

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.
 (GSD, GSDML, ... file for the Gateway is built into the web server)
- (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)