

AS-i 3.0 EtherNet/IP + Modbus TCP Gateways with integrated Safety Monitor

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2 / 1 Master, EtherNet/IP + Modbus TCP Slave

- switch integrated

1 Safety Monitor for 2 AS-i networks

- Operation using a single Monitor configuration!
Monitor processes safety slaves on two AS-i networks
Coupling between the two networks superfluous

16 / 32 release circuits

- 4 release circuits SIL 3, cat. 4 on the Monitor
two sets of safe relays, two sets of fast electronic safe outputs

Safe AS-i outputs are supported

- 16 / 32 independent AS-i outputs
Multiple safe AS-i outputs possible via a single AS-i address

Monitor configuration can be "arbitrarily" large

- 256 configuration blocks (previously 48)
Identical reaction time due to artificial limitation to 256 configuration blocks

Applications up to category 4/PLe/SIL 3

Chip card for storage of configuration data

¹ Modbus TCP from Ident. no.(see lateral label): 13076



BWU2267 / BWU2273



BWU2317



BWU2579

Article no.	BWU2267 / BWU2273 / BWU2317	BWU2579
Interfaces		
Ethernet interfaces	RJ-45: 10/100 MBaud EtherNet + Modbus TCP according to IEEE 802.3, switch integrated	
Baudraten	10/100 MBaud	
AS-i cycle time		
AS-i cycle time	150 µs · (number of slaves + 2)	
Operating voltage	AS-i voltage 30V DC	
Safety monitor		
Start delay	< 10 ms	
Max. turn-off time	< 40 ms	
Inputs: 4 x EDM/Start	EDM: inputs to monitor external devices Start: Start inputs switching current statical 4mA at 24V, dynamic 30mA at 24V (T=100 µs)	
Outputs: 4 x output switching elements	relay outputs (output circuits 1 and 2) max. contact load: 3A AC-15 at 30V, 3A DC-13 at 30V semiconductor outputs (output circuits 3 and 4) max. contact load: 0,5A DC-13 at 30V	
Card slot	chip card for storage of configuration data	
Display		
LCD	indication of slave addresses and error messages in plaintext	
LED power	power on	
LED net	Ethernet network active	
LED config error	configuration error	
LED U AS-i	AS-i voltage o.k.	
LED AS-i active	AS-i normal operation active	
LED prg enable	automatic addresses programming enabled	

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LED prj mode	configuration mode active	
LED AUX	auxiliary power	
4 x LED EDM/Start	state of inputs: LED off: open LED on: closed	
4 x LED output circuit	state of outputs: LED off: open LED on: closed	
UL-specifications (UL508)		
External protection	an isolated source with a secondary open circuit voltage of $\leq 30V_{DC}$ with a 3A 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.	
cTUVus	the devices • BWU2267 • BWU2273 • BWU2317 • BWU2579 from Bihl + Wiedemann GmbH were safety certified by TÜV Rheinland of North America, Inc. according to UL-standards and meet the safety requirements for the North American market.	
Standards	EN 61 000-6-2 EN 61 000-6-4 EN 62 061:2005, SIL 3 EN 61 508:2001, SIL 3 EN ISO 13 849-1:2008, performance-level e	
Environment		
Housing	Stainless Steel	
Ambient operating temperature	0°C ... +55°C	
Storage temperature	-25°C ... +85°C	
Protection category IEC 60 529	IP20	
Maximum tolerable shock and vibration stress	according to EN 61 131-2	
Voltage of insulation	$\geq 500V$	
Dimensions (W / H / D in mm)	100 / 120 / 96	100 / 120 / 106
Weight	800 g	

Article No.	Diagnostics interface	AS-i Safety outputs are supported	Number of AS-i circuits Safety Monitor	Max. number of release circuits	Number of release circuits in device	Configuration blocks	Number of AS-i masters
BWU2267	RS 232 + Ethernet ¹	yes	2	16	4 release circuits SIL 3, cat. 4 in device; 2 x relays, 2 x fast electronic safe outputs	256 Devices	2 AS-i Masters with integrated power supply decoupling
BWU2273	RS 232 + Ethernet ¹	yes	2	16	4 release circuits SIL 3, cat. 4 in device; 2 x relays, 2 x fast electronic safe outputs	256 Devices	1 AS-i Master
BWU2317	RS 232 + Ethernet ¹	yes	2	16	4 release circuits SIL 3, cat. 4 in device; 2 x relays, 2 x fast electronic safe outputs	256 Devices	2 AS-i Masters
BWU2579	Ethernet SafeLink ²	yes	2	32	4 release circuits SIL 3, cat. 4 in device; 2 x relays, 2 x fast electronic safe outputs	256 Devices	2 AS-i Masters with integrated power supply decoupling

¹ ASIMON, AS-i Control Tools via RS-232 and Ethernet (RJ-45 EtherNet/IP + Modbus TCP-interface)

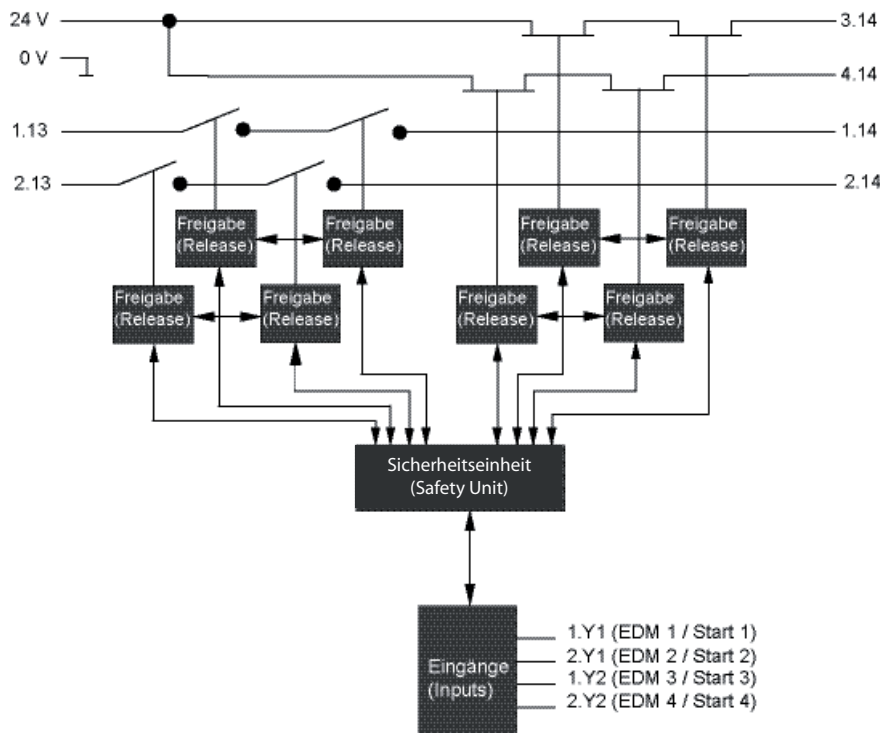
² ASIMON, AS-i Control Tools via Ethernet diagnostics interface and Ethernet (RJ-45 EtherNet/IP + Modbus TCP-interface)

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Article No.	Operating current		
	master power supply, max. 300mA out of AS-i circuit 1 (approx. 70mA ... 300mA), max. 300mA out of AS-i circuit 2 (approx. 70mA ... 300mA); in sum max. 370mA	Version „1 Gateway, 1 power supply for 2 AS-i circuits“, ca. 350mA (PELV voltage)	master power supply, approx 300mA out of AS-i network
BWU2267	–	•	•
BWU2273	•	–	–
BWU2317	•	–	–
BWU2579	–	•	–

Article No.	Full functional range of EtherNet/IP gateways (without AS-i Safety)		
	BWU2379	BWU2380	BWU2381
BWU2267	–	–	•
BWU2273	•	–	–
BWU2317	–	•	–
BWU2579	–	–	•

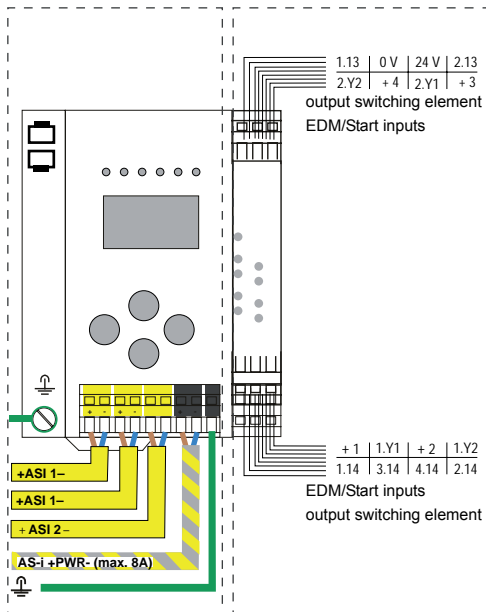
Safety Monitor block diagrams



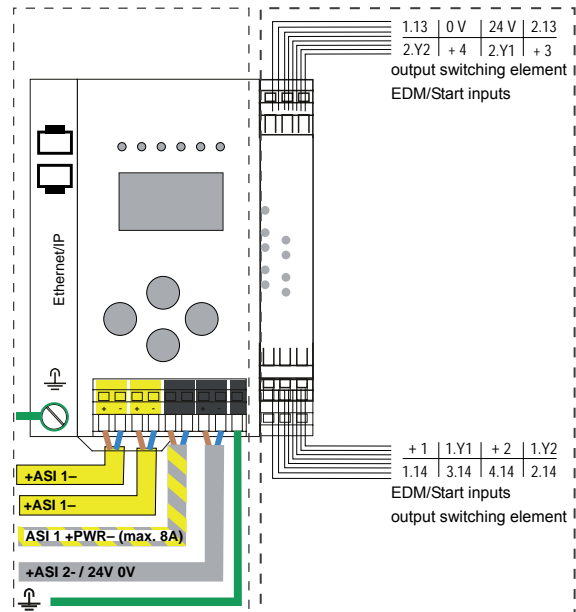
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Connections: Gateway + Safety Monitor

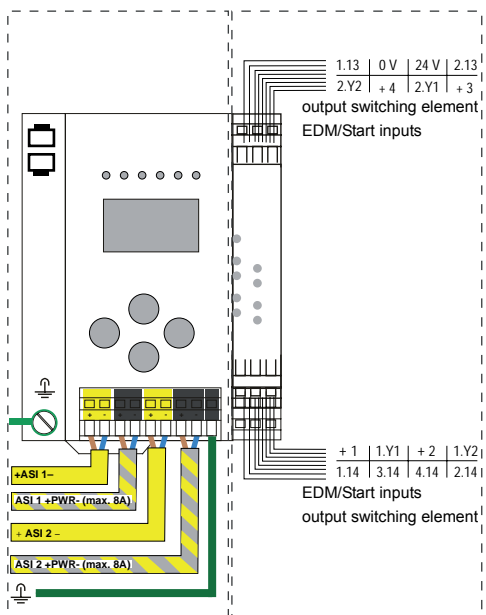
BWU2267 / BWU2579



BWU2273



BWU2317



Accessories:

- Safe contact expander, 2 independent channels (art. no. BWU2539)
- ASIMON 3 G2 and AS-i Control Tools with serial cable for AS-i Masters/Monitors in stainless steel (art. no. BW2071)
- AS-i Power Supply 4A (art. nr. BW1649) / AS-i Power Supply 8A (art. nr. BW1997)