

# ASi-5/ASi-3 openSAFETY over POWERLINK Gateway with integrated safety monitor



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

**Compatible with all ASi generations**

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

- integrated Hub

**openSAFETY over POWERLINK**

**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**



(Abbildung ähnlich)



Figure	Type	Inputs Safety, SIL 3, Kat. 4	Inputs Safety, expandable to	Outputs Safety, SIL 3, Kat. 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>	Art. no.
	Safety, POWERLINK, ASi-5/ASi-3	–	max 31 x 2 channels, max. 1891 in configuration	–	max. 64, max. 1984 in configuration	openSAFETY over POWERLINK + Safe Link	1 ASi network, 1 ASi-5/ASi-3 Master	yes, max. 4 A/ASi network	Ethernet diagnostic	<b>BWU3994</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 circuits, inexpensive power supplies:**  
**"ja, max. 4 A/ASi Kreis":** Cost-effective power for 2 ASi circuits with 1 power supply.

<sup>(3)</sup> **Diagnostic and configuration interface**  
**"Ethernet diagnostic":** Access to ASi master and safety monitor via Bihl+Wiedemann proprietary software over Ethernet diagnostics 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>Art. no.</b>		<b>BWU3994</b>
<b>Fieldbus interface</b>		
Type	POWERLINK 2 x RJ-45, integrated 2-Port-Hub	
Baud rates	10/100 MBaud	
Safety communication	openSAFETY	
OPC UA interface	-	
Card slot	chip card (BW4055) for storage of configuration data	
<b>Diagnostic interface</b>		
Type	Ethernet RJ-45 according to IEEE 802.3	
Baud rates	10/100 MBaud half-duplex or full-duplex	
Safety communication	Safe Link	
OPC UA interface	OPC UA-Server + Webserver	
<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 $\mu$ s * (number of ASi-3 nodes + 2)	
Operating voltage	30 V <sub>DC</sub> (20 ... 31,6 V) (PELV voltage)	
Operating current	ca. 300 mA	
Current per ASi network	up to 30 °C	4 A/ASi circuit
	at 40 °C	
	at 55 °C	
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	menu, indication of ASi addresses and error messages in plain text	
LED POWERLINK (green)	POWERLINK communication activ	
LED power (green)	power on	
LED config error (red)	configuration error	
LED U ASi (green)	ASi voltage o.k.	
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)	-	
LEDs SI1 ... SI6 (yellow)	-	
LEDs SO1 ... SO6 (yellow)	-	
<b>UL-Spezifikationen (UL508)</b>		
External protection	An isolated source with a secondary open circuit voltage of .30 VDC 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.	

# ASi-5/ASi-3 openSAFETY over POWERLINK Gateway with integrated safety monitor

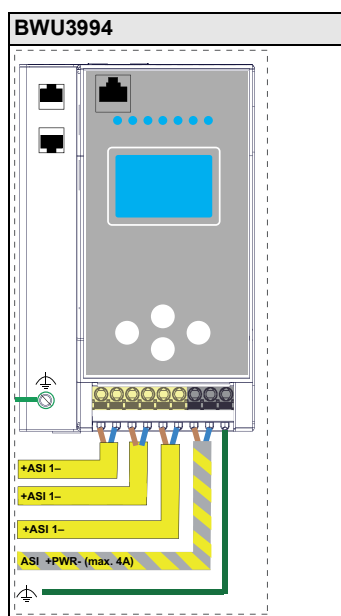
<b>Art. no.</b>	<b>BWU3994</b>
<b>Environment</b>	
Applied standards	EN 62026-2 EN 60529 EN 61000-6-2 EN 61000-6-4 EN 61131-2 EN 62061, SIL 3 EN 61508, SIL 3 EN ISO 13849-1, Performance-Level e EN ISO 13849-2
Operating altitude	max. 5000 m
Ambient temperature	-25 °C ... +55 °C (no condensation permitted)
Storage temperature	-25 °C ... +85 °C
Housing	stainless steel, for DIN rail mounting
Pollution degree	2
Schutzart	IP20
Maximum tolerable shock and vibration stress	according to 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>BWU3994</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:



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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, 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))