Data sheet

FLX3-CPUC100

Flexi Compact

SAFETY CONTROLLERS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
FLX3-CPUC100	1085349

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

Detailed technical data

Features

Module	Main module
Description	The main module is the central process unit of the modular safety controller. All incoming signals are monitored and logically processed in the main module. The outputs are switched based on this processing.
Safety inputs	20
Safety outputs	4
Test outputs	8
Security Level	SL-C 1 (IEC 62443-4-2)
Configuration method	Via software (Safety Designer)
Items supplied	Main module SmartPlug Front connector with 16 terminals and opening for SmartPlug Front connector with 18 terminals Housing end cap Safety instruction Operating instructions for download

Safety-related parameters

Safety integrity level	SIL 3 (IEC 61508)
Category	Category 4 (ISO 13849-1)
Performance level	PL e (ISO 13849-1)
PFH_D (mean probability of a dangerous failure per hour)	4×10^{-9} [1]
T_M (mission time)	20 years (ISO 13849-1)

[1] Calculated value when using dual-channel safety inputs and safety outputs with test pulse. Maximum 9×10^{-9} with single-channel safety inputs and safety outputs without test pulse. For details, see the operating instructions.

Functions

Programmable logic	✓

Monitoring of the connected safety devices	✓
Switching of the connected safety devices	✓
Fast shut-off	✓
Testing of the connected safety devices and the wiring (short-circuit detection)	✓
Use of the test outputs as non-safe outputs	✓
Safe series connection with Flexi Loop	✓

Interfaces

Connection type	Front connector with spring terminals
Front connector	1 front connector with 16 terminals and opening for SmartPlug 1 front connector with 18 terminals
Safety inputs	20
Safety outputs	4
Test outputs	8
Configuration and diagnostics	
USB connection via SmartPlug	✓
Display elements	LEDs

Electronics

Protection class	III (EN 61140)
Interference resistance	EN 61000-6-2
Interference emission	EN 61000-6-4
Voltage supply	The voltage supply of the main module is maintained directly via the terminals on the front connector
Supply voltage V_S	24 V DC (16.8 V ... 30 V) [1]
Type of voltage supply	PELV or SELV [2]
Overvoltage category	II (EN 61131-2)
Power consumption at nominal voltage (without outputs)	3 W (DC)
Power loss	≤ 6.2 W

[1] Voltage supply of the main module and the extension modules connected via the backplane bus.

[2] The supply current must be limited externally to max. 8 A – either by the power supply unit used, or by means of a fuse.

Mechanics

Dimensions (W x H x D)	46.2 mm x 124.7 mm x 85.5 mm
Contamination rating	2 (IEC 61010-1)
Control device type	Open device (IEC 61010-2-201)
Weight	277 g (± 5 %)
Mounting	Mounting on a 35 mm × 7.5 mm mounting rail in accordance with IEC 60715

Ambient data

Enclosure rating	IP20 (EN 60529)
Ambient operating temperature	–25 °C ... +55 °C [1]
Storage temperature	–25 °C ... +70 °C

[1] At altitudes up to 2,000 m above sea level For higher areas of application up to max. 4,000 m above sea level, see the operating instructions.

Air humidity	≤ 95 %, Non-condensing
Vibration resistance	1 g, 5 Hz ... 200 Hz (EN 60068-2-6)
Shock resistance	15 g, 11 ms (EN 60068-2-27)

[1] At altitudes up to 2,000 m above sea level For higher areas of application up to max. 4,000 m above sea level, see the operating instructions.

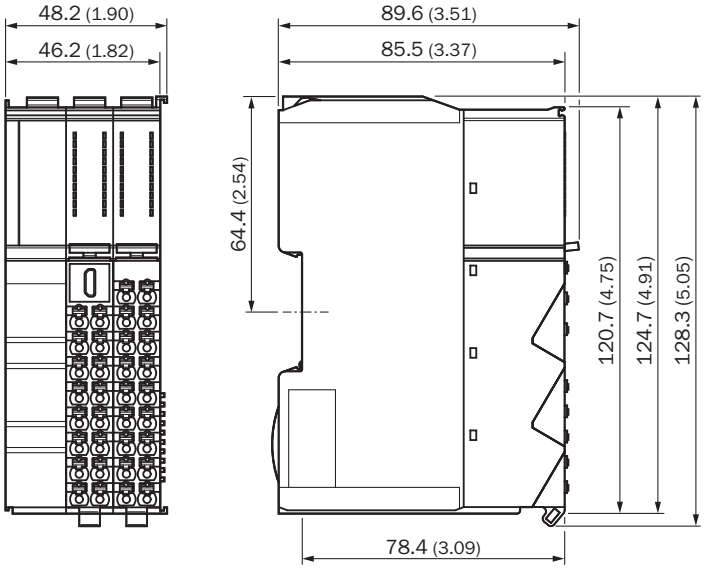
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
UK-Type-Examination approval	✓
cULus certificate	✓
cTUVus certificate	✓
S Mark certificate	✓
EC-Type-Examination approval	✓
EC-Type-Examination approval (Machinery Directive)	✓
EC-Type-Examination approval (Machinery Regulation)	✓
Third party certificate	✓
Cybersecurity certificate	✓

Classifications

ECLASS 5.0	27243001
ECLASS 5.1.4	27243101
ECLASS 6.0	27243101
ECLASS 6.2	27243101
ECLASS 7.0	27243101
ECLASS 8.0	27243101
ECLASS 8.1	27243101
ECLASS 9.0	27243101
ECLASS 10.0	27243101
ECLASS 11.0	27243101
ECLASS 12.0	27243101
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449
ETIM 8.0	EC001449
UNSPSC 16.0901	32151705

Dimensional drawing FLX3-CPUC100 main module



Dimensions in mm (inch)

Recommended accessories

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

	Brief description	Type	part no.
Safety relays			
	• **Applications:** Output expansion module for OSSDs • **Compatible sensor types:** Safety sensors with OSSDs • **Connection type:** Front connector with spring terminals • **Restart interlock:** no • **External device monitoring (EDM):** Via path • **Outputs:** 4 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe), 1 signaling current path (not safe) • **Housing width:** 28 mm	RLY3-0SSD400	1099971
	• **Applications:** Output expansion module for OSSDs • **Compatible sensor types:** Safety sensors with OSSDs • **Connection type:** Front connector with spring terminals • **Restart interlock:** no • **External device monitoring (EDM):** Via path • **Outputs:** 2 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe) • **Housing width:** 18 mm	RLY3-0SSD100	1085343

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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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