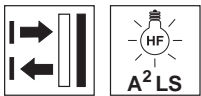


## HRTR 46B

## Diffuse reflection light scanner with background suppression

en 01-2009/11 50112184

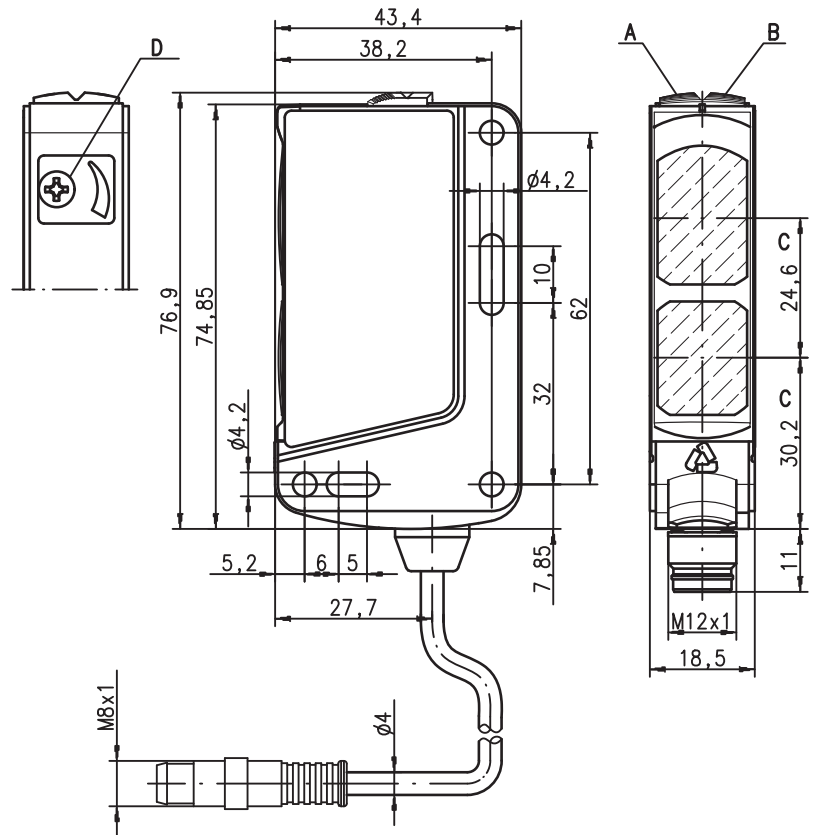


**5 ... 1,800mm**  
800mm with  
black-white error < 10%

10 - 30 V  
DC

- 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

### Dimensioned drawing



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

### Electrical connection

UB	1	br/BN
NC	2	
GND	3	bl/BU
OUT1	4	sw/BK



### 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%) <sup>1)</sup>  
 Scanning range <sup>2)</sup>  
 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  $U_B$  <sup>3)</sup> 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  
 Signal voltage high/low ≥ ( $U_B - 2V$ ) / ≤ 2V  
 Output current max. 100mA

### 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 circuit <sup>4)</sup> 2, 3  
 VDE safety class <sup>5)</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) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 5) Rating voltage 50VAC

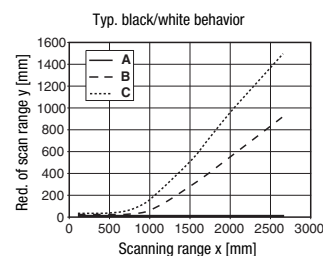
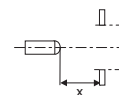
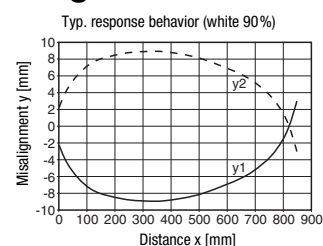
## Tables

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

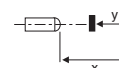
1	white 90%
2	grey 18%
3	black 6%

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.