ASi-3 Ethernet/IP + Modbus TCP Gateway in Stainless Steel

Bihl+Wiedemann

EtherNet/IP + Modbus TCP in one device

OPC UA server

Integrated switch

Integrated web server for simple diagnostics

Recognition of Duplicate ASi Addresses

ASi Earth Fault Detector integrated

ASi Noise Detector integrated

Optional Control III, programming in C

Significantly improved response times

(Figure similar)

Figure	Fieldbus interface [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.
	EtherNet/IP + Modbus TCP, 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	**BWU3735**
	EtherNet/IP + Modbus TCP, OPC UA	ASi-3 compatible	1 ASi network, 1 ASi-3 Master	no, max. 8 A/ASi network	Ethernet Fieldbus	yes	yes	optional	**BWU3734**

[1] **Fieldbus interface**
Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.
EtherNet/IP+ Modbus TCP ASi Gateway: interface for an EtherNet/IP+ Modbus TCP 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**
"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 proprietary 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 hand held addressing device.

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

[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.	BWU3734	BWU3735
Fieldbus Interface		
Type	Ethernet + Modbus TCP acc. to IEEE 802.3 2 x RJ-45, integrated 2-Port-Switch,	
Baud rate	10/100 MBaud	
OPC UA interface	OPC UA server + web server	
Function	Device Level Ring (DLR) (Ethernet/IP only)	
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	
OPC UA interface	OPC UA server + web server	
ASi		
ASi specification	3.0	
Cycle time	150 µs * (number of nodes + 2)	
Operating voltage	30 V_{DC} (20 ... 31,6 V) (PELV voltage)	
ASi Power24V capability [1]	no	
Display		
LCD	menu, ASi indication of ASi addresses, error messages in plain text	
LED power (green)	power ON	
LED ser active (green)	Ethernet communication 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)	configuration mode active	
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	
Protection category	IP20	
Tolerable loading referring to impacts and vibrations	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	

[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.

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Article no.	Operating current		
	Master power supply, max. 200 mA out of ASi circuit 1 (ca. 70 mA ... 200 mA), max. 200 mA out of ASi circuit 2 (ca. 70 mA ... 200 mA); in sum max. 270 mA	Cost-effective power for 2 ASi networks with 1 power supply, approx. 250 mA (PELV voltage)	Master power supply, ca. 200 mA out of ASi circuit
BWU3734	–	–	●
BWU3735	●	–	–

Article no.	BWU3734	BWU3735
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:
- **Software for diagnostics, service approval and measurements (art. no. BW2902)**
- **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*)**
- **Control III, Programming in C (art. no. BW2582)**

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