

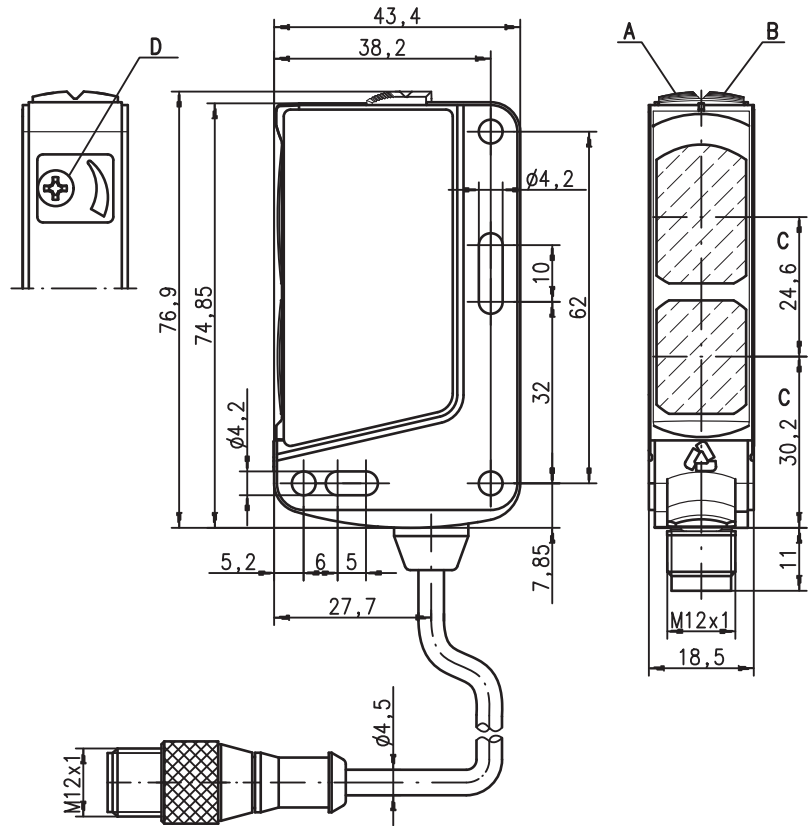
RTR 46B

Energetic diffuse reflection light scanner

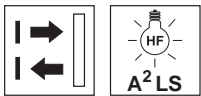
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Dimensioned drawing



- A** Green indicator diode
- B** Yellow indicator diode
- C** Optical axis
- D** Scanning range adjustment



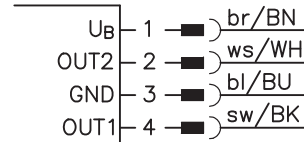
10 ... 1,100mm



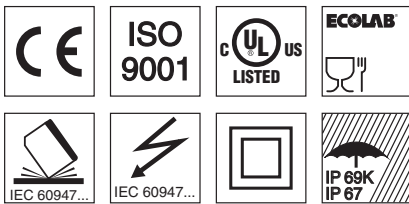
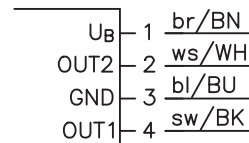
- Diffuse reflection light scanner with visible red light
- Scanning range adjustment
- Fast alignment through *brightVision*®
- A²LS - Active Ambient Light Suppression
- Complementary switching outputs for optimal adaptation to the application

Electrical connection

Connector, 4-pin



Cable



Accessories:

(available separately)

- Mounting systems (BT 46, BT 46.1, BT 46.1.5, BT 46.2)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)

We reserve the right to make changes • DS_RTR_46B_en.fm

Specifications

Optical data

Typ. scanning range limit (white 90%) ¹⁾	10 ... 1,100mm
Scanning range ²⁾	see tables
Adjustment range	100 ... 900mm
Light source	LED (modulated light)
Wavelength	620nm (visible red light)

Red light

Timing

Switching frequency	500Hz
Response time	1 ms
Delay before start-up	≤ 100ms

Electrical data

Operating voltage U_B ³⁾	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Open-circuit current	≤ 20mA
Switching output	.../66. ... 2 push-pull switching outputs ⁴⁾
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 100mA

Indicators

Green LED	ready
Yellow LED	reflection

Mechanical data

Housing	plastic
Optics cover	plastic
Weight	50g (with connector) / 55g (with cable) / 65g (with cable and connector)
Connection type	M12 connector or cable with M12 connector, cable length: 200mm or cable 2,000mm

Environmental data

Ambient temp. (operation/storage)	-40°C ... +60°C / -40°C ... +70°C
Protective circuit ⁵⁾	2, 3
VDE safety class ⁶⁾	II, all-insulated
Protection class	IP 67, IP 69K
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2

- 1) Typ. scan. range limit: max. achievable scanning range for light objects (white 90%)
- 2) Scanning range: recommended scanning range for objects with different diffuse reflection
- 3) For UL applications: for use in class 2 circuits only
- 4) The push-pull switching outputs must not be connected in parallel
- 5) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 6) Rating voltage 50V

Order guide

	Designation	Part No.
With M12 connector		
Complementary switching output	RTR 46B/66-S12	50108522
Cable with M12 connector		
Complementary switching output	RTR 46B/66, 200-S12	50108523
Cable, cable length 2m		
Complementary switching output	RTR 46B/66	50108524

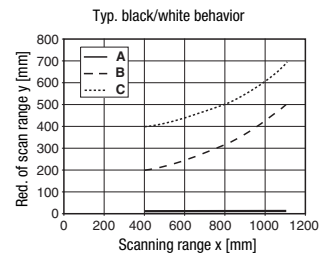
Tables

1	10	800	1,100
2	35	400	600
3	45	250	400

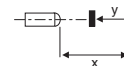
1	white 90%
2	grey 18%
3	black 6%

□	Scanning range [m]
□	Typ. scanning range limit [m]

Diagrams



- A white 90%
- B grey 18%
- C black 6%



Remarks

- **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 to be used for the protection of persons.
- With the set scanning range, a tolerance of the upper scanning range limit is possible depending on the reflection properties of the material surface.

RTR 46B

Energetic diffuse reflection light scanner

Type key

R	T	R	4	6	B	/	6	6	-	S	1	2
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Operating principle

RTR Diffuse reflection light scanner with light visible red light

Series

46B 46B Series

Switching output

/66 Complementary push-pull switching outputs

/44 Complementary PNP switching outputs

/4 Pin 4 PNP switching output, pin 2 no contact

Function characteristics

N/A Pin 4 light switching; with push-pull, PNP light switching

D Inverted switching logic

Electrical connection

N/A Cable, standard length 2000mm

,200-S12 Cable, length 200 mm with M12 connector

-S12 M12 connector

