



FLM3-CPUN100A03

Flexi Mobile

SAFETY CONTROLLERS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
FLM3-CPUN100A03	1118655

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



Detailed technical data

Features

Items supplied	Safety controller SmartPlug M5 screw for FE connection Safety instruction Downloadable operating instructions
Integrated components	1 × FLM3-CPUN1 1 × FLM3-XTDO1 1 × FLM0-GCAN1
Relevant operating instructions	8026430: Flexi Mobile operating instructions 8026436: IO XTDO1 operating instructions 8026442: GCAN1 operating instructions

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)	See operating instructions
T_M (mission time)	20 years (ISO 13849-1)

Functions

Monitoring of the connected safety devices	✓
Special IO functions (e.g. Fast Shut Off)	✓
Detection of (non-safety) A/B incremental encoders	✓
Switching of the connected safety devices	✓
Testing of the connected safety devices and the wiring (short-circuit detection)	✓
Switching of non-safety devices via test outputs	✓
Programmable logic using graphical function blocks (binary logic, integer processing, application-specific function blocks, drive monitoring)	✓
Kinematics calculation for mobile robots	✓

Drive safety functions	Safe stop 0 (SS0) Safe stop 1 (SS1) Safe stop 2 (SS2) Safe operating stop (SOS) Safe speed monitoring (SSM) Safely-limited speed (SLS) Safe direction (SDI) Safe brake control (SBC) Safe cam (SCA) Safely-limited position (SLP)
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Interfaces

Connection type	1 × USB (on the smart plug) 1 × rectangular plug, 48-pin, type: Molex CMC 1 × rectangular plug, 32-pin, type: Molex CMC 1 × Ethernet: M12 socket, 4-pin, D-coded 1 × CAN-I: M12 plug, 5-pin, A-coded 1 × CAN-O: M12 socket, 5-pin, A-coded
Number of connectable A/B incremental encoders (non safety)	2 ¹⁾
Safety inputs	28
Flexi Loop-compatible	✓
Safety outputs	12
Test outputs	8 ²⁾
Communication interface	Ethernet, Modbus® TCP, SLMP CAN, CANopen
Configuration and diagnostics	
Software	Safety Designer
Storage	SmartPlug (interchangeable, included in the scope of delivery)
Interface	USB connection via SmartPlug TCP/IP configuration interface
Display elements	LEDs

¹⁾ Alternative use of 4 safety inputs. Allows 2 encoders to be connected.

²⁾ The test outputs can also be used to switch non-safety elements (e.g. lamps).

Electronics

Protection class	III (IEC 61140)
Supply voltage V_s	24 V DC (16 V ... 32 V)
Type of voltage supply	PELV or SELV ¹⁾
Interference resistance	EN 61000-6-2 EN 61000-6-7
Interference emission	EN 61000-6-4
Overvoltage category	II (EN 61131-2)
Switch-on time	≤ 15 s

¹⁾ 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)	266 mm x 57.6 mm x 194 mm
Contamination rating	4 (IEC 61010-1) 3 (UL 61010-1)
Control device type	Closed device (IEC 61010-2-201)

Weight	1.95 kg (± 5 %)
Mounting	3 through-holes for M6 screw (optionally with EMC insulating washers)

Ambient data

Enclosure rating	IP65 (IEC 60529) IP66 (IEC 60529) IP67 (IEC 60529) IP69K (ISO 20653) Type 1, "Raintight" and "Watertight" according to UL50E (UL 61010-1)
Ambient operating temperature	-25 °C ... +60 °C
Gehäusetemperatur	-25 °C ... +80 °C
Storage temperature	-40 °C ... +85 °C
Operating altitude	≤ 4,000 m above sea level
Air humidity	≤ 95 %, Non-condensing
Vibration resistance	5 g, 5 Hz ... 200 Hz (EN 60068-2-6)
Broadband noise	3.5 g RMS, 10 Hz ... 500 Hz (EN 60068-2-64)
Shock resistance	
Single shock (3 pulses)	100 g, 6 ms (EN 60068-2-27)
Continuous shock (1,500 pulses)	30 g, 11 ms (EN 60068-2-27)
Salznebel	Test method 4 (EN 60068-2-52)
Sonnenstrahlung und Bewitterung	Test method Sa2 (EN 60068-2-5)

Classifications

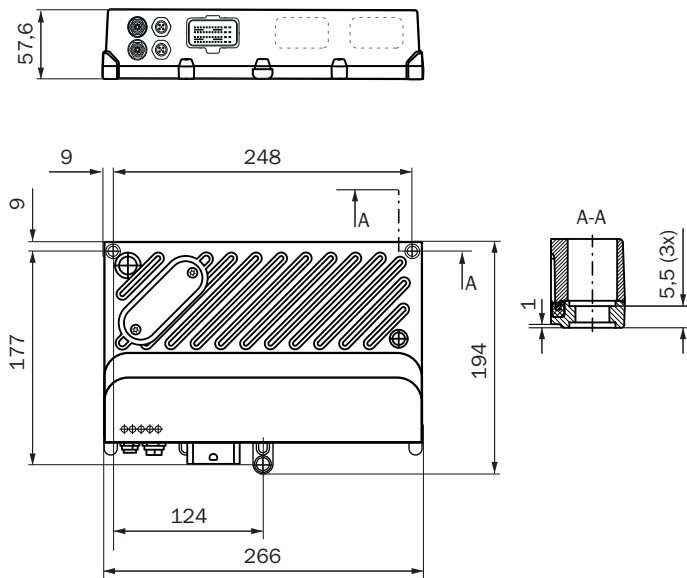
ECLASS 5.0	27243001
ECLASS 5.1.4	27243101
ECLASS 6.0	27243101
ECLASS 6.2	27243101
ECLASS 7.0	27243101
ECLASS 8.0	27243101
ECLASS 8.1	27243101
ECLASS 9.0	27243101
ECLASS 10.0	27243101
ECLASS 11.0	27243101
ECLASS 12.0	27243101
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449
ETIM 8.0	EC001449
UNSPSC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

Certificates

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

cTUVus certificate	✓
EC-Type-Examination approval	✓
EC-Type-Examination approval (Machinery Directive)	✓
EC-Type-Examination approval (Machinery Regulation)	✓
Third party certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Dimensional drawing



Dimensions in mm (inch)

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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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