

## 24 Volt ASi Gateways in Stainless Steel



### 24 Volt ASi:

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

### Available fieldbus interfaces:

- PROFIBUS
- PROFINET IO: IRT-technology and 1 integrated Switch
- EtherNet/IP + Modbus/TCP in one device
- EtherCAT
- POWERLINK
- CC-Link



(figure similar)

### OPC UA server

### Integrated webserver for simplified diagnostics

### Recognition of duplicate ASi addresses

### ASi Noise Detector integrated



| Figure | Type                | Model   | Fieldbus interface <sup>(1)</sup> | Number of ASi networks, number of ASi Master <sup>(2)</sup> | Recognition of duplicate ASi addresses <sup>(3)</sup> | ASi fault detector <sup>(4)</sup> | Programming in C <sup>(5)</sup> | Article no.    |
|--------|---------------------|---------|-----------------------------------|---|---|-----------------------------------|---------------------------------|----------------|
|        | 24 Volt ASi Gateway | Gateway | PROFIBUS                          | 1 ASi network, 1 ASi Master                                 | yes   | yes                               | no                              | <b>BWU3053</b> |
|        | 24 Volt ASi Gateway | Gateway | PROFINET, OPC UA                  | 1 ASi network, 1 ASi Master                                 | yes   | yes                               | no                              | <b>BWU3760</b> |
|        | 24 Volt ASi Gateway | Gateway | EtherNet/IP + Modbus TCP, OPC UA  | 1 ASi network, 1 ASi Master                                 | yes   | yes                               | no                              | <b>BWU3822</b> |
|        | 24 Volt ASi Gateway | Gateway | EtherCAT                          | 1 ASi network, 1 ASi Master                                 | yes   | yes                               | no                              | <b>BWU3058</b> |
|        | 24 Volt ASi Gateway | Gateway | POWERLINK                         | 1 ASi network, 1 ASi Master                                 | yes   | yes                               | no                              | <b>BWU3312</b> |
|        | 24 Volt ASi Gateway | Gateway | CC-Link                           | 1 ASi network, 1 ASi Master                                 | yes   | yes                               | no                              | <b>BWU3051</b> |

<sup>(1)</sup> **Fieldbus interface**

Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.

**OPC UA server:** interface for the OPC UA communication.

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- (2) **Number of ASi networks, number of ASi Master**  
**"Single Master"**: 1 ASi network, 1 ASi Master.
- (3) **Recognition of duplicate ASi addresses**  
 Detects whether the same address has been assigned to two ASi slaves. Frequent error when using a handheld addressing device.
- (4) **ASi fault detector**  
 Checks the ASi line for interference effects such as noise, external voltages, ...
- (5) **Programming in C**  
 Using a C-program offers the possibility to run mini-PLC functions with a gateway.

| Article no.             | BWU3053   | BWU3760  | BWU3822   | BWU3058   | BWU3312  | BWU3051   |
|-------------------------|---|--|---|---|--|---|
| <b>Interface</b>        |   |  |   |   |  |   |
| Fieldbus interface      | <b>PROFIBUS</b><br>(RS 485)   | <b>PROFINET</b><br>(RJ-45)   | <b>EtherNet/IP +<br/>Modbus TCP</b><br>(RJ-45)  | <b>EtherCAT</b><br>(RJ-45)  | <b>POWERLINK</b><br>(RJ-45)  | <b>CC-Link</b><br>(screw terminal blocks)   |
|                         | <ul style="list-style-type: none"> <li>acc. to IEC 61158 / IEC 61784-1</li> <li>imaging of the ASi Slaves as I/O of the PROFIBUS</li> <li>complete diagnosis and configuration via the DP Master</li> </ul> | <ul style="list-style-type: none"> <li>2 x RJ-45, integrated 2-Port-Switch</li> <li>IRT capability</li> <li>Conformance Class B</li> <li>integrated switch complies with Class C (IRT capability)</li> </ul> | <ul style="list-style-type: none"> <li>2 x RJ-45, integrated 2-Port-Switch</li> <li>Ethernet + Modbus TCP acc. to IEEE 802.3</li> </ul> | <ul style="list-style-type: none"> <li>2 x RJ-45, integrated 2-Port-Switch</li> <li>acc. to IEEE 802.3</li> </ul> | <ul style="list-style-type: none"> <li>2 x RJ-45 Ethernet acc. to IEEE 802.3</li> <li>integrated 2-Port-Switch</li> <li>POWERLINK acc. to IEC 61748-2 and IEC 61158</li> </ul> | <ul style="list-style-type: none"> <li>acc. to CC-Link specification</li> <li>remote device</li> <li>2-4 occupied stations (depending on operating mode)</li> </ul> |
| OPC UA interface        | –   | OPC UA server + web server   |   | –   | –  | –   |
| Baud rates              | 9,6 KBaud ... 12 MBaud, automatic recognition   | 100 MBaud  | 10/100 MBaud  | 100 MBaud   |  | 156 KBaud ... 10 MBaud  |
| Function                | –   | <ul style="list-style-type: none"> <li>PROFINET IO Device</li> <li>Media Redundancy Protocol (MRP)</li> <li>Shared Device</li> </ul>   | <ul style="list-style-type: none"> <li>Device Level Ring (DLR) (Ethernet/IP only)</li> </ul>  | –   | –  | –   |
| Card slot               | chip card for storage of configuration data   |  |   |   |  |   |
| <b>ASi</b>              |   |  |   |   |  |   |
| ASi specification       | 3.0   |  |   |   |  |   |
| Cycle time              | 150 µs * (number of slaves + 2)   |  |   |   |  |   |
| Operating voltage       | 24 V <sub>DC</sub> (20 ... 31,6 V) (PELV voltage)   |  |   |   |  |   |
| Operating current       | approx. 250 mA  |  |   |   |  |   |
| Current per ASi network | max. 4 A  |  |   |   |  |   |
| Length of ASi cable     | with 24 V standard power supply: max. 50 m<br>with 30 V ASi power supply: max. 100 m  |  |   |   |  |   |

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| Article no.                                  | BWU3053   | BWU3760   | BWU3822                                       | BWU3058                                       | BWU3312  | BWU3051                                      |
|--|---|---|---|---|--|--|
| <b>Display</b>                               |   |   |   |   |  |  |
| LCD  | menu, ASi indication of slave addresses, error messages in plain text   |   |   |   |  |  |
| LED power (green)                            | power ON  |   |   |   |  |  |
| Fieldbus                                     | LED PROFIBUS  | LED PROFINET  | LED net                                       | LED status                                    | LED POWERLINK                                  | LED CC-Link                                  |
|  | green:<br>PROFIBUS<br>communication<br>active   | green:<br>PROFINET<br>communication<br>active<br>red:<br>no PROFINET<br>communication | green:<br>EtherNet<br>communication<br>active | green:<br>EtherCAT<br>communication<br>active | green:<br>POWERLINK<br>communication<br>active | green:<br>CC-Link<br>communication<br>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   |   |   |   |  |  |
| <b>UL-specifications (UL508)</b>             |   |   |   |   |  |  |
| External protection                          | An isolated source with a secondary open circuit voltage of $\leq 30 V_{DC}$ 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.   |   |   |   |  |  |
| <b>Environment</b>                           |   |   |   |   |  |  |
| Applied standards                            | EN 61131-2<br>EN 60529<br>EN 61000-6-2<br>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  |   |   |   |  |  |
| Pollution degree                             | 2   |   |   |   |  |  |
| Protection category                          | IP20  |   |   |   |  |  |
| Tolerable loading referring to humidity      | according to EN 61131-2   |   |   |   |  |  |
| Maximum tolerable shock and vibration stress | according to EN 61131-2   |   |   |   |  |  |
| Voltage of insulation                        | $\geq 500 V$  |   |   |   |  |  |
| Weight                                       | 500 g   |   |   |   |  |  |
| Dimensions (W / H / D in mm)                 | 75 / 120 / 83   | 85 / 120 / 83   |   |   |  |  |

| Article no.   | BWU3053, BWU3760, BWU3822, BWU3058, BWU3312, BWU3051 |
|---|--|
| <b>Redundant power supply out of ASi:<br/>all fundamental functions of the device remain available even in case of power failure in one of the two ASi networks</b> | –  |
| <b>Current measurement of the ASi circuits</b>  | –  |
| <b>Self-resetting fuses</b>   | •  |
| <b>Adjustable fuses</b>   | –  |
| <b>ASi earth fault monitor distinguishes between ASi cable and sensor cable</b>   | –  |
| <b>In version 1 gateway, 1 power supply for 2 ASi circuits:<br/>only 1 Gateway + 1 ASi power supply for 2 ASi networks</b>  | •  |

## 24 Volt ASi Gateways in Stainless Steel



### Accessories:

- Diagnostic Software (art. no. BW2902)
- PROFINET Master Simulator (art. no. BW3035, BW3057)
- PROFIBUS Master Simulator (art. no. BW1131, BW1257)
- 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](http://www.bihl-wiedemann.de/en/products/accessories/power-supplies))



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