

ASi-5/ASi-3 PROFIsafe via PROFINET Gateway with integrated Safety Monitor

ASi-5 – Great data bandwidth, short cycle times

Compatible with all ASi generations

PROFIsafe and Safe Link in one device

- up to 450 devices

2 ASi-5/ASi-3 Master, PROFINET node

- ASi Safety input nodes report via PROFIsafe
- ASi Safety output nodes switch via PROFIsafe

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, SIL 3, cat. 4	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.
	PROFIsafe, PROFINET, ASi-5 / ASi-3	-	max. 62 x 2 channels, 1922 in max. configuration	-	max. 64, 1984 in max. configuration	PROFIsafe (F-CPU) + ASIMON program + Safe Link	2 ASi networks, 2 ASi-5/ASi-3 Masters	yes, max. 4A/ ASi network	Ethernet fieldbus; Ethernet diagnostics	BWU3833

⁽¹⁾ **Number of ASi networks, number of ASi Master**

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

„Double Master“: 2 ASi networks, 2 ASi Masters.

⁽²⁾ **1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies**

"yes, max. 4A/ASi network": Cost-effective power for 2 ASi networks with 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 with integrated safety monitor is available in the "Downloads" section of the respective device.

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Article no.	BWU3833	
Interface		
PROFINET interface	2 x RJ-45, integrated 2-Port-Switch IRT capability Conformance Class B, integrated switch complies with Conformance Class C (IRT capability)	
OPC UA interface	OPC UA server + 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	
ASi		
ASi specification	ASi-3 + ASi-5	
Cycle time	Cycle time ASi-3 (variable): 150 μ s * (number of ASi-3 nodes + 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)	
Current per ASi circuit	up to 30 °C	4 A per ASi circuit
	at 40 °C	4 A per ASi circuit
	at 55 °C	4 A per ASi circuit
ASi Power24V capability ⁽¹⁾	yes	
Length of the ASi line	when supplied via 24 V power supply unit: max. 50 m when supplied via 30 V power supply unit: max. 100 m for ASi-3 / max. 200 m for ASi-5	
AUX		
Operating voltage	–	
Max current consumption	–	
Display		
LCD	indication of ASi addresses and error messages in plain text	
LED PROFINET (green / red)	green: PROFINET communication active red: no PROFINET communication	
LED power (green)	power on	
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 address programming enabled	
LED prj mode (yellow)	configuration mode active	
LED AUX (green)	–	
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.	

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Article no.	BWU3833
Environment	
Applied standards	EN 60529 EN 62026-2 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
Maximum tolerable shock and vibration stress	according EN 61131-2
Voltage of insulation	≥ 500 V
Weight	800 g
Dimensions (W / H / D in mm)	85 / 120 / 106

(1) ASi Power24V

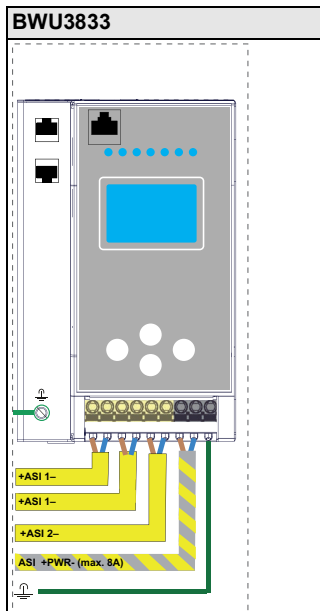
The device can be operated directly on a 24 V (PELV) power supply. The gateway has been optimized with integrated data coupling coils and adjustable self-resetting fuses for safe use of powerful 24 V power supplies.

Article no.	Operating current		
	Master power supply, ca. 300 mA out of ASi circuits	Master power supply, max. 300 mA out of ASi circuit 1 (approx. 70 mA ... 300 mA), max. 300 mA out of ASi circuit 2 (approx. 70 mA ... 300 mA); in sum max. 370 mA	Version „1 gateway, 1 power supply, for 2 ASi networks“, approx. 300 mA (PELV voltage)
BWU3833	–	–	•

	BWU3833
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	•
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	•

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Connections



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)
- PROFINET Master Simulators Licenses (art. no. BW4754, BW4755)