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Safety module - IB IL 24 PSDOR 4-PAC - 2985864

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Safety-oriented decentral relay output module, IP20 degree of protection, for the INTERBUS-Safety and the PROFIsafe system. This module has four safe digital relay outputs, each having two contacts.

Product Description


The safety module is an output module from the Inline product range, designed for use in an INTERBUS-Safety or PROFIsafe system. The safety module can be used as part of an Inline station at any point within an INTERBUS-Safety or PROFIsafe Inline system. The transmission speed of the safety module can be set to 500 kbaud or 2 Mbaud using a switch. Only one transmission speed must be used uniformly within a station. The module has four safe digital relay outputs, each with two relay contacts. The outputs can be parameterized according to the application and enable the integration of actuators in the safe INTERBUS system (INTERBUS-Safety) and in the PROFIsafe system. The safety-related segment circuit can be switched on or off using suitable wiring. When the output is switched off, the supply to the subsequent modules is disconnected safely. The module also has two clock outputs with assigned alarm inputs for monitoring external contact extensions. Depending on the installation and parameterization, in these systems the safety module can achieve the following safety integrity:

- Up to category 4 according to standard EN 954-1
- Up to SIL 3 according to standards EN 61508 and EN 62061
- Up to PL e according to standard EN ISO 13849-1

Why buy this product

- 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 STK |
| GTIN |  4 046356 131599 |

Technical data

Note

| | |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

Dimensions

| | |
|--------------------|--------------------|
| Width | 73.2 mm |
| Height | 119.8 mm |
| Depth | 71.5 mm |
| Note on dimensions | Housing dimensions |

Ambient conditions

Safety module - IB IL 24 PSDOR 4-PAC - 2985864

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 mean sea level) |
| Degree of protection | IP20 |

Interfaces

| | |
|--------------------|--|
| Fieldbus system | INTERBUS |
| Designation | Inline local bus |
| Connection method | Inline data jumper |
| Transmission speed | 500 kBit/ / 2 MBit/s (can be switched) |

Digital outputs

| | |
|------------------------------------|--|
| Output name | Relay output |
| Connection method | Spring-cage connection |
| | 2-wire |
| Number of outputs | 4 (Safety relays) |
| Output voltage | 24 V DC ($U_S - 1 \text{ V}$) |
| Nominal output voltage | 24 V DC (Inline connector) |
| Output current | max. 4 A (Inline connector, pro contact, observe derating) |
| | max. 6 A (COMBICON connector, pro contact, observe derating) |
| Maximum output current per channel | 4 A |

Power supply for module electronics

| | |
|----------------------------|----------------------------------|
| Supply voltage | 24 V DC (via voltage jumper) |
| Supply voltage range | 19.2 V DC ... 30 V DC |
| Communications power U_L | 7.5 V (via voltage jumper) |
| Current consumption | max. 360 mA (from the local bus) |

General

| | |
|-------------------------------|-----------------|
| Net weight | 386 g |
| Note on weight specifications | with connectors |
| Mounting type | DIN rail |

Inline potentials

| | |
|--------------------------------|--|
| Communications power U_L | 7.5 V DC (see safety data) |
| Current consumption from U_L | max. 360 mA |
| Main circuit supply U_M | 24 V DC |
| Supply voltage range U_M | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current consumption from U_M | typ. 30 mA (all outputs set including actuator current) |

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Technical data

Inline potentials

| | |
|------------------------------|-------------|
| | max. 0.03 A |
| Segment circuit supply U_S | 24 V |

Safety-related characteristic data

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|---|--|
| 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

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|------------------|---|
| Test section | 5 V supply, incoming remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min. |
| | 5 V supply, outgoing remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min. |
| | 7.5 V supply (bus logics)/24 V supply (I/O) 500 V AC 50 Hz 1 min. |
| | 24 V supply (U_M , U_S), GND, clock outputs/7.5 V supply (bus logic), relay outputs 500 V AC 50 Hz 1 min. |
| | COMBICON X3 relay outputs/COMBICON X4 relay outputs, Inline connector relay outputs, 7.5 V supply (bus logic), 24 V supply (U_M , U_S), GND, clock outputs, FE 2500 V AC 50 Hz 1 min. |
| | COMBICON X4 relay outputs/COMBICON X3 relay outputs, Inline connector relay outputs, 7.5 V supply (bus logic), 24 V supply (U_M , U_S), GND, clock outputs, 2500 V AC 50 Hz 1 min. |
| Protection class | I, IEC 61140, EN 61140, VDE 0140-1 |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27240404 |
| eCl@ss 4.1 | 27240404 |
| eCl@ss 5.0 | 27242204 |
| eCl@ss 5.1 | 27242604 |
| eCl@ss 6.0 | 27242604 |
| eCl@ss 7.0 | 27242604 |
| eCl@ss 8.0 | 27242604 |
| eCl@ss 9.0 | 27242604 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001599 |
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Classifications

ETIM

| | |
|----------|----------|
| ETIM 4.0 | EC001599 |
| ETIM 5.0 | EC001599 |

UNSPSC

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|---------------|----------|
| UNSPSC 6.01 | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11 | 43172015 |
| UNSPSC 12.01 | 43201404 |
| UNSPSC 13.2 | 43201404 |

Approvals

Approvals

Approvals

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

Ex Approvals

Approvals submitted

Approval details

UL Listed



cUL Listed



Functional Safety

PROFIBUS

cULus Listed



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| Product | Code | Reference | Product link |
|--|---------|-------------------------|----------------------------|
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