



S8-PR/MR...U

Luminescence sensor

INSTRUCTION MANUAL

CONTROLS

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

READY LED (green)
The green LED ON indicates the powering status.

SET PUSH-BUTTON
A long pressure on the push-button activates the teach procedure. The REMOTE input allows the external control of the SET push-button.

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

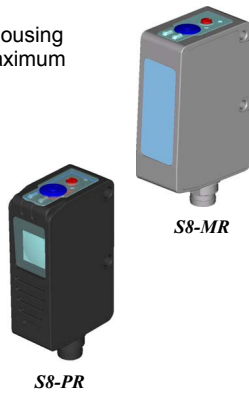
Please refer to the "SETTING" paragraph to get the correct setting procedure.
WARNING: the maximum mechanical rotation range of the trimmer is 240°. Do not force over of the maximum and minimum positions.

INSTALLATION

S8-PR:
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.

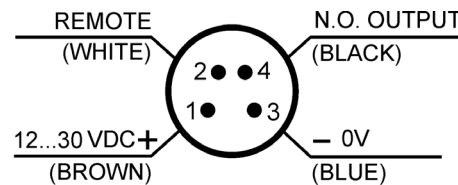
S8-MR:
The sensor can be positioned by means of the two threaded holes using two screws (M3x14 or longer, 0.8Nm maximum tightening torque) with washers.

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.

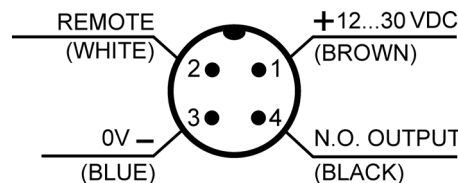


CONNECTIONS

M8 connector



Pig-tail with M12 connector



TECHNICAL DATA

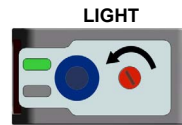
	S8-PR...U	S8-MR...U
Power supply:	12 ... 30 VDC Class 2 (Type 1 for S8-MR) UL508	
Ripple:	2 Vpp max.	
Current consumption (output current excluded):	30 mA max	
Outputs:	PNP or NPN N.O.; 30 VDC max. (short-circuit protection) Pull-down/up resistance = 47 KΩ	
Output current:	100 mA (overload protection)	
Output saturation voltage:	≤ 2 V	
Response time:	250 μs / 1 ms	
Switching frequency:	500Hz / 2 kHz (according to sensitivity)	
Emission type:	LED UV (375 nm)	
Spot dimension:	Ø 2 mm a 15 mm	
Operating distance (typical values):	10...30 mm	
LIGHT/DARK selection:	Mono-turn 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)	
Housing material:	ABS (S8-PR) / INOX AISI 316L (S8-MR)	
Lens material:	Window in glass; lens in PC (S8-PR) / window in PMMA (S8-MR)	
Mechanical protection:	IP67 (S8-PR) / IP67, IP69K (S8-MR)	
Connections:	M8 4-pole connector / 150 mm Ø 4 mm cable with M12 4-pole connector (S8-PR pig-tail vers.)	
Weight:	12 g. max. (S8-PR connector vers.) / 50 g. max. pig-tail (S8-PR pig-tail vers.) 70 g. max (S8-MR connector vers.)	
AtEx 2014/34/EU:	II 3G EX nA II T6 ; II 3D EX tD A22 IP67 T85°C	

SETTINGS

LIGHT/DARK MODE SETTING

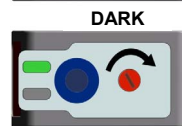
LIGHT mode setting

Rotate trimmer in an anti-clockwise direction to set the LIGHT mode (output ON on fluorescent mark).



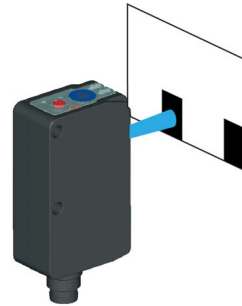
DARK mode setting

Rotate trimmer in a clockwise direction to set the DARK mode (output ON on background).



EASY TOUCH ACQUISITION

Place mark in front of the sensor spot and press SET until the green READY LED turns off. If the READY LED turns permanently ON the acquisition was successful. If the LED blinks slowly the acquisition failed due to insufficient signal.



Press SET and the sensor returns to the previous setting. If the Easy Touch acquisition fails due to insufficient signal, try using Mark-Background procedure described below.

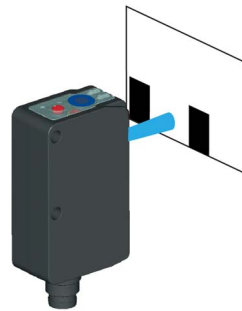
MARK-BACKGROUND ACQUISITION

Mark acquisition

Place mark in front of the sensor spot and press SET until the green READY LED turns on again (3 sec).

Background acquisition

Place background in front of the sensor spot and press SET again. If the READY LED turns permanently ON the acquisition was successful. If the LED blinks slowly the acquisition failed due to insufficient contrast. Press SET and the sensor returns to the previous setting.



During detection if the luminescence is very low, the sensor increase his sensitivity with a frequency of 500Hz (LED READY green blinks two times at the end of teach procedure).

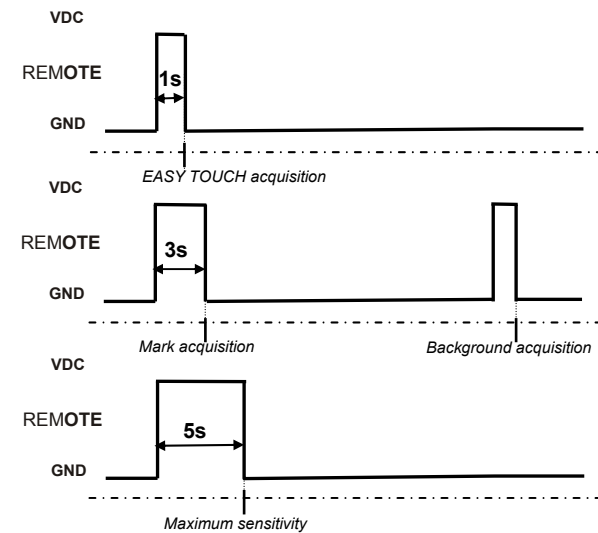
OTHER FUNCTIONS

MAXIMUM SENSITIVITY WITH MAXIMUM FREQUENCY SETTING

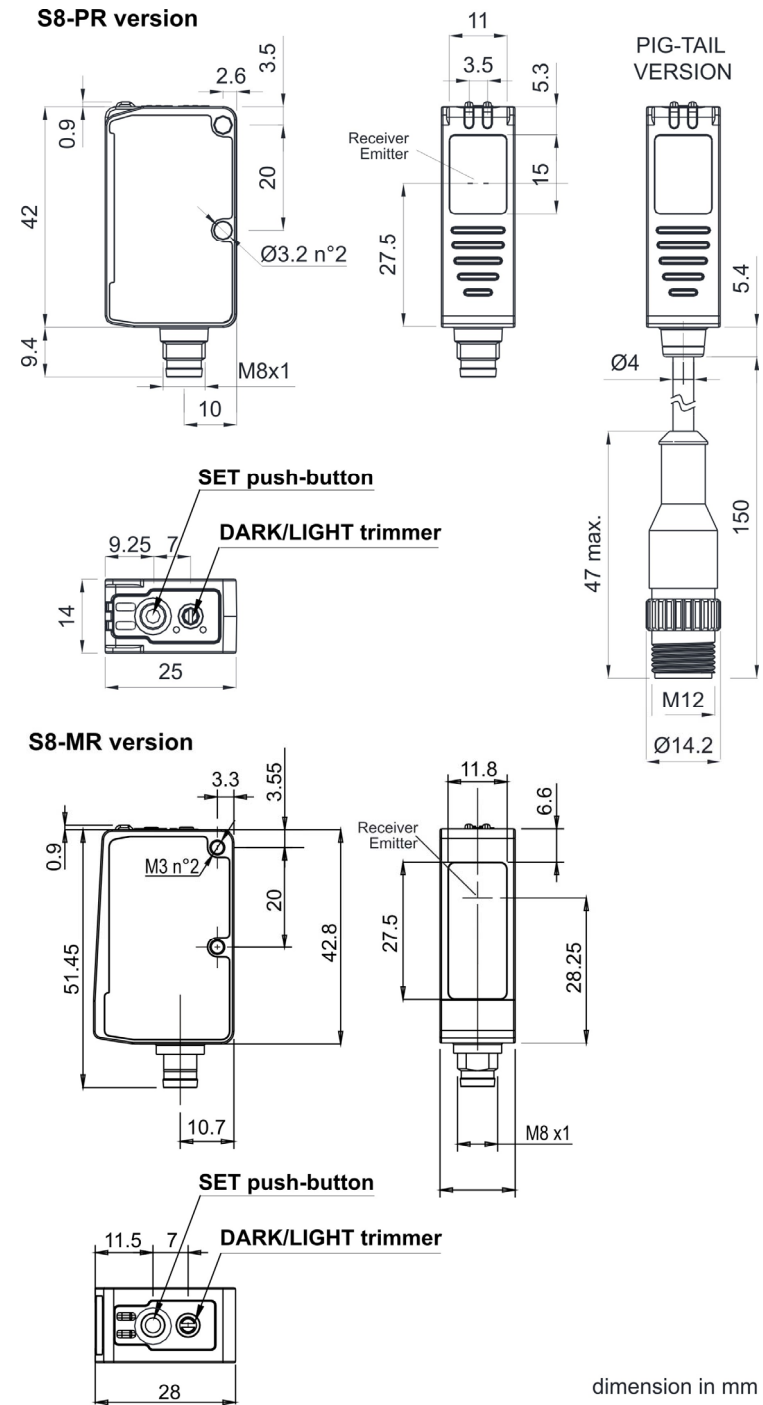
To set maximum sensitivity with maximum frequency, press SET push-button for 5 sec. with LED READY green turns off again.

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 push-button, connected to GND or not connected is equal to not pressing the SET push-button.



DIMENSIONS



The sensors are NOT safety devices, and so MUST NOT be used in the safety control of the machines where installed.

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Helpful links at www.datalogic.com: [Contact Us](#), [Terms and Conditions](#), [Support](#).

The warranty period for this product is 36 months. See General Terms and Conditions of Sales for further details.

Under current Italian and European laws, Datalogic is not obliged to take care of product disposal at the end of its life. Datalogic recommends disposing of the product in compliance with local laws or contacting authorised waste collection centres.

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