

# ASi-5/ASi-3 PROFINET Gateway with integrated Safety Monitor



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

Compatible with all ASi generations

Safe Link

1 ASi-5/ASi-3, PROFINET device

Safe ASi outputs are supported

- up to 64 independent ASi outputs
- Multiple safe ASi outputs possible via a single ASi address

OPC UA server and integrated web server for simplified diagnostics

Selection of Mode of Safe Operation


Applications up to category 4/PLe/SIL 3

Chip card for storage of configuration data



(Figure similar)



Figure	Fieldbus Interface <sup>(1)</sup>	Safety communication	Inputs, Safety, SIL 3, cat. 4	Outputs Safety, SIL 3, cat. 4	ASi-5/ASi-3	ASi Safety	Number of ASi networks, number of ASi Master <sup>(2)</sup>	Integrated decoupling, ASi current measurement in the gateway <sup>(3)</sup>	Diagnostic and configuration interface <sup>(4)</sup>	Article No.
	PROFINET, OPC UA	Safe Link	–	–	ASi-5 + ASi-3 compatible	ASi-3 Safety compatible	1 ASi network, 1 ASi-5 /ASi-3 Master	yes, max. 4 A/ASi network	Ethernet fieldbus; Ethernet diagnostics	<b>BWU3998</b>

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

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

**"Single Master":** 1 ASi network, 1 ASi-5/ASi-3 Master.

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

**"yes, max. 4 A/ASi network":** Data decoupling integrated in the gateway. Cost-effective power for 2 ASi networks with 1 power supply (optionally supply of multiple Single Gateways by 1 power supply). Operation with short cable lengths with standard 24 V power supply possible.

**(4) Diagnostic and configuration interface**

**"Ethernet fieldbus + Ethernet diagnostic":** Access to ASi master and safety monitor via Bihl+Wiedemann proprietary software over Ethernet diagnostics interface or Ethernet fieldbus interface.

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

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<b>Article no.</b>		<b>BWU3998</b>
<b>Fieldbus Interface</b>		
Type	PROFINET; 2 x RJ-45, integrated 2-Port-Switch, IRT capability Class B, integrated switch complies with Class C (IRT capability)	
Baud rates	10/100 MBaud	
OPC UA Interface	OPC UA server + integrated web server	
Function	PROFINET IO Device Media Redundancy Protocol (MRP) Shared Device	
Card slot	Chip card (BW4055) for storage of configuration data	
<b>Diagnostic interface</b>		
Type	Ethernet; RJ-45 acc. to IEEE 802.3	
Baud rates	10/100 MBaud half-duplex or full-duplex	
Safety communication	Safe Link	
OPC UA Interface	OPC UA server + integrated web server	
Safe coupling <sup>(1)</sup>	no	
<b>ASi</b>		
ASi specification	ASi-5 + ASi-3	
Cycle time	<b>Cycle time ASi-5 (constant):</b> 1,27 ms for 384 bits input data + 384 bits output data	
	<b>Cycle time ASi-3 (variable):</b> 150 µs * (number of ASi-3 nodes + 2)	
ASi safety	ASi-3 Safety compatible	
Operating voltage	30 V <sub>DC</sub> (20 ... 31,6 V) (PELV voltage)	
Operating current	approx. 300 mA	
Current per ASi network	up to 30 °C	4 A per ASi network
	at 40 °C	4 A per ASi network
	at 55 °C	4 A per ASi network
ASi Power24V capability <sup>(2)</sup>	yes	
Length of ASi line	with supply via 24 V power supply: max. 50 m with supply via 30 V power supply: max. 100 m for ASi-3 / max. 200 m for ASi-5	
<b>AUX</b>		
Operating voltage	–	
Max current consumption	–	
<b>Display</b>		
LCD	menu, indication of ASi addresses and error messages in plain text	
LED power (green)	power on	
LED PROFINET (green/red)	green: PROFINET communication active red: no PROFINET communication	
LED config error (red)	configuration error	
LED U ASi (green)	ASi voltage OK	
LED ASi active (green)	ASi normal operation active	
LED prg enable (green)	automatic addresses programming enabled	
LED prj mode (yellow)	configuration mode active	
LED AUX (yellow)	–	
<b>UL-specifications (UL508)</b>		
External protection	External protection: An isolated voltage source with a PELV/SELV voltage ≤30 V <sub>DC</sub> must have internal or external current limiting.	
In general	UL mark does not provide UL certification for any functional safety rating or aspects of the above devices.	

# ASi-5/ASi-3 PROFINET Gateway with integrated Safety Monitor

<b>Article no.</b>	<b>BWU3998</b>
<b>Ambient</b>	
Applied standards	EN 62026-2 EN60529 EN 61000-6-2 EN 61000-6-4 EN 62061, SIL 3 EN 61508, SIL 3 EN ISO 13849-1, Performance-Level e EN ISO 13849-2
Operating altitude	max. 2000 m
Ambient temperature	-25 °C ... +55 °C (no condensation permitted)
Storage temperature	-25 °C ... +85 °C
Housing	stainless steel, for DIN-rail mounting
Pollution degree	2
Protection category	IP20
Tolerable loading referring to impacts and vibrations	according EN 61131-2
Voltage of insulation	≥500 V
Weight	500 g
Dimensions (W / H / D in mm)	85 / 120 / 106

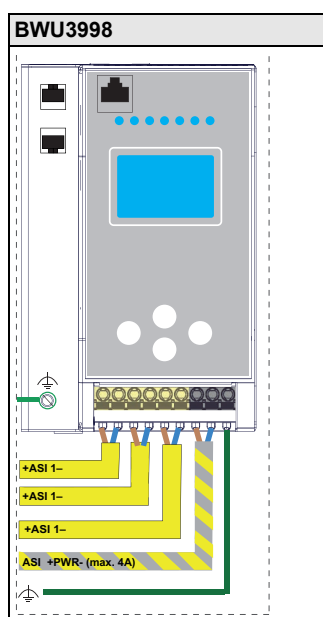
(1) Safe data exchange between safe protocols (e.g. CIP Safety, PROFIsafe etc.).

(2) **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.

	<b>BWU3998</b>
<b>Data decoupling integrated in the gateway</b>	•
<b>Current measurement of the ASi circuits</b>	•
<b>Self-resetting adjustable fuses</b>	•
<b>ASi earth fault monitor distinguishes between ASi cable and sensor cable</b>	•
<b>Cost-effective power for 2 ASi networks with 1 power supply</b>	•

## Connections: Gateway:



## ASi-5/ASi-3 PROFINET Gateway with integrated Safety Monitor



### Accessories:

- Safe contact expander, 1 or 2 independent channels (art. no. BWU2548 / BWU2539)
- Chip card, memory capacity 512 kB (art. no. BW4055)
- Bihl+Wiedemann Safety Suite - Safety Software for Configuration, Diagnostics and Commissioning (art. no. BW2916)
- 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)