

# ASi-3 EtherNet/IP + Modbus TCP Gateway in stainless steel

## ASi-3 EtherNet/IP™ (1) + Modbus TCP-Gateway in stainless steel

OPC UA interface and REST API for IIoT applications

Integrated web server for simple diagnostics and maintenance

1 ASi-3 Master, EtherNet/IP + Modbus TCP device  
 • switch integrated

Duplicate ASi address recognition

ASi Earth Fault Detector integrated

ASi Noise Detector integrated

Optional Control III, programming in C



(figure similar)



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Figure	Interface, fieldbus (1)	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)	Prog. in C (7)	Art. no.
	EtherNet/IP + Modbus TCP, OPC UA	1 ASi network, 1 ASi-3 master	yes, max. 8 A/ASi network	Ethernet fieldbus, Ethernet diagnostic	yes	yes	optional	<b>BWU4958</b>

- (1) **Interface, fieldbus**  
 Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.  
**Ethernet/IP+ Modbus TCP ASi Gateway:** interface for a Ethernet/IP+ Modbus TCP fieldbus  
**OPC UA server:** interface for OPC UA communication.
- (2) **Number of ASi networks, number of ASi Master**  
**"Double Master":** 1 ASi network, 1 ASi-3 Master.
- (3) **Integrated decoupling, ASi current measurement in the gateway**  
**"yes, max. 8 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.
- (4) **Diagnostic and configuration interface**  
**"Ethernet fieldbus + Ethernet diagnostic":** Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet diagnostic 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.**
- (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 AS-i 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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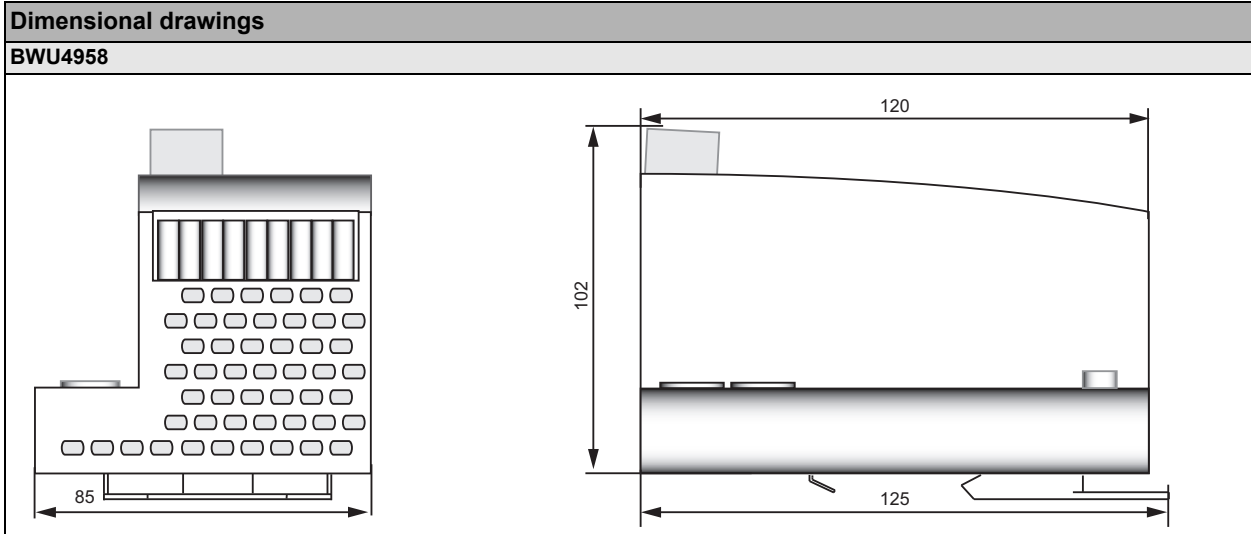
<b>Article no.</b>	<b>BWU4958</b>
<b>Fieldbus interface</b>	
Type	EtherNet/IP + Modbus TCP acc. to IEEE 802.3 2 x RJ-45, integrated 2-Port-Switch,
Baud rate	10/100 MBaud
IT interface	OPC UA server, web server, REST API
Function	Device Level Ring (DLR) (Ethernet/IP only)
Card slot	chip card (128 kB) for storage of configuration data
<b>Diagnostic interface</b>	
Type	Ethernet; RJ-45 acc. to IEEE 802.3
Baud rate	10/100 MBaud half duplex/full duplex
IT interface	OPC UA server, web server, REST API
<b>ASi</b>	
ASi specification	ASi-3
Number of ASi networks, number of ASi Master	1 ASi network, 1 ASi-3 master
Cycle time	150 $\mu$ s * (number of ASi-3 nodes + 2)
Operating current	approx. 250 mA
Current per ASi network	max. 8 A
ASi Power24V capability <sup>(1)</sup>	yes
<b>Display</b>	
LCD	menu, indication of ASi addresses and error messages in plain text
LED power (green)	power on
LED net (green)	Ethernet network 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 addresses programming enabled
LED prj mode (yellow)	configuration mode active
<b>UL-specifications (UL61010)</b>	
In general	UL mark does not provide UL certification for any functional safety rating or aspects of the above devices.
<b>Environment</b>	
Applied standards	EN 60529 EN 61000-6-2 EN 61000-6-4 EN 61131-2
Operating altitude	max. 2000 m
Ambient temperature	-25 °C ... +50 °C (up to max. 55 °C) <sup>(2)</sup> (no condensation permitted)
Storage temperature	-25 °C ... +85 °C
Intended environment	for indoor use only
Housing	stainless steel, for DIN rail mounting
Pollution Degree	2
Overvoltage category	III
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	$\geq$ 500 V
Weight	625 g
Dimensions (W / H / D in mm)	85 / 120 / 106

<sup>(1)</sup> **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.

<sup>(2)</sup> Maximum ambient operating temperature +50 °C according UL certificate for the use in the USA and Canada.

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## Wiring rules ASi connection and power supply

Push-in terminals, 2 /3 /4 poles (pitch 5 mm)	
<b>General</b>	
Nominal cross section	2.5 mm <sup>2</sup>
<b>Conductor cross section</b>	
Conductor cross section solid	0.2 ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 ... 2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule	without plastic sleeve: 0.25 ... 2.5 mm <sup>2</sup>
	with plastic sleeve: 0.25 ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, with TWIN ferrules	without plastic sleeve: 0.5 ... 1.5 mm <sup>2</sup>
AWG	24 ... 14
Stripped insulation length	10 mm

	<b>BWU4958</b>
Data decoupling integrated in the gateway	•
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:

- Chip card, memory capacity 128 kByte (art. no. BW2222)
- Bihl+Wiedemann Suite - Software for Configuration, Diagnostics and Commissioning (art. no. BW2902)
- 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))