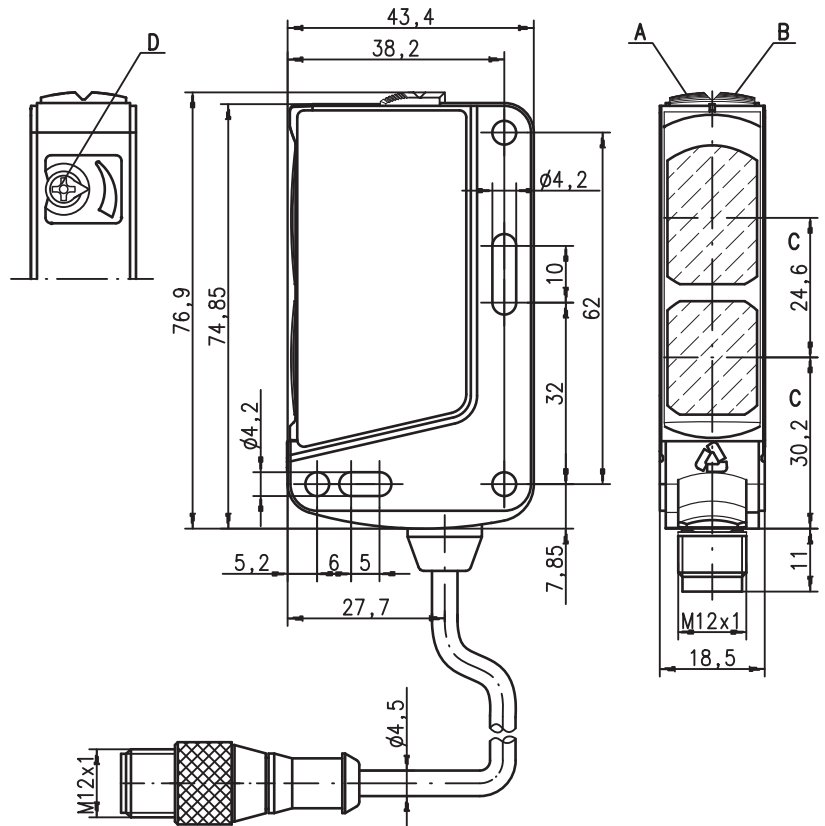


HRT 46B "Roller conveyor"

Diffuse reflection light scanner

Dimensioned drawing

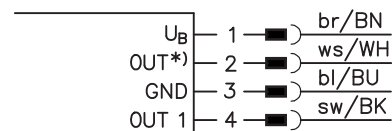
en 02-2010/02 50112100



- 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		Infrared light
Typ. scanning range limit (white 90%) ¹⁾	10 ... 1200mm	see tables
Scanning range ²⁾	120 ... 1200mm	LED (modulated light)
Adjustment range	120 ... 1200mm	850nm
Light source		
Wavelength		
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⁾
	.../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
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		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

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	Part No.
HRT 46B/66.1-S12	50111640
HRT 46B/4.1-S12	50111618

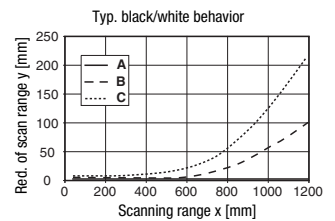
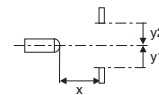
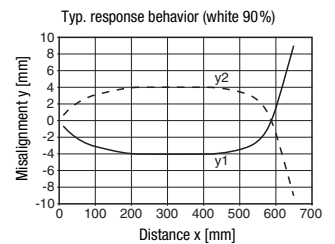
Tables

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

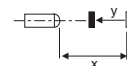
1	white 90%
2	grey 18%
3	black 6%

Scanning range [mm]

Diagrams



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



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.

