

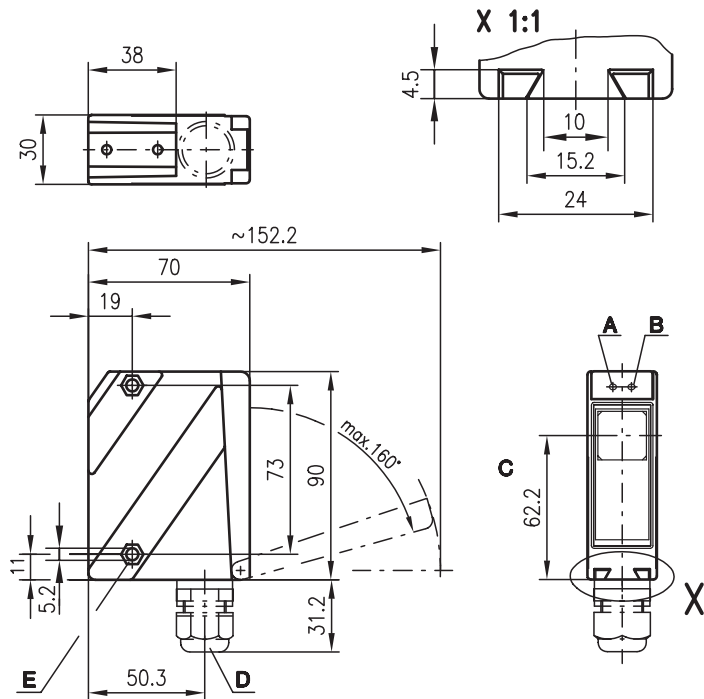


LS 96

Throughbeam photoelectric sensors



Dimensioned drawing

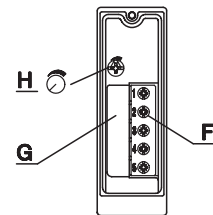


39m

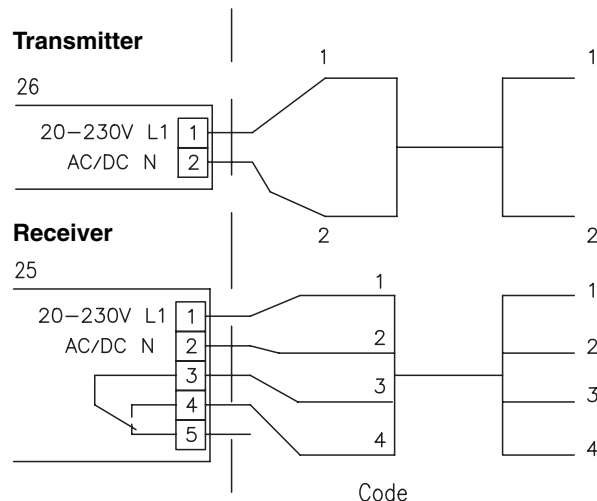


- Throughbeam photoelectric sensors with high performance reserve in red light
- Wide angle version for easy alignment
- Robust metal housing with glass cover, protection class IP 67/IP 69K for industrial application
- All-mains design 20 ... 230VAC/DC with relay output
- Relay with change-over contact, sensitivity adjustment and delay before start-up for optimal adaptation to the application
- Connection via comfortable terminal compartment up to 1.5mm²

- A Indicator diode green
- B Indicator diode yellow
- C Optical axis
- D Screwed cable gland M16x1.5 for Ø 5 ... 10mm
- E Countersinking for SK nut M5, 4.2 deep
- F Connection terminals
- G Cable entry
- H Sensitivity adjustment



Electrical connection (example)



Accessories:

(available separately)

- Mounting systems (BT 96, BT 96.1, BT 96.4, UMS 96, BT 450.1-96)
- Spark extinction
- Alignment aid ARH 96

We reserve the right to make changes • 96_a06e.fm

Specifications

Optical data

Typ. operating range limit ¹⁾	0 ... 39m
Operating range ²⁾	0 ... 30m
Light source	LED (modulated light)
Wavelength	660nm (red light)

Timing

Switching frequency	20Hz
Response time	25ms
Delay before start-up	≤ 200ms

Electrical data

Operating voltage U_B	20 ... 230VAC, 50/60Hz 20 ... 230VDC
Power consumption	≤ 1.5VA
Switching output ³⁾	relay, 1 change-over contact
Function characteristics	break-contact/make-contact
Switching voltage, relay	250 VAC/DC
Switching current, relay	250 VAC, 3A/30V, 3A
Bias current	750 VA, $\cos\phi=1$
Sensitivity	adjustable

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	380g
Connection type	terminals transmitter cable 3x0.5mm ² (oil flex 110), 1.5m receiver cable 3x0.5mm ² (oil flex 110), 1.5m

Environmental data

Ambient temp. (operation/storage)	-20°C ... +60°C/-40°C ... +70°C
Protective circuit ⁴⁾	1, 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

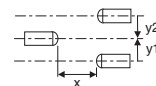
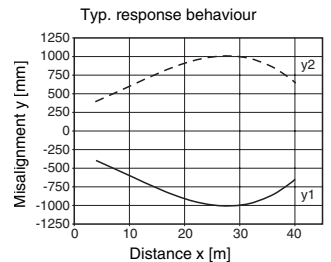
- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) Suitable spark extinction must be provided with inductive or capacitive loads
- 4) 1=transient protection, 2=polarity reversal protection, 3=short-circuit 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

Tables

0	30	39
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- Operating range [m]
- Typ. operating range limit [m]

Diagrams



Order guide

Selection table		Order code →	LS 96M/R-176W-2 Part No. 500 32004 (Tr) Part No. 500 32003 (Re)					
Equipment ↓								
Housing	metal		●					
Light source	red light (30m)		●					
Connection	terminals		●					
	cable tail 1.5m							

Remarks

- Angle at a distance of 3m:
transmitter:
angle of radiation typ. 10°
receiver:
receiving angle typ. 12°
- Cable version
wire assignment:
1,2 = supply
3,4 = break-contact

LS = Pair consisting of
LSS = Transmitter
LSE = Receiver

LS 96M/R-176W-2
LSS 96M-175W-26
LSE 96M/R-176W-25