

HRTU 418 RM/WM

Ultrasonic sensors

Dimensioned drawing

en 06-2014/11 50109145



30 ... 200mm
100 ... 700mm



- Colour and transmission independent detection of objects
- Switching behaviour largely independent of surface properties
- Distance teachable
- Small construction

We reserve the right to make changes • DS_HRTU418RMM5020_en_50109145.fm



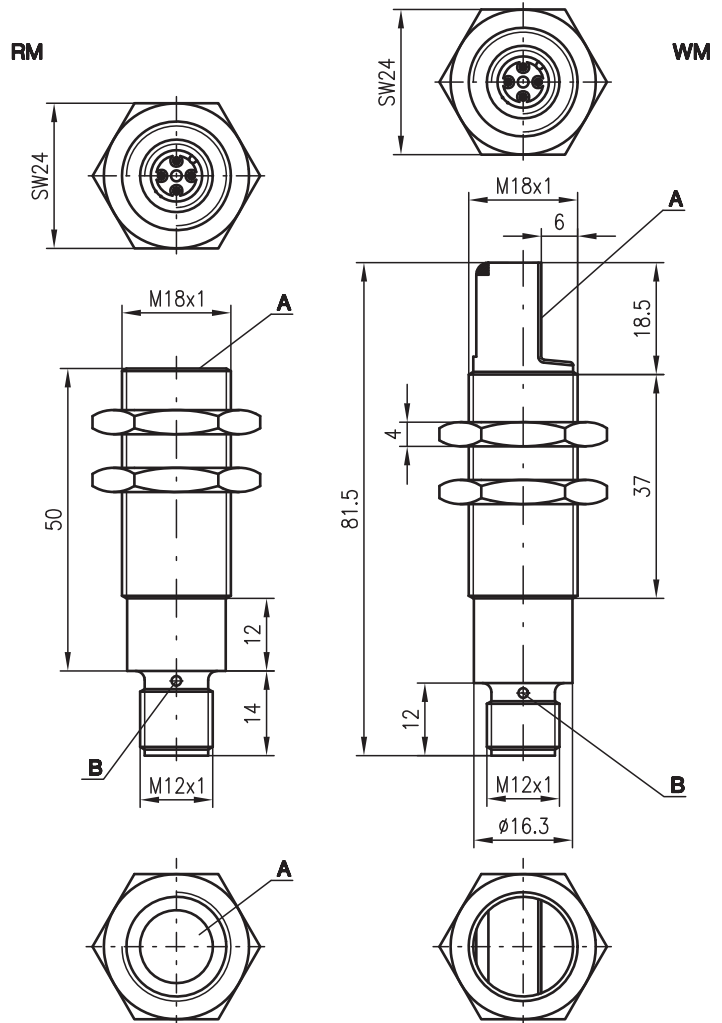
Accessories:

(available separately)

- Mounting systems
- Cable with M12 connector (K-D ...)

RM

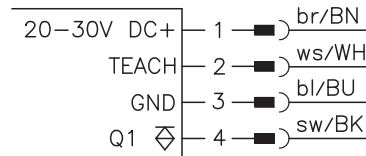
WM



- A** Active surface
- B** Indicator diode Q1

Electrical connection

...418 RM/WM/P...



Specifications

Ultrasonic specifications

Operating range ¹⁾
 Adjustment range
 Ultrasonic frequency
 Typ. opening angle
 Resolution
 Direction of beam

Reproducibility
 Switching hysteresis
 Temperature drift

Timing

Switching frequency
 Response time
 Delay before start-up

Electrical data

Operating voltage U_B ²⁾
 Residual ripple
 Bias current
 Switching output
 Function characteristics
 Output current
 Switching range adjustment

Indicators

Yellow LED
 Flashing yellow LED

Mechanical data

Housing
 Weight
 Ultrasonic transducer
 Connection type

Environmental data

Ambient temp. (operation/storage)
 Protective circuit ⁴⁾
 VDE safety class
 Protection class
 Standards applied
 Fitting position
 Certifications

HRTU 418...-200-S12

30 ... 200mm
 50 ... 200mm
 400kHz
 see diagrams
 HRTU 418RM/P...: straight,
 HRTU 418WM/P...: angular, 90°
 ± 1 mm
 10mm
 ± 0.17%/K

HRTU 418...-700-S12

100 ... 700mm
 150 ... 700mm
 200kHz
 5Hz
 100ms
 20ms

20 ... 30V DC (incl. ± 10% residual ripple)
 ± 10% of U_B
 ≤ 20mA
 PNP transistor
 switching in case of object recognition
 150mA
 teach-in, teach input (pin 2) connected to GND for ≥ 3s

output activated
 teaching procedure

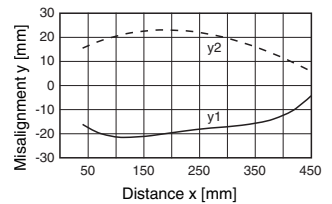
metal / CuZn
 50g
 piezoceramic ³⁾
 M12 connector, plastic, 4-pin

-25°C ... +70°C/-40°C ... +85°C
 1, 2, 3
 III
 IP 65
 IEC 60947-5-2
 any
 UL 508, C22.2 No.14-13 ^{2) 5)}

Diagrams

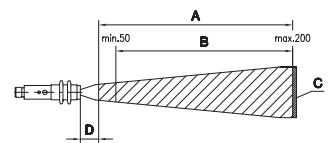
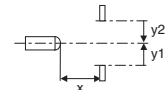
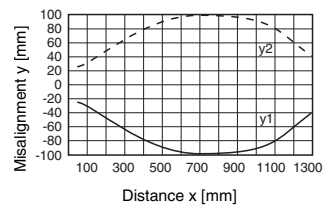
HRTU 418 ...-200-S12

Typ. response behaviour (object 20x20mm)



HRTU 418 ...-700-S12

Typ. response behaviour (object 20x20mm)



- A Operating range
- B Adjustment range
- C Object
- D Dead zone

Remarks

Operate in accordance with intended use!

- ⚠ This product is not a safety sensor and is not intended as personnel protection.
- ⚠ The product may only be put into operation by competent persons.
- ⚠ Only use the product in accordance with the intended use.

- **Teaching procedure:**
 Position measured object at the desired measurement distance. Connect teach input (pin 2) to GND for ≥ 3s. Reconnect teach input to + U_B or leave unconnected; switching output is taught.
- **Temperature drift**
 ± 0.17%/K

Order guide

	Designation	Part No.
Operating range: 30 ... 200mm, direction of beam: straight	HRTU 418RM/P-5020-200-S12	50038635
Operating range: 30 ... 200mm, direction of beam: 90°	HRTU 418WM/P-5020-200-S12	50038636
Operating range: 100 ... 700mm, direction of beam: straight	HRTU 418RM/P-3020-700-S12	50038639
Operating range: 100 ... 700mm, direction of beam: 90°	HRTU 418WM/P-3020-700-S12	50038640