FC1A-CZ2A1A

FlexChain

AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.

FC1A-CZ2A1A | FlexChain
AUTOMATION LIGHT GRIDS

Illustration may differ

Ordering information

Type	part no.
FC1A-CZ2A1A	1091610

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

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

Detailed technical data

Features

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

Mechanics/electronics

Supply voltage V_s	24 V [1] [2]
Current consumption $I_{max.}$ (at maximum number of guests)	600 mA @ 24 V
Output current $I_{max.}$	≤ 100 mA
Output load, capacitive	100 µF
Output load, Inductive	1 H
Initialization time	< 1 s
Dimensions (W x H x D)	109.4 mm x 25 mm x 35 mm
Connection type	Cable with plug M12, 8-pin [3]

[1] ± 20 %.

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

[3] PLC communication control.

Housing material	Plastic (ABS)
Synchronization	Cable
Enclosure rating	IP65, IP67
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Protection class	III
Weight	Approx. 161 g

[1] ± 20 %.

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

[3] PLC communication control.

Performance

Response time	≤ 35 ms [1]

[1] Depending on system configuration.

Communication interface

IO-Link	✓ , IO-Link V1.1
Data transmission rate	230,4 kbit/s (COM3)
Cycle time	≥ 2.3 ms
Process data length	32 Byte
Serial	✓ , RS-485
Data transmission rate	9.6 kbit/s ... 460.8 kbit/s
Inputs/outputs	RS-485 + 1 x I/O + 1 x Q (IO-Link)
Digital output	Q_1, Q_2
Number	2
Digital input	In_1
Number	1

Ambient data

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

Smart Task

Smart Task name	Base logics

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

IO-Link certificate	✓

Classifications

ECLASS 5.0	27242608
ECLASS 5.1.4	27242608
ECLASS 6.0	27242608
ECLASS 6.2	27242608
ECLASS 7.0	27242608
ECLASS 8.0	27242608
ECLASS 8.1	27242608
ECLASS 9.0	27242608
ECLASS 10.0	27242608
ECLASS 11.0	27242608
ECLASS 12.0	27242608
ETIM 5.0	EC001604
ETIM 6.0	EC001604
ETIM 7.0	EC001604
ETIM 8.0	EC001604
UNSPSC 16.0901	39121528

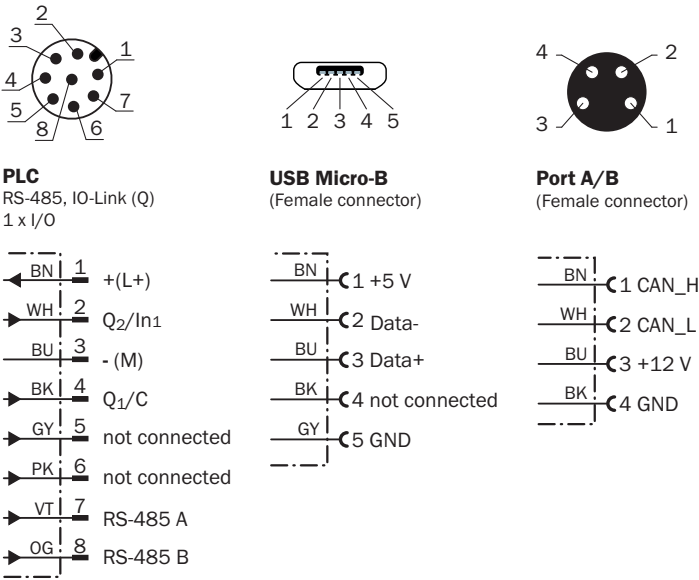## Dimensional drawing
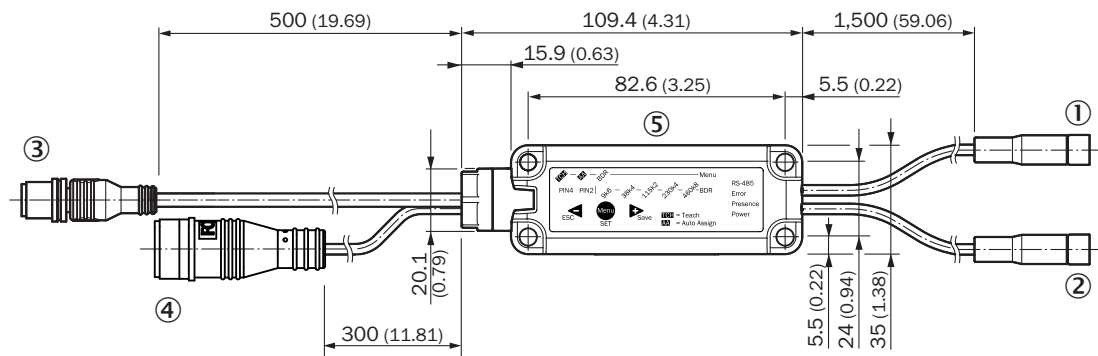
Dimensions in mm (inch)
① Port A, cable with female connector, M8, 4-pin
② Port B, cable with female connector, M8, 4-pin
③ PLC, cable with male connector, M12, 8-pin
④ USB Micro-B, cable with female connector, M16, 5-pin
⑤ Control panel

Connection type and diagram

PLC
RS-485, IO-Link (Q)
1 x I/O

Wire	Pin	Signal
BN	1	+(L+)
WH	2	Q_2/In_1
BU	3	- (M)
BK	4	Q_1/C
GY	5	not connected
PK	6	not connected
VT	7	RS-485 A
OG	8	RS-485 B

USB Micro-B
(Female connector)

Wire	Pin	Signal
BN	1	+5 V
WH	2	Data-
BU	3	Data+
BK	4	not connected
GY	5	GND

Port A/B
(Female connector)

Wire	Pin	Signal
BN	1	CAN_H
WH	2	CAN_L
BU	3	+12 V
BK	4	GND

Recommended accessories

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

Brief description	Type	part no.
connectors and cables		
• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 8-wire, PVC • **Description:** Sensor/actuator cable, special color code, shielded • **Application:** Zones with chemicals	YF2A28-100S01XLEAX	2099605
• **Connection type head A:** Male connector, Micro-B, 4-pin, straight • **Connection type head B:** Male connector, USB-A, 4-pin, straight • **Signal type:** USB 2.0 • **Cable:** 2 m, 4-wire • **Description:** USB 2.0, unshielded	USB cable	6036106

	Brief description	Type	part no.
network devices			
		SIG200-0A0412200	1089794
		SIG200-0A0G12200	1102605
integration modules and adapters			
	• **Description:** FlexChain Adapter	FCA-A1Z2A1AZ	6073035
	• **Description:** FlexChain Booster	FCA-BZZ2A1A1	6073036
	• **Description:** FlexChain Adapter, Special feature: Transmission of measurement data (4 Bytes) of WTT12LC-Bxx6x, WTT12LC-Bxx9x	FCA-A1Z2A1AZS01	1149326

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."

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