SIU
for Lector Viewer

SICK
Sensor Intelligence.

Intended use

The Sensor Integration Unit (referred to as SIU below) is an integration unit for SICK sensors and is used for the implementation of system solutions in industrial environments.

The SIU is used to display the results of read operations and state information as well as for the simple configuration of camera-based code readers of type Lector®6xx.

The SIU, its accessories and the Lector Viewer may only be employed in accordance with their intended use. In the case of any other usage or in the event of any modifications to the device (e.g. by opening the housing) or to the SICK software, any warranty claims against SICK AG shall be null and void.

About this document

This Quickstart document describes the SIU for use with the Lector Viewer and the camera-based code readers of type Lector®6xx. It contains all the information needed in order to use the device.

Before starting to work with the SIU, read this Quickstart document carefully and make sure that you are familiar with the device. The information on correct and safe operation of the system presented here will help you avoid personal injury or damage to property.

Additional and other applicable documents

For further information on the SIU and Lector Viewer operation, please refer to the relevant product manuals.

The SIU manual describes the following aspects in detail:

- Physical interfaces and pinouts of all connectors
- Installation
- Operation
- Basic functions

The Lector Viewer manual provides a detailed description of the following application functions:

- System and status information
- Match-code teach-in
- Auto setup
- Parameter switching
- Multi-view
- Sensor-specific configuration settings

The current Quickstart document as well as the manuals and other documents can be downloaded from the Internet as follows:

1. Go to http://www.sick.com and choose your country and language.
2. Enter the model type or order number of the SIU in the search box.
3. You will find all the documents and additional downloads in the Downloads section.

To display PDF documents on your PC, you will need PDF viewer software, e.g. Adobe Reader (http://get.adobe.com/reader).

You can also obtain support from your sales partner: *www.sick.com/worldwide.*

For your safety

It is essential that the SIU is transported, stored, installed and used correctly in accordance with its intended use in order to ensure error-free, safe operation.

The SIU may only be installed, operated, used and maintained by appropriately trained, authorized specialist personnel. Specialist personnel are individuals who possess the technical training, knowledge and experience necessary in order to understand the tasks entrusted to them, evaluate these and identify possible hazards.

⚠ CAUTION

To prevent the risk of electric shock, do not open the housing of the SIU. The housing does not contain any user-serviceable parts.

Installation and commissioning

Scope of delivery

The following components and accessories are supplied with the SIU:

- SD card containing the Lector Viewer installation
- Software license key
- Quickstart document

Step 1: Mounting the SIU

You can mount the device on any sufficiently stable support outside of the control cabinet. To do this, use the mounting holes on the back of the device (indicated in green in *Figure 1*).
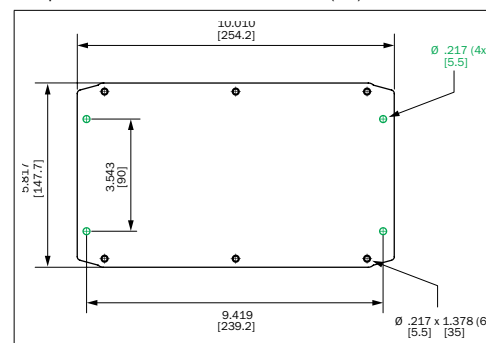
Use pan-head screws of size M5 or #10 (US).

Figure 1: SIU, dimensions and mounting holes, (all dimensions in inches [millimeters])

Step 2: Connecting sensors to the SIU

Direct connection

Connect the Ethernet communication interface at the Lector®6xx to the SIU.

- For Lector®62x you can use the cable 6034420 (2m).
- We can supply you with connecting cables for Lector®63x/64x/65x on request.

Connection via network

First of all connect the Ethernet communication interface at the Lector®6xx to the network (e.g. via a switch).

- For Lector®62x you can use the cable 6034414 (2m).
- For Lector®63x/64x/65x, use the cable 6049728 (2m).

Then connect the Ethernet communication interface at the SIU to the network (e.g. via a switch). You can, for example, use the cable 6034414 (2m) to do this.

Step 3: Installing the power supply

- **The power supply may only be installed by a qualified electrician.**
- **When working at electrical installations, it is essential to comply with habitual safety requirements.**

To establish the power supply for the SIU, use a suitable cable to connect a 24 V electrical supply (power supply unit) to the device's DC connector (see *Figure 2*).

⚠ CAUTION

Before connecting the power supply unit to the SIU, make sure that the unit is unplugged from the mains supply.

The SIU does not have its own power switch. To switch off the device, remove the power supply cable from the DC connector.

Maintenance and cleaning

Maintenance

The SIU housing does not contain any user-serviceable parts. Please note that opening the housing shall render any warranty claims against SICK AG null and void.

Cleaning

Clean the touchscreen display with a soft, dry or slightly moistened cloth. Do not use any solvents or high-pressure cleaners.

Replacing the memory card

The SIU possesses an SD memory card which is already inserted in the memory card slot when the device is shipped. The memory card slot is located below the cover on the right-hand side of the device (see *Figure 2*).

⚠ CAUTION

- Always disconnect the device from the power supply before removing or re-inserting the memory card.
- In all cases, take measures to protect against electrostatic discharge.

Proceed as follows to remove the memory card:

1. Make sure that the device is switched off.
2. Unscrew the cover on the right-hand side of the device.
3. Press the memory card carefully to release the lock in the slot.
4. Pull the memory card out of its slot.
5. To insert the memory card again, push it into the slot until it locks in place. Fix the cover again.

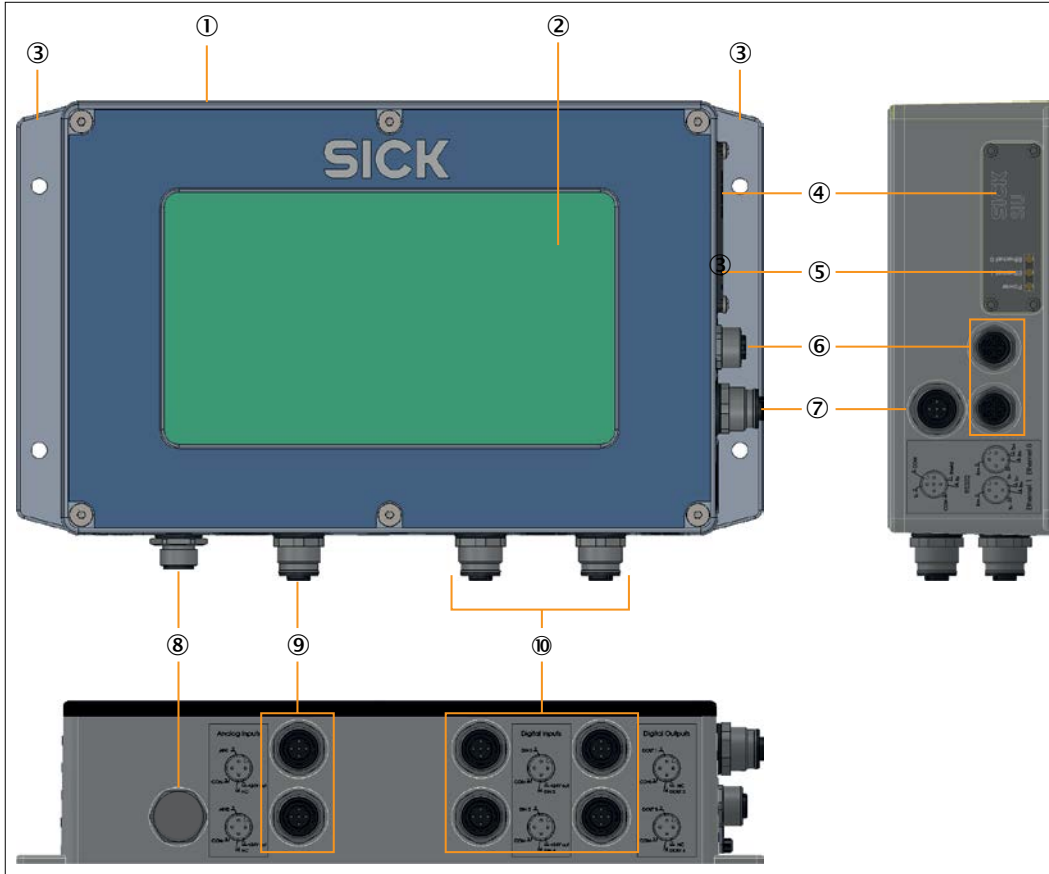## Description of the device

Device overview and interfaces

Figure 2: SIU, device overview and interfaces

① Housing with IP65 enclosure rating
② LCD touchscreen display
③ Mounting tabs (back plate)
④ Cover for USB ports and memory card slot
⑤ LED status indicator
⑥ Ethernet port
⑦ RS232 port
⑧ DC power connector
⑨ Ports 1 and 2 (with analog inputs)
⑩ Ports 3 to 6 (with digital inputs and outputs)

Overview of port/connector pinout and design

	DC connector		Ethernet ports		RS232 port	
Pin	**Signal**	**Description**	**Signal**	**Description**	**Signal**	**Description**
1	L+	24 V	Tx+	Fieldbus, transmitted signal, positive	Shield	Shield
2	NC	Not connected	Rx+	Fieldbus, received signal, positive	Tx	Send data
3	M	0 V	Tx-	Fieldbus, transmitted signal, negative	COM	Common terminal
4	NC	Not connected	Rx-	Fieldbus, received signal, negative	Rx	Receive data
5					NC	Not connected

	Analog inputs			
	Analog input 1		Analog input 2	
Pin	**Signal**	**Description**	**Signal**	**Description**
1	+24V out	Power supply +24V	+24V out	Power supply +24V
2	AIN1	Analog input	AIN2	Analog input
3	COM	Common terminal	COM	Common terminal
4	NC	Not connected	NC	Not connected

	Digital inputs				Digital outputs			
	Digital inputs 1 and 2		Digital inputs 3 and 4		Digital outputs 1 and 2		Digital outputs 3 and 4	
Pin	**Signal**	**Description**	**Signal**	**Description**	**Signal**	**Description**	**Signal**	**Description**
1	+24V out	Power supply +24V	+24V out	Power supply +24V	NC	Not connected	NC	Not connected
2	DIN 1	Sensor input	DIN 3	Sensor input	DOUT 1	Sensor output	DOUT 3	Sensor output
3	COM	Common terminal	COM	Common terminal	COM	Common terminal	COM	Common terminal
4	DIN 2	Sensor input	DIN 4	Sensor input	DOUT 2	Sensor output	DOUT 4	Sensor output

Status display

The following status LEDs are located on the right-hand side of the device:

- Power = Power supply
- Ethernet 1 = Ethernet communication
- Ethernet 0 = Ethernet/fieldbus communication

Figure 3: Status LEDs

Technical data (extract)

Type	SIU for Lector Viewer
Operating system	Linux 3.6
Processor	ARM (AM3358b), clock frequency: 1 GHz
Working memory (RAM)	256 MB, extensible to 512 MB
Processing power	2000 Dhrystone MIPS
Data transmission speed	100 Mbit/s (12.5 MB/s)
Sampling rate	250 kHz
Display	LCD touchscreen display, 7-inch (800 x 480)
Memory card	Capacity: 4 GB, extensible to 32 GB; Format: microSDHC
Supply voltage	SIU with external power supply: 24 V DC SIU with integrated power supply: 100 to 250 V AC, 50/60 Hz
Supply current	SIU with integrated power supply: max. 0.8 A
Overvoltage category	II
Protection class	SIU with external power supply: Class II SIU with integrated power supply: Class I (protective earth necessary)
Dimensions (W x L x H):	7.5 x 5.5 x 2.5 inches
Housing material	Aluminum alloy
Weight	3.2 lbs (1.45 kg)
Enclosure rating	IP 65
Ambient temperature, operation	0...122 °F (0...50 °C)
Ambient temperature, storage	-40...167 °F (-40...75 °C)
Impact load	30 g, 3 directions

Type	SIU for Lector Viewer
Vibration load	10 Hz to 55 Hz +/- 1 mm, 3 directions
Conformance	UL508, CE

Service and support

For help and support, please contact one of your partners in the subsidiary that is responsible for you. You can find the corresponding contact information on our website under www.sick.com/worldwide.

References for further information

The copyright notices for open source programs and the associated license texts can be found in the Lector Viewer manual.