AS-i 3.0 PROFINET-Gateways in Stainless Steel

PROFINET IO

- **offers IRT-technology**
- **1 integrated Switch**

(figure similar)

Recognition of duplicate AS-i addresses

AS-i Earth Fault Detector integrated

AS-i Noise Detector integrated

Optional Control III, programming in C

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)	Program-ming in C (7)	Article no.
	PROFINET AS-i	Gateway	PROFINET	2 AS-i networks, 2AS-i Masters	yes, max. 4 A/AS-i network	Ethernet fieldbus	yes	yes	optional	**BWU3363**
	PROFINET AS-i	Gateway	PROFINET	1 AS-i network, 1 AS-i Master	no, max. 8 A/ AS-i network	Ethernet fieldbus	yes (8)	yes	optional	**BWU2729**

(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

(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.

(8) BWU2729 from ID no. 15638 (see lateral label).

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Article no.	BWU2729	BWU3363
Interface		
PROFINET interface	2 x RJ-45, integrated 2-Port-Switch, IRT capability	
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	
AS-i		
AS-i specification	3.0	
Cycle time	150 µs * (number of slaves + 2)	
Operating voltage	30 V_{DC} (20 ... 31,6 V) (PELV voltage)	
AS-i Power24V capability (1)	no	yes
Display		
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	
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	
Voltage of insulation	≥500 V	
Weight	500 g	
Dimensions (W / H / D in mm)	85 / 120 / 83	

(1) **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.

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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)
BWU2729	•	–	–
BWU3363	–	–	•

Article no.	BWU2729	BWU3363
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*)