

AS-i 3.0 PROFIBUS Gateways in Stainless Steel

Recognition of duplicate AS-i addresses

AS-i Earth Fault Detector integrated

AS-i Noise Detector integrated

Optional Control III, programmable in C

GSD file integrated



(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⁾	Article no.
	PROFIBUS AS-i	Gateway	PROFIBUS	2 AS-i networks, 2 AS-i Masters	yes, max. 4 A/ AS-i network	Ethernet diagnostic	yes	yes	BWU2546
	PROFIBUS AS-i	Gateway	PROFIBUS	2 AS-i networks, 2 AS-i Masters	no, max. 8 A/ AS-i network	–	no	yes	BWU1774
	PROFIBUS AS-i	Gateway	PROFIBUS	2 AS-i networks, 2 AS-i Masters	no, max. 8 A/ AS-i network, redundant supply	Ethernet diagnostic	yes	yes	BWU2545
	PROFIBUS AS-i	Gateway	PROFIBUS	1 AS-i network, 1 AS-i Master	yes, max. 4 A/ AS-i network	Ethernet diagnostic	yes	yes	BWU2775
	PROFIBUS AS-i	Gateway	PROFIBUS	1 AS-i network, 1 AS-i Master	no, max. 8 A/ AS-i network, redundant supply	Ethernet diagnostic	yes	yes	BWU2544
	PROFIBUS AS-i	Gateway	PROFIBUS	1 AS-i network, 1 AS-i Master	no, max. 8 A/ AS-i network	–	no	yes	BWU1773
	PROFIBUS AS-i Basic	Gateway	PROFIBUS	1 AS-i network, 1 AS-i Master	no, max. 8 A/ AS-i network	–	no	yes	BWU1746

(1) **Fieldbus interface**

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

PROFIBUS AS-i Gateway: interface for a PROFIBUS fieldbus

PROFIBUS AS-i Basic Gateway: interface for a PROFIBUS 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.

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- (4) **Diagnostic and configuration interface**
"Ethernet diagnostic": Access to AS-i master and safety monitor with Bihl+Wiedemann proprietary software by using the Ethernet diagnostics interface.
"RS 232": Access to AS-i master and safety monitor with Bihl+Wiedemann proprietary software by using an adapter cable via RS 232 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 hand held addressing device.
- (6) **AS-i fault detector**
 Checks the AS-i line for interference effects such as noise, external voltages, etc.

Article no.	BWU1746	BWU1773 BWU1774	BWU2544 BWU2545	BWU2546 BWU2775
Interface				
PROFIBUS interface	IEC 61158 / IEC 61784-1			
Baud rates	9,6 Kbaud up to 12 000 Kbaud, automatic recognition			
DP functions	imaging of the AS-i slaves as I/O Data of the PROFIBUS complete diagnosis and configuration via the DP Master			
Card slot	-		Chip card for storage of configuration data	
AS-i				
AS-i specification ⁽¹⁾	3.0			
Cycle time	150 µs * (number of slaves + 2)			
Operating voltage	30 V _{DC} (20 ... 31,6 V)			
AS-i Power24V capability ⁽²⁾	no			yes
Display				
7-Segment display	AS-i slave addresses, error codes	-		
LCD	-	menu, AS-i indication of slave addresses, error messages in plain text		
LED power (green)	power ON			
LED PROFIBUS (green)	PROFIBUS Master recognized			
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)	master is in configuration mode			
Environment				
Applied standards	EN 61000-6-2 EN 61000-6-4			
Housing	Stainless Steel, for DIN rail mounting			
Operating temperature	0 °C ... +55 °C			
Storage temperature	-25 °C ... +85 °C			
Pollution degree	2			
Protection category DIN EN 60529	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			
Dimensions (W / H / D in mm)	42 / 120 / 40	75 / 120 / 83	75 / 120 / 93	
Weight	300 g	460 g		

(1) **AS-i 3.0 from ID no. 12003** (see lateral label) for BWU1567, BWU1568, BWU1569, BWU1773, BWU1774.
All currently supplied devices comply with standard AS-i 3.0.

(2) **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, max. 200 mA out of AS-i circuit 1 (ca. 70 mA ... 200 mA), max. 200mA out of AS-i circuit 2 (ca. 70 mA ... 200 mA); in sum max. 270 mA	Master power supply, ca. 200 mA out of AS-i circuit 1 ca. 70 mA out of AS-i circuit 2	Version „1 gateway, 1 power supply for 2 AS-i networks“, approx. 250 mA (PELV voltage)	Master power supply, ca. 200 mA out of AS-i circuit
BWU1746	–	–	–	•
BWU1773	–	–	–	•
BWU1774	–	•	–	–
BWU2544	–	–	–	•
BWU2545	•	–	–	–
BWU2546	–	–	•	–
BWU2775	–	–	•	–

	BWU1746 BWU1773 BWU1774 BWU2544	BWU2545	BWU2546 BWU2775
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 networks: only 1 Gateway + 1 AS-i power supply for 2 AS-i networks	–	–	•

Accessories:

- Software for diagnostics, service and approval measurements (art. no. BW2902)
- PROFIBUS DP master simulator (art. no. BW1257)
- 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)