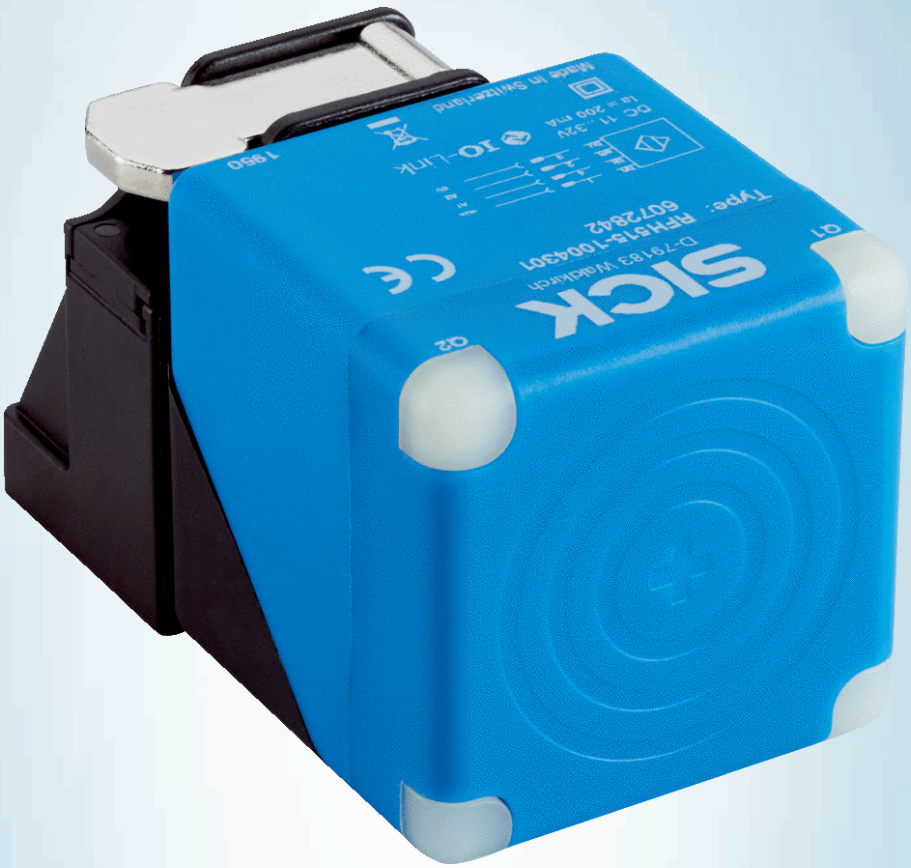
Data sheet



RFH515-1004301

RFH5xx

RFID

SICK
Sensor Intelligence.

Ordering information

Type	part no.
RFH515-1004301	6072842

Other models and accessories ➜ www.sick.com/RFH5xx

Detailed technical data

Features

Version	Short Range
Product category	RFID read/write device with integrated antenna
Radio approval	European Union [1] USA Canada Australia Korea México China India United Kingdom Israel Singapore
Frequency band	HF (13.56 MHz)
Carrier frequency	13.56 MHz
RFID standard	ISO/IEC 15693, ISO/IEC 18000-3 “Mode 1”
Connection type	IO-Link
Read range	≤ 80 mm [2]
Antenna	Integrated
Air interface data transmission rate	26 kbit/s

[1] All member states of the European Union, EEA-EFTA states (Liechtenstein, Iceland, Norway), Switzerland, Turkey.
[2] With RFID ISO card transponder in plane parallel alignment to read/write device antenna; depending on dimensions and quality of transponder.

Mechanics/electronics

Connection type	1 x M12, 4-pin male connector
Supply voltage	11 V DC ... 32 V DC
Power consumption	≤ 1.8 W
Housing material	Brass (chromium-plated) PBTP (blue)

[1] Continuous operation at ambient operating temperature +25 °C, 322 years at +40 °C, 41 years +80 °C.

Enclosure rating	IP68
Protection class	II
Weight	108 g, incl. bracket
Dimensions (L x W x H)	40 mm x 40 mm x 67 mm
Design	Cubical (C44)
MTTF	> 756 years [1]

[1] Continuous operation at ambient operating temperature +25 °C, 322 years at +40 °C, 41 years +80 °C.

Interfaces

IO-Link	✓ , IO-Link V1.1
Remark	Process data length: IN (input), 32 bytes; OUT (output), 32 bytes
Function	Process data, parameterization, diagnosis
	Data interface (read result output)
Data transmission rate	COM3 (230,4 kBaud)
Digital outputs	1 (Q_2, Switching, PNP, in IO-Link mode) 2 (Q_1, Q_2, Switching, PNP, in SIO mode)
Optical indicators	4 LEDs, multi-color (Process feedback)
Configuration software	PLC software SOPAS ET [1]

[1] In combination with SiLink2 Master or SIG200.

Ambient data

Electromagnetic compatibility (EMC)	EN 301489-3 V1.6.1 (2013)
Vibration resistance	IEC 60068-2-6:2007-12 (10 Hz to 55 Hz / 1 min / 5 min)
Shock resistance	IEC 60068-2-27:2008-02 (30 gn / 11 ms / half-sine)
Ambient operating temperature	–25 °C ... +80 °C
Storage temperature	–25 °C ... +80 °C
Permissible relative humidity	0% ... 95%, non-condensing

Certificates

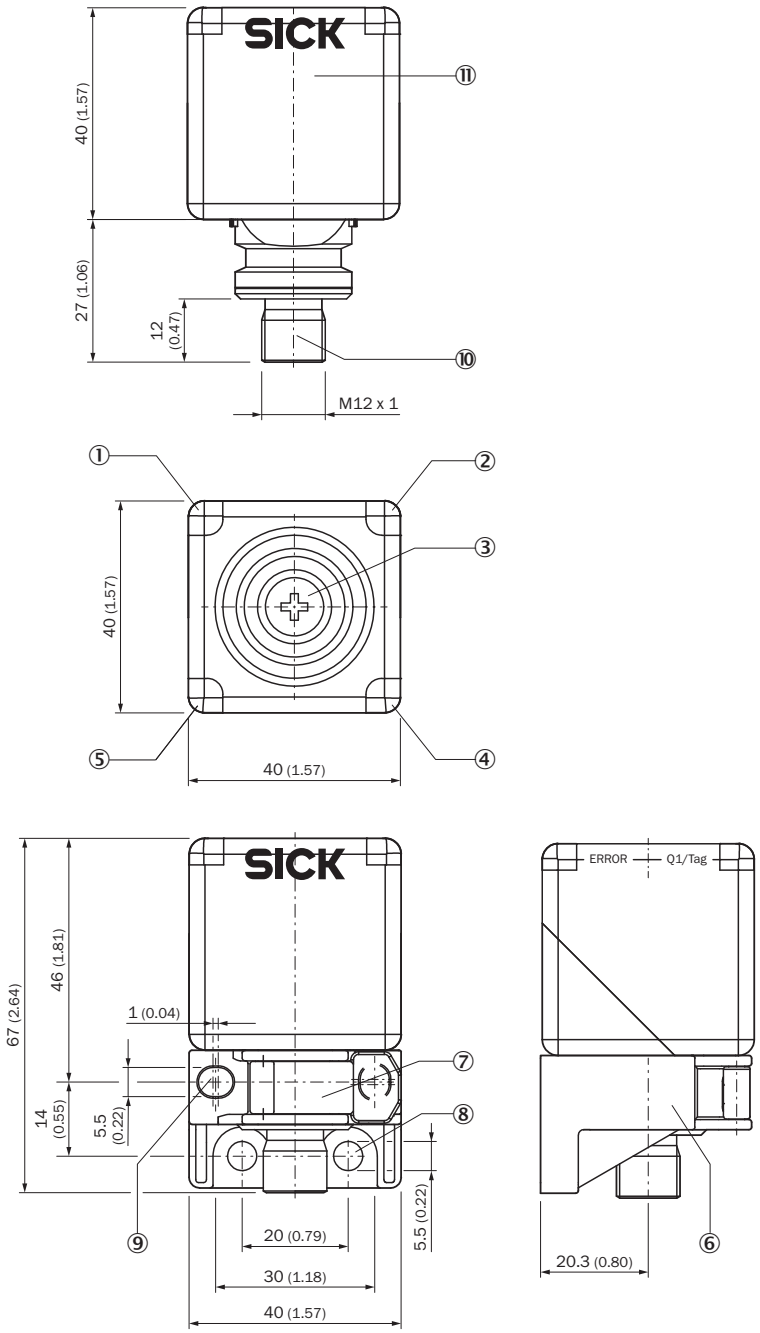
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓
FCC certificate	✓
Radio Approval certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27280401
ECLASS 5.1.4	27280401
ECLASS 6.0	27280401
ECLASS 6.2	27280401

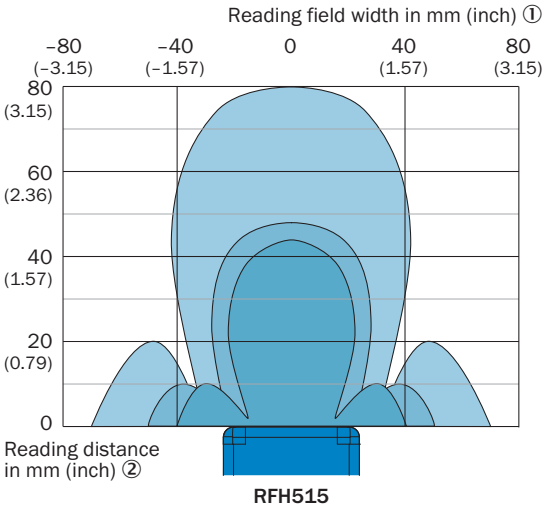
ECLASS 7.0	27280401
ECLASS 8.0	27280401
ECLASS 8.1	27280401
ECLASS 9.0	27280401
ECLASS 10.0	27280401
ECLASS 11.0	27280401
ECLASS 12.0	27280401
ETIM 6.0	EC002998
ETIM 7.0	EC002998
ETIM 8.0	EC002998
UNSPSC 16.0901	52161523

Dimensional drawing



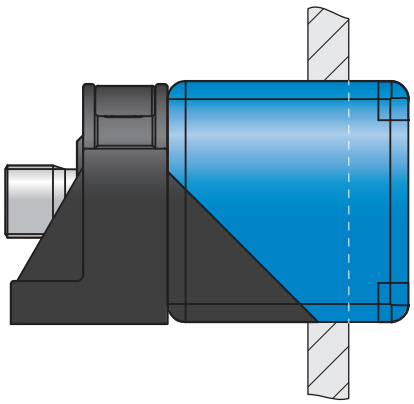
Dimensions in mm (inch)
① LED ERROR, display color red
② POWER LED, display color green
③ Cap with integrated antenna
④ LED Q2 / BUSY, display color yellow
⑤ LED Q1 / TAG, display color yellow
⑥ Terminal bracket
⑦ Bracket for locking the device in the clamping bracket
⑧ 2 x round hole for mounting
⑨ 2 x slot for alternative mounting In this view, right slot with 90° rotated orientation covered by closed bracket.
⑩ IO-Link connection (male connector, M12, 4-pin, A-coded)
⑪ Field for product identification data

Reading field diagram



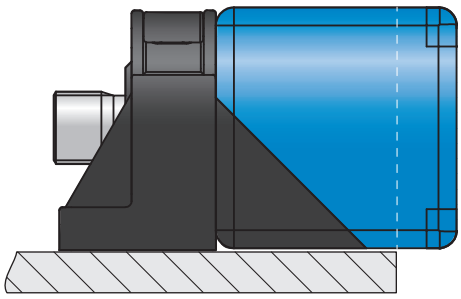
① Reading field width in mm (inch)
② Reading distance in mm (inch)

Assembly note RFH515 (in metal)



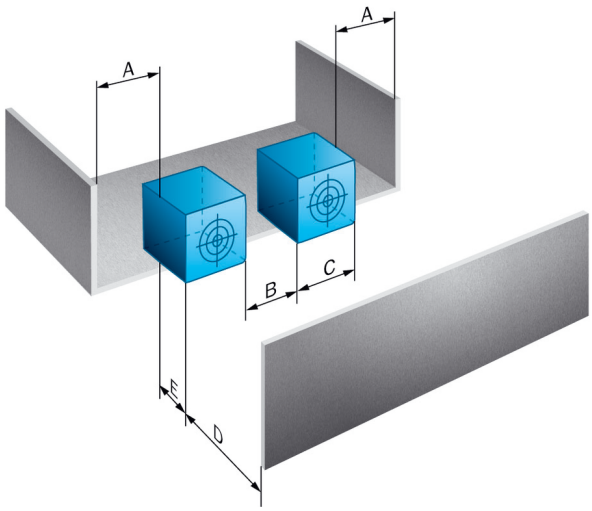
Recommended overrun of the active head when mounting the device in metal: about 10 mm (non-flush installation)

Assembly note RFH515 (on metal)



Recommended overrun of the active head when mounting the device on metal: about 10 mm

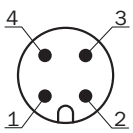
Assembly note Parallel mounting



Distances required to prevent mutual interference with parallel mounting of several devices as well as from the environment.

Distance	RFH515-1004301
A	40 mm
B	80 mm
C	40 mm
D	240 mm
E	10 mm

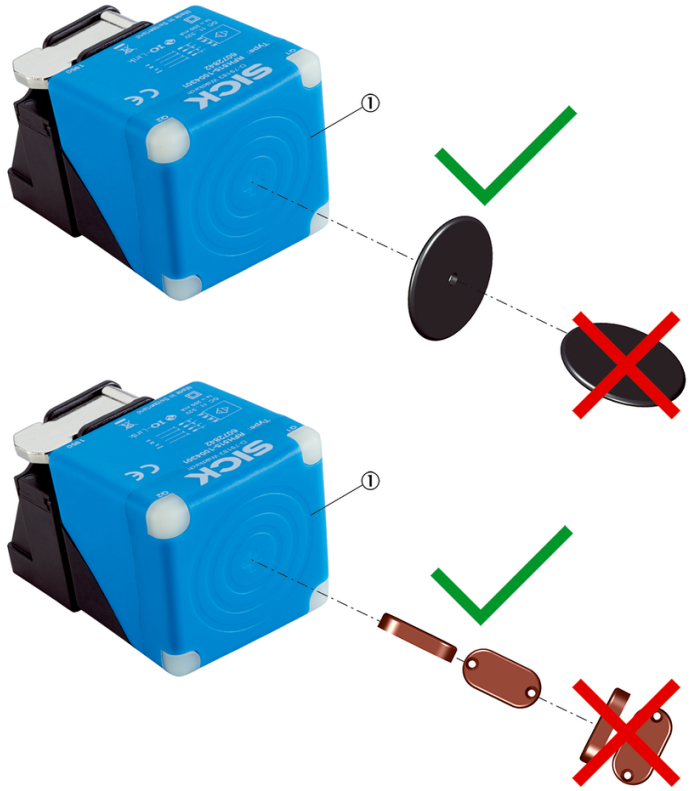
PIN assignment IO-Link connection



IO-Link connection (male connector, M12, 4-pin, A-coded)
① L+
② Q_2
③ L-

④ C/Q1

Application RFH515



Optimal alignment of the transponders for a reliable read and write process
① Cap with integrated antenna

Recommended accessories

Other models and accessories ➜ www.sick.com/RFH5xx

	Brief description	Type	part no.
RFID transponders			
	• **Memory capacity (EPC / user memory):** 896 Bit (28 x 4 Byte) (User Memory) • **Dimensions (L x W x H):** 12.5 mm x 25 mm x 5 mm	HF Transponder, rectangular, on-metal	6039051

	Brief description	Type	part no.
network devices			
		SIG200-0A0412200	1089794
		IOLA2US-01101 (SiLink2 Master)	1061790
connectors and cables			
	• **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 4-pin, straight, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 4-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A14- C60UB3M2A14	2095999

SICK AT A GLANCE

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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