

ASi-3 PROFINET-Gateways in Stainless Steel

PROFINET IO

- offers IRT-technology
- 1 integrated Switch

Recognition of duplicate ASi addresses

ASi Earth Fault Detector integrated

ASi Noise Detector integrated

Optional Control III, programming in C



(figure similar)



| Figure | Fieldbus interface (1) | ASi-5/ASi-3 | Number of ASi networks, number of ASi Master (2) | Integrated decoupling, ASi current measurement in the gateway (3) | Diagnostic and configuration interface (4) | Recognition of duplicate ASi addresses (5) | ASi fault detector (6) | Programming in C (7) | Article no. |
|--------|------------------------|------------------|--|---|--|--|------------------------|----------------------|----------------|
| | PROFINET | ASi-3 compatible | 1 ASi network, 1 ASi-3 Master | no, max. 8 A/ ASi network | Ethernet fieldbus + Ethernet diagnostic | yes | yes | optional | BWU3431 |

(1) **Fieldbus interface**

Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.
PROFINET ASi Gateway: interface for a PROFINET fieldbus

(2) **Number of ASi networks, number of ASi Master**

"Single Master": 1 ASi network, 1 ASi Master.

(3) **Integrated decoupling, ASi current measurement in the gateway**

"no, max. 8 A/ASi network": 1 power supply per ASi network.

(4) **Diagnostic and configuration interface**

"Ethernet fieldbus": Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet fieldbus interface.
The latest version of the device description file of the gateway is available in the "Downloads" section of the respective device.

(5) **Recognition of duplicate ASi addresses**

Detects whether the same address has been assigned to two ASi nodes. Frequent error when using a handheld addressing device.

(6) **ASi fault detector**

Checks the ASi line for interference effects such as noise, external voltages, ...

(7) **Programming in C**

Using a C-program offers the possibility to run mini-PLC functions with a gateway.

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| | |
|---|--|
| Article no. | BWU3431 |
| Fieldbus Interface | |
| Type | PROFINET; 2 x RJ-45, integrated 2-Port-Switch, IRT capability |
| Conformance Class | Class B integrated switch complies with Class C (IRT capability) |
| Baud rate | 100 MBaud |
| Function | PROFINET IO Device Media Redundancy Protocol (MRP) Shared Device |
| Card slot | Chip card for storage of configuration data |
| Diagnostic Interface | |
| Type | Ethernet; RJ-45 acc. to IEEE 802.3 |
| ASi | |
| ASi specification | 3.0 |
| Cycle time | 150 μ s * (number of nodes + 2) |
| Operating voltage | 30 V _{DC} (20 ... 31,6 V) (PELV voltage) |
| ASi Power24V capability ⁽¹⁾ | no |
| Display | |
| LCD | menu, ASi indication of ASi addresses, error messages in plain text |
| LED power (green) | power ON |
| LED PROFINET (green/red) | green: PROFINET communication active red: PROFINET communication not active |
| LED config error (red) | configuration error |
| LED U ASi (green) | ASi voltage o.k. |
| LED ASi active (green) | ASi normal operation active |
| LED prg enable (green) | automatic address programming enabled |
| LED prj mode (yellow) | in configuration mode |
| UL-specifications (UL508) | |
| External protection | An isolated source with a secondary open circuit voltage of ≤ 30 V _{DC} with a 3 A maximum over current protection. Over current protection is not required when a Class 2 source is employed. |
| In general | UL mark does not provide UL certification for any functional safety rating or aspects of the above devices. |
| Environment | |
| Applied standards | EN 60529 EN 61000-6-2 EN 61000-6-4 |
| Operating altitude | max. 2000 m |
| Operating temperature | 0 °C ... +55 °C |
| Storage temperature | -25 °C ... +85 °C |
| Housing | Stainless Steel, for DIN rail mounting |
| Protection category | IP20 |
| Tolerable loading referring to impacts and vibrations | according to EN 61131-2 |
| Maximum tolerable shock and vibration stress | according to EN 61131-2 |
| Voltage of insulation | ≥ 500 V |
| Weight | 500 g |
| Dimensions (W / H / D in mm) | 85 / 120 / 93 |

⁽¹⁾ **ASi Power24V**

The device can be operated directly on a 24 V (PELV) power supply. The gateway has been optimized with integrated data coupling coils and adjustable self-resetting fuses for safe use of powerful 24 V power supplies.

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| Article no. | Operating current | | |
|-------------|--|--|--|
| | Master power supply, ca. 200 mA out of ASi circuit | Master power supply, max. 200 mA out of ASi circuit 1 (ca. 70 mA ... 200 mA), max. 200 mA out of ASi circuit 2 (ca. 70 mA ... 200 mA); in sum max. 270 mA | Cost-effective power for 2 ASi networks with 1 power supply, approx. 250 mA (PELV voltage) |
| BWU3431 | • | – | – |

| Article no. | BWU3431 |
|--|---------|
| Data decoupling integrated in the gateway | • |
| Redundant power supply out of ASi: all fundamental functions of the device remain available even in case of power failure in one of the two ASi networks | – |
| Current measurement of the ASi circuits | – |
| Self-resetting adjustable fuses | – |
| ASi earth fault monitor distinguishes between ASi cable and sensor cable | – |
| Cost-effective power for 2 ASi networks with 1 power supply | – |

Accessories:

- Diagnostic Software measurements (art. no. BW2902)
- PROFINET Master Simulator (art. no. BW3035, BW3057)
- Control III, Programming in C (art. no. BW2582)
- Power supplies, e.g.: ASi power supply, 4 A (art. no. BW1649), ASi power supply, 8 A (art. no. BW1997)
(further power supply units can be found at www.bihl-wiedemann.de/en/products/accessories/power-supplies)