

## IHRT 46B

## Diffuse reflection light scanner with background suppression

en 01-2011/09 50116674

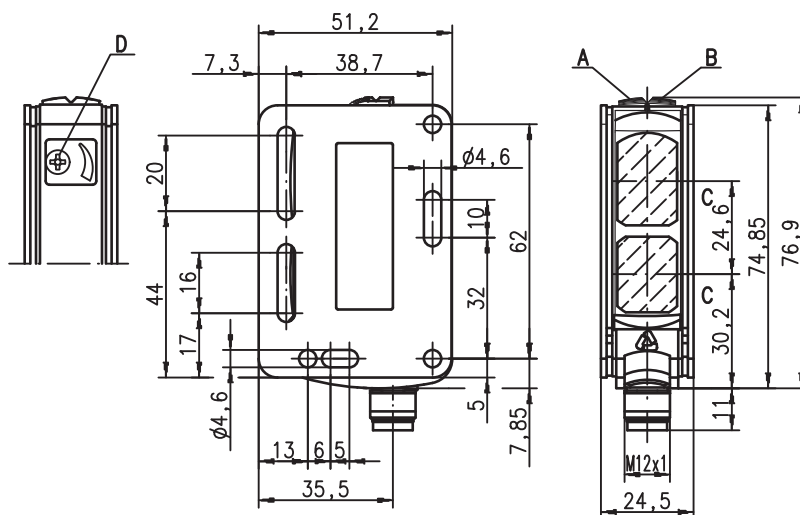


**0 ... 1,000mm**  
800mm with  
black-white error < 10%



- 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
- Mechanical window cover
- Optimized for use in dusty atmospheres
- Warning output - for increased availability
- A²LS - Active Ambient Light Suppression

### Dimensioned drawing



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

### Electrical connection

Connector, 4-pin

U <sub>B</sub>	1	br/BN
OUT*)	2	ws/WH
GND	3	bl/BU
OUT1	4	sw/BK

Selection pin 2

*)	OUT
	warn

### 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\_IHRT46B\_4\_en.fm



## Specifications

### Optical data

Typ. scanning range limit (white 90 %) <sup>1)</sup>  
 Scanning range <sup>2)</sup>  
 Adjustment range  
 Light source <sup>3)</sup>  
 Wavelength

### Infrared light

0 ... 1,000mm  
 see tables  
 120 ... 1,000mm  
 LED (modulated light)  
 850nm

### Timing

Switching frequency 100Hz  
 Response time 5ms  
 Delay before start-up ≤ 100ms

### Electrical data

#### With transistor switching outputs

Operating voltage  $U_B$  <sup>4)</sup> 10 ... 30VDC (incl. residual ripple)  
 Residual ripple ≤ 15% of  $U_B$   
 Open-circuit current ≤ 30mA  
 Switching output .../4.21... PNP switching output, pin 4: PNP light 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 / optics cover plastic with metal cover / plastic  
 Weight 110g  
 Connection type M12 connector

### 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

### Options

**Warning output autoControl warn** PNP transistor, counting principle  
 Signal voltage high/low ≥ ( $U_B - 2V$ ) / ≤ 2V  
 Output current max. 100mA

- 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) Average life expectancy 100,000 h at an ambient temperature of 25°C  
 4) For UL applications: for use in class 2 circuits only  
 5) 2=polarity reversal protection, 3=short-circuit protection for all outputs  
 6) Rating voltage 50V

## Order guide

The sensors listed here are preferred types; current information at [www.leuze.com](http://www.leuze.com).

	Designation	Part no.
<b>With M12 connector</b>		
Warning output, display low performance reserve	IHRT 46B/4.21-S12	50112941

## Tables

1	0	1,000
2	0	900
3	30	800

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

☐ Scanning range [mm]

## Diagrams

## 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.