ASi-3 PROFINET-Gateways in Stainless Steel

PROFINET IO
- **offers IRT-technology**
- **1 integrated Switch**

OPC UA interface and REST API for IIoT applications

Integrated web server for simple diagnostics and maintenance

Recognition of duplicate ASi addresses

ASi Earth Fault Detector integrated

ASi Noise Detector integrated

Optional Control III, programming in C

(figure similar)

Figure	Interface, fieldbus [1]	ASi-5/ASi-3	Number of ASi networks, number of ASi Master [2]	Integrated decoupling, ASi current measurement in the gateway [3]	Diagnostic and configuration interface [4]	Recognition of duplicate ASi addresses [5]	ASi fault detector [6]	Programming in C [7]	Article no.
	PROFINET, OPC UA	ASi-3 compatible	2 ASi networks, 2 ASi-3 Masters	yes, max. 4 A/ASi network	Ethernet fieldbus	yes	yes	optional	**BWU3759**
	PROFINET, OPC UA	ASi-3 compatible	2 ASi networks, 2 ASi-3 Masters	no, max. 8 A/ASi network, redundant supply	Ethernet fieldbus	yes	yes	optional	**BWU3844**
	PROFINET, OPC UA	ASi-3 compatible	1 ASi network, 1 ASi-3 Master	no, max. 8 A/ASi network	Ethernet fieldbus	yes	yes	optional	**BWU3758**

[1] **Interface, fieldbus**
Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.
PROFINET ASi Gateway: interface for a PROFINET fieldbus
OPC UA server: interface for the OPC UA communication.

[2] **Number of ASi networks, number of ASi Master**
"Single Master": 1 ASi network, 1 ASi-3 Master.
"Double Master": 2 ASi networks, 2 ASi-3 Masters.

[3] **Integrated decoupling, ASi current measurement in the gateway**
"yes, max. 4 A/ASi network": Data decoupling integrated in the gateway. Cost-effective power for 2 ASi networks with 1 power supply (optionally supply of multiple Single Gateways by 1 power supply). Operation with short cable lengths with standard 24 V power supply possible.
"no, max. 8 A/ASi network, redundant supply": 1 power supply per ASi network. Gateway is powered in normal operation from one of the two ASi power supplies. Should one ASi power supply fail, switching to the other ASi power supply allows all the diagnostics functions to be maintained and the unaffected ASi network continues to operate.
"no, max. 8 A/ASi network": 1 power supply per ASi network.

[4] **Diagnostic and configuration interface**
"Ethernet fieldbus": Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet fieldbus interface.
The latest version of the device description file of the gateway is available in the "Downloads" section of the respective device.

[5] **Recognition of duplicate ASi addresses**
Detects whether the same address has been assigned to two ASi nodes. Frequent error when using a handheld addressing device.

[6] **ASi fault detector**
Checks the ASi line for interference effects such as noise, external voltages, ...

[7] **Programming in C**
Using a C-program offers the possibility to run mini-PLC functions with a gateway.

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Article no.	BWU3758	BWU3844	BWU3759
Fieldbus Interface			
Type	PROFINET; 2 x RJ-45, integrated 2-Port-Switch, IRT capability		
Baud rate	100 MBaud		
IT interface	OPC UA server, web server, REST API		
Conformance Class	Class B integrated switch complies with Class C (IRT capability)		
Function	PROFINET IO Device Media Redundancy Protocol (MRP) Shared Device		
Card slot	Chip card for storage of configuration data		
Diagnostic Interface			
Type	Ethernet; RJ-45 acc. to IEEE 802.3		
Baud rate	10/100 MBaud half/full duplex		
IT interface	OPC UA server, web server, REST API		
ASi			
ASi specification	3.0		
Cycle time	150 µs * (number of nodes + 2)		
Operating voltage	30 V_{DC} (20 ... 31,6 V) (PELV voltage)		
Operating current	200 mA	270 mA	250 mA
Length of ASi cable	max. 100 m		
ASi Power24V capability [1]	no		yes
Display			
LCD	menu, ASi indication of ASi addresses, error messages in plain text		
LED power (green)	power ON		
LED PROFINET (green/red)	green: PROFINET communication active red: PROFINET communication not active		
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 address programming enabled		
LED prj mode (yellow)	in configuration mode		
UL-specifications (UL508)			
External protection	An isolated source with a secondary open circuit voltage of ≤30 V_{DC} 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.		
Environment			
Applied standards	EN 60529 EN 61000-6-2 EN 61000-6-4		
Operating altitude	max. 2000 m		
Operating temperature	0 °C … +55 °C		
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 to EN 61131-2		
Maximum tolerable shock and vibration stress	according to EN 61131-2		
Voltage of insulation	≥500 V		
Weight	500 g		
Dimensions (W / H / D in mm)	85 / 120 / 83		

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(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.	BWU3758	BWU3844	BWU3759
Data decoupling integrated in the gateway	–	–	●
Redundant power supply out of ASi: all fundamental functions of the device remain available even in case of power failure in one of the two ASi networks	–	●	–
Current measurement of the ASi circuits	–	–	●
Self-resetting adjustable fuses	–	–	●
ASi earth fault monitor distinguishes between ASi cable and sensor cable	–	–	●
Cost-effective power for 2 ASi networks with 1 power supply	–	–	●

Accessories:
- Diagnostic Software measurements (art. no. BW2902)
- PROFINET Master Simulator (art. no. BW3035, BW3057)
- Control III, Programming in C (art. no. BW2582)
- Power supplies, e.g.: ASi power supply, 4 A (art. no. BW1649), ASi power supply, 8 A (art. no. BW1997)
  (further power supply units can be found at *www.bihl-wiedemann.de/en/products/accessories/power-supplies*)