

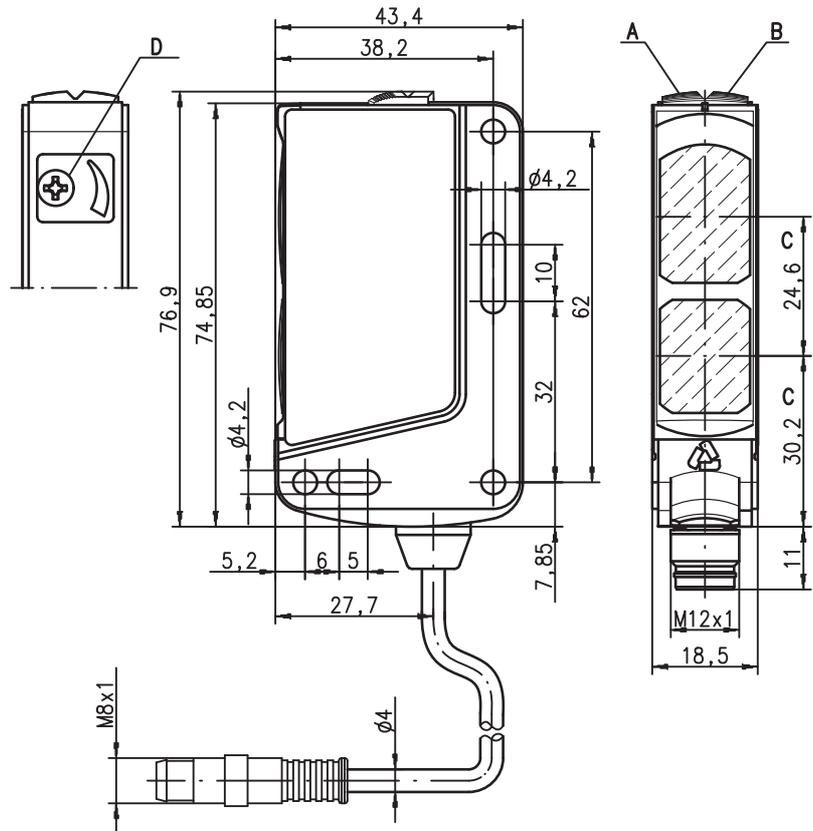
HRTR 46B

Diffuse reflection light scanner with background suppression

en 01-2009/11 50112184



Dimensioned drawing



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

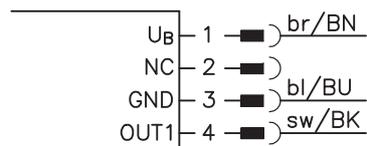


5 ... 1,800mm
800mm with
black-white error < 10%



- Adjustable scanner with background suppression
- Reliable detection of light and dark, as well as inclined or sloped surfaces
- Exact scanning range adjustment through multiturn potentiometer
- Fast alignment through *brightVision*®
- A²LS - Active Ambient Light Suppression

Electrical connection

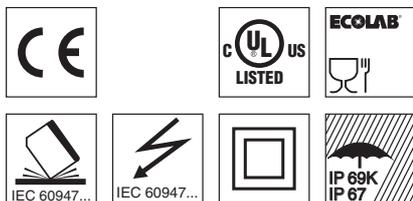


Accessories:

(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_HRTR46B_200_S8_en.fm



Specifications

Optical data

Typ. scanning range limit (white 90%)¹⁾
 Scanning range²⁾
 Adjustment range
 Light source
 Wavelength

Red light

5 ... 1,800mm
 see tables
 120 ... 1,800mm
 LED (modulated light)
 620nm (visible red light)

Timing

Switching frequency 200Hz
 Response time 2.5ms
 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 .../4D. ... PNP switching output
 pin 4: PNP dark switching
 $\geq (U_B - 2V) / \leq 2V$
 max. 100mA

Signal voltage high/low
 Output current

Indicators

Green LED ready
 Yellow LED reflection
 Yellow LED, flashing reflection, no performance reserve

Mechanical data

Housing plastic
 Optics cover plastic
 Weight 65g (with cable and connector)
 Connection type cable with M8 connector, cable length: 200mm

Environmental data

Ambient temp. (operation/storage) -40°C ... +60°C / -40°C ... +70°C
 Protective circuit⁴⁾ 2, 3
 VDE safety class⁵⁾ 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) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 5) Rating voltage 50VAC

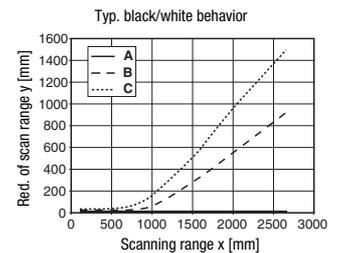
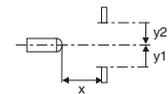
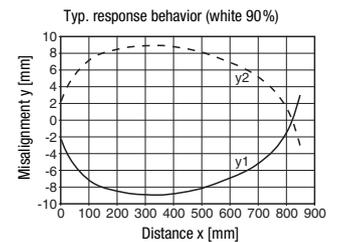
Tables

1	0	1,800
2	15	1,000
3	20	700

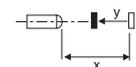
1	white 90%
2	grey 18%
3	black 6%

Scanning range [mm]

Diagrams



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



Order guide

Cable with M8 connector and snap locking

No contact with pin 2, direct connection to AS-interface I/O coupling modules possible

Designation

HRTR 46B/4D, 200-S8.1

Part No.

50112101

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.