

RK 96
Retro-reflective photoelectric sensors

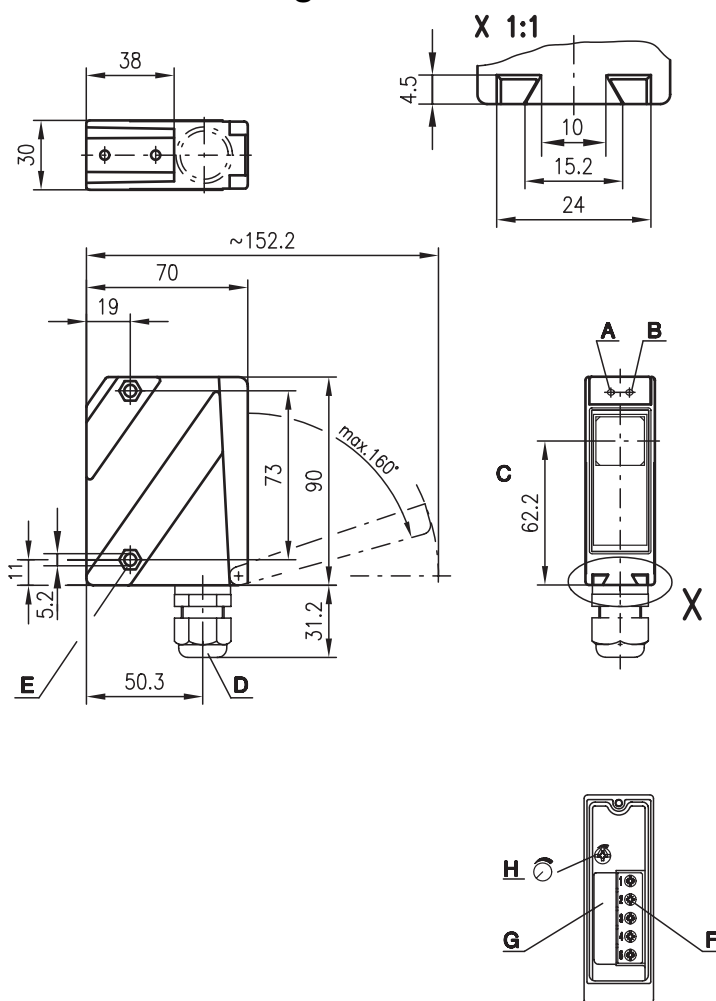
18m


- Retro-reflective photoelectric sensors with a long operating range
- Invisible infrared light
- Robust metal housing with glass cover or plastic housing, protection class IP 67/ IP 69K for industrial application
- Complementary outputs, sensitivity adjustment and delay before start-up for optimal adaptation to the application
- Connection via comfortable terminal compartment up to 1.5mm²

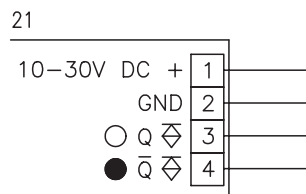

Accessories:

(available separately)

- Mounting systems (BT 96, UMS 96, BT 450.1-96)
- Reflectors
- Reflective tapes

Dimensioned drawing


- 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


Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾ 18 m
 Operating range ²⁾ see tables
 Light source LED (modulated light)
 Wavelength 880nm (infrared)

Timing

Switching frequency 1000Hz
 Response time 0.5ms
 Delay before start-up ≤ 200ms

Electrical data

Operating voltage U_B 10 ... 30VDC (incl. residual ripple)
 Residual ripple ≤ 15% of U_B
 Bias current ≤ 40mA
 Switching output PNP transistor
 Function characteristics light/dark switching
 Signal voltage high/low $\geq (U_B - 2V) \leq 2V$
 Output current max. 100mA
 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

Environmental data

Ambient temp. (operation/storage) -20°C ... +55°C/-40°C ... +55°C
 Protective circuit ³⁾ 1, 2, 3, 4
 VDE safety class ⁴⁾ II, all-insulated
 Protection class IP 67, IP 69K ⁵⁾
 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) 1=transient protection, 2=polarity reversal protection, 3=short circuit protection for all outputs, 4=interference blanking
- 4) Rating voltage 250VAC
- 5) 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

Reflectors			Operating range
1	TK(S)	100x100	0.3 ... 15m
2	MTK(S)	50x50	0.3 ... 11m
3	TK(S)	30x50	0.3 ... 6m
4	TK(S)	20x40	0.3 ... 5m
5	TK(S)	82	0.3 ... 11m
6	Tape 2	100x100	0.3 ... 6m

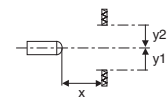
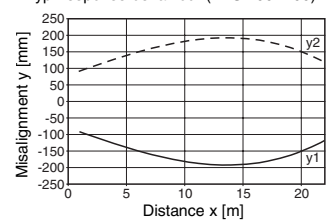
1	0.1	15	18
2	0.1	11	12
3	0.1	6	7.1
4	0.1	5	6
5	0.1	11	12
6	0.1	6	8

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

TK ... = adhesive
 TKS ... = screw type
 Tape 2 = adhesive

Diagrams

Typ. response behaviour (TKS 100x100)



Order guide

	Designation	Part No.
Metal housing	RK 96M/P-1440-21	500 30648

Remarks