



RFU610-10601

RFU61x

RFID / PROGRAMMABLE DEVICES

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
RFU610-10601	1099890

Included in delivery: Mounting kit (1)

Other models and accessories → www.sick.com/RFU61x



Detailed technical data

Features

Version	Short Range
Product category	Read/write device with integrated antenna
Radio approval	USA Canada México
Frequency band	UHF (860 MHz ... 960 MHz)
Carrier frequency	902.75 MHz ... 927.25 MHz
Output power	40 mW (EIRP, 16 dBm)
RFID standard	EPCglobal UHF Class 1 Generation 2, ISO/IEC 18000-6 C
Modulation	PR-ASK
Connection type	PoE, Power and Ethernet
Read range	≤ 0.5 m ¹⁾
Antenna	Integrated
Polarization	Circular
Axial ratio	Typ. 2 dB
Aperture angle	110°
Front-to-back ratio	> 5 dB

¹⁾ Depending on transponder used and ambient conditions.

Mechanics/electronics

Electrical connection	1 x M12, 4-pin male connector, A-coded 1 x M12, 8-pin female connector, X-coded 1 x M8, 4-pin female connector, A-coded 1 x USB, 5-pin micro-B socket
Supply voltage	18 V DC ... 30 V AC ¹⁾

¹⁾ PoE: 48 V DC ... 57 V DC in accordance with PoE technology.

²⁾ Operation at +50 °C.

Power consumption	6 W, standby 3 W
Housing	Aluminum die cast Plastic (PPS)
Enclosure rating	IP67
Protection class	III
Weight	313 g
Dimensions (L x W x H)	92 mm x 80 mm x 38 mm
MTBF	22 years ²⁾

¹⁾ PoE: 48 V DC ... 57 V DC in accordance with PoE technology.

²⁾ Operation at +50 °C.

Performance

Readable code structures	RFID transponders
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Interfaces

Ethernet	✓, TCP/IP
Function	Host, AUX
Data transmission rate	10/100 MBit/s
PROFINET	✓
Function	PROFINET Single Port, Host
Data transmission rate	10/100 MBit/s
EtherNet/IP™	✓
Function	Host
Data transmission rate	10/100 MBit/s
USB	✓
Remark	USB 2.0
Function	AUX
Digital inputs	1 (physical, switching, trigger sensor can be connected directly to the device (port 3) - max. 40 mA)
Optical indicators	4 LEDs, multi-color (device status) 4 RGB LED (Process feedback)
Configuration software	SOPAS ET CoLa commands (telegrams) Web server Fieldbus controller (PLC) with additional support by SICK function blocks, function buttons
Programming interface	Application-specific programming using the SICK AppStudio development environment
Memory card	microSD memory card (parameter cloning, data storage)

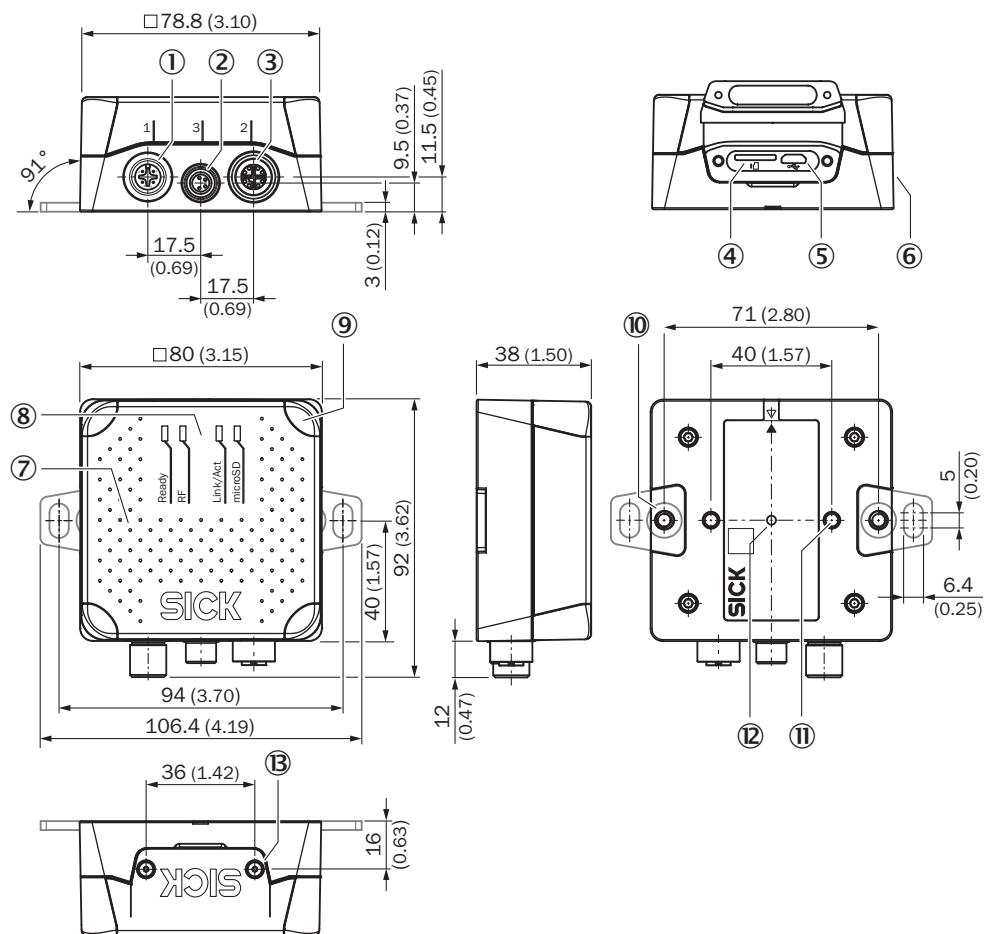
Ambient data

Electromagnetic compatibility (EMC)	EN 301489-3
Vibration resistance	EN 60068-2-6:2007
Shock resistance	EN 60068-2-27:2008
Ambient operating temperature	-25 °C ... +50 °C
Storage temperature	-40 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing

Classifications

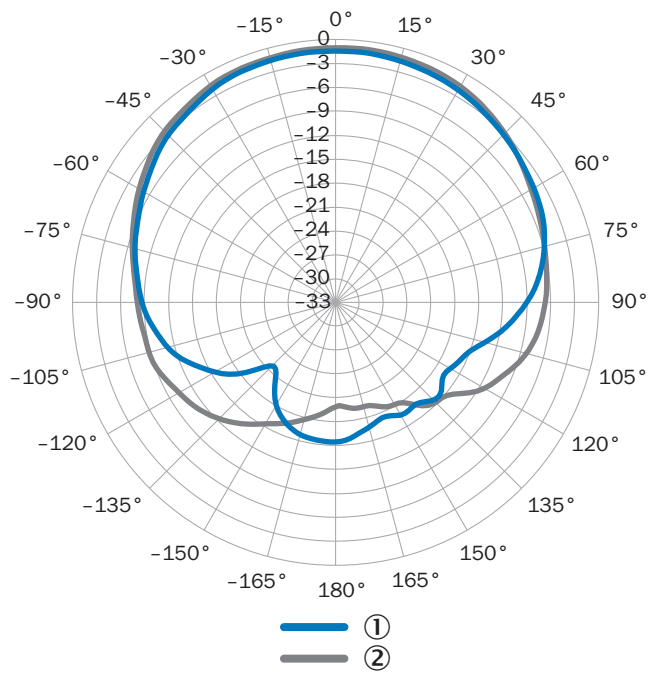
ECl@ss 5.0	27280401
ECl@ss 5.1.4	27280401
ECl@ss 6.0	27280401
ECl@ss 6.2	27280401
ECl@ss 7.0	27280401
ECl@ss 8.0	27280401
ECl@ss 8.1	27280401
ECl@ss 9.0	27280401
ETIM 6.0	EC002998
UNSPSC 16.0901	52161523

Dimensional drawing (Dimensions in mm (inch))



- ① Port 1: Power (male connector, M12, 4-pin, A-coded)
- ② Port 3: Trigger (female connector, M8, 4-pin, A-coded)
- ③ Port 2: PoE (female connector, M12, 8-pin, X-coded)
- ④ Slot for microSD memory card
- ⑤ "USB" connection (female connector, 5-pin, type Micro-B) interface for temporary use (service)
- ⑥ Side type label
- ⑦ Cover with integrated antenna
- ⑧ 4 x multi-colored LED (status)
- ⑨ 4 x RGB LED (process feedback)
- ⑩ 2 x M5 blind tapped holes, 6 mm deep for attaching the mounting straps
- ⑪ 2 x M5 blind tapped holes, 7 mm deep for mounting the device
- ⑫ Type label with integrated pressure compensation membrane
- ⑬ 2 x screw (M2,5 socket screw), captive, for side cover

Radiation pattern

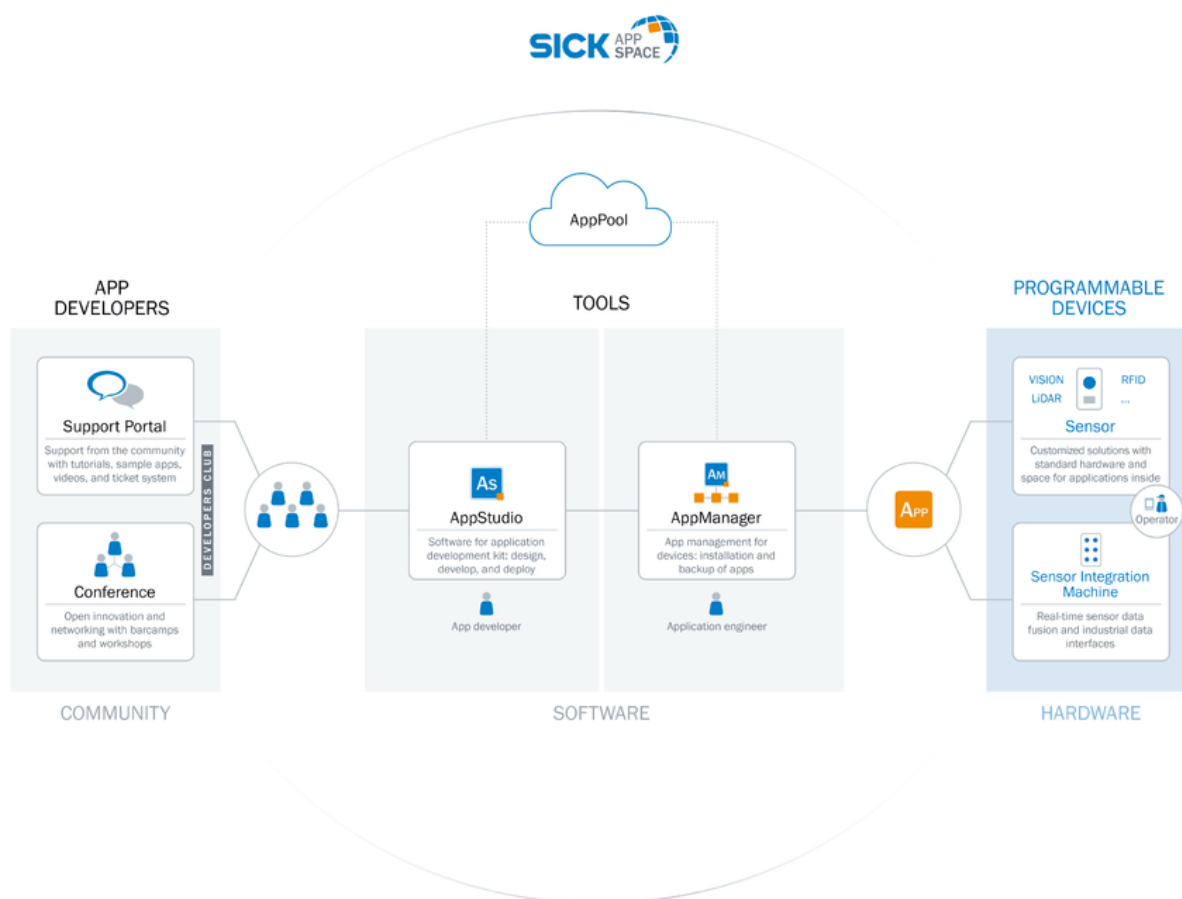


Measured antenna gain in dBic at 866.5 MHz, LHCP (left-hand circularly polarized)

- ① Horizontal plane (azimuth)
- ② Vertical plane (elevation)




Selection Guide




SICK AppSpace



Recommended accessories

Other models and accessories → www.sick.com/RFU61x

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A14-020UB3XLEAX	2095607
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: male connector, M8, 4-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF8U14-020UA3M8U14	2096347
	Head A: male connector, M12, 8-pin, straight, X-coded Head B: male connector, RJ45, 8-pin, straight Cable: Gigabit Ethernet, twisted pair, PUR, halogen-free, shielded, 2 m	YM2X18-020EG2MRJA8	6049728

	Brief description	Type	Part no.
Reflectors			
	Rectangular, screw connection, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812
Others			
	UHF transponder, global, paper, 97 mm x 15 mm, Impinj Monza 4E	UHF Transponder, paper label, global	6070051
Photoelectric sensors			
	Photoelectric sensor enclosed in a miniature housing	GL6-P4211	1059241

Recommended services

Additional services → www.sick.com/RFU61x

	Type	Part no.
Warranty extensions		
<ul style="list-style-type: none"> • Product area: Identification solutions, Vision, Distance sensors, Detection and ranging solutions • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase), Long-term protection for calculable lump sum. • Duration: Five-year warranty from date of purchase. 	Five-year extended warranty	1680671
Commissioning		
<ul style="list-style-type: none"> • Product area: RFID • Range of services: Inspection of connection, alignment, optimization of parameters of the RFU/RFH as well as verification tests, Setup of previously defined functions of reading configuration, data processing and network, interfaces and inputs and outputs • Documentation: Archiving of product parameters in a SICK database, Documentation of reading rate, Creation of a commissioning log • Duration: Additional work will be invoiced separately • Note: The prices do not include expenses or costs for the travel time 	Commissioning RFU/RFH	1610018
Training		
<ul style="list-style-type: none"> • Product family group: RFID • Range of services: SICK offers training courses for numerous target groups ranging from basic to expert levels, the training format and location can be worked out in collaboration with SICK • Note: A minimum and maximum number of participants is determined based on the training format, depending on the training format, content and location, a training course may take place over the course of one or more work days • Duration: The fixed price includes the specific training services agreed upon, the fixed price includes the work time required for the training services, the required work time depends on the range of services, Additional work will be invoiced separately • Travel expenses: The prices include costs for the travel time and expenses, travel costs, such as flight or hotel expenses, are not included 	RFH/RFU training	1612233

	Type	Part no.
Maintenance		
<ul style="list-style-type: none"> • Product area: RFID • Range of services: Inspection, analysis and restoring of defined functions, Checking and adjustment of reading configuration, data processing, network, interfaces and inputs and outputs as well as operating data • Documentation: Documentation of operating hours and archiving of parameters in a SICK database, Documentation of the read rate, for RFU log file with parameters such as RSSI, Tx-Pwr, CS and reading gate duration, Creation of a maintenance log • Duration: Additional work will be invoiced separately • Note: The prices do not include expenses or costs for the travel time 	Maintenance RFU/RFH	1611424

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com