

# 24 Volt ASi-5/ASi-3 Gateways in Stainless Steel, 1 ASi-5/ASi-3 Master

**ASi-5 – Great data bandwidth, short cycle times**

**Compatible with all ASi generations**

**ASi-5 master and ASi-3 master in one device**

**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:**

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



(figure similar)

**OPC UA server and integrated web server 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-5/ASi-3 Gateway	Gateway	PROFINET, OPC UA	1 ASi network, 1 ASi Master	yes	yes	no	<b>BWU3847</b>
	24 Volt ASi-5/ASi-3 Gateway	Gateway	EtherNet/IP + Modbus TCP, OPC UA	1 ASi network, 1 ASi Master	yes	yes	no	<b>BWU3849</b>
	24 Volt ASi-5/ASi-3 Gateway	Gateway	EtherCAT, OPC UA	1 ASi network, 1 ASi Master	yes	yes	no	<b>BWU3854</b>
	24 Volt ASi-5/ASi-3 Gateway	Gateway	POWERLINK, OPC UA	1 ASi network, 1 ASi Master	yes	yes	no	<b>BWU4016</b>

**(1) 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.

The latest version of the device description file of the gateway is available in the "Downloads" section of the respective device.

**(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 nodes. Frequent error when using a handheld addressing device.

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- (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.	BWU3847	BWU3849	BWU3854	BWU4016
<b>Interface</b>				
Fieldbus interface	<b>PROFINET</b> (RJ-45)	<b>EtherNet/IP + Modbus TCP</b> (RJ-45)	<b>EtherCAT</b> (RJ-45)	<b>POWERLINK</b> (RJ-45)
	<ul style="list-style-type: none"> <li>2 x RJ-45, integrated 2-Port-Switch 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, integrated 2-Port-Hub</li> <li>acc. to IEEE 802.3</li> </ul>
OPC UA interface	OPC UA server + web server			
Baud rates	100 MBaud	10/100 MBaud	100 MBaud	100 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 (512 KB) for storage of configuration data			
<b>ASi</b>				
ASi specification	ASi-3 + ASi-5			
Cycle time	<b>Cycle time ASi-3 (variable):</b> $150 \mu\text{s} * (\text{number of ASi-3 nodes} + 2)$ <b>Cycle time ASi-5 (constant):</b> 1,27 ms for 384 bits input data + 384 bits output data			
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 power supply: max. 50 m with 30 V power supply: max. 100 m with ASi-3 / max. 200 m with ASi-5			
<b>Display</b>				
LCD	menu, ASi indication of ASi addresses, error messages in plain text			
LED power (green)	power ON			
Fieldbus	<b>LED PROFINET</b> green: PROFINET communication active red: no PROFINET communication	<b>LED net</b> green: EtherNet communication active	<b>LED status</b> green: EtherCAT communication active	<b>LED POWERLINK</b> green: POWERLINK communication 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 $\leq 30 \text{ V}_{\text{DC}}$ 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.			

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<b>Environment</b>				
Applied standards	EN 61131-2 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			
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	≥500 V			
Weight	500 g			
Dimensions (W / H / D in mm)	85 / 120 / 83		85 / 120 / 93	

Article no.	BWU3847, BWU3849, BWU3854, BWU4016
Current measurement of the ASi circuits	-
Self-resetting fuses	•
Adjustable fuses	-
ASi earth fault monitor distinguishes between ASi cable and sensor cable	-
In version 1 gateway, 1 power supply for 2 ASi circuits: only 1 Gateway + 1 ASi power supply for 2 ASi networks	•

### Accessories:

- Chip card, memory capacity 512 kB (art. no. BW4055)
- Bihl+Wiedemann Suite - Software for Configuration, Diagnostics and Commissioning (art. no. BW2902)
- Power supplies, e.g.: 30 V power supply, 4 A, 1 phase (art. no. BW4218), 30 V power supply, 8 A, 1 phase (art. no. BW4219), 30 V power supply, 8 A, 3 phases (art. no. BW4220), 30 V Power Supply, 16 A, 1 phase (art. no. BW4221), 30 V Power Supply, 16 A, 3 phases (art. no. BW4222) (for further power supply units visit [www.bihl-wiedemann.de/en/products/accessories/power-supplies](http://www.bihl-wiedemann.de/en/products/accessories/power-supplies))
- PROFINET Master Simulators Licenses (art. no. BW4754, BW4755)