

# AS-i 3.0 PROFINET-Gateways in Stainless Steel

## PROFINET IO

- offers IRT-technology
- 1 integrated Switch

## OPC UA server

## Integrated web server for simple diagnostics

## Recognition of duplicate AS-i addresses

## AS-i Earth Fault Detector integrated


## AS-i Noise Detector integrated

## Optional Control III, programming in C



(figure similar)



Figure	Type	Model	Fieldbus interface (1)	Number of AS-i networks, number of AS-i Master (2)	1 power supply, 1 gateway for 2 AS-i networks, inexpensive power supplies (3)	Diagnostic and configuration interface (4)	Recognition of duplicate AS-i addresses (5)	AS-i fault detector (6)	Programming in C (7)	Article no.
	PROFINET AS-i	Gateway	PROFINET, OPC UA	2 AS-i networks, 2AS-i Masters	yes, max. 4 A/ AS-i network	Ethernet fieldbus	yes	yes	optional	<b>BWU3759</b>
	PROFINET AS-i	Gateway	PROFINET, OPC UA	2 AS-i networks, 2AS-i Masters	no, max. 8 A/AS-i network, redundant supply	Ethernet fieldbus	yes	yes	optional	<b>BWU3844</b>
	PROFINET AS-i	Gateway	PROFINET, OPC UA	1 AS-i network, 1 AS-i Master	no, max. 8 A/ AS-i network	Ethernet fieldbus	yes	yes	optional	<b>BWU3758</b>

### (1) Fieldbus interface

Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.

**PROFINET AS-i Gateway:** interface for a PROFINET fieldbus

**OPC UA server:** interface for the OPC UA communication.

### (2) Number of AS-i networks, number of AS-i Master

**"Single Master":** 1 AS-i network, 1 AS-i Master.

**"Double Master":** 2 AS-i networks, 2 AS-i Masters.

### (3) 1 power supply, 1 gateway for 2 AS-i networks, inexpensive power supplies

**"yes, max. 4 A/AS-i network":** Cost-effective power for 2 AS-i 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/AS-i network, redundant supply":** 1 power supply per AS-i network. Gateway is powered in normal operation from one of the two AS-i power supplies. Should one AS-i power supply fail, switching to the other AS-i power supply allows all the diagnostics functions to be maintained and the unaffected AS-i network continues to operate.

**"no, max. 8 A/AS-i network":** 1 power supply per AS-i network.

### (4) Diagnostic and configuration interface

**"Ethernet fieldbus":** Access to AS-i 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 AS-i addresses

Detects whether the same address has been assigned to two AS-i slaves. Frequent error when using a handheld addressing device.

### (6) AS-i fault detector

Checks the AS-i 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.

# AS-i 3.0 PROFINET-Gateways in Stainless Steel

Article no.	BWU3758	BWU3844	BWU3759
<b>Interface</b>			
PROFINET interface	2 x RJ-45, integrated 2-Port-Switch, IRT capability		
OPC UA interface	OPC UA server		
Conformance Class	Class B integrated switch complies with Class C (IRT capability)		
Baud rate	100 MBaud		
Function	PROFINET IO Device Media Redundancy Protocol (MRP) Shared Device		
Card slot	Chip card for storage of configuration data		
<b>AS-i</b>			
AS-i specification	3.0		
Cycle time	150 $\mu$ s * (number of slaves + 2)		
Operating voltage	30 V <sub>DC</sub> (20 ... 31,6 V) (PELV voltage)		
Length of AS-i cable	max. 100 m		
AS-i Power24V capability <sup>(1)</sup>	no		yes
<b>Display</b>			
LCD	menu, AS-i indication of slave 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 AS-i (green)	AS-i voltage o.k.		
LED AS-i active (green)	AS-i normal operation active		
LED prg enable (green)	automatic address programming enabled		
LED prj mode (yellow)	in configuration mode		
<b>UL-specifications (UL508)</b>			
External protection	An isolated source with a secondary open circuit voltage of $\leq 30$ V <sub>DC</sub> 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.		
<b>Environment</b>			
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	$\geq 500$ V		
Weight	500 g		
Dimensions (W / H / D in mm)	85 / 120 / 83		

<sup>(1)</sup> **AS-i 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.

## AS-i 3.0 PROFINET-Gateways in Stainless Steel

Article no.	Operating current		
	Master power supply, ca. 200 mA out of AS-i circuit	Master power supply, max. 200 mA out of AS-i circuit 1 (ca. 70 mA ... 200 mA), max. 200 mA out of AS-i circuit 2 (ca. 70 mA ... 200 mA); in sum max. 270 mA	Version „1 gateway, 1 power supply for 2 AS-i networks“, approx. 250 mA (PELV voltage)
BWU3758	•	–	–
BWU3844	–	•	–
BWU3759	–	–	•

Article no.	BWU3758	BWU3844	BWU3759
Redundant power supply out of AS-i: all fundamental functions of the device remain available even in case of power failure in one of the two AS-i networks	–	•	–
Current measurement of the AS-i circuits	–	–	•
Self-resetting adjustable fuses	–	–	•
AS-i earth fault monitor distinguishes between AS-i cable and sensor cable	–	–	•
In version 1 gateway, 1 power supply for 2 AS-i circuits: only 1 Gateway + 1 AS-i power supply for 2 AS-i networks	–	–	•

### 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.: AS-i power supply, 4 A (art. no. BW1649), AS-i power supply, 8 A (art. no. BW1997)  
(further power supply units can be found at [www.bihl-wiedemann.de/en/products/accessories/power-supplies](http://www.bihl-wiedemann.de/en/products/accessories/power-supplies))