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 interface and REST API for IIoT applications

Integrated web server for simple diagnostics and maintenance

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 out-puts, independent according to SIL 3, expandable to	Safety communica-tion	Number of ASi networks, number of ASi Master [1]	1 power sup-ply, 1 gateway for 2 ASi networks, inexpensive power supplies [2]	Diagnostic and configura-tion interface [3]	Art. no.
	Safety, POWERLINK, ASi-5/ASi-3	–	max 31 x 2 chan-nels, max. 1891 in configura-tion	–	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	**BWU3994**

[1] **Number of ASi networks, number of ASi Master**
"Single Master": 1 ASi network, 1 ASi-5/ASi-3 Master.

[2] **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.

[3] **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.

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

Bihl+Wiedemann

Art. no.	BWU3994
Fieldbus interface	
Type	POWERLINK 2 x RJ-45, integrated 2-Port-Hub
Baud rates	10/100 MBaud
Safety communication	openSAFETY
IT interface	-
Card slot	chip card (BW4055) for storage of configuration data
Diagnostic interface	
Type	Ethernet RJ-45 according to IEEE 802.3
Baud rates	10/100 MBaud half-duplex or full-duplex
Safety communication	Safe Link
IT interface	OPC UA-Server, Webserver, REST API
ASi	
ASi specification	ASi-5 + ASi-3
Cycle time	**Cycle time ASi-5 (constant):** 1,27 ms for 384 bits input data+ 384 bits output data
	Cycle time ASi-3 (variable): 150 µs * (number of ASi-3 nodes + 2)
Operating voltage	30 V_{DC} (20 ... 31,6 V) (PELV voltage)
Operating current	ca. 300 mA
Current per ASi network — up to 30 °C / at 40 °C / at 55 °C	4 A/ASi circuit
ASi Power24V capability [1]	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
AUX	
Operating voltage	–
Max current consumption	–
Display	
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)	–
UL-Spezifikationen (UL508)	
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.

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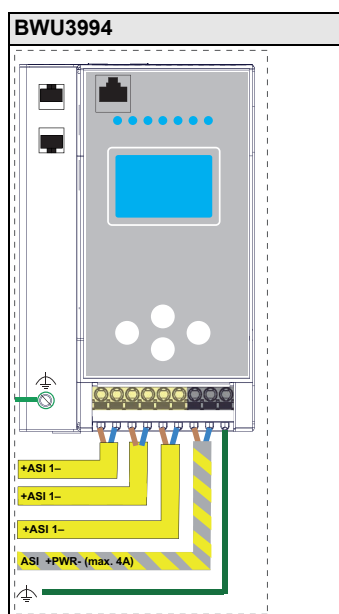
Art. no.	BWU3994
Environment	
Applied standards	EN 62026-2 EN 60529 EN 61000-6-2 EN 61000-6-4 EN 61131-2 EN 62061, SIL 3 EN 61508, SIL 3 EN ISO 13849-1, Performance-Level e EN ISO 13849-2
Operating altitude	max. 5000 m
Ambient temperature	-25 °C … +55 °C (no condensation permitted)
Storage temperature	-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.

	BWU3994
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 + 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_)

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