

## I/O module - IB ST 24 DIO 8/8/3-2A - 2753708

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INTERBUS-ST digital input/output module, eight inputs, 24 V DC, eight outputs, 24 V DC, 2 A, IP20 degree of protection, consisting of: Terminal part with screw connection and module electronics

### Product Description

INTERBUS ST digital input and output modules

The digital INTERBUS input/output modules provide the option of connecting 8 sensors and 8 actuators with two or three-wire connections.

The electronics module is a plug-in type. In the event of a malfunction, the passive basic termination block remains on the DIN rail and the active electronics module can be replaced within a few seconds.

The modules are protected against polarity reversal and the outputs are additionally protected against short-circuiting with fuses. The status of the fuses is monitored and any errors which occur are passed on to the control system.

The contact with the protective earth ground is made directly when the module is snapped onto the DIN rail.

Input/output status LEDs and bus diagnostic displays on the top side of the module electronics give information on the condition of the module at any time.

All the modules can be labeled individually on the large, pull-out labeling field. The insert cards can be labeled by hand, plotter, or printer. The terminal points can also be labeled individually with Zack strip.

### Your advantages

- ✓ 8 digital outputs
- ✓ 8 digital inputs
- ✓ Connection of actuators in 3-wire technology
- ✓ Connection of sensors in 3-wire technology
- ✓ Electrical isolation
- ✓ Diagnostic and status indicators
- ✓ DIN rail mounting

**RoHS**

### Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                 |
| GTIN         |  |
| GTIN         | 4017918062880                                                                        |

### Technical data

#### Note

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## Technical data

### Note

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

### Dimensions

|        |        |
|--------|--------|
| Width  | 118 mm |
| Height | 117 mm |
| Depth  | 116 mm |

### Ambient conditions

|                                          |                                             |
|------------------------------------------|---------------------------------------------|
| Ambient temperature (operation)          | 0 °C ... 55 °C                              |
| Ambient temperature (storage/transport)  | -25 °C ... 70 °C                            |
| Permissible humidity (operation)         | 30 % ... 75 % (non-condensing)              |
| Permissible humidity (storage/transport) | 30 % ... 95 % (non-condensing)              |
| Air pressure (operation)                 | 86 kPa ... 108 kPa (1500 m above sea level) |
| Air pressure (storage/transport)         | 66 kPa ... 108 kPa (3500 m above sea level) |
| Degree of protection                     | IP20                                        |

### Interfaces

|                    |                        |
|--------------------|------------------------|
| Designation        | ST local bus           |
| Connection method  | ST local bus connector |
| Transmission speed | 500 kbps               |

### Digital inputs

|                                   |                                    |
|-----------------------------------|------------------------------------|
| Input name                        | Digital inputs                     |
| Connection method                 | Screw connection                   |
| Connection technology             | 3-wire                             |
| Number of inputs                  | 8                                  |
| Typical response time             | 3 ms (typ.)                        |
| Protective circuit                | Overload protection Fuse in header |
| Nominal input current at $U_{IN}$ | typ. 5 mA (per channel)            |
| Input voltage                     | 24 V DC                            |
| Input voltage range "0" signal    | -30 V DC ... 5 V DC                |
| Input voltage range "1" signal    | 13 V DC ... 30 V DC                |

### Digital outputs

|                                                    |                                    |
|----------------------------------------------------|------------------------------------|
| Output name                                        | Digital outputs                    |
| Connection method                                  | Screw connection                   |
| Connection technology                              | 3-wire                             |
| Number of outputs                                  | 8                                  |
| Protective circuit                                 | Short-circuit protection Fuse      |
|                                                    | Overload protection Fuse in header |
| Maximum output current per channel                 | 2 A                                |
| Maximum output current per module / terminal block | 16 A                               |
| Maximum output current per group                   | 8 A                                |

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### Technical data

#### Power supply for module electronics

|                      |                                                        |
|----------------------|--------------------------------------------------------|
| Supply voltage       | 24 V DC                                                |
| Supply voltage range | 20 V DC ... 30 V DC (including ripple)                 |
| Ripple               | 3.6 V <sub>pp</sub> within the allowable voltage range |
| Current consumption  | 0.2 A                                                  |

#### General

|                   |                     |
|-------------------|---------------------|
| Mounting type     | DIN rail            |
| Net weight        | 710 g               |
| Mounting position | Horizontal DIN rail |

#### Electrical isolation

|              |                                              |
|--------------|----------------------------------------------|
| Test section | Bus logic / I/O 500 V AC 50 Hz 1 min.        |
|              | I/O / Ground conductor 500 V AC 50 Hz 1 min. |

#### Standards and Regulations

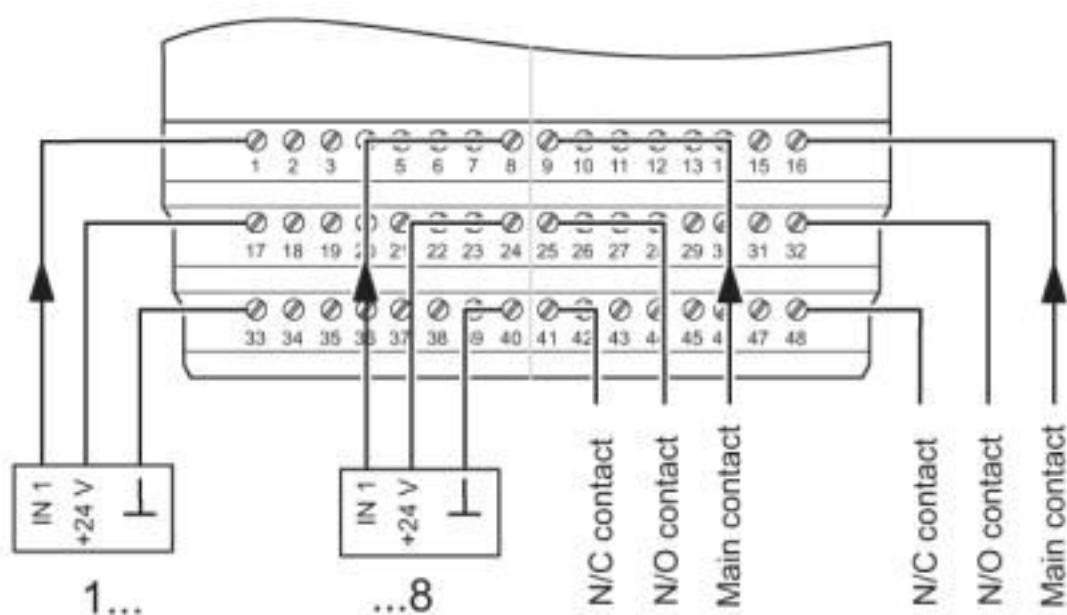
|                                  |                                       |
|----------------------------------|---------------------------------------|
| Connection in acc. with standard | CUL                                   |
| Protection class                 | III (IEC 61140, EN 61140, VDE 0140-1) |

#### 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" |

### Drawings

Connection diagram



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### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27242604 |
| eCl@ss 4.0    | 27250300 |
| eCl@ss 4.1    | 27250300 |
| eCl@ss 5.0    | 27250300 |
| 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 2.0 | EC001430 |
| ETIM 3.0 | EC001599 |
| ETIM 4.0 | EC001599 |
| 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

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##### Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

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##### Ex Approvals

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#### Approval details

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### Approvals

|               |                                                                                   |                                                                                                                                                       |               |
|---------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
|               |                                                                                   |                                                                                                                                                       |               |
| mm²/AWG/kcmil |                                                                                   | 30-12                                                                                                                                                 |               |

|                |                                                                                   |                                                                                                                                                       |               |
|----------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
|                |                                                                                   |                                                                                                                                                       |               |
| mm²/AWG/kcmil  |                                                                                   | 30-12                                                                                                                                                 |               |

|     |                                                                                   |               |
|-----|-----------------------------------------------------------------------------------|---------------|
| EAC |  | EAC-Zulassung |
|-----|-----------------------------------------------------------------------------------|---------------|

|                  |                                                                                     |
|------------------|-------------------------------------------------------------------------------------|
| cULus Recognized |  |
|------------------|-------------------------------------------------------------------------------------|

### Accessories

#### Accessories

#### Bridge

Jumper - IB ST LBC - 2836492



Spare local bus cable, for INTERBUS-ST modules

Insertion bridge - EB 84 IB ST BU - 2836269



Insertion bridges, divisible, isolated comb spine, color blue, 84-pos.

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### Accessories

Insertion bridge - EB 84 IB ST RD - 2836272



Insertion bridges, divisible, isolated comb spine, color red, 84-pos.

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### Device parameterization

Software - AX+ BASIC - 2985068



Software CD for FDT container for integrating device DTMs (free download)

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### Fuse

Fuse - IBS TR5 4AF - 2753465



Replacement fuse, for INTERBUS-ST modules

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### Programming

Software - AX DTM LIB - 2988065



DTM library

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Replacement electronics module - IB STME 24 DIO 8/8/3-2A - 2752945



Replacement module electronics for IB ST (ZF) 24 DIO 8/8/3-2A

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