

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 interface and REST API for IIoT applications

Integrated web server for simple diagnostics and maintenance

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	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⁾	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	BWU4257

(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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Article no.	BWU4257
Fieldbus interface	
Type	PROFINET 2 x RJ-45, integrated 2-Port-Switch, IRT capability
Transmission rate	10/100 MBit/s
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 (BW5183) for storage of configuration data
Diagnostic interface	
Type	Ethernet; RJ-45 according IEEE 802.3
Transmission rate	10/100 MBit/s
IT interface	OPC UA server, web server, REST API
ASi	
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	Cycle time ASi-5 (constant): 1,27 ms for 384 bits input data + 384 bits output data
	Cycle time ASi-3 (variable): $150 \mu\text{s} * (\text{number of ASi-3 nodes} + 2)$
Operating current	ca. 250 mA
Current per ASi network	max. 8A
ASi Power24V capability ⁽¹⁾	yes
Display	
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
UL-specifications (UL61010)	
In general	UL mark does not provide UL certification for any functional safety rating or aspects of the above devices.

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Article no.	BWU4257
Environment	
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) ⁽²⁾ (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

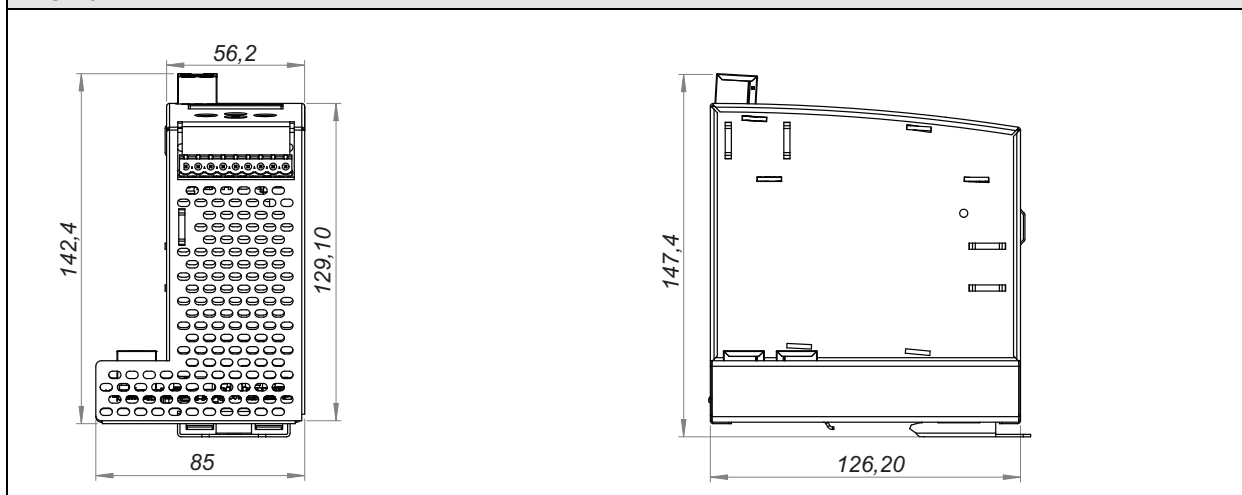
(1) ASi Power24V

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)
General	
Nominal cross section	2.5 mm ²
Conductor cross section	
Conductor cross section solid	0.2 ... 2.5 mm ²
Conductor cross section flexible	0.2 ... 2.5 mm ²
Conductor cross section flexible, with ferrule	without plastic sleeve: 0.25 ... 2.5 mm ²
	with plastic sleeve: 0.25 ... 2.5 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules	without plastic sleeve: 0.5 ... 1.5 mm ²
AWG	24 ... 14
Stripped insulation length	10 mm

Wiring rules power supply

	Push-in terminals, 3 poles (pitch 7.62 mm)
General	
Nominal cross section	2.5 mm ²
Conductor cross section	
Conductor cross section solid	0.5 ... 1.5 mm ²
Conductor cross section flexible	0.5 ... 2.5 mm ² (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. BW5183)
- Bihl+Wiedemann Suite - Software for Configuration, Diagnostics and Commissioning (art. no. BW2902)
- PROFINET Master Simulators Licenses (art. no. BW4939, BW5069)
- 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)