



**Specifications**

**Optical data**

Typ. scanning range limit (white 90%) <sup>1)</sup>	10 ... 1,100mm
Scanning range <sup>2)</sup>	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 $U_B$ <sup>3)</sup>	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of $U_B$
Open-circuit current	≤ 20mA
Switching output	.../66. ... 2 push-pull switching outputs <sup>4)</sup>
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 <sup>5)</sup>	2, 3
VDE safety class <sup>6)</sup>	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.
<b>With M12 connector</b>		
Complementary switching output	RTR 46B/66-S12	50108522
<b>Cable with M12 connector</b>		
Complementary switching output	RTR 46B/66, 200-S12	50108523
<b>Cable, cable length 2m</b>		
Complementary switching output	RTR 46B/66	50108524

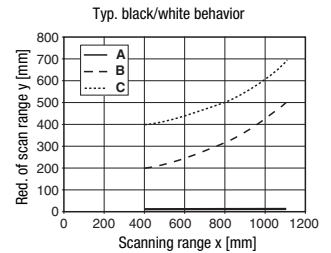
**Tables**

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

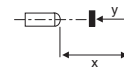
1	white 90%
2	grey 18%
3	black 6%

- 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

