

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	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASi networks, number of ASi Master ⁽¹⁾	1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies ⁽²⁾	Diagnostic and configuration interface ⁽³⁾	Article No.
	Safety, PROFINET, ASi-5 / ASi-3	max. 31 x 2 channels, max. 1891 in max. configuration	–	max. 64, max. 1984 in max. configuration	Safe Link	1 ASi network, 1 ASi-5 /ASi-3 Master	yes, max. 4 A/ ASi network	Ethernet fieldbus; Ethernet diagnostics	BWU3998

⁽¹⁾ **Number of ASi networks, number of ASi Master**
"Single Master": 1 ASi network, 1 ASi Master.

⁽²⁾ **1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies**
"yes, max. 4 A/ASi network": Cost-effective power for 2 ASi networks with 1 power supply (optionally supply of multiple Single Gateways by 1 power supply).

⁽³⁾ **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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Article no.	BWU3998	
Interface		
PROFINET interface	2 x RJ-45, integrated 2-Port-Switch, IRT capability	
Conformance Class	Class B integrated switch complies with Class C (IRT capability)	
OPC UA Interface	OPC UA server + integrated web server	
Baud rates	10/100 MBaud	
Function	PROFINET IO Device Media Redundancy Protocol (MRP) Shared Device	
Card slot	Chip card (512 KB) for storage of configuration data	
Ethernet interface		
Baud rates	10/100 MBaud half-duplex or full-duplex	
Safety communication	Safe Link	
Safe coupling ⁽¹⁾	no	
ASi		
ASi specification	ASi-3 + ASi-5	
Cycle time	Cycle time ASi-3 (variable): 150 μ s * (number of ASi-3 slaves + 2)	
	Cycle time ASi-5 (constant): 1,27 ms for 384 bits input data + 384 bits output data	
Operating voltage	30 V _{DC} (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 ⁽²⁾	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	
AUX		
Operating voltage	-	
Max current consumption	-	
Display		
LCD	menu, indication of slave 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)	-	
UL-specifications (UL508)		
External protection	An isolated source with a secondary open circuit voltage of ≤ 30 V _{DC} has to be protected with a 3 A maximum over current. 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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Article no.	BWU3998
Ambient	
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
Ambient temperature	0 °C ... +55 °C
Storage temperature	-25 °C ... +85 °C
Operating altitude	max. 2000 m
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

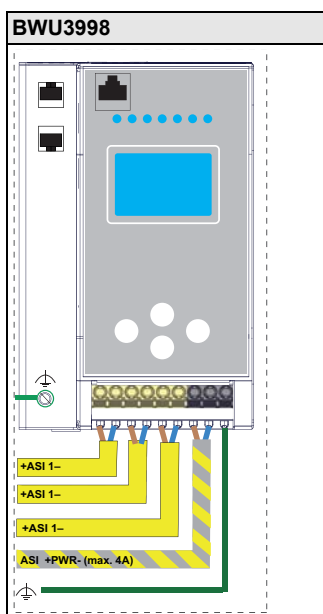
(1) Safe data exchange between safe protocols (e.g. CIP Safety, PROFIsafe etc.).

(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.

	BWU3998
Current measurement of the ASi circuits	•
Self-resetting 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 is needed for both 2 ASi circuits	•

Connections: Gateway:



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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, 3 phases (art. no. BW1927), 30 V power supply, 8 A, 3 phases (art. no. BW1676) (for further power supply units visit www.bihl-wiedemann.de/en/products/accessories/power-supplies)
- PROFINET Master Simulator (art. no. BW3035, BW3057)