ILS 95

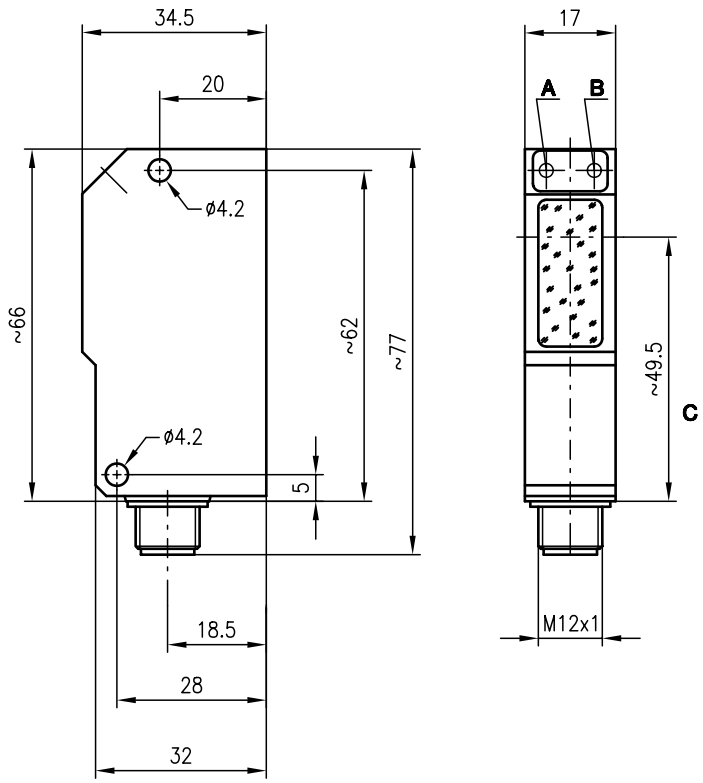
Throughbeam photoelectric sensors

0 … 20 m

10 - 30 V
DC

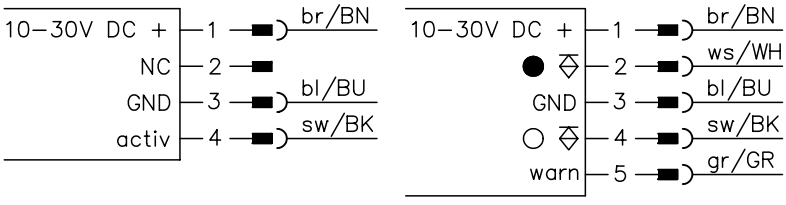
- Throughbeam photoelectric sensor with high performance reserve using visible red light or infrared light
- High switching frequency for detection of fast events
- Small construction with glass cover and robust zinc diecast housing, protection class IP 67/IP 69K for industrial application
- Complementary switching outputs for light/ dark switching or as a control function

Dimensioned drawing



A Switching indicator yellow
B Operation indicator green
C Optical axis

Electrical connection



IEC 60947...
IEC 60947...
IP 69K
IP 67

Accessories:

(available separately)

- Mounting systems (BT 95, UMS 1)
- M12 connectors (KD …)

Specifications

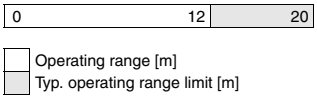
Optical data	ILS 95/44.8 L.1 Infrared light	ILSR 95/44.8 L Red light
Typ. operating range limit [1]	0 … 20m	0 … 20m
Operating range [2]	0 … 12m	0 … 12m
Light source	LED (modulated light)	LED (modulated light)
Wavelength	880nm	660nm
Timing		
Switching frequency	1000Hz	
Response time	0.5ms	
Delay before start-up	≤ 100ms	
Electrical data		
Operating voltage U_B	10 … 30VDC (incl. residual ripple)	
Residual ripple	≤ 15% of U_B	
Bias current	≤ 35mA	
Switching output	2 PNP transistor outputs, complementary	
Function characteristics	light/dark switching	
Signal voltage high/low	≥ (U_B-2V)/≤ 2V	
Output current	max. 100mA	
Indicators		
LED green	ready	
LED yellow	light path free	
LED yellow flashing	light path free, no performance reserve	
Mechanical data		
Housing	diecast zinc	
Optics cover	glass	
Weight	90g	
Connection type	M12 connector, stainless steel receiver 5-pin, transmitter 4-pin	
Environmental data		
Ambient temp. (operation/storage)[3]	-25°C (-30°C) … +60°C/-40°C … +70°C	
Protective circuit [4]	2, 3	
VDE safety class [5]	II, all-insulated	
Protection class	IP 67, IP 69K [6]	
LED class	1 (acc. to EN 60825-1)	
Standards applied	IEC 60947-5-2	
Options		
Activation input activ		
Transmitter active/not active	≥ 8V/≤ 2V or not connected	
Activation/disable delay	≤ 1ms	
Input resistance	4.7kΩ ± 10%	
Warning output autoControl warn	PNP transistor, counting principle	
Signal voltage high/low	≥ (U_B-2V)/≤ 2V	
Output current	max. 100mA	

1) Typ. operating range limit: max. attainable range without performance reserve
2) Operating range: recommended range with performance reserve
3) -30°C with operating voltage continuously applied
4) 2=polarity reversal protection, 3=short-circuit protection for all outputs
5) Rating voltage 250VAC
6) IP 69K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives, acids and bases are not part of the test

Order guide

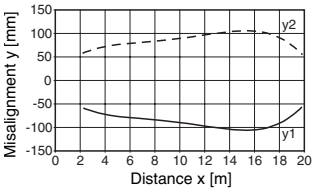
	Designation	Part No.
Infrared light		
Transmitter and receiver	ILS 95/44.8 L.1	
Transmitter	LS 95/2.8 SE-L.1	500 26835
Receiver	ILS 95/44 E-L.1	500 26836
Red light		
Transmitter and receiver	ILSR 95/44.8 L	
Transmitter	LSR 95/2.8 SE-L	500 25606
Receiver	ILSR 95/44 E-L	500 25608

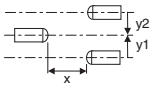
Tables



Diagrams

Typ. response behaviour





Remarks

- The throughbeam photoelectric sensor using visible red light is also available with integrated AS-i chip for direct connection to the AS-i system.