

# 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**

**1 ASi-5/ASi-3 Master, PROFINET device**

- 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 <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 programm + Safe Link	1 ASi network, 1 ASi-5/ASi-3 master	yes, max. 4A/ASi network	Ethernet fieldbus; Ethernet diagnostics	<b>BWU4018</b>

<sup>(1)</sup> **Number of ASi networks, number of ASi Master**  
**"Single Master"**: 1 ASi network, 1 ASi-5/ASi-3 Master.

<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.

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<b>Article no.</b>	<b>BWU4018</b>
<b>Fieldbus interface</b>	
Type	PROFINET; 2 x RJ-45,integrated 2-Port-Switch, IRT capability Conformance Class B, integrated switch complies with Conformance Class C (IRT capability)
Baud rates	10/100 MBaud
Safety communication	PROFIsafe via PROFINET + Safe Link
OPC UA interface	OPC UA server + web server
Function	PROFINET IO Device Media Redundancy Protocol (MRP) Shared Device
Card slot	chip card (512 kB) for storage of configuration data
<b>Diagnostic interface</b>	
Type	Ethernet; RJ-45 according to IEEE 802.3
Baud rate	10/100 MBaud half-duplex or full-duplex
Safety communication	Safe Link
OPC UA interface	OPC UA server + web server
<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)
Operating current	ca. 300 mA
Current per ASi circuit	4 A/ASi circuit
ASi Power24V capability <sup>(1)</sup>	yes
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>AUX</b>	
Operating voltage	-
Max current consumption	-
<b>Display</b>	
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 node address 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.

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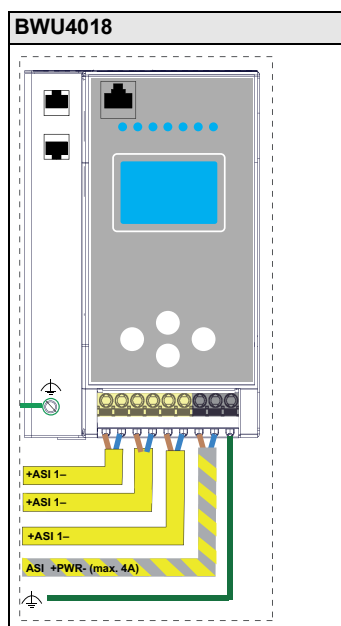
<b>Article no.</b>	<b>BWU4018</b>
<b>Environment</b>	
Applied standards	EN 62026-2 EN 60529 EN 61000-6-2 EN 61000-6-4 EN 62061, SIL 3 EN 61508, SIL 3 EN ISO 13849-1, Performance-Level e EN ISO 13849-2
Operating altitude	max. 2000 m
Ambient temperature	-25 °C ... +55 °C (no condensation permitted)
Storage temperature	-25 °C ... +85 °C
Housing	stainless steel, for DIN rail mounting
Pollution degree	2
Protection category	IP20
Tolerable loading referring to humidity	according EN 61131-2
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.

	<b>BWU4018</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>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</b>	•

### Connections: Gateway + Safety Monitor:



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



### Accessories:

- Chip card, memory capacity 512 kB (art. no. BW4055)
- Bihl+Wiedemann Safety Suite - Safety Software for Configuration, Diagnostics and Commissioning (art. no. BW2916)
- Spannungsversorgung, z.B.: 30 V Netzteil, 4 A, 1-phasig (Art.-Nr. BW4218), 30 V Netzteil, 8 A, 1-phasig (Art.-Nr. BW4219), 30 V Netzteil, 8 A, 3-phasig (Art.-Nr. BW4220), 30 V Netzteil, 16 A, 1-phasig (Art.-Nr. BW4221), 30 V Netzteil, 16 A, 3-phasig (Art.-Nr. BW4222) (weitere Netzteile finden Sie unter [www.bihl-wiedemann.de/de/produkte/zubehoer/spannungsversorgung](http://www.bihl-wiedemann.de/de/produkte/zubehoer/spannungsversorgung))
- PROFINET Master Simulator (art. no. BW4754, BW4755)