

# AXL F LPEDO8/3 1F - Safety module



2702171

<https://www.phoenixcontact.com/it/products/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<sup>®</sup>, EtherNet/IP<sup>™</sup>, 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	DNA
Product key	DNA511
Catalog page	Page 269 (C-6-2019)
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

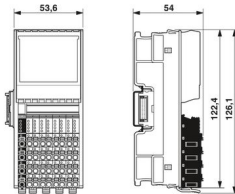
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## Technical data

### Dimensions

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

### Interfaces

Axioline F local bus	
Connection method	Bus base module

### System properties

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

Module	
Input address area	48 Byte
Output address area	48 Byte
Required parameter data	1 Byte
Required configuration data	7 Byte

### Output data

Digital	
Output name	Digital outputs
Number of outputs	4 (for 2-channel assignment) 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 <sub>US</sub> ) max. 4 A (per group)

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	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.)
	max. 6 A (Total current of all outputs according to $CUL_{US}$ )
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

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

## 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)

## Connection data

### Connection technology

Connection name	Axioline F connector
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### Conductor connection

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

### Axioline F connector

Connection method	Spring-cage connection
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Conductor cross section, rigid	0.2 mm² ... 1.5 mm²
Conductor cross section, flexible	0.2 mm² ... 1.5 mm²
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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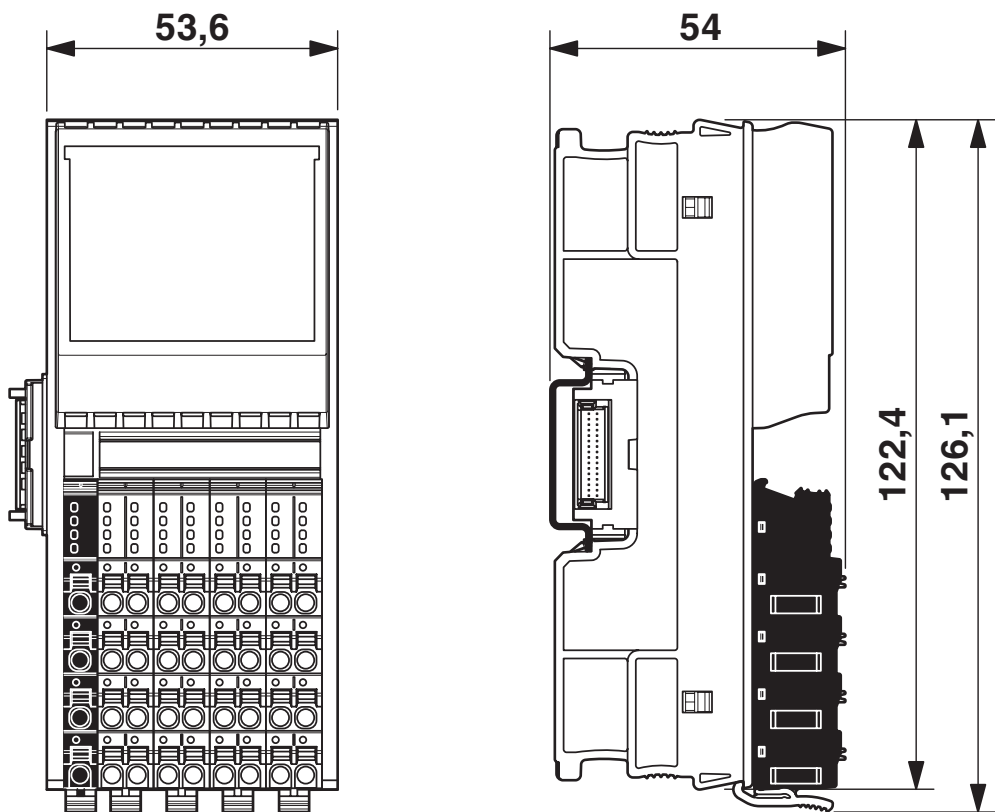
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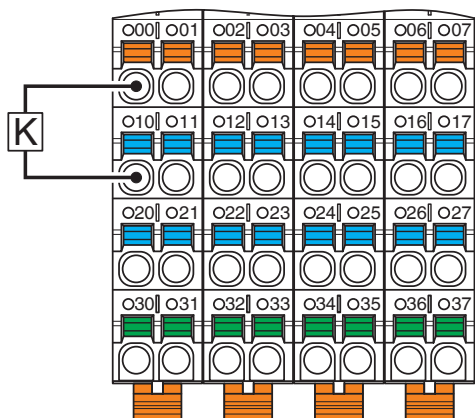
## Drawings

Dimensional drawing



Dimensions (in mm)

Connection diagram



Example connection of a contactor

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## Approvals

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	<b>DNV GL</b> Approval ID: TAA00000DF
	<b>UL Listed</b> Approval ID: FILE E 238705
	<b>cUL Listed</b> Approval ID: FILE E 238705
	<b>BSH</b> Approval ID: 840
	<b>Functional Safety</b> Approval ID: 968/FSP 2449.00/22
	<b>Functional Safety</b> Approval ID: 968/FSP 2449.00/22
	<b>UAE-RoHS</b> Approval ID: 23-02-63243
	<b>cULus Listed</b>

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## Classifications

### ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

### ETIM

ETIM 9.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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