

AS-i 3.0 Ethernet/IP + Modbus TCP Gateway in Stainless Steel

EtherNet/IP + Modbus TCP in one device

Integrated switch

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.
	EtherNet/IP + ModbusTCP AS-i	Gateway	EtherNet/IP + Modbus TCP	2 AS-i networks, 2 AS-i Masters	yes, max. 4 A/ AS-i network	Ethernet Fieldbus + RS 232	yes	yes	optional	BWU2381
	EtherNet/IP + ModbusTCP AS-i	Gateway	EtherNet/IP + Modbus TCP	2 AS-i networks, 2 AS-i Masters	no, max. 8 A/ AS-i network, redundant supply	Ethernet Fieldbus + RS 232	yes	yes	optional	BWU2380
	EtherNet/IP + ModbusTCP AS-i	Gateway	EtherNet/IP + Modbus TCP	1 AS-i network, 1 AS-i Master	no, max. 8 A/ AS-i network	Ethernet Fieldbus + RS 232	yes	yes	optional	BWU2379

(1) Fieldbus interface

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

EtherNet/IP+ Modbus TCP AS-i Gateway: interface for an EtherNet/IP+ Modbus TCP 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 + RS 232": Access to AS-i master and safety monitor with Bihl+Wiedemann proprietary software by using the Ethernet fieldbus interface or 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.

(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.	BWU2379	BWU2380	BWU2381
Interface			
Ethernet interface	2 x RJ-45, integrated 2-Port-Switch, Ethernet + Modbus TCP acc. to IEEE 802.3		
Baud rate	10/100 Mbaud		
Function	Device Level Ring (DLR) (Ethernet/IP only)		
Card slot	Chip card for storage of configuration data		
AS-i			
AS-i specification	3.0		
Cycle time	150 μ s * (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 ser active (green)	Ethernet communication 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 slave programming enabled		
LED prj mode (yellow)	configuration mode active		
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.

Article no.	Operating current		
	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)	Master power supply, ca. 200 mA out of AS-i circuit
BWU2379	-	-	•
BWU2380	•	-	-
BWU2381	-	•	-

AS-i 3.0 Ethernet/IP + Modbus TCP Gateway in Stainless Steel

Article no.	BWU2379	BWU2380	BWU2381
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:

- Software for diagnostics, service approval and measurements (art. no. BW2902)
- 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)
- Control III, Programming in C (art. no. BW2582)