

# AXL F LPDO8/3 1F - Safety module



2702171

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Axioline F, Digital output module, Functional safety, SafetyBridge solution, Digital outputs: 4 (for 2-channel assignment), 8 (for 1-channel assignment), 2 A, degree of protection: IP20

## Product description

The safety module is an output module from the Axioline F product range with integrated safety logic designed for use in a SafetyBridge Technology V3 system. The safety module can be used as part of an Axioline F station at any point within an EtherCAT®, EtherNet/IP™, Sercos, Modbus, PROFINET or PROFIBUS system. The module has four safe digital outputs for two-channel assignment or eight safe digital outputs for single-channel assignment.

## Your advantages

- Cost-effective system configuration, as no safety PLC or safe fieldbus system is required
- Flexible use, thanks to compatibility with all bus couplers from the Axioline F range
- Reduced installation time, thanks to fast wiring and easy handling
- Easy configuration using the free SAFECONF software
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508

## Commercial data

Item number	2702171
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA511
GTIN	4055626004983
Weight per piece (including packing)	352.9 g
Weight per piece (excluding packing)	222 g
Customs tariff number	85389091
Country of origin	DE

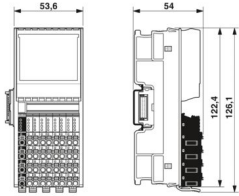
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## Technical data

### Dimensions

Dimensional drawing	
Width	53.6 mm
Height	126.1 mm
Depth	54 mm
Note on dimensions	Housing dimensions

### Notes

#### Note on application

Note on application	Only for industrial use
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### Material specifications

Color (Housing)	yellow (RAL 1018)
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### Interfaces

#### Axioline F local bus

Connection method	Bus base module
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### System properties

#### SafetyBridge properties

Connection to I/O modules	max. 16 (safe digital I/O modules)
Logic memory	30 kByte

#### Programming data (LocalbusSlave)

Input address area	48 Byte
Output address area	48 Byte

#### Fieldbus data telegram

Required parameter data	1 Byte
Required configuration data	7 Byte

### Output data

#### Digital:

Output name	Digital outputs
	4 (for 2-channel assignment)

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Number of outputs	8 (for 1-channel assignment)
	8
Protective circuit	Overload protection, freewheeling circuit for inductive loads, Discharge circuit for accelerated discharge of capacitive loads
Output voltage	24 V DC
Output current	max. 2 A (per channel)
	max. 1.5 A (per channel according to $CUL_{US}$ )
	max. 4 A (per group)
	max. 3 A (per group according to $CUL_{US}$ )
	max. 8 A (Total current of all outputs; Please observe the notes in the user manual.)
Maximum output current per channel	2 A
Maximum output current per module / terminal block	8 A
Permissible cable length	max. 1000 m (Forward and return line in total)
Behavior with overload	Affected output is disabled and a diagnostic message is generated.

## Product properties

Product type	I/O component
Product family	Axioline F
Application	Functional safety
	SafetyBridge
Type	modular

## Electrical properties

Transmission medium	Copper
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### Potentials

Protective circuit	Protection against polarity reversal, EMC protective circuit, undervoltage detection
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### Potentials: Axioline F local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Current draw	max. 280 mA
	typ. 260 mA (all outputs set; supply by $U_O$ of 19.2 V DC ... 30 V DC)

### Potentials: Supply for digital output modules ( $U_O$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	typ. 25 mA (all outputs set; supply from $U_O$ with 30 V DC; without supply to the actuators)
Current consumption	25 mA

## Connection data

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## Connection technology

Connection name	Axioline F connector
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## Axioline F connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-35 °C ... 60 °C (Mounting position: any)
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 108 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3500 m above sea level)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 75 % (on average, 85% infrequently, non-condensing)
Permissible humidity (storage/transport)	10 % ... 75 % (non-condensing)

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
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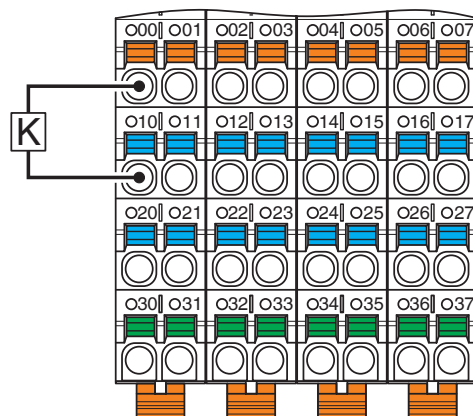
## Drawings

Dimensional drawing



Dimensions (in mm)

Connection diagram



Example connection of a contactor

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## Approvals

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**DNV GL**

Approval ID: TAA00000DF

**BSH**

Approval ID: 840



**cULus Listed**

Approval ID: E238705



**Functional Safety**

Approval ID: 968/FSP 2449.00/22

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## Classifications

### ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604
ECLASS-15.0 ASSET	27250101

### ETIM

ETIM 10.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	c46c2bb2-51c1-41e0-804d-ad04fbcdddc6

### EF3.1 Climate Change

CO2e kg	17.58 kg CO2e
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