

DISTANCE SENSORS

S80

Time Of Flight measurement LASER distance sensor

- Class 2 visible red LASER emission
- Direct proximity measurement from 4 m to 7 m
- 20 m to 100 m retroflex measurement
- High precision and measurement speed
- PNP or NPN, 4-20 mA analog output and RS 485 serial interface

APPLICATIONS

- Automated warehousing
- Trans-elevator and crane positioning
- Automotive assembling lines
- Non-LFT measurement in logistics



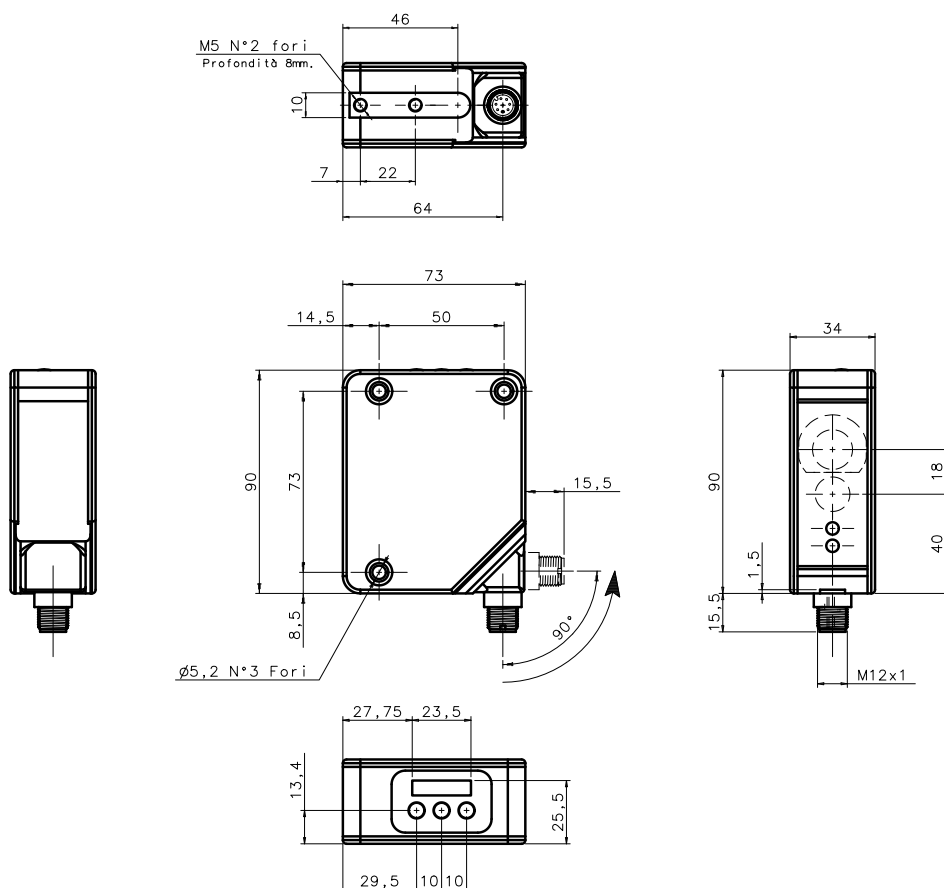
S80		
Direct measurement range ¹ :		0,3...4 m (S80-Y0) 0,3...7 m (S80-YL0)
Retroreflex measurement range ² :		0,3...20,3 m (S80-Y1) 0,3...100,3 m (S80-Y2)
Repeatability		< 5mm (S80-Y0)
		7 mm @7m (S80-YL0)
		10 mm @20m (S80-Y1)
		10 mm @100m (S80-Y2)
Switching frequency		100 Hz (Normal), 500 Hz(Fast)
Light emission		red LASER (class 2)
Response time		5 ms (Normal), 1 ms(Fast)
Serial interface		RS485
Setting		Teach-in
Power supply	Vdc	15...30 V
	Vac	
	Vac/dc	
	PNP	▪
	NPN	▪
	NPN/PNP	
Output	relay	
	other	4...20 mA Analog output , RS485 serial interface
Connection	cable	
	connector	▪
	pig-tail	
Approximate dimensions (mm)		34x90x73
Housing material		aluminum
Mechanical protection		IP67

¹On target 90% white to 18% grey

²On reflector R80

TECHNICAL DATA	
Power supply	15 ... 30 Vdc (limit values)
Ripple	2 Vpp max.
Consumption (output current excluded)	130 mA max. (110 mA at 24 V) (mod. S80...Y19/Y29) 170 mA max. (110 mA at 24 V) (mod. S80...Y09/YL09)
Light emission	red Laser 658 nm
Setting	SET push-buttons +/- push-buttons
Indicators	command panel: yellow OUTPUT LED green 4-digit display, 2 OUT1, OUT2 LEDs green FAST LED (mod. S80...Y09/Y19/Y29) indicators LED: yellow OUTPUT LED red ALARM LED
Output	2 PNP or NPN; analog output with 4-20 mA; RS485 serial interface
Output current	100 mA max.
Saturation voltage	2 V max.
Response time	5 ms (norm) and 1 ms (fast) (mod. S80...Y09/Y19/Y29) 6 ms (mod. S80...YL09)
Switching frequency	100 Hz (norm) and 500 Hz (fast) (mod. S80...Y09/Y19/Y29) 85 Hz (mod. S80...YL09)
Connection	M12 8-pole connector
Dielectric strength	500 Vac, 1 min between electronics and housing
Insulating resistance	>20 MΩ, 500 Vdc between electronics and housing
Electrical protection	class 2
Mechanical protection	IP67
Ambient light rejection	according to EN 60947-5-2
Vibrations	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 material	aluminium
Lens material	window and lenses in glass
Operating temperature	-10 ... 50 °C
Storage temperature	-20 ... 70 °C
Weight	330 g max.

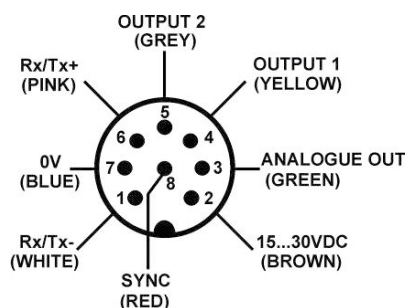
DIMENSIONS



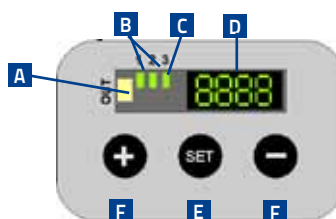
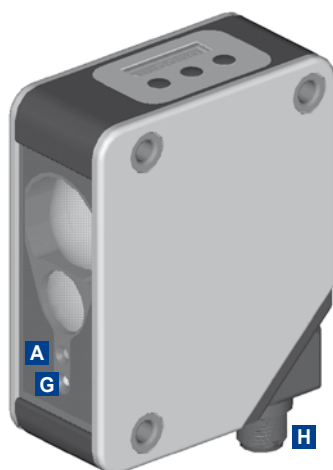
DISTANCE SENSORS

CONNECTIONS

M12 CONNECTOR

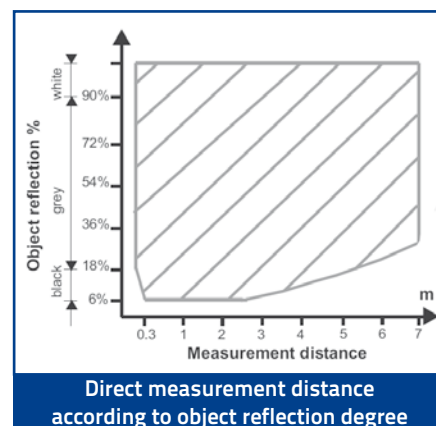
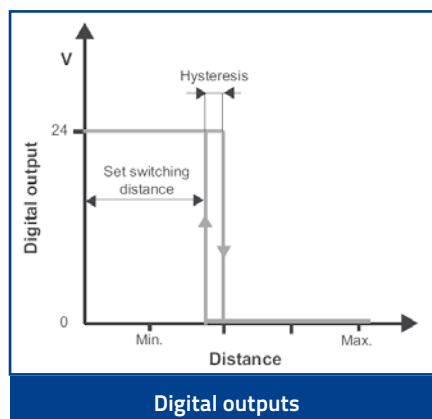
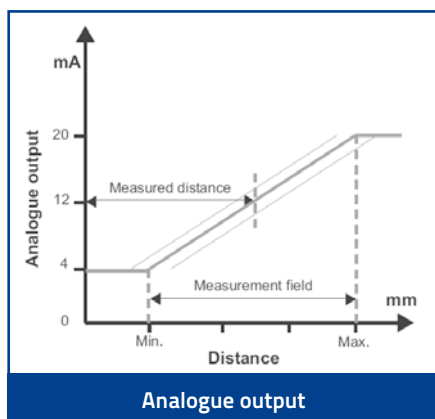


INDICATORS AND SETTINGS



- A** Output 'OR' function LED
- B** Output status LED
- C** Response time LED
- D** 4-digit display
- E** SET push-button
- F** +/- selection push-buttons
- G** Alarm LED
- H** M12 connector output orientable on two positions

DETECTION DIAGRAMS



MODEL SELECTION AND ORDER INFORMATION

OPTIC FUNCTION	HOUSING	CONNECTION	OUTPUT	MODEL	ORDER No.
Distance sensor (4 m)	Aluminum	M12 Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-Y09-PPIZ	951501080
		M12 Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-Y09-NNIZ	951501010
Distance sensor (7 m)		M12 Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-YL09-PPIZ	951501060
		M12 Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-YL09-NNIZ	951501070
Distance sensor (20 m)		M12 Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-Y19-PPIZ	951501020
		M12 Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-Y19-NNIZ	951501030
Distance sensor (100 m)		M12 Connector	PNP, Analog 4...20 mA, RS485	S80-MH-5-Y29-PPIZ	951501040
		M12 Connector	NPN, Analog 4...20 mA, RS485	S80-MH-5-Y29-NNIZ	951501050

ACCESSORIES

MODEL	DESCRIPTION	ORDER No.
ST-5037	L-SHAPED mounting bracket	95ACC2260
R80*	S80 distance sensor reflector	95A151210

*Supplied with the sensor

CABLES

TYPE	DESCRIPTION	LENGTH	MODEL	ORDER No.
Axial M12 Connector	8-pole, black, P.V.C.	3 m	CS-A1-06-B-03	95ACC2230
		5 m	CS-A1-06-B-05	95ACC2240
		10 m	CS-A1-06-B-10	95ACC2250
Radial M12 Connector		3 m	CV-A2-26-B-03	95ACC1600
		5 m	CV-A2-26-B-05	95ACC1610
		10 m	CV-A2-26-B-10	95ACC1620
Axial M12 Connector	8-pole, shielded, black, P.V.C.	3 m	CV-A1-26-B-03	95ACC1510
		5 m	CV-A1-26-B-05	95ACC1520
		10 m	CV-A1-26-B-10	95ACC1530
		15 m	CV-A1-26-B-15	95ACC2080
		25 m	CV-A1-26-B-25	95ACC2100
	8-pole, U.L., black, P.V.C.	3 m	CS-A1-06-U-03	95ASE1220
		5 m	CS-A1-06-U-05	95ASE1230
		10 m	CS-A1-06-U-10	95ASE1240
		15 m	CS-A1-06-U-15	95ASE1250
		25 m	CS-A1-06-U-25	95ASE1260
		50 m	CS-A1-06-U-50	95A252710
	8-pole, black	Connector-not cabled	CS-A1-06-B-NC	95ACC2550