

# MINIATURE SENSORS

## S40

### High performance miniature European style photoelectric sensors

- High-performance models with Teach-in function
- Background suppression and LASER retroreflective models
- Polarized retroreflective for transparent objects
- 4-wire NO/NC output or Remote teach input



#### APPLICATIONS

- Processing and Packaging machinery
- Conveyor lines, material handling
- Automated warehousing



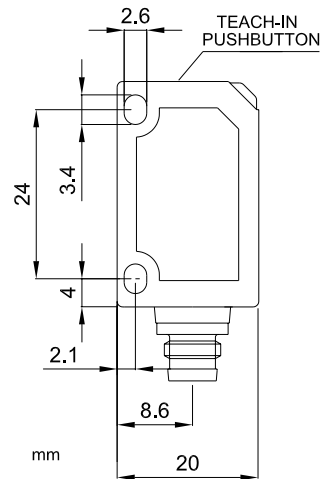
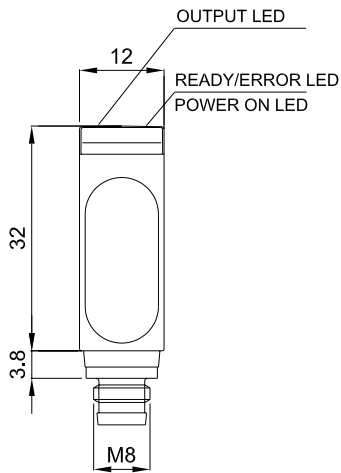
S40		
Polarized retroreflective		0,1...2,5 m
Retroreflective for transparent (on R2 reflector)		0,1...6 m (class 2 LASER)
Diffuse proximity		100...700 mm
Background suppression		5...300 mm
		40...150 mm (class 2 LASER)
		15...100 mm
		20...60 mm (class 2 LASER)
Power supply	Vdc	10...30 V
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/PNP	
	relay	
	other	
Connection	cable	▪
	connector	▪
	pig-tail	
Approximate dimensions (mm)		12x32x20
Housing material		ABS
Mechanical protection		IP67

TECHNICAL DATA

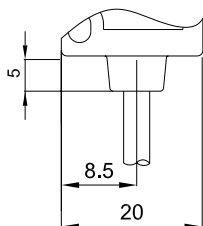
Power supply	10 ... 30 Vdc (reverse polarity protection)
Ripple	10% max.
Consumption (output current excluded)	35 mA max.
Light emission	red LED 660 nm, 640 nm (mod. S40...M03) red Laser 650 nm
Setting	teach-in push-button and remote by cable
Indicators	yellow OUTPUT LED green READY/ERROR LED
Output	NPN or PNP, 22 kΩ pull down/up resistance (short-circuit protection)
Output current	100 mA max.
Saturation voltage	2,4 V max.
Response time	0,5 ms 125 μs (Laser mod. S40...B03/C03)
Switching frequency	1 kHz 4 kHz (Laser mod. S40...B03/C03)
Connection	M8 4-pole connector, 2 m cable 3,5 mm
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	ABS UL 94V-0
Lens material	Methacrylic PMMA
Operating temperature	-20 ... +60 °C
Storage temperature	-20 ... +80 °C
Weight	40 g max. cable vers., 10 g max. conn. vers.

DIMENSIONS

M8 CONNECTOR VERSION



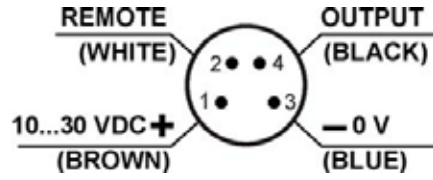
CABLE VERSION



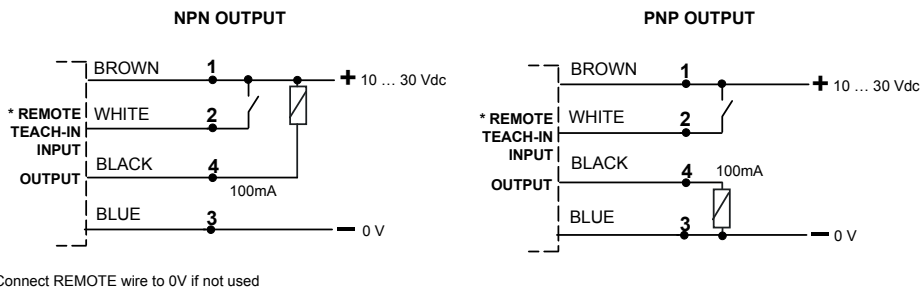
# MINIATURE SENSORS

## CONNECTIONS

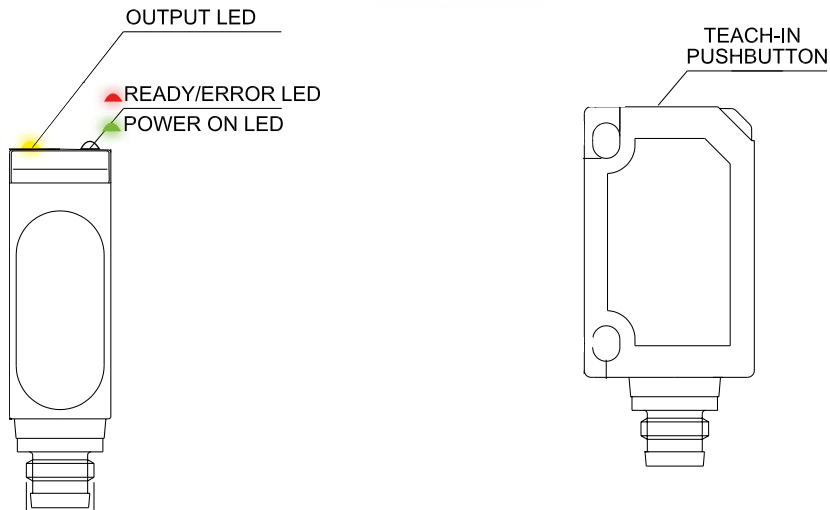
### M8 CONNECTOR



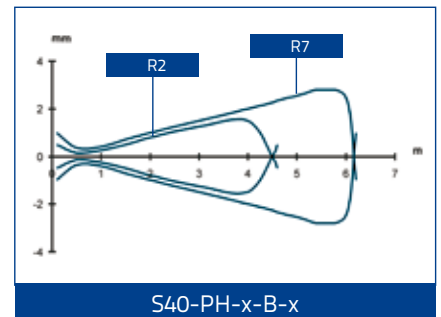
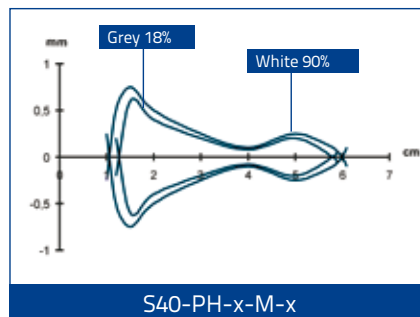
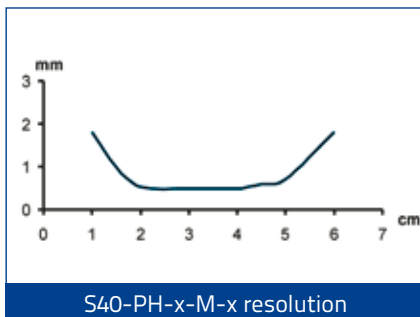
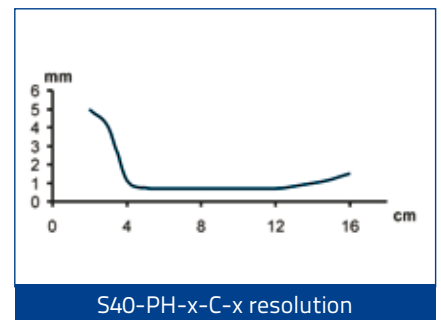
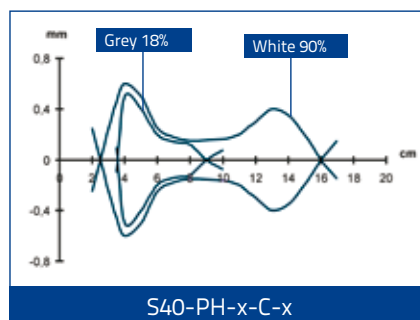
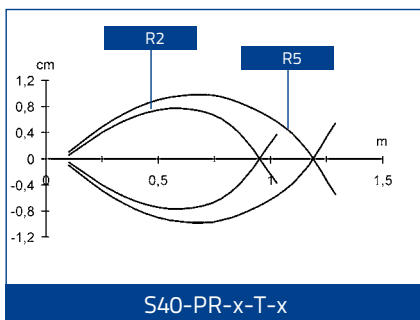
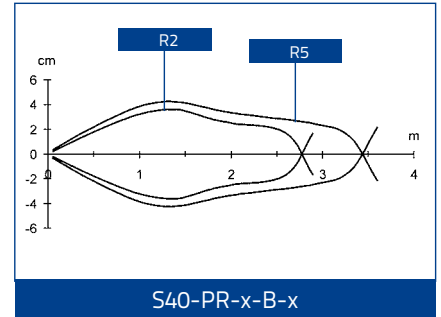
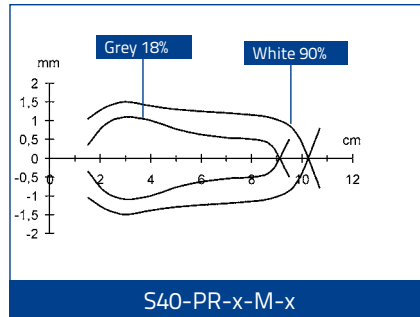
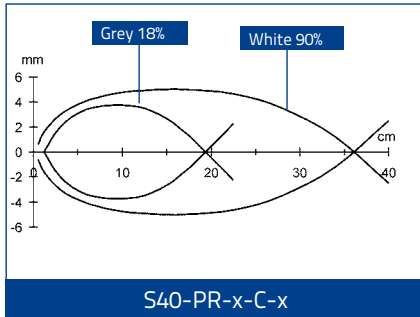
### CABLE



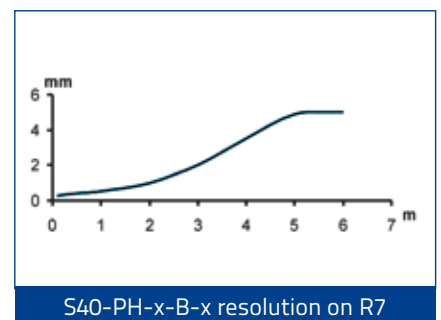
## INDICATORS AND SETTINGS



## DETECTION DIAGRAMS



The detection diagrams indicate the typical operating distance with excess gain 1.

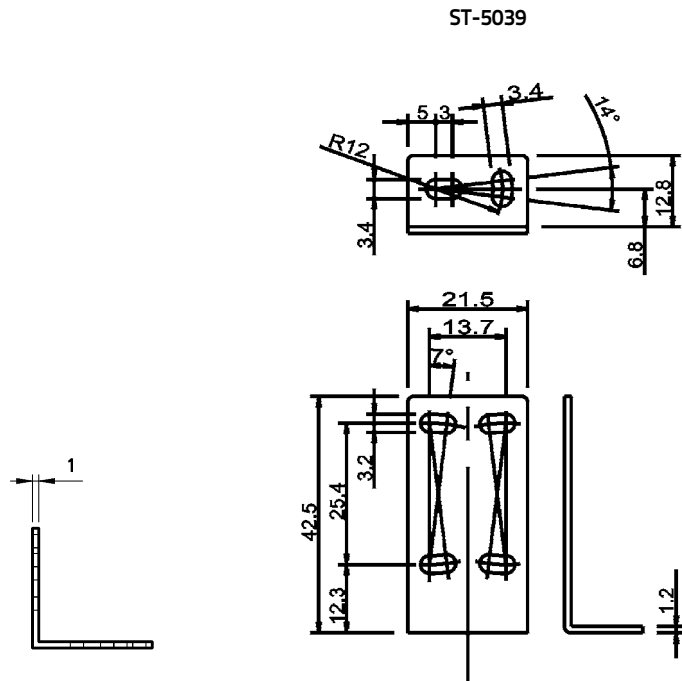
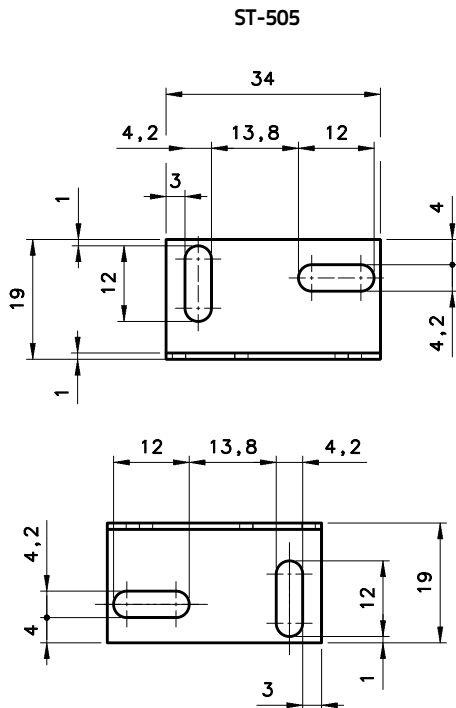


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## MODEL SELECTION AND ORDER INFORMATION

OPTIC FUNCTION	EMISSION	CONNECTION	OUTPUT	MODEL	ORDER No.
Polarized retroreflective	LASER	M8 connector	NPN	S40-PH-5-B03-NH	950401240
			PNP	S40-PH-5-B03-PH	950401250
	LED	2m Cable	NPN	S40-PR-2-B03-NH	950401360
			PNP	S40-PR-2-B03-PH	950401300
		M8 connector	NPN	S40-PR-5-B03-NH	950401480
			PNP	S40-PR-5-B03-PH	950401420
Diffuse proximity	LASER	M8 connector	NPN	S40-PH-5-C03-NH	950401260
			PNP	S40-PH-5-C03-PH	950401270
	LED	2m Cable	NPN	S40-PR-2-C03-NH	950401370
			PNP	S40-PR-2-C03-PH	950401310
		M8 connector	NPN	S40-PR-5-C03-NH	950401490
			PNP	S40-PR-5-C03-PH	950401430
Background suppression	LASER	2m Cable	PNP	S40-PH-2-M03-PH	950401540
		M8 connector	NPN	S40-PH-5-M03-NH	950401280
			PNP	S40-PH-5-M03-PH	950401290
	LED	2m Cable	NPN	S40-PR-2-M03-NH	950401380
		M8 connector	PNP	S40-PR-2-M03-PH	950401320
			NPN	S40-PR-5-M03-NH	950401500
Retroreflective for transparent	LED	2m Cable	NPN	S40-PR-2-T03-NH	950401410
			PNP	S40-PR-2-T03-PH	950401350
		M8 connector	NPN	S40-PR-5-T03-NH	950401530
			PNP	S40-PR-5-T03-PH	950401470

## ACCESSORIES



MODEL	DESCRIPTION	ORDER NO.
ST-505	lateral mounting	95ACC2800
ST-5039	L-shaped fixing bracket	95ACC2270

## CABLES

TYPE	DESCRIPTION	LENGTH	MODEL	ORDER No.
Axial M8 Connector	4-pole, grey, P.V.C.	3 m	CS-B1-02-G-03	95A251420
		5 m	CS-B1-02-G-05	95A251430
		7 m	CS-B1-02-G-07	95A251440
		10 m	CS-B1-02-G-10	95A251480
	4-pole, P.U.R.	2 m	CS-B1-02-R-02	95A251620
		5 m	CS-B1-02-R-05	95A251640
Radial M8 Connector	4-pole, grey, P.V.C.	3 m	CS-B2-02-G-03	95A251450
		5 m	CS-B2-02-G-05	95A251460
		7 m	CS-B2-02-G-07	95A251470
		10 m	CS-B2-02-G-10	95A251530
	4-pole, P.U.R.	2 m	CS-B2-02-R-02	95A251630
		5 m	CS-B2-02-R-05	95A251650