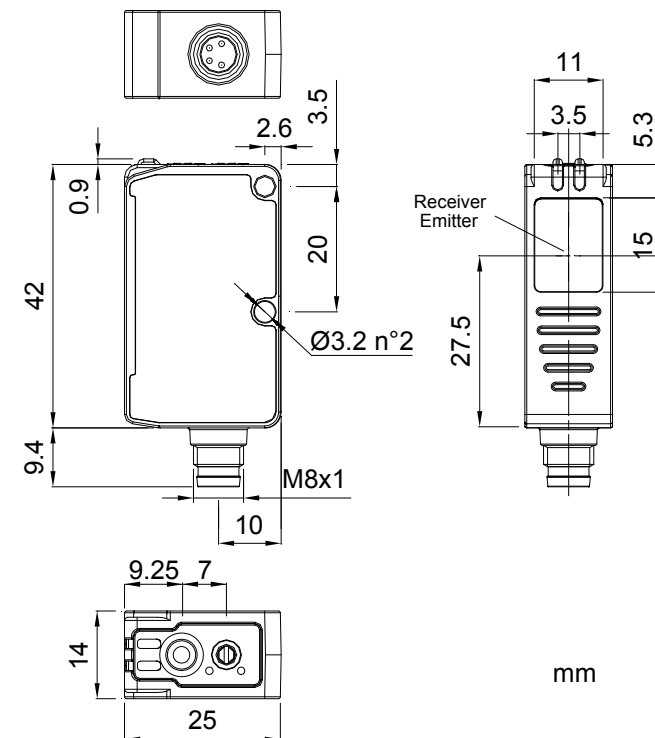
OTHER FUNCTIONS

REMOTE input

The REMOTE signal carries-out acquisition functions without using the SET push-button.
The REMOTE wire connected to +Vdc is equal to pressing the SET pus-button, connected to GND or not connected is equal to not pressing the SET push-button.

ACQ.

Reflector acquisition