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Safety-related digital output module, IP20 protection, for the SafetyBridge system. The module has four safe digital outputs with two-channel occupancy or 8 safe digital outputs with single-channel occupancy

Product Description

The safety module is an output module from the Inline product range designed for use in a SafetyBridge system. The safety module can be used as part of an Inline station at any point within an INTERBUS, EtherCAT®, DeviceNet™, CANopen®, EtherNet/IP™, Sercos, Modbus, PROFINET or PROFIBUS system. The transmission speed of the safety module can be set to 500 kBaud or 2 Mbaud using a switch. One transmission speed must be used consistently within a station. The module has four safe digital outputs for two-channel assignment or eight safe digital outputs for single-channel assignment.

Your advantages

- ☑ Generation and monitoring of the SafetyBridge protocol
- Processing of the parameterized safety logic
- SIL 3 according to IEC 61508/EN 61508
- ✓ SILCL 3 according to EN 62061
- ☑ PL e according to EN ISO 13849-1



Key Commercial Data

| Packing unit | 1 pc |
|--------------|-----------------|
| GTIN | 4 046356 770033 |
| GTIN | 4046356770033 |

Technical data

Note

| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|
| Dimensions | |
| Width | 48.8 mm |
| Height | 119.8 mm |
| Depth | 71.5 mm |
| Note on dimensions | Housing dimensions |



Technical data

Ambient conditions

| Ambient temperature (operation) | -25 °C 55 °C |
|--|---|
| Ambient temperature (storage/transport) | -25 °C 70 °C |
| Permissible humidity (operation) | 10 % 85 % (Take suitable measures against increased air humidity within the permitted temperature range.) |
| Permissible humidity (storage/transport) | 10 % 85 % (Take suitable measures against increased air humidity within the permitted temperature range.) |
| Air pressure (operation) | 80 kPa 108 kPa (up to 2000 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 | Inline local bus |
|--------------------|-------------------------------------|
| Connection method | Inline data jumper |
| Transmission speed | 500 kbps / 2 Mbps (can be switched) |

Digital outputs

| Output name | Digital outputs |
|------------------------------------|--|
| Connection method | Spring-cage connection |
| Connection technology | 2, 3, 4-wire |
| Number of outputs | 4 (with two-channel assignment) |
| | 8 (for single-channel assignment) |
| | 8 |
| Protective circuit | Overload protection, short-circuit protection of outputs |
| Output voltage | 24 V DC (U _S - 1 V) |
| Nominal output voltage | 24 V DC |
| Output current | max. 6 A (Total current of all outputs, -25 °C 50 °C) |
| | max. 4 A (Total current of all outputs, >50 °C 55 °C) |
| Maximum output current per channel | 2 A |
| Maximum output current per group | 3 A |
| Nominal load, inductive | see safety data |
| Nominal load, lamp | see safety data |
| Nominal load, ohmic | see safety data |
| Behavior with inductive overload | Output can be destroyed |

Power supply for module electronics

| Supply voltage | 24 V DC (via voltage jumper) |
|----------------------|------------------------------|
| Supply voltage range | 19.2 V DC 30 V DC |

General

| Mounting type | DIN rail |
|-------------------------------|-----------------|
| Color | yellow |
| Net weight | 343 g |
| Note on weight specifications | with connectors |



Technical data

General

| Diagnostics messages | Short-circuit or overload of the digital outputs Error message in diagnostics code (bus) and display by means of the LED on the motor |
|----------------------|---|
|----------------------|---|

Inline potentials

| Designation | Communications power (U _L) |
|----------------------|--|
| Supply voltage | 7.5 V DC (see safety data) |
| Current consumption | max. 230 mA (see safety data) |
| Designation | Main circuit supply (U _M) |
| Supply voltage | 24 V DC (see safety data) |
| Supply voltage range | 19.2 V DC 30 V DC (including all tolerances, including ripple) |
| Current consumption | typ. 30 mA (all outputs set including actuator current) |
| | max. 6.03 A |
| Designation | Segment circuit supply (U _S) |
| Supply voltage | 24 V (see safety data) |

SafetyBridge properties

| Connection to I/O modules | max. 16 (safe digital I/O modules) |
|---------------------------|------------------------------------|
| Logic memory | 60 kByte |

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) |
|--|
|--|

Environmental Product Compliance

| REACh SVHC | Lead 7439-92-1 |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Classifications

eCl@ss

| eCl@ss 10.0.1 | 27242604 |
|---------------|----------|
| eCl@ss 4.0 | 27240400 |



Classifications

eCl@ss

| eCl@ss 4.1 | 27240400 |
|------------|----------|
| eCl@ss 5.0 | 27242200 |
| eCl@ss 5.1 | 27242600 |
| eCl@ss 6.0 | 27242600 |
| eCl@ss 7.0 | 27242604 |
| eCl@ss 8.0 | 27242604 |
| eCl@ss 9.0 | 27242604 |

ETIM

| ETIM 3.0 | EC001599 |
|----------|----------|
| ETIM 4.0 | EC002498 |
| ETIM 5.0 | EC001599 |
| ETIM 6.0 | EC001599 |
| ETIM 7.0 | EC001599 |

UNSPSC

| UNSPSC 6.01 | 43172015 |
|---------------|----------|
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11 | 43172015 |
| UNSPSC 12.01 | 43201404 |
| UNSPSC 13.2 | 32151602 |
| UNSPSC 18.0 | 32151602 |
| UNSPSC 19.0 | 32151602 |
| UNSPSC 20.0 | 32151602 |
| UNSPSC 21.0 | 32151602 |

Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

Functional Safety



968/EZ 424.05/17



Approvals

UL Listed



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

FILE E 140324

cUL Listed



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

FILE E 140324

Functional Safety



968/EZ 424.05/17

cULus Listed



Accessories

Accessories

Connector set

Connector set - IB IL 24 SDO 8-PLSET/CP - 2916927



Connector set (yellow), color coded, for safe SDO boards.

Filter terminal block

Filter terminal block - PSR-FTB/20/86 - 2904477



Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (20 μ F/86 μ F), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.

Filter terminal block - PSR-FTB/1.5/11.5 - 2904476



Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (1.5 μ F/11.5 μ F), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.



Accessories

Parameterization memory

Program / configuration memory - SD FLASH 2GB EASY SAFE BASIC - 2403297



Program and configuration memory, plug-in, 2 GB, with license key and application program for easy web-based configuration and startup of a SafetyBridge solution.

Program / configuration memory - SD FLASH 2GB EASY SAFE PRO - 2403298



Program and configuration memory, plug-in, 2 GB, with license key and application program for easy web-based configuration and startup of a SafetyBridge solution including communication via Modbus/TCP, PROFINET, and e-mail.

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