

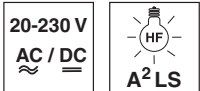
LS 96

Throughbeam photoelectric sensors

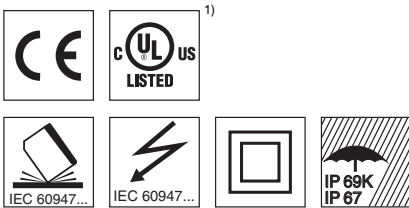
en 11-2014/06 50120809-01



**65m
150m**



- Throughbeam photoelectric sensors with high performance reserve in infrared light
- Robust metal housing with glass cover or plastic housing, protection class IP 67/ IP 69K for industrial application
- All-mains design 20 ... 230VAC/DC
- 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
- Version with additional switching delay



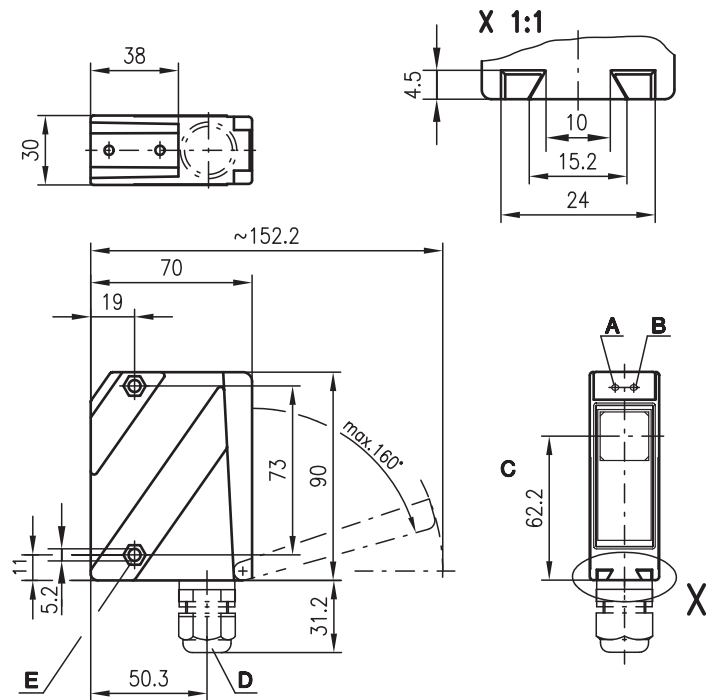
1) LS 96M/R-1310-2
LS 96M/R-3310-2

Accessories:

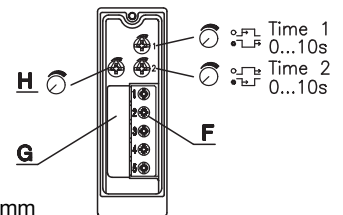
(available separately)

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

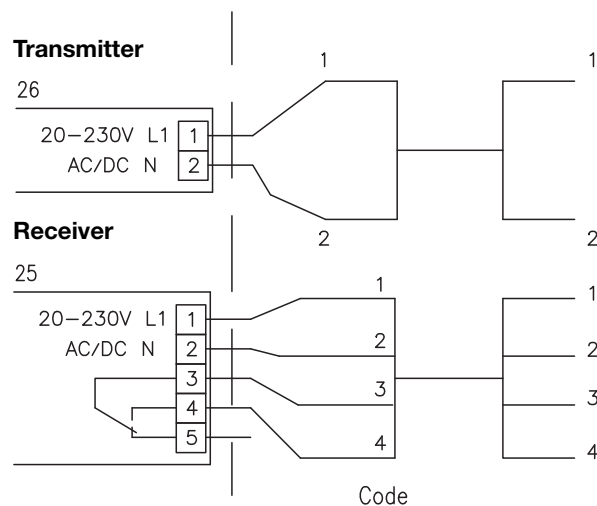
Dimensioned drawing



- A** Green indicator diode
- B** Yellow indicator diode
- 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)



We reserve the right to make changes •

Specifications

Optical data

Typ. operating range limit ¹⁾
 Operating range ²⁾
 Light source
 Wavelength

65m
 0 ... 65m
 0 ... 50m
 LED (modulated light)
 880nm (infrared)

150m
 0 ... 150m
 0 ... 120m

Timing

Switching frequency
 Response time
 Delay before start-up

20Hz
 25ms
 ≤ 200ms

Electrical data

Operating voltage U_B

20 ... 230VAC, 50/60Hz
 20 ... 230VDC

Power consumption
 Switching output ³⁾
 Function characteristics
 Switching voltage, relay
 Switching current, relay
 Open-circuit current
 Sensitivity

≤ 1.5VA
 relay, 1 change-over contact
 break-contact/make-contact
 250VAC/DC
 250VAC, 3A/30V, 3A
 750VA, cosφ=1
 adjustable

Indicators

Green LED
 Yellow LED
 Yellow LED, flashing

ready
 light path free
 light path free, no performance reserve

Mechanical data

Housing
 Optics cover
 Weight
 Connection type

Metal housing

diecast zinc
 glass
 380g
 terminals

Plastic housing

polycarbonate
 plastic
 150g
 terminals

Environmental data

Ambient temp. (operation/storage)
 Protective circuit ⁴⁾
 VDE safety class ⁵⁾
 Protection class
 Light source
 Standards applied
 Certifications ⁷⁾

-30°C ... +60°C/-40°C ... +70°C
 1, 2, 3
 II, all-insulated
 IP 67, IP 69K ⁶⁾ IP 67
 exempt group (in acc. with EN 62471)
 IEC 60947-5-2
 UL 508, C22.2 No.14-13

Options

Switching delay (slow oper./release) 0 ... 10s (separately adjustable)

- 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
- 7) LS 96M/R-1310-2, LS 96M/R-3310-2

Operate in accordance with intended use!

- ⚠ This product is not a safety sensor and is not intended as personnel protection.
- ⚠ The product may only be put into operation by competent persons.
- ⚠ Only use the product in accordance with the intended use.

Order guide

Selection table		Order code →					
Equipment ↓		LS 96K/R-1310-2 Part No. 50025253 (Tr) Part No. 50025257 (Re)	LS 96K/R-1320-2 Part No. 50025253 (Tr) Part No. 50025256 (Re)	LS 96M/R-1310-2 Part No. 50080081 (Tr) Part No. 50080080 (Re)	LS 96M/R-3310-2 Part No. 50080081 (Tr) Part No. 50031651 (Re)	LS 96K/R-131P-2 Part No. 50030405 (Tr) Part No. 50030406 (Re)	
Housing	metal			●	●		
	plastic	●	●			●	
Light source	infrared light (50m)	●	●	●		●	
	infrared light (120m)				●		
Connection	terminals	●	●	●	●	●	
Features	switching delay		●				
	UL homologation			●	●		

Tables

65m models

0	50	65
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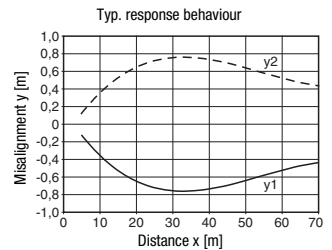
150m models

0	120	150
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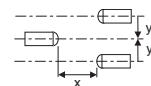
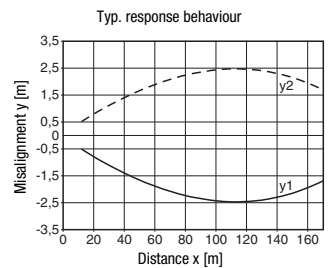
□ Operating range [m]
 ▒ Typ. operating range limit [m]

Diagrams

65m models



150m models



Remarks

- LS 96K/R-131P-2
 P = Reduction M16

LS = Pair consisting of
 LSS = Transmitter
 LSE = Receiver

LS 96K/R-1310-2

LSS 96K-1350-26
 LSE 96K/R-1310-25

LS 96K/R-1320-2

LSS 96K-1350-26
 LSE 96K/R-1320-25

LS 96M/R-1310-2

LSS 96M-1350-26
 LSE 96M/R-1310-25

LS 96M/R-3310-2

LSS 96M-1350-26
 LSE 96M/R-3310-25

LS 96K/R-131P-2

LSS 96K-135P-26
 LSE 96K/R-131P-25