

# 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**

**Safe speed and standstill monitoring**

**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 <sup>(1)</sup>	1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies <sup>(2)</sup>	Diagnostic and configuration interface <sup>(3)</sup>	Article No.
	PROFIsafe, PROFINET, ASi-5 / ASi-3	-	max. 31 x 2 channels, 1891 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	<b>BWU3833</b>

<sup>(1)</sup> **Number of ASi networks, number of ASi Master**

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

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

<sup>(2)</sup> **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.

<sup>(3)</sup> **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.

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



<b>Article no.</b>	<b>BWU3833</b>	
<b>Interface</b>		
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	
<b>ASi</b>		
ASi specification	ASi-3 + ASi-5	
Cycle time	<b>Cycle time ASi-3 (variable):</b> 150 $\mu$ s * (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	30 V <sub>DC</sub> (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 <sup>(1)</sup>	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	
<b>AUX</b>		
Operating voltage	–	
Max current consumption	–	
<b>Display</b>		
LCD	indication of slave 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 addresses programming enabled	
LED prj mode (yellow)	configuration mode active	
LED AUX (green)	–	
<b>UL-specifications (UL508)</b>		
External protection	An isolated source with a secondary open circuit voltage of $\leq 30$ V <sub>DC</sub> 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.	
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	

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<b>Article no.</b>	<b>BWU3833</b>
<b>Environment</b>	
Operating altitude	max. 2000 m
Ambient temperature	0 °C ... +55 °C
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

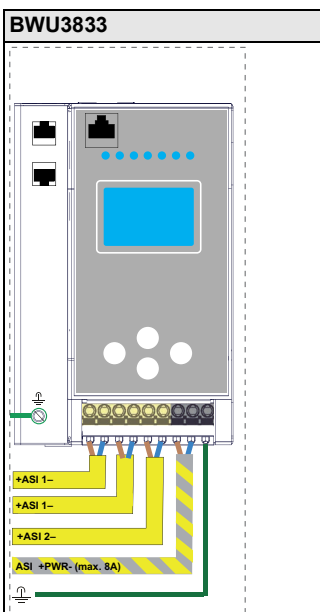
**(1) ASi Power24V**

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)
<b>BWU3833</b>	-	-	•

	<b>BWU3833</b>
<b>Redundant power supply out of ASi:</b> all fundamental functions of the device remain available even in case of power failure in one of the two ASi networks	-
<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>In version „1 gateway, 1 power supply for 2 ASi circuits“:</b> only 1 gateway + 1 ASi power supply is needed for both 2 ASi circuits	•

## Connections



## ASi-5/ASi-3 PROFIsafe via 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, 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](http://www.bihl-wiedemann.de/en/products/accessories/power-supplies))
- PROFINET Master simulator Plus (art. no. BW3057)



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