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

ASi-5 – Great data bandwidth, short cycle times

(Figure similar)

Compatible with all ASi generations

Safe Link

1 ASi-5/ASi-3, PROFINET device

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	Type	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.
	Safety, PROFINET, ASi-5 / ASi-3	max. 31 x 2 channels, max. 1891 in max. configuration	–	max. 64, max. 1984 in max. configuration	Safe Link	1 ASi network, 1 ASi-5 /ASi-3 Master	yes, max. 4 A/ ASi network	Ethernet fieldbus; Ethernet diagnostics	**BWU3998**

(1) **Number of ASi networks, number of ASi Master**
"Single Master": 1 ASi network, 1 ASi Master.

(2) **1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies**
"yes, max. 4 A/ASi network": Cost-effective power for 2 ASi networks with 1 power supply (optionally supply of multiple Single Gateways by 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 is available in the "Downloads" section of the respective device.

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

Article no.		BWU3998
Interface		
PROFINET interface		2 x RJ-45, integrated 2-Port-Switch, IRT capability
Conformance Class		Class B integrated switch complies with Class C (IRT capability)
OPC UA Interface		OPC UA server + integrated 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
Ethernet interface		
Baud rates		10/100 MBaud half-duplex or full-duplex
Safety communication		Safe Link
Safe coupling (1)		no
ASi		
ASi specification		ASi-3 + ASi-5
Cycle time		**Cycle time ASi-3 (variable):** 150 µs * (number of ASi-3 slaves + 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)
Operating current		approx. 300 mA
Current per ASi network	up to 30 °C	4 A per ASi network
	at 40 °C	4 A per ASi network
	at 55 °C	4 A per ASi network
ASi Power24V capability (2)		yes
Length of ASi line		with supply via 24 V power supply: max. 50 m with supply via 30 V power supply: max. 100 m for ASi-3 / max. 200 m for ASi-5
AUX		
Operating voltage		–
Max current consumption		–
Display		
LCD		menu, indication of slave addresses and error messages in plain text
LED power (green)		power on
LED PROFINET (green/red)		green: PROFINET communication active red: no PROFINET communication
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 (yellow)		–
UL-specifications (UL508)		
External protection	An isolated source with a secondary open circuit voltage of ≤30 V_{DC} has to be protected with a 3 A maximum over current. 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 PROFINET Gateway with integrated Safety Monitor

Article no.	BWU3998
Ambient	
Applied standards	EN 62026-2 EN60529 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
Ambient temperature	0 °C … +55 °C
Storage temperature	-25 °C … +85 °C
Operating altitude	max. 2000 m
Housing	stainless steel, for DIN-rail mounting
Pollution degree	2
Protection category	IP20
Tolerable loading referring to impacts and vibrations	according EN 61131-2
Voltage of insulation	≥500 V
Weight	500 g
Dimensions (W / H / D in mm)	85 / 120 / 106

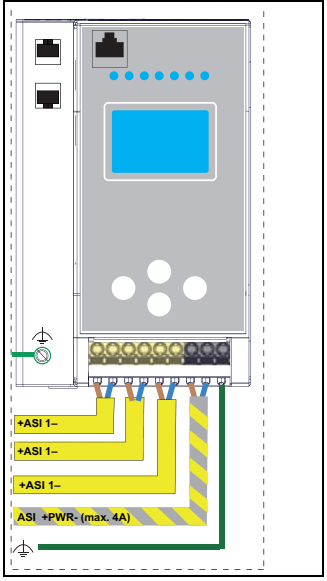
(1) Safe data exchange between safe protocols (e.g. CIP Safety, PROFIsafe etc.).

(2) **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.

	BWU3998
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:

BWU3998



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*)**
- **PROFINET Master Simulator (art. no. BW3035, BW3057)**