

# SM-ALL



## COMPLETE LINE OF AMPLIFIED SUBMINIATURE PHOTOELECTRIC SENSORS

- 15mm, 20mm, 30mm and 50mm fixed focus proximity
- 1,5m retroreflective and 1m polarized retroreflective
- 2m through beam models
- Amplified NPN or PNP output with NO-NC output

### APPLICATIONS

- Processing and Packaging machinery
- Automotive
- Beverage & Bottling
- Vending machines

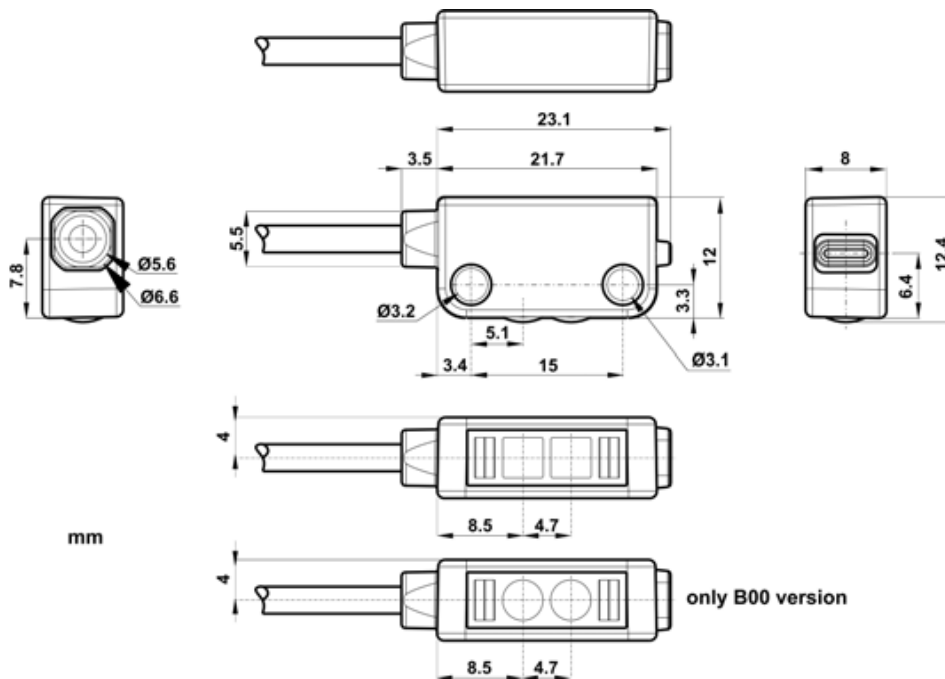


SM-ALL	
<b>Through beam</b>	0...2 m
<b>Retroreflective (on R2 reflector)</b>	0,05...1,5 m
<b>Polarized retroreflective</b>	0,1...1 m
<b>Fixed focus</b>	3...15 mm
	3...20 mm
	3...30 mm
	3...50 mm
<b>Power supply</b>	Vdc
	Vac
	Vac/dc
<b>Output</b>	PNP
	NPN
	NPN/PNP
	relay
	other
<b>Connection</b>	cable
	connector
	pig-tail
<b>Approximate dimensions (mm)</b>	8x23x12
<b>Housing material</b>	Polycarbonate
<b>Mechanical protection</b>	IP67

# TECHNICAL DATA

<b>Power supply</b>	10 ... 30 Vdc (limit values)
<b>Ripple</b>	10% max.
<b>Consumption (output current excluded)</b>	20 mA max.
<b>Light emission</b>	red LED 640 nm
<b>Operating mode</b>	LIGHT mode on N.O. output/DARK mode on N.C. output
<b>Indicators</b>	yellow OUTPUT LED excl. mod. G00 green POWER LED
<b>Output</b>	PNP or NPN; NO; NC
<b>Output current</b>	50 mA max.
<b>Saturation voltage</b>	1,25 V max. (NPN), 1,45 V max. (PNP)
<b>Response time</b>	700 $\mu$ s 1,3 ms (mod. SM...F00/G00)
<b>Switching frequency</b>	700 Hz 385 Hz (mod. SM...F00/G00)
<b>Connection</b>	2 m cable -2,5 mm
<b>Dielectric strength</b>	500 Vac, 1 min between electronics and housing
<b>Insulating resistance</b>	>20 M $\Omega$ , 500 Vdc between electronics and housing
<b>Electrical protection</b>	class 2
<b>Mechanical protection</b>	IP67
<b>Ambient light rejection</b>	according to EN 60947-5-2
<b>Vibrations</b>	0,5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)
<b>Shock resistance</b>	11 ms (30 G) 6 shock for every axis (EN60068-2-27)
<b>Housing material</b>	Polycarbonate
<b>Lens material</b>	PMMA, glass (mod. B00)
<b>Operating temperature</b>	-20 ... 55 °C
<b>Storage temperature</b>	-30 ... 75 °C
<b>Weight</b>	22 g

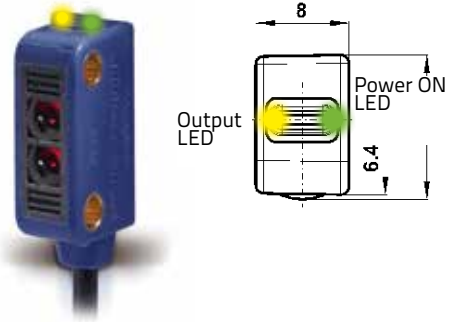
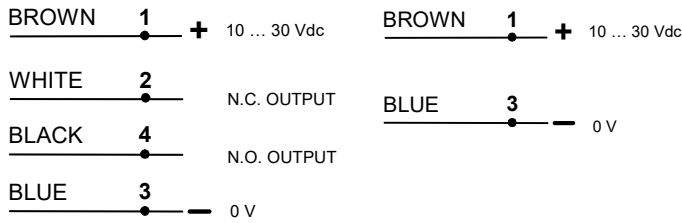
# DIMENSIONS



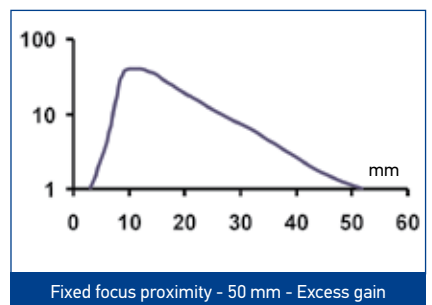
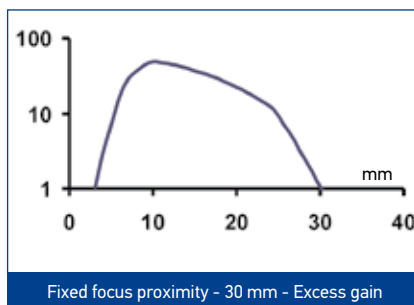
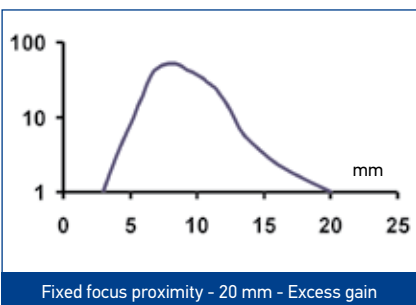
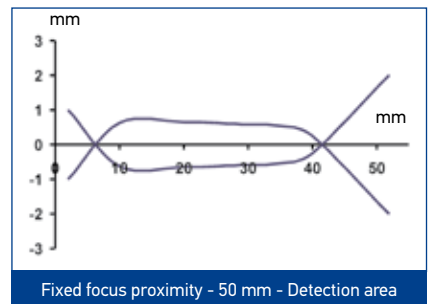
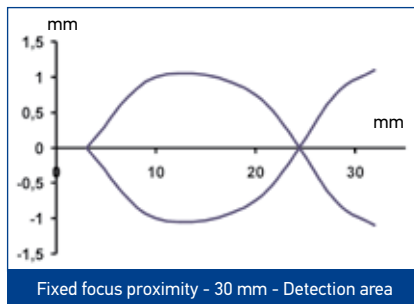
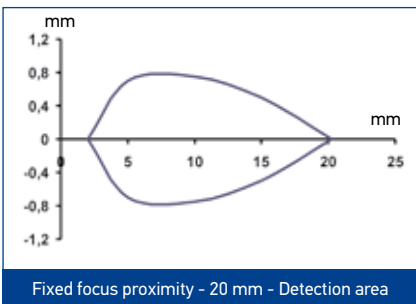
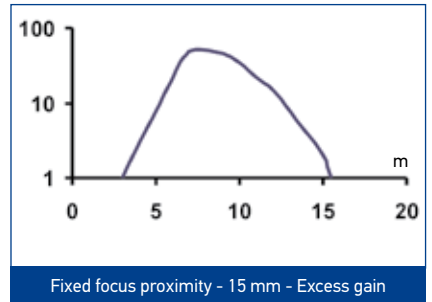
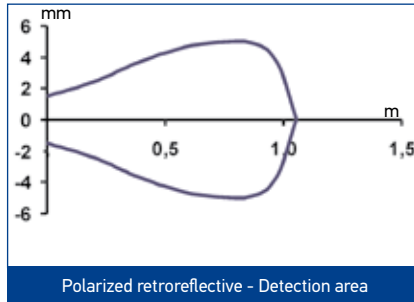
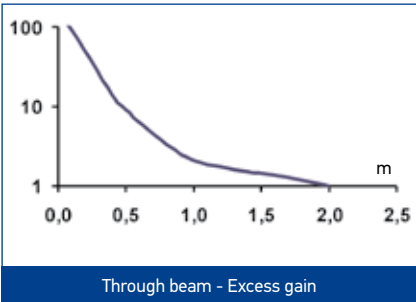
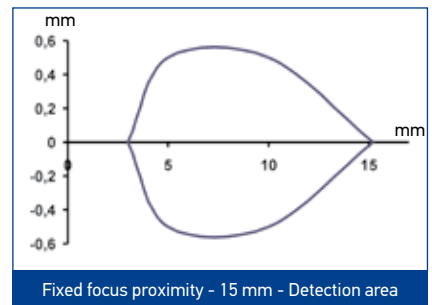
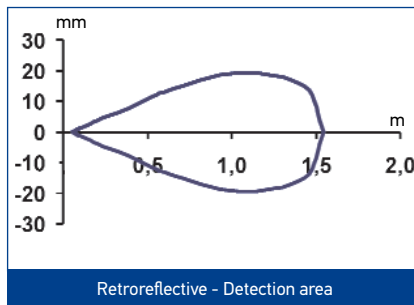
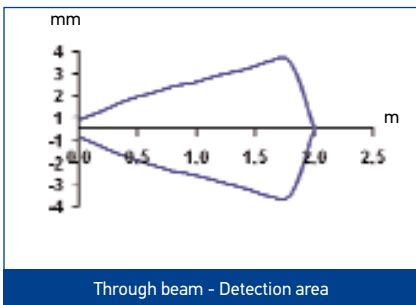
# CONNECTIONS

# INDICATORS AND SETTINGS

## CABLE



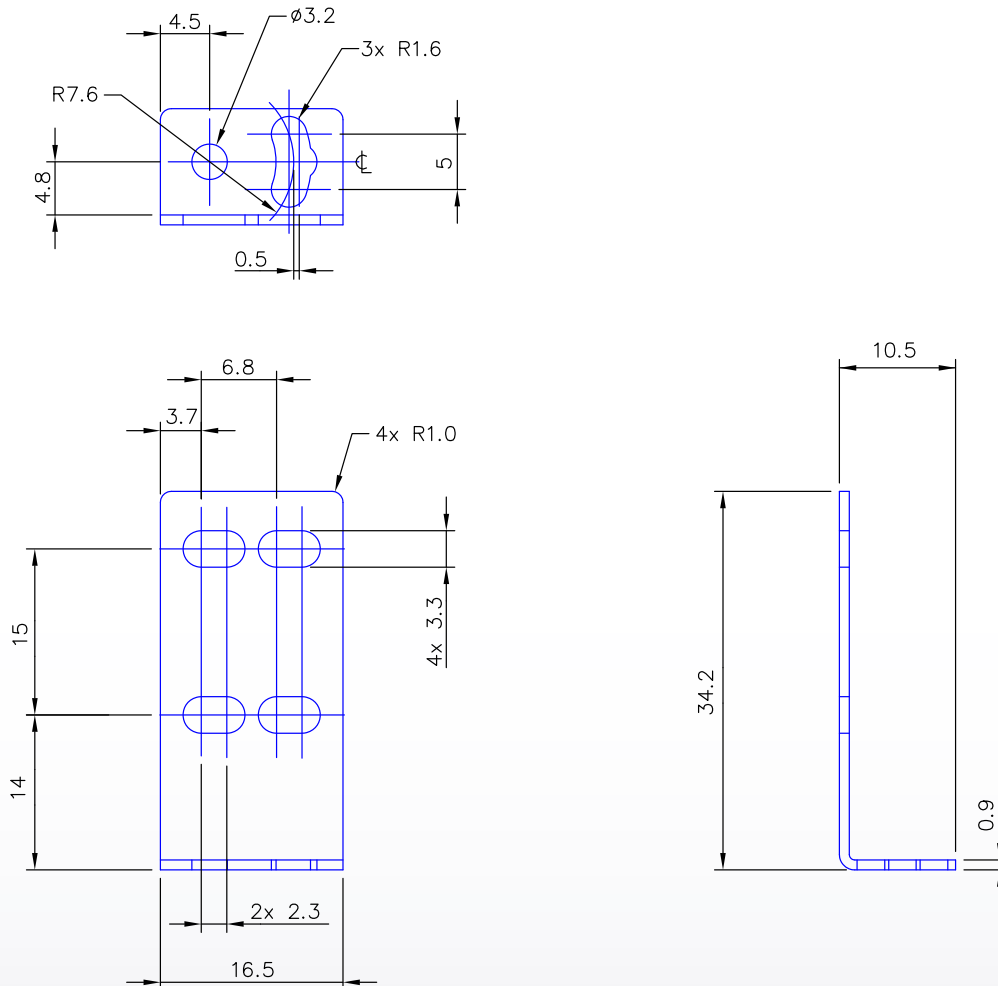
# DETECTIONS DIAGRAMS



# MODEL SELECTION AND ORDER INFORMATION

OPTIC FUNCTION	OPERATING DISTANCE	CONNECTION	OUTPUT	MODEL	ORDER No.	
Retroreflective	0,05...1,5 m	2m Cable	PNP	SM-PR-2-A00-PP	95B000060	
			NPN	SM-PR-2-A00-NN	95B000070	
Polarized retroreflective	0,1...1 m	2m Cable	PNP	SM-PR-2-B00-PP	95B000080	
			NPN	SM-PR-2-B00-NN	95B000090	
Fixed focus (short distance)	15 mm	2m Cable	PNP	SM-PR-2-D00-PP	95B000020	
			NPN	SM-PR-2-D00-NN	95B000030	
Fixed focus (normal distance)	20 mm		PNP	SM-PR-2-D10-PP	95B000140	
			NPN	SM-PR-2-D10-NN	95B000150	
Fixed focus (medium distance)	30 mm		PNP	SM-PR-2-D20-PP	95B000040	
			NPN	SM-PR-2-D20-NN	95B000050	
Fixed focus (long distance)	50 mm		PNP	SM-PR-2-D30-PP	95B000000	
			NPN	SM-PR-2-D30-NN	95B000010	
Through beam receiver	0...2 m		2m Cable	PNP	SM-PR-2-F00-PP	95B000120
				NPN	SM-PR-2-F00-NN	95B000130
		-		SM-PR-2-G00-XG	95B000160	

## ACCESSORIES



MODEL	DESCRIPTION	ORDER NO.
ST-5049	right angle bracket	95ACC6650