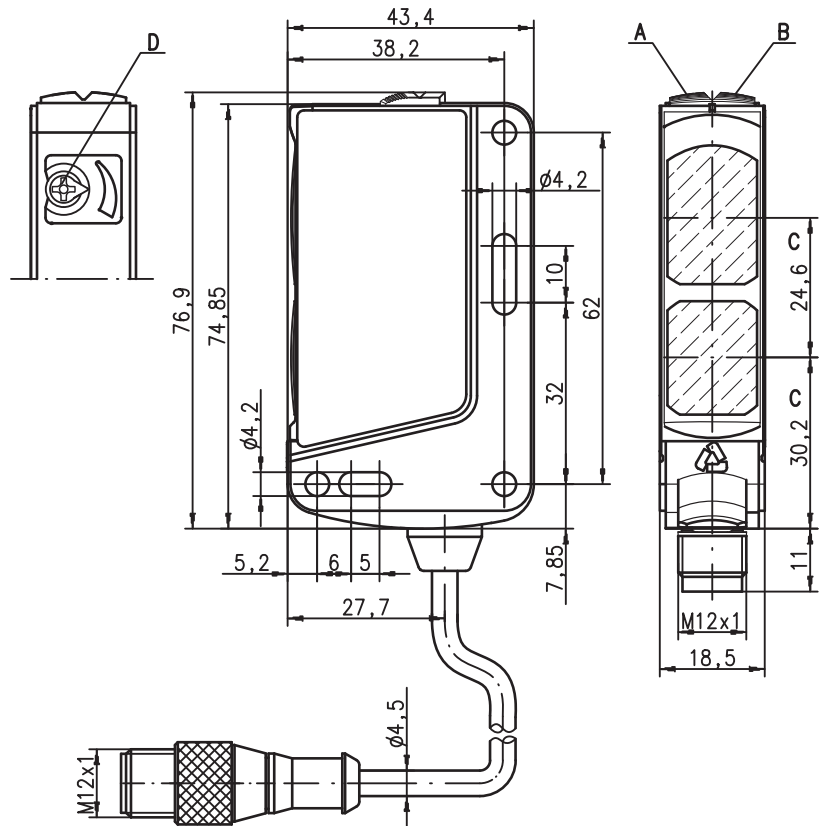


HRT 46B "Roller conveyor"

Diffuse reflection light scanner

Dimensioned drawing

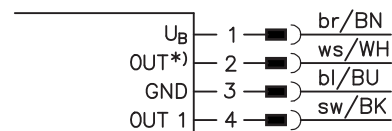
en 02-2010/02 50112100



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

Electrical connection

Plug connection, 4-pin



*) OUT 2 or no contact



10 ... 1200mm
800mm with
black-white error < 10%



- Reliable detection of objects between the rollers of a roller conveyor
- Reliable detection of light and dark, as well as inclined or sloped surfaces
- Reliable detection of objects which have undefined heights and of objects which extend over pallet edges.
- Complementary switching outputs for optimal adaptation to the application
- A²LS - Active Ambient Light Suppression

We reserve the right to make changes • DS_HRT46B-1_en.fm



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 ...)

Specifications

Optical data

Typ. scanning range limit (white 90%) ¹⁾
 Scanning range ²⁾
 Adjustment range
 Light source
 Wavelength

Infrared light

10 ... 1200mm
 see tables
 120 ... 1200mm
 LED (modulated light)
 850nm

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 ≤ 30mA
 Switching output .../66. ... 2 push-pull switching outputs ⁴⁾
 pin 2: PNP dark switching, NPN light switching
 pin 4: PNP light switching, NPN dark switching
 PNP switching output, pin 4: PNP light switching
 .../4. ... $\geq (U_B - 2V) / \leq 2V$
 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 50g
 Connection type M12 connector

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

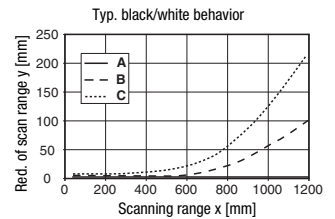
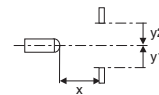
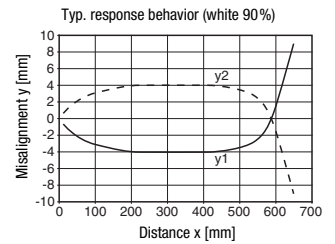
Tables

1	10	1,200
2	15	1,000
3	20	800

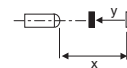
1	white 90%
2	grey 18%
3	black 6%

Scanning range [mm]

Diagrams



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



Order guide



The sensors listed here are preferred types; current information at www.leuze.com.

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

Designation

HRT 46B/66.1-S12
 HRT 46B/4.1-S12

Part No.

50111640
 50111618

Remarks

- The sensor is designed for roller conveyor applications for the detection of objects between two rollers (distance between rollers ≥ 6mm).

HRT 46B "Roller conveyor"

Diffuse reflection light scanner

Type key

I	H	R	T	4	6	B	/	4	D	.	1	-	6	0	0	F	-	S	1	2
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Operating principle / construction

HRT Infrared-light scanner with background suppression
IHRT Infrared-light scanner with background suppression, with warning output

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 or warning output
/6 Pin 4: push-pull switching output, pin 2: no contact
/7 Relay, make-contact

Function characteristics

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

Special functions

.1 Detection of objects between the rollers of a roller conveyor

Product modifications

-xxxx Scanning range in mm, only for preset sensors (only on request)
F Permanent setting (only on request)

Electrical connection

N/A cable, PVC, standard length 2000 mm
S12 M12 connector, 4-pin, axial
200-S12 cable, PVC, length 200mm with M12 connector, 4-pin, axial

● 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.

