

# ASi-5/ASi-3 PROFINET-Gateways in Stainless Steel, 2 ASi-5/ASi-3 Masters

## ASi-5/ASi-3 PROFINET-Gateways in Stainless Steel

New standard ASi-5

ASi-5 master and ASi-3 master in one device

OPC UA server and  
integrated web server for simplified diagnostics

2 ASi-5/ASi-3 Masters, PROFINET device

PROFINET IO

- offers IRT-technology
- 1 integrated Switch

Duplicate ASi address recognition

ASi Earth Fault Detector integrated


ASi Noise Detector integrated

Optional Control III, Programming in C



(figure similar)



Figure	Fieldbus, Interface <sup>(1)</sup>	ASi-5/ASi-3	Number of ASi networks, number of ASi Master <sup>(2)</sup>	Integrated decoupling, ASi current measurement in the gateway <sup>(3)</sup>	Diagnostic and configuration interface <sup>(4)</sup>	Recognition of duplicate ASi addresses <sup>(5)</sup>	ASi fault detector <sup>(6)</sup>	Programming in C <sup>(7)</sup>	Art. no.
	PROFINET, OPC UA	ASi-5 + ASi-3 compatible	2 ASi networks, 2 ASi-5/ASi-3 Masters	yes, max. 8 A / ASi network	Ethernet fieldbus + Ethernet diagnostic	yes	yes	optional	<b>BWU4257</b>

**(1) Fieldbus interface**

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**

**"Double Master":** 2 ASi networks, 2 ASi-5/ASi-3 Masters.

**(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 proprietary 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 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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<b>Article no.</b>	<b>BWU4257</b>
<b>Fieldbus interface</b>	
Type	PROFINET 2 x RJ-45, integrated 2-Port-Switch, IRT capability
Baud rates	10/100 MBaud
OPC UA interface	OPC UA server + web server
Conformance Class	Class B, integrated switch complies with Class C (IRT capability)
Function	PROFINET IO Device PROFINET system redundancy S2 (NAP S2) Media Redundancy Protocol (MRP) Shared Device
Card slot	chip card (BW4055) for storage of configuration data
<b>Diagnostic interface</b>	
Type	Ethernet; RJ-45 according IEEE 802.3
Baud rate	10/100 MBaud half-duplex or full-duplex
OPC UA interface	OPC UA server + web server
<b>ASi</b>	
ASi specification	ASi-5 + ASi-3
Number of ASi networks, number of ASi Master	2 ASi networks, 2 ASi-5/ASi-3 Masters
Cycle time	<b>Cycle time ASi-5 (constant):</b> 1,27 ms for 384 bits input data + 384 bits output data <b>Cycle time ASi-3 (variable):</b> $150 \mu\text{s} * (\text{number of ASi-3 nodes} + 2)$
Operating current	ca. 250 mA
Current per ASi network	max. 8A
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 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 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.

## ASi-5/ASi-3 PROFINET-Gateways in Stainless Steel, 2 ASi-5/ASi-3 Masters

Article no.	BWU4257
<b>Environment</b>	
Angewandte Normen	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	≥500 V
Weight	625 g
Dimensions (W / H / D in mm)	85 / 126 / 147

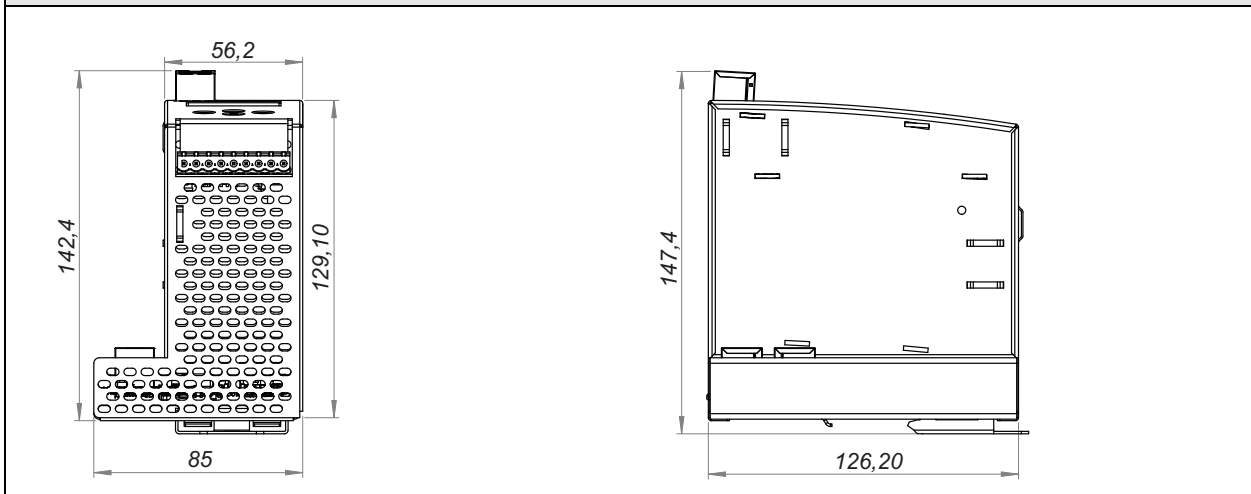
(1) **ASi Power24V**

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.

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

### Dimensional drawings

#### BWU4257



# ASi-5/ASi-3 PROFINET-Gateways in Stainless Steel, 2 ASi-5/ASi-3 Masters

## Wiring rules ASi connection

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

## Wiring rules power supply

Push-in terminals, 3 poles (pitch 7.62 mm)	
<b>General</b>	
Nominal cross section	2.5 mm <sup>2</sup>
<b>Conductor cross section</b>	
Conductor cross section solid	0.5 ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.5 ... 2.5 mm <sup>2</sup> (with or without plastic sleeve)
AWG	20 ... 12
Stripped insulation length	10 mm

Article no.	BWU4257
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 512 kB (art. no. BW4055)
- Bihl+Wiedemann Safety Suite - Safety 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))
- PROFINET Master Simulators Licenses (art. no. BW4754, BW4755)