en 2019/05/08 50120809-01

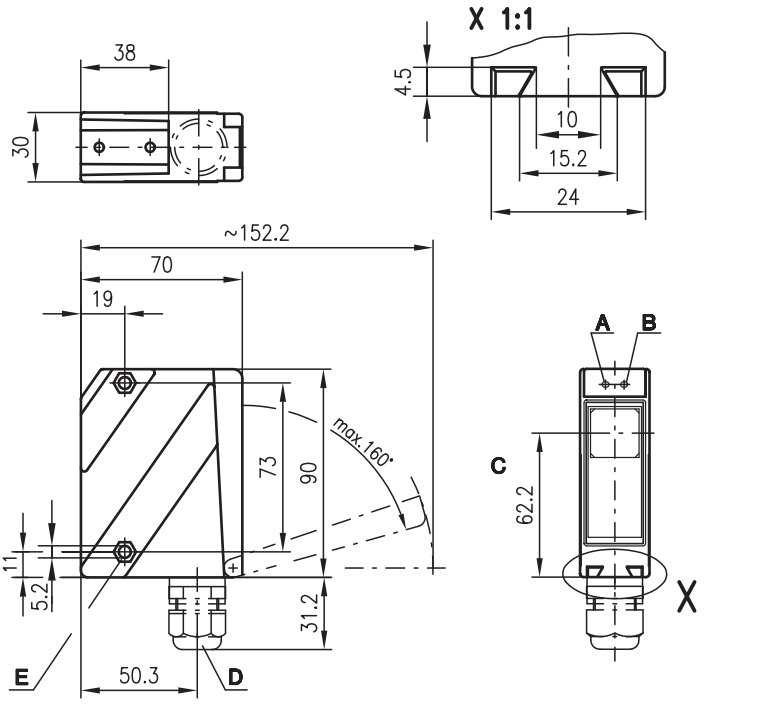


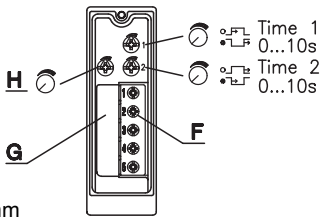
65m
150m

20-230 V
AC / DC

- Throughbeam photoelectric sensors with high function reserve in infrared light
- Robust metal housing with glass cover or plastic housing, degree of protection 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 1.5mm^2
- Version with additional switching delay

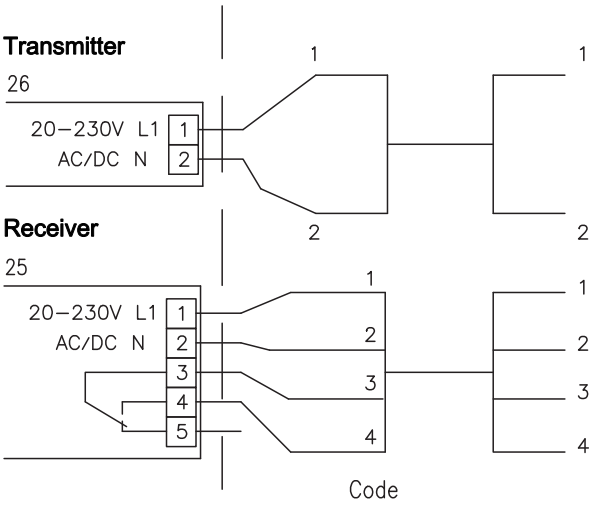
Dimensioned drawing





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)



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

Accessories:

(available separately)

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

We reserve the right to make changes • DS_LS96MKR_en_50120809-

Technical data

	65m	150m
Optical data		
Typ. operating range limit [1]	0 … 65m	0 … 150m
Operating range [2]	0 … 50m	0 … 120m
Light source	LED (modulated light)	
Wavelength	880nm (infrared)	
Time behavior		
Switching frequency	20Hz	
Response time	25ms	
Readiness delay	≤ 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	NC contact/NO contact	
Switching voltage, relay	250VAC/DC	
Switching current, relay	250VAC, 3A/30V, 3A	
Open-circuit current	750VA, cosφ=1	
Sensitivity	Adjustable	
Indicators		
Green LED	Ready	
Yellow LED	Light path free	
Yellow LED, flashing	Light path free, no function reserve	
Mechanical data	**Metal housing**	**Plastic housing**
Housing	Diecast zinc	Polycarbonate
Optics cover	Glass	Plastic
Weight	380g	150g
Connection type	Terminals	Terminals
Environmental data		
Ambient temp. (operation/storage)	-30°C … +60°C/-40°C … +70°C	
Protective circuit [4]	1, 2, 3	
VDE protection class [5]	II, all-insulated	
Degree of protection	IP 67, IP 69K [6]	IP 67
Light source	Exempt group (in acc. with EN 62471)	
Standards applied	IEC 60947-5-2	
Additional functions		
Switching delay (slow oper./release)	0 … 10s (separately adjustable)	

1) Typ. operating range limit: max. attainable range without function reserve
2) Operating range: recommended range with function 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

- **Approved purpose:**
  This product may only be used by qualified personnel and must only be used for the approved purpose. This sensor is not a safety sensor and is not intended as personnel protection.

Order guide

Selection table Equipment ↓	Order code ➔	**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 approval			●				

Tables

65m models

0	50	65

150m models

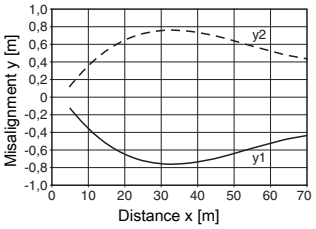
0	120	150

Operating range [m]
Typ. operating range limit [m]

Diagrams

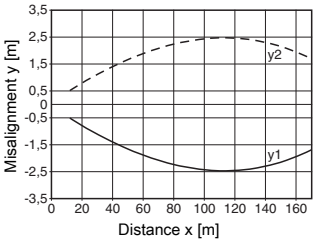
65m models

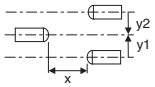
Typ. response behavior



150m models

Typ. response behavior





Notes

- 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