



FC1A-DZ2A1A

FlexChain

AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
FC1A-DZ2A1A	1091611

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 × 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

¹⁾ ± 20 %.

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

³⁾ PLC communication control.

⁴⁾ 2x cables.

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, 5-pin ^{3) 4)}
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. 170 g

1) ± 20 %.

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

3) PLC communication control.

4) 2x cables.

Performance

Response time	≤ 35 ms ¹⁾
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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
CANopen	✓
Data transmission rate	50 kbit/s ...1 Mbit/s
Inputs/outputs	CANopen + 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
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Certificates

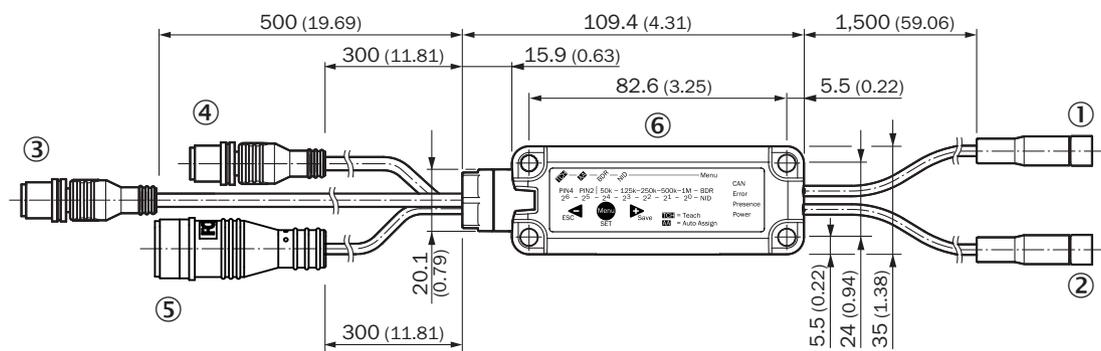
EU declaration of conformity	✓
UK declaration of conformity	✓

ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓
IO-Link	✓
CANopen certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

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

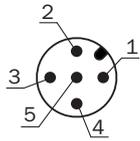


Dimensions in mm (inch)

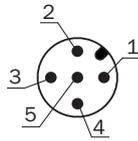
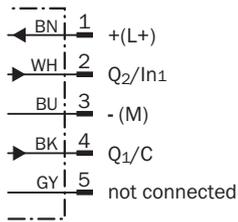
- ① Port A, cable with female connector, M8, 4-pin
- ② Port B, cable with female connector, M8, 4-pin
- ③ PLC, cable with male connector, M12, 5-pin
- ④ CANopen, cable with male connector, M12, 5-pin
- ⑤ USB Micro-B, cable with female connector, M16, 5-pin

⑥ Control panel

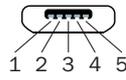
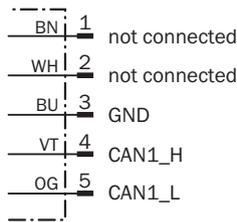
Connection type and diagram



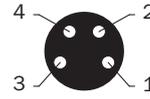
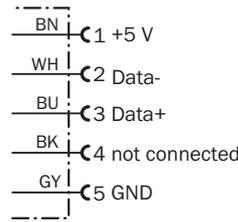
PLC
IO-Link (Q)
1 x I/O



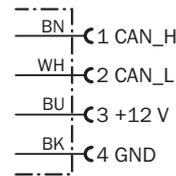
CANopen



USB Micro-B
(Female connector)



Port A/B
(Female connector)



Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A15-100UB5M2A15	2096011
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A15-100VB5XLEAX	2096241
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 5-pin, straight Signal type: CANopen Description: CANopen, unshielded 	CAN male connector	6021167
	<ul style="list-style-type: none"> 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			
	<ul style="list-style-type: none"> Description: FlexChain Adapter 	FCA-A1Z2A1AZ	6073035
	<ul style="list-style-type: none"> Description: FlexChain Booster 	FCA-BZZ2A1A1	6073036
	<ul style="list-style-type: none"> 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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com