

**TECHNICAL DATA**

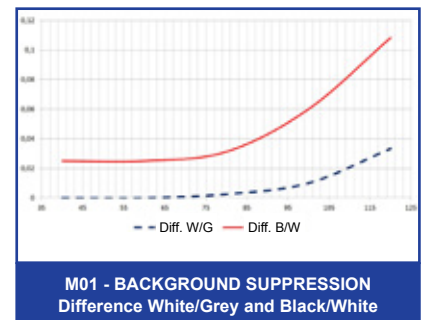
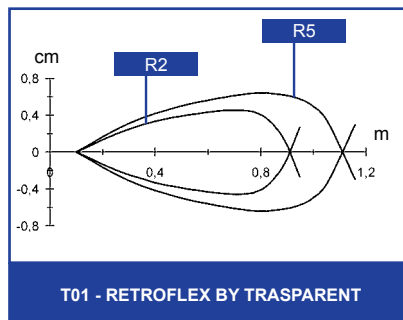
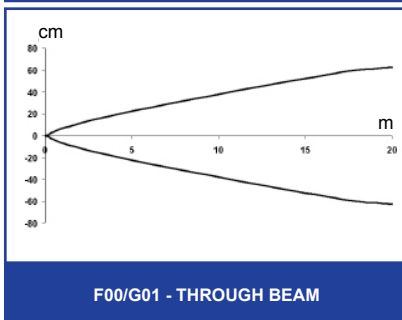
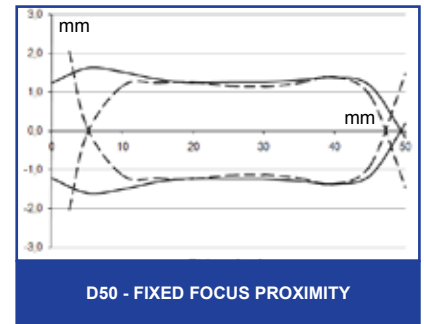
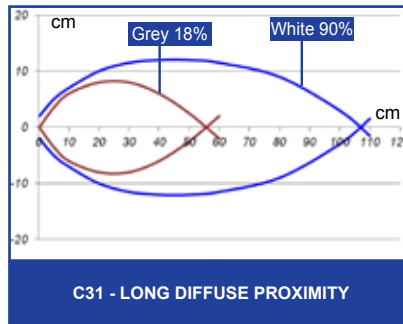
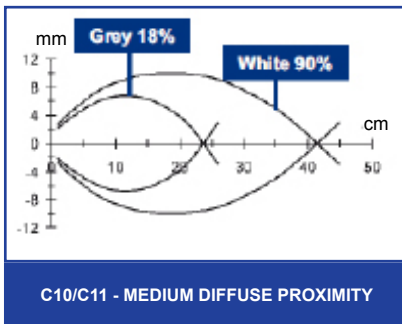
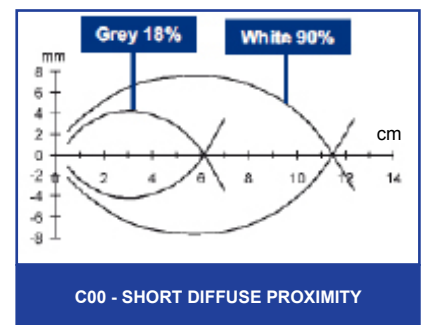
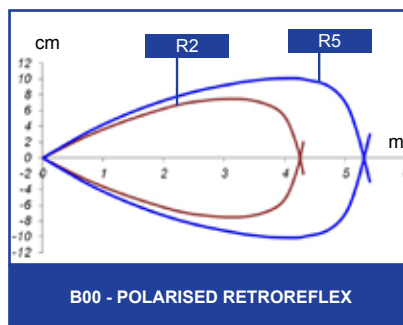
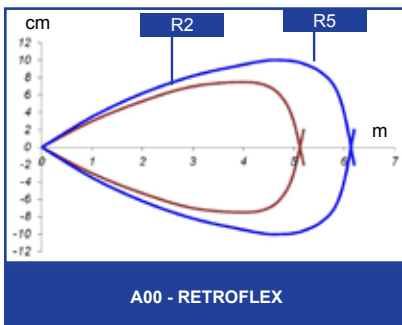
<b>Power supply</b>	12 ... 30 Vdc <sup>1</sup>
<b>Ripple</b>	≤ 2 Vpp
<b>Consumption</b>	≤ 25 mA
<b>Output current</b>	≤ 100 mA
<b>Saturation voltage</b>	≤ 2 V
<b>Dielectric strength</b>	500 Vac 1 min., between electronics and housing
<b>Insulation resistance</b>	>20 MΩ 500 Vdc, between electronics and housing
<b>Mechanical protection</b>	IP65, IP67, IP69K
<b>Ambient light rejection</b>	According to EN 60947-5-2
<b>Vibrations</b>	0.5 mm amplitude, 10 ... 55 Hz frequency, for each axis (EN60068-2-6)
<b>Protection devices</b>	A, B <sup>2</sup>
<b>Housing</b>	Plastic version ABS TERLURAN Metal version INOX AISI 316L
<b>Indicators</b>	yellow OUTPUT LED green STABILITY LED, POWER LED (through beam emitter S15-xx-x-G0x)
<b>Operating mode</b>	selectable dark/light <sup>3</sup>
<b>Auxiliary functions</b>	Test + and Test - Emitter off with Test+ on Vdc and Test- on 0 V
<b>Connection</b>	Cable vers. 2 m Ø 4 mm (PVC, 4 x 0,14 mm <sup>2</sup> ) Connector vers. M12 4-pole connector pig-tail vers. 150 mm cable + M12 4-pole connector
<b>Lens material</b>	plastic PMMA
<b>Weight</b>	40 g max mod. M12 55 g max mod. cable 35 g max mod. pig-tail
<b>Operating temperature</b>	-25 ... +55°C
<b>Storage temperature</b>	-25 ... +70°C
<b>Reference directives</b>	EN 60947-5-2, UL 508

**TECHNICAL NOTE**

- <sup>1</sup>Limit values
- <sup>2</sup>A - reverse polarity protection  
B - overload and short-circuit protection
- <sup>3</sup>With L/D input not connected the proximity models function in the light mode and the retroreflex and through beam models in the dark mode; the light mode can be selected connecting the L/D input to +Vdc, the dark mode connecting it to 0Vdc.



**DETECTION DIAGRAMS**



## S15 - PA (PLASTIC VERS.)

OPTIC FUNCTION	LIGHT EMISSION <sup>1</sup>	OPERATING DISTANCE	CONNECTION	SETTING	SWITCH FREQUENCY	RESPONSE TIME
non-polarised retroflex	infrared LED 880 nm	0,1...5 m on R2	connector M12	sensitivity trimmer	500 Hz	1 ms
			cable	fixed		
			pig-tail	fixed		
polarised retroflex	red LED 660 nm	0,1...4 m on R2	connector M12	sensitivity trimmer	500 Hz	1 ms
			cable	fixed		
			pig-tail	fixed		
diffuse proximity	infrared LED 880 nm	short: 1...10 cm	cable	fixed	500 Hz	1 ms
			pig tail	fixed		
		medium: 1...35 cm	connector M12	sensitivity trimmer		
			cable	fixed		
			pig-tail	fixed		
		long: 1...100 cm	connector M12	sensitivity trimmer		
fixed focus proximity	red LED 660 nm	1...5 cm	cable	fixed	1 KHz	500 µs
			pig-tail	fixed		
through beam receiver	n/a	0...20 m	connector M12	sensitivity trimmer	250 Hz	2 ms
			cable	fixed		
			pig-tail	fixed		
through beam emitter	infrared LED 880 nm	0...20 m	connector M12	light emission power trimmer	n/a	2 ms
			cable	fixed		
			pig-tail	fixed		
retro-reflex by transparent	red LED 660 nm	0,1...0,8 m on R2	connector M12	sensitivity trimmer	500 Hz	1 ms
background suppression	red LED 660 nm	40...120 mm	connector M12	sensitivity trimmer	500 Hz	1 ms

<sup>1</sup> Average life of 100.000 h with TA = +25 °C

## S15 - NA (METAL VERS.)

OPTIC FUNCTION	LIGHT EMISSION <sup>1</sup>	OPERATING DISTANCE	CONNECTION	SETTING	SWITCH FREQUENCY	RESPONSE TIME
non-polarised retroflex	infrared LED 880 nm	0,1...5 m on R2	connector M12	sensitivity trimmer	500 Hz	1 ms
polarised retroflex	red LED 660 nm	0,1...4 m on R2	connector M12	sensitivity trimmer	500 Hz	1 ms
diffuse proximity	infrared LED 880 nm	medium: 1...35 cm	connector M12	sensitivity trimmer	500 Hz	1 ms
		long: 1...100 cm	connector M12	sensitivity trimmer	500 Hz	1 ms
through beam receiver	n/a	0...20 m	connector M12	sensitivity trimmer	250 Hz	2 ms
through beam emitter	infrared LED 880 nm	0...20 m	connector M12	light emission power trimmer	n/a	2 ms
retro-reflex by transparent	red LED 660 nm	0,1...0,8 m on R2	connector M12	sensitivity trimmer	500 Hz	1 ms
background suppression	red LED 660 nm	40...120 mm	connector M12	sensitivity trimmer	500 Hz	1 ms

<sup>1</sup> Average life of 100.000 h with TA = +25 °C