



# FC1A-BZ2A1A

FlexChain

SWITCHING AUTOMATION LIGHT GRIDS

**SICK**  
Sensor Intelligence.



Illustration may differ

## Ordering information

Type	Part no.
FC1A-BZ2A1A	1091609

**Included in delivery:** M8 4-PIN BUS CONNECTION MALE CONNECTOR (2)

Other models and accessories → [www.sick.com/FlexChain](http://www.sick.com/FlexChain)



## Detailed technical data

### Features

<b>Device version</b>	FlexChain Host
<b>Sensor principle</b>	Sender/receiver Photoelectric retro-reflective sensor Photoelectric proximity sensor Light grid system
<b>Configuration</b>	USB connection for easy configuration of the FlexChain with SOPAS ET, the engineering tool from SICK
<b>Parameterization</b>	Sensor parameterization Zone definition Measurement functions Logic function Interface parameterization Diagnostics functions
<b>Included with delivery</b>	1 × FlexChain Host 1 × Quick Start Guide 2 × FlexChain terminators (2119481)

### Mechanics/electronics

<b>Supply voltage <math>V_s</math></b>	24 V <sup>1) 2)</sup>
<b>Current consumption <math>I_{max.}</math> (at maximum number of guests)</b>	600 mA @ 24 V
<b>Output current <math>I_{max.}</math></b>	≤ 100 mA
<b>Output load, capacitive</b>	100 µF
<b>Output load, inductive</b>	1 H
<b>Initialization time</b>	< 1 s
<b>Dimensions (W x H x D)</b>	109.4 mm x 25 mm x 35 mm
<b>Connection type</b>	Cable with plug M12, 8-pin <sup>3)</sup>
<b>Housing material</b>	Plastic (ABS)

<sup>1)</sup> ± 20 %.

<sup>2)</sup> Reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

<sup>3)</sup> PLC communication control.

<b>Synchronization</b>	Cable
<b>Enclosure rating</b>	IP65, IP67
<b>Circuit protection</b>	U <sub>V</sub> connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Protection class</b>	III
<b>Weight</b>	Approx. 161 g

1) ± 20 %.

2) Reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

3) PLC communication control.

## Performance

<b>Response time</b>	≤ 35 ms <sup>1)</sup>
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<sup>1)</sup> Depending on system configuration.

## Communication interface

<b>IO-Link</b>	✓, IO-Link V1.1
Data transmission rate	230,4 kbit/s (COM3)
Cycle time	≥ 2.3 ms
Process data length	32 Byte
<b>Inputs/outputs</b>	5 x I/O + 1 x Q (IO-Link)
<b>Digital output</b>	Q <sub>1</sub> ... Q <sub>6</sub>
Number	6
<b>Digital input</b>	In <sub>1</sub> ... In <sub>5</sub>
Number	5

## Ambient data

<b>Shock resistance</b>	Single shocks 30 g, 11 ms 6 per axle, continuous shocks 25 g, 6 ms, 1,000 per axis
<b>Vibration resistance</b>	Sinusoidal oscillation 20-2,000 Hz 10 g, 3 h per axle
<b>EMC</b>	EN 61000-6-2, EN 61000-6-3
<b>Ambient operating temperature</b>	-25 °C ... +50 °C
<b>Ambient temperature, storage</b>	-25 °C ... +70 °C

## Smart Task

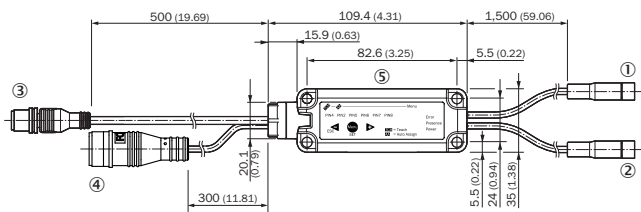
<b>Smart Task name</b>	Base logics
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## Classifications

<b>ECLASS 5.0</b>	27242608
<b>ECLASS 5.1.4</b>	27242608
<b>ECLASS 6.0</b>	27242608
<b>ECLASS 6.2</b>	27242608
<b>ECLASS 7.0</b>	27242608
<b>ECLASS 8.0</b>	27242608
<b>ECLASS 8.1</b>	27242608
<b>ECLASS 9.0</b>	27242608
<b>ECLASS 10.0</b>	27242608

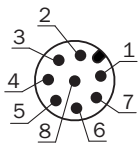
<b>ECLASS 11.0</b>	27242608
<b>ECLASS 12.0</b>	27242608
<b>ETIM 5.0</b>	EC001604
<b>ETIM 6.0</b>	EC001604
<b>ETIM 7.0</b>	EC001604
<b>ETIM 8.0</b>	EC001604
<b>UNSPSC 16.0901</b>	39121528

### Dimensional drawing (Dimensions in mm (inch))

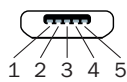
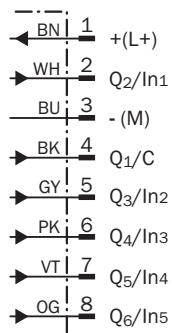


- ① Port A, cable with female connector, M8, 4-pin
- ② Port B, cable with female connector, M8, 4-pin
- ③ PLC, cable with male connector, M12, 8-pin
- ④ USB Micro-B, cable with female connector, M16, 5-pin
- ⑤ Control panel

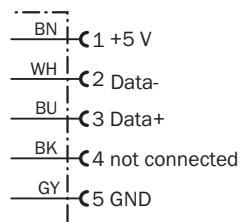
### Connection type and diagram



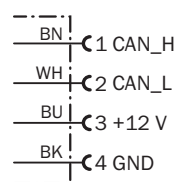
**PLC**  
IO-Link (Q)  
5 x I/O



**USB Micro-B**  
(Female connector)









**Port A/B**  
(Female connector)



## Recommended accessories

Other models and accessories → [www.sick.com/FlexChain](http://www.sick.com/FlexChain)

	Brief description	Type	Part no.
Connection modules			
	FlexChain Adapter	FCA-A1Z2A1AZ	6073035
	FlexChain Booster	FCA-BZZ2A1A1	6073036
Plug connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 10 m, 8-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, special color code, shielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>	YF2A28-100S01XLEAX	2099605
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, USB-A</li> <li>• <b>Connection type head B:</b> Male connector, Micro-B</li> <li>• <b>Signal type:</b> USB 2.0</li> <li>• <b>Cable:</b> 2 m</li> <li>• <b>Description:</b> USB 2.0, unshielded</li> </ul>	USB cable	6036106
Sensor Integration Gateway			
	<ul style="list-style-type: none"> <li>• <b>Further functions:</b> Web server integrated, USB connection for easy configuration of the SIG200 Sensor Integration Gateway with SOPAS ET, the engineering tool from SICK, logic editor is available for easy configuration of logic functions</li> <li>• <b>Connection CONFIG:</b> 1 x M8, 4-pin female connector, USB 2.0 (USB-A)</li> <li>• <b>Logic editor:</b> yes</li> <li>• <b>Communication interface:</b> IO-Link, USB, Ethernet, PROFINET, REST API</li> <li>• <b>Product category:</b> IO-Link Master</li> </ul>	SIG200-0A0412200	1089794
	<ul style="list-style-type: none"> <li>• <b>Further functions:</b> Web server integrated, USB connection for easy configuration of the SIG200 Sensor Integration Gateway with SOPAS ET, the engineering tool from SICK, logic editor is available for easy configuration of logic functions</li> <li>• <b>Connection CONFIG:</b> 1 x M8, 4-pin female connector, USB 2.0 (USB-A)</li> <li>• <b>Logic editor:</b> yes</li> <li>• <b>Communication interface:</b> IO-Link, USB, Ethernet, REST API</li> <li>• <b>Product category:</b> IO-Link Master</li> </ul>	SIG200-0A0G12200	1102605

## 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](http://www.sick.com)