DATALOGIC

S300-PR…F-ST2/ST4
Receiver

S300-PR…G-ST2/ST4
Emitter

ISTRUCTION MANUAL

INSTRUCTIONS FOR USE

⚠️ The emitter/receiver safety sensors are homologated only to be connected to the SG-BWS-T4 safety control units.

Different use is potentially dangerous and not allowed, please take care to follow the instructions of manual Series SG-BWS-T4.

For the connection modalities, please refer to the SG-BWS-T4 instruction manual.

CONTROLS

STABILITY LED
POWER ON LED
OUTPUT LED
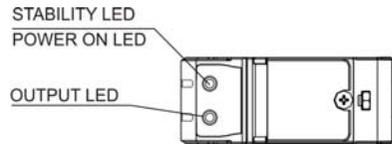
OUTPUT LED (yellow) (S300…F)
The yellow LED ON indicates the output status.
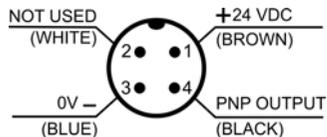
STABILITY LED (green) (S300…F)
The green LED ON indicates that the sensor has working with a enough safety margin.
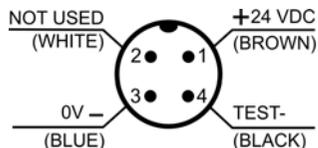
POWER ON LED (S300…G)
The green LED indicates that the sensor is operating.

CONNECTIONS

S300…F

NOT USED (WHITE) 2 — 1 +24 VDC (BROWN)
0V (BLUE) 3 — 4 PNP OUTPUT (BLACK)

S300…G

NOT USED (WHITE) 2 — 1 +24 VDC (BROWN)
0V (BLUE) 3 — 4 TEST- (BLACK)

TECHNICAL DATA

DC MODELS	S300…2/5-G/F-ST2/ST4
Power supply:	24 VDC ±15% Class 2 (UL508)
Ripple:	10 % max
Current consumption (output current excluded):	S300…F: <25mA S300…G: < 20 mA
Outputs:	PNP NC open collector
Output current:	100 mA (resistive load)
Output saturation voltage:	2.4 V max
Diagnostic functions	Test- iput
Response time:	1 ms
Switching frequency:	500 Hz
Weight:	140 g

Common data

	S300…G	S300…F
Emission type:	INFRARED LED (880nm)	-
Operating distance (typical value):	S300…ST2: 0..50m S300…ST4: 0..40m	
EAA:	S300…ST2: ± 5° / S300…ST4: ±2.5°	
Indicators:	POWER ON LED (GREEN)	OUTPUT LED (YELLOW), STABILITY LED (GREEN)
Operating temperature:	-40…55 °C	
Storage temperature:	-40…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:	EN 60947-5-2	
Vibration:	0.5 mm amplitude, 10 … 55 Hz frequency, for every axis (EN60068-2-6)	
Shock resistance:	11 ms (30 G) 6 shock for every axis (EN60068-2-27)	
Housing:	PBT 30% Glass fiber-reiforced	
Lenses:	frontal window and lens in PC	
Protection class:	IP67 (IEC / EN60529) / cable gland EN50262	
UL requirements:	Class 2 power supply; 60-70°C copper conductor 24-20 AWG; Type 1 Enclosure	
Connections:	see the "CONNECTIONS" paragraph	
AtEx 2014/34/EU:	II 3G EX nA II T6 ; II 3D EX tD A22 IP67 T85°C	

INSTALLATION

Terminal block
Terminal block cover screw
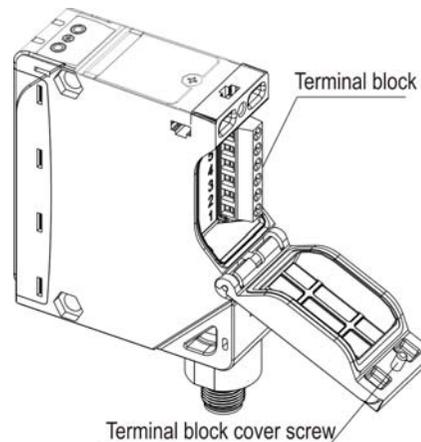
The sensor can be positioned by means of the two housing holes using two screws (M5x35 or longer, 1.2Nm maximum tightening torque).

The sensor bottom surface has been provided of two mechanical threaded insert M5x5,5. These metal insert are commercial components.

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.

Tighten all screws surely to maintain the water-proof characteristics for IP67 (IEC/EN60529).

Excessive tightening causes damage. Tighten the screws within the tightening torque range shown in the table.

TIGHTENING TORQUE (Nm)	
Terminal screws(6pc)	**0.5 max**
Covers screws	**0.5…0.8**

DIMENSIONS

Dimensions in mm
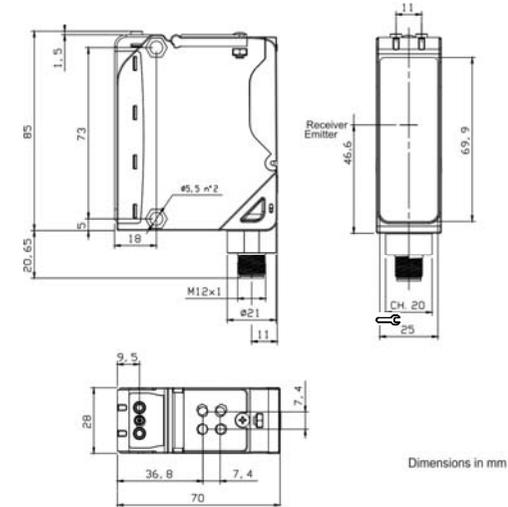
SETTING

Sensitivity setting (S300..F and S300…G)
Position the sensors on opposite sides. Find the points where the yellow LED (OUT) is switched ON and OFF in both vertical and horizontal positions, and fix the sensor in the centre between these points. Optimum operation is obtained when both LEDs switch ON.

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