

# BiSS-Gateway

## 24 V BiSS Safety > PROFINET/PROFIsafe R1

In the 24 V BiSS Safety > PROFINET / PROFIsafe variant, the BiSS-Gateway provides the data received by BiSS Safety from up to two encoders via PROFINET and PROFIsafe to a PROFINET IO controller.

Part no.: 4260629980138



### SUPPLY

|  |                       |
|--|-----------------------|
| <b>Nominal voltage</b>                             | 24V DC                |
| <b>Voltage range</b>                               | 19,2V bis 28,8V DC    |
| <b>Max. input power</b><br>(excl power of encoder) | <4W (0,166A @ 24V DC) |
| <b>Max. input power</b><br>(incl power of encoder) | <12W (0,5A @ 24V DC)  |
| <b>Overvoltage protection</b>                      | Yes                   |
| <b>Reverse polarity protection</b>                 | Yes                   |
| <b>Encoder current consumption</b>                 | max. 1A               |

### INTERFACES

|                               |   |
|-------------------------------|---|
| <b>Power supply</b>           | terminal connection, wire size 0,2 – 1,31mm <sup>2</sup> (AWG16-26) |
| <b>PROFINET IO Controller</b> | 1x RJ-45  |
| <b>PROFINET Periphery</b>     | 1x RJ-45 (Daisy Chain)  |
| <b>BiSS Safety-Encoder 1</b>  | D-Sub, 9-pole, coded  |
| <b>BiSS Safety-Encoder 2</b>  | D-Sub, 9-pole, coded  |

### MECHANICAL DATA

|                      |                        |
|----------------------|------------------------|
| <b>Dimensions</b>    | 170mm x 116,4mm x 40mm |
| <b>Weight</b>        | Approx. 0,5kg          |
| <b>Mounting type</b> | 35mm top hat rail      |

### BISS SAFETY

|  |  |
|--|--|
| <b>Protocol type</b>                         | BiSS C                                 |
| <b>Transmission profile</b><br>(BiSS Safety) | RXH                                    |
| <b>Transmission rate</b>                     | 10Mbit/s                               |
| <b>Update rate</b>                           | 1kSample/s                             |
| <b>Asynchron Control Data Communication</b>  | Configuration of encoder communication |

### PROFINET

|                            |                       |
|----------------------------|-----------------------|
| <b>Type</b>                | PROFINET IO Device    |
| <b>Transmission rate</b>   | 100Mbit/s             |
| <b>Update rate</b>         | 1kHz (RT, adjustable) |
| <b>PROFINET IO Version</b> | 2.35 / 2.42           |
| <b>Supported services</b>  | SNMP, LLDP            |
| <b>Supported MIBs</b>      | MIB2                  |
| <b>Realtime Class</b>      | RT_CLASS_1            |
| <b>Netload Class</b>       | II                    |
| <b>Conformance Class</b>   | B                     |

### PROFIsafe

|                          |                    |
|--------------------------|--------------------|
| <b>Device Function</b>   | PROFIsafe F-Device |
| <b>PROFIsafe Version</b> | 2.6.1              |

## AMBIENT CONDITIONS

|   |  |
|---|--|
| <b>Vibration resistance</b><br>acc. to EN 60068-2-6 | 2Hz – 9Hz & 9Hz – 200Hz:<br>1,5mm by constant acceleration |
| <b>Shock resistance</b><br>acc. to EN 60068-2-27    | 50m/s <sup>2</sup> , 6ms                                   |
| <b>Ambient temperature operation</b>                | 0°C – 60°C   |
| <b>Ambient temperature storage/transport</b>        | -40°C – 60°C   |
| <b>Relative humidity</b>                            | 5% – 85% without condensation                              |
| <b>Altitude</b>                                     | <3000m above sea level                                     |
| <b>Protection degree</b><br>acc. to EN 60529        | IP20   |
| <b>Protection class</b><br>acc. to EN60529          | Safety class III   |

## CONFORMITY EMC GUIDELINE 2014/30/EU

|  |   |
|--|---|
| <b>Discharge, static electricity</b><br>acc. to EN 61000-4-2 | Contact discharge: 4kV<br>Air discharge: 8kV  |
| <b>Electromagnetic field</b><br>acc. to EN 61000-4-3         | 80MHz – 1GHz, 10V/m<br><br>1,4GHz – 1,6GHz & 1,8GHz – 2,2GHz, 5,1GHz – 6GHz & 2,4GHz – 2,5GHz<br>3V/m<br>80%AM (1kHz) |
| <b>Fast transients (Burst)</b><br>acc. to EN 61000-4-4       | Signal input: ±1kV, 5/50ns<br>Repeat frequency: 5kHz<br><br>DC power input: ±2kV, 5/50ns<br>Repeat frequency: 5kHz    |

|   |  |
|---|--|
| <b>Conducted emitted interference</b><br>acc. to EN 61000-4-6   | 150kHz – 80MHz<br>10V/m<br>80%AM (1kHz)  |
| <b>Emitted interference case</b><br>acc. to<br>CISPR 16-1-1<br>CISPR 16-1-4<br>CISPR 16-2-3                   | 30MHz – 230MHz<br><br>50dB (µV/m)<br>quasi peak value<br>in 3m<br><br>230MHz – 1000MHz<br><br>57dB (µV/m)<br>quasi peak value<br>in 3m   |
| <b>Emitted interference low voltage connection</b><br>acc. to<br>CISPR 16-1-1<br>CISPR 16-1-2<br>CISPR 16-2-1 | 0,15MHz – 0,5MHz<br><br>79dB (µV/m)<br>quasi peak value<br><br>66dB(µV/m)<br>mean value<br><br>0,5MHz – 30MHz<br><br>73dB (µV/m)<br>quasi peak value<br><br>60dB(µV/m)<br>mean value                       |
| <b>EN 55032</b><br>telecommunication connection   | 0,15MHz – 0,5MHz<br><br>87dB – 97dB<br>(µV/m)<br>quasi peak value<br><br>84dB – 74dB<br>(µV/m) mean<br>value<br><br>0,5MHz – 30MHz<br><br>84dB (µV/m)<br>quasi peak value<br><br>74dB (µV/m)<br>mean value |

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