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Safety-related digital input module, IP20 protection, for the SafetyBridge system. The module has 4 safe digital inputs for two-channel assignment or 8 safe digital inputs for single-channel assignment.

### **Product Description**

The safety module is an input module from the Axioline F product range 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™, Sercos, Modbus, PROFINET or PROFIBUS system. The module has four safe digital inputs for two-channel assignment or eight safe digital inputs for single-channel assignment. Depending on the installation and parameterization, in the SafetyBridge technology V3 system the safety module can achieve the following safety integrity:

- Up to SIL 3 according to standard EN 61508
- Up to SILCL 3 according to standard EN 62061
- Up to Cat. 4/PL e according to standard EN ISO 13849-1

### Why buy this product

- ☐ 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 SIL 3 according to EN 61508
- ☑ Up to SILCL 3 according to EN 62061
- Up to cat. 4/PL e according to EN ISO 13849-1



### **Key Commercial Data**

Packing unit	1 STK
GTIN	4 055626 066813
GTIN	4055626066813
Weight per Piece (excluding packing)	347.600 g
Custom tariff number	85389091
Country of origin	Germany



## Technical data

### Dimensions

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

### Ambient conditions

Ambient temperature (operation)	-35 °C 60 °C (Mounting position: any)
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)
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)
Degree of protection	IP20

### Interfaces

Designation	Axioline F local bus (Note: not suitable for use in the Axioline F local bus of the Phoenix Contact AXC 3050 controller)
No. of channels	1
Connection method	Bus base module

### Digital inputs

Input name	Digital inputs
Description of the input	IEC 61131-2 type 3
Connection method	Push-in connection
Connection technology	2, 3, 4-wire
Number of inputs	4 (with two-channel assignment)
	8 (for single-channel assignment)
Input filter time	1.5 ms
Input characteristic curve	IEC 61131-2 type 3
Input voltage	24 V DC (via clock outputs T1 and T2 or external supply)
Input voltage range	-3 V DC 30.2 V DC
Nominal input current at U <sub>IN</sub>	typ. 4.2 mA
Typical input current per channel	4.2 mA

### General

Mounting type	DIN rail
Net weight	347.6 g
Note on weight specifications	with connectors and bus base module

### Axioline potentials

Designation	Axioline F local bus supply (U <sub>Bus</sub> )
Supply voltage	5 V DC (via bus base module)



## Technical data

## Axioline potentials

Current consumption	typ. 280 mA (all inputs set; power supply by $\rm U_{\rm l}$ of 19.2 V DC to 30.2 V DC)
	max. 310 mA
Designation	Supply for digital input modules (U <sub>I</sub> )
Supply voltage	24 V DC
Supply voltage range	19.2 V DC 30.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 9 mA (all inputs set; power supply by U <sub>I</sub> with 30.2 V DC; without power supply to the sensors via clock supplies T1 and T2)
Type of protection	Protection against polarity reversal, EMC protective circuit, undervoltage detection

### Safety-related characteristic data

Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	EN ISO 13849
Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)
Category	max. 4 (two channel; dependent in parameterization and wiring)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	max. 3 (two channel; dependent in parameterization and wiring)

### Standards and Regulations

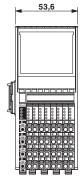
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
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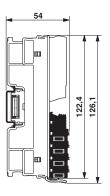
### **Environmental Product Compliance**

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

# Drawings

### Dimensional drawing







## Classifications

### eCl@ss

eCl@ss 5.1	27242604
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

### **ETIM**

ETIM 5.0	EC001599
ETIM 6.0	EC001599

### **UNSPSC**

UNSPSC 13.2	32151602

## Approvals

### Approvals

### Approvals

UL Listed / cUL Listed / Functional Safety / Functional Safety / cULus Listed

Ex Approvals

### Approval details

UL Listed



http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

FILE E 238705

cUL Listed



http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

FILE E 238705

**Functional Safety** 



968/EZ 424.05/17

**Functional Safety** 



968/EZ 424.05/17



## Approvals

cULus Listed



### Accessories

Accessories

Device marking

Insert label - EMT (35X28)R - 0801602



Insert label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK S1.1, mounting type: snapped into marker carrier, lettering field size: 35 x 28 mm

#### DIN rail connector

Bus connector - AXL F BS F - 2688129



Axioline F bus base module for housing type F

### Terminal marking

Zack marker strip - ZB 20,3 AXL UNPRINTED - 0829579



Zack marker strip for Axioline F (device labeling), in 2  $\times$  20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

Zack Marker strip, flat - ZBF 10/5,8 AXL UNPRINTED - 0829580



Zack marker strip, flat, in 10 mm pitch, unprinted, 10-section, for individual labeling with M-PEN 0,8, X-PEN, or CMS-P1-PLOTTER



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