

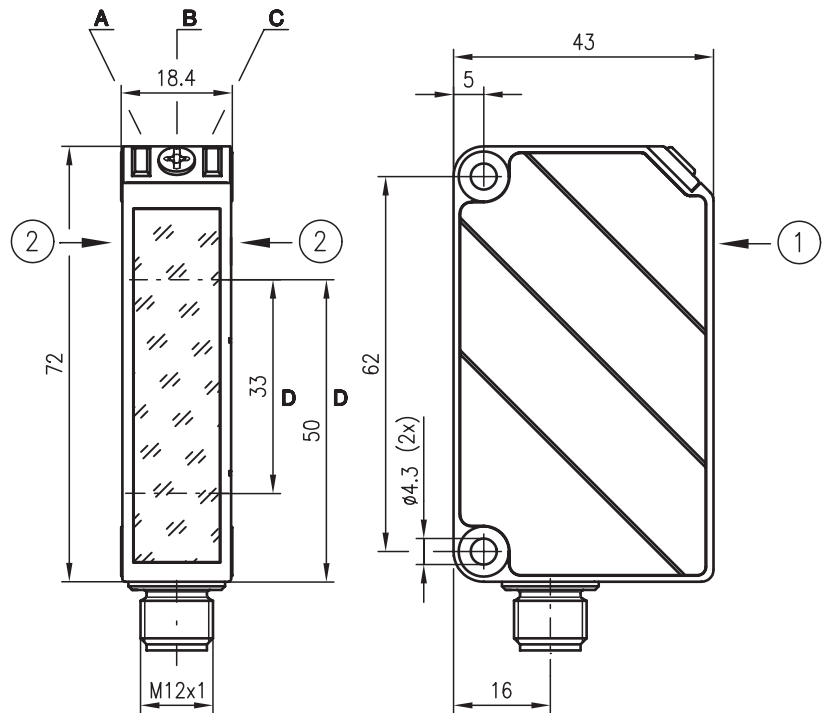


HRT 46

Diffuse reflection light scanner with background suppression



Dimensioned drawing



- A Indicator diode green
- B Scanning range adjustment
- C Indicator diode yellow
- D Optical axis

Preferred direction for movement of the test object ① + ②



10 ... 1000mm

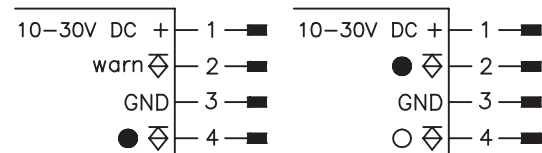


- Adjustable scanner with background suppression
- Safe detection of light and dark, as well as inclined or sloped surfaces
- Exact scanning range adjustment through multiturn potentiometer
- Complementary switching outputs for optimal adaptation to the application
- Warning output - for increased availability
- Solid plastic housing, protection class IP 67 (IP 69K optional) for industrial application

Electrical connection

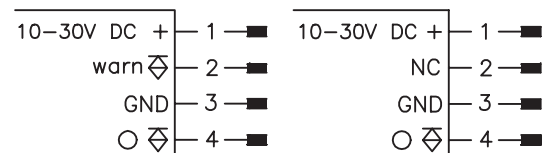
- HRT 46/44-800-S12
- HRT 46/44.6-800-S12
- HRT 46/44.01-800-S12

IHRT 46/4D-800-S12



IHRT 46/4-800-S12
IHRT 46/4.01-800-S12

HRT 46/4-800-S12



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*46_d01e.fm

Specifications

Optical data

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

Infrared light

0 ... 1000mm
 see tables
 300 ... 800mm
 LED (modulated light)
 880nm

Timing

Switching frequency (I)HRT 46/...01... 100Hz
 other models 200Hz
 Response time (I)HRT 46/...01... 5ms
 other models 2.5ms
 Delay before start-up ≤ 100ms

Electrical data

Operating voltage U_B 10 ... 30VDC (incl. residual ripple)
 Residual ripple ≤ 15% of U_B
 Bias current ≤ 30mA
 Switching output PNP transistor
 Function characteristics HRT46/44-... light/dark switching (complementary)
 IHRT46/4D... dark switching
 (I)HRT 46/4... light switching

Signal voltage high/low ≥ ($U_B - 2V$) / ≤ 2V
 Output current max. 100mA

Indicators

LED green ready
 LED yellow reflection
 LED yellow flashing reflection, no performance reserve

Mechanical data

Housing plastic
 Optics cover plastic
 Weight 100g
 Connection type M12 connector

Environmental data

Ambient temp. (operation/storage) -30°C ... +60°C / -40°C ... +70°C
 Protective circuit ³⁾ 2, 3
 VDE safety class ⁴⁾ II, all-insulated
 Protection class IP 67, IP 69K ⁵⁾
 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. scanning range limit: max. attainable range without performance reserve
- 2) Scanning range: recommended range with performance reserve
- 3) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 4) Rating voltage 250 VAC
- 5) HRT 46/44.6-800-S12 only: IP 69K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives, acids and bases are not part of the test

Order guide

With M12 connector

Complementary switching output
 Complementary switching output, protection class IP 69K
 Dark switching with warning output
 Light switching with warning output
 Light switching, for AS-interface I/O coupling modules
 Light switching with warning output, optimised for dark, shining objects
 Complementary switching output, optimised for dark, shining objects

Designation	Part No.
HRT 46/44-800-S12	500 80979
HRT 46/44.6-800-S12	500 40432
IHRT 46/4D-800-S12	500 80978
IHRT 46/4-800-S12	500 35779
HRT 46/4-800-S12	501 03559
IHRT 46/4.01-800-S12	501 04065
HRT 46/44.01-800-S12	501 06436

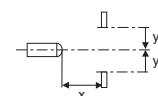
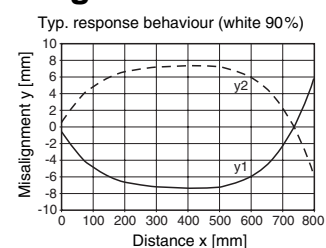
Tables

1	5	800	1000
2	10	780	900
3	15	750	880

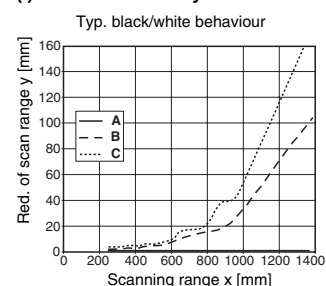
1	white 90%
2	grey 18%
3	black 6%

Scanning range [mm]
 Typ. scanning range limit [mm]

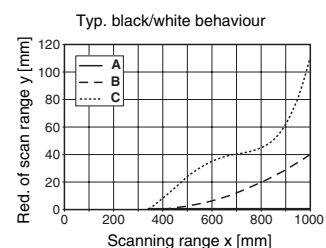
Diagrams



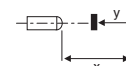
(I)HRT 46/...01... only:



Other models:



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



Remarks

- With the set scanning range, a tolerance of the upper scanning range limit is possible depending on the reflection properties of the material surface.