ASi-5/ASi-3 Sercos Gateway with integrated Safety Monitor

(figure similar)

ASi-5 – Great data bandwidth, short cycle times

Compatible with all ASi generations

ASi-5/ASi-3 CIP Safety over Sercos Gateway with integrated Safety Monitor

ASi-5 master and ASi-3 master in one device

CIP Safety over Sercos and Safe Link in one device
- **up to 450 Devices**

CIP Safety Originator integrated

2 ASi-5/ASi-3 masters, Sercos device
- **switch integrated**

Safe ASi outputs are supported
- **up to 64 independent ASi outputs**
  Multiple safe ASi outputs possible via a single ASi address

OPC UA server and integrated web server for simplified diagnostics

Selection of Mode of Safe Operation

Significantly improved response times

Applications up to category 4/PLe/SIL 3

Chip card for storage of configuration data

Figure	Fieldbus Interface (1)	Safety communication	Inputs Safety, SIL 3, cat. 4	Outputs Safety, SIL 3, cat. 4	Inputs Safety, expandable to	Safety outputs, independent according to SIL 3, expandable to	Number of ASi networks, number of ASi Master (2)	Integrated decoupling, ASi current measurement in the gateway (3)	Diagnostic and configuration interface (4)	Art. no.
	Safety, Sercos, OPC UA	CIP Safety over Sercos + Safe Link	–	–	max. 62 x 2 channels, max. 1922 in max. configuration	max. 64, max. 1984 in max. configuration	2 ASi networks, 2 ASi-5/ASi-3 masters	yes, max. 4 A/ASi network	Ethernet diagnostic	**BWU3845**

(1) **Fieldbus interface**
Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.
OPC UA server: interface for the OPC UA communication.

(2) **Number of ASi networks, number of ASi Master**
"Double Master": 2 ASi networks, 2 ASi-5/ASi-3 Masters.

(3) **Integrated decoupling, ASi current measurement in the gateway**
"yes, max. 4 A/ASi network": Data decoupling integrated in the gateway. Cost-effective power for 2 ASi 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.

(4) **Diagnostic and configuration interface**
"Ethernet diagnostic": Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet diagnostic interface.
The latest version of the device description file of the gateway is available in the "Downloads" section of the respective device.

ASi-5/ASi-3 Sercos Gateway with integrated Safety Monitor

Article no.		BWU3845
Fieldbus Interface		
Type		Sercos; 2 x RJ-45: 100MBaud, 2-Port-Switch, Sercos III
Baud rates		100 MBaud
CIP Safety Originator		up to 32 instances
Card slot		chip card (BW4055) for storage of configuration data
Diagnostic Interface		
Type		Ethernet; RJ-45 acc. to IEEE 802.3
Safety communication		CIP Safety via Sercos + Safe Link
ASi		
ASi specification		ASi-5 + ASi-3
Cycle time		**Cycle time ASi-5 (constant):** 1,27 ms for 384 bits input data + 384 bits output data
		Cycle time ASi-3 (variable): 150 µs * (number of ASi-3 nodes + 2)
Operating voltage		30 V_{DC} (20 ... 31,6 V) (PELV voltage)
Operating current		300 mA
Current per ASi network	up to 30 °C	4 A per ASi network, ∑ (ASi) 8 A (2)
	up to 40 °C	4 A per ASi network, ∑ (ASi) 7 A (2)
	up to 55 °C	4 A per ASi network, ∑ (ASi) 6 A (2)
ASi Power24V capability (1)		yes
AUX		
Operating voltage		–
Max current consumption		–
Display		
LCD		indication of ASi addresses and error messages in plain text
LED power (green)		power on
LED Sercos (green)		Sercos communication active
LED config error (red)		configuration error
LED U ASi (green)		ASi voltage o.k.
LED ASi active (green)		ASi normal operation active
LED prg enable (green)		automatic address programming enabled
LED prj mode (yellow)		configuration mode active
LED AUX (green)		–
LEDs SI1 ... SI6 (yellow)		–
LEDs SO1 ... SO6 (yellow)		–
UL-specifications (UL508)		
External protection		An isolated voltage source with a PELV/SELV voltage ≤30 V_{DC} must have internal or external current limiting.
In general		UL mark does not provide UL certification for any functional safety rating or aspects of the above devices.

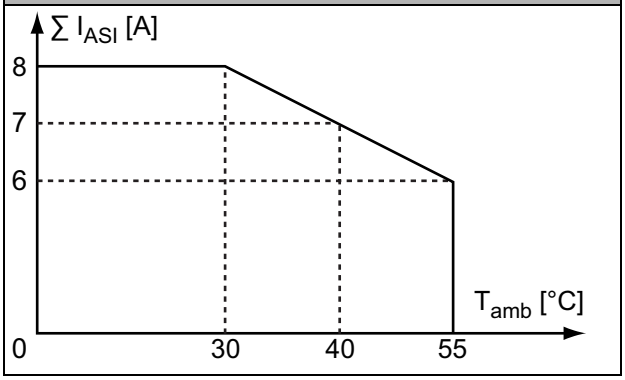
ASi-5/ASi-3 Sercos Gateway with integrated Safety Monitor

Article no.	BWU3845
Environment	
Applied standards	EN 60529 EN 62026-2 EN 61000-6-2 EN 61000-6-4 EN 62061, SIL 3 EN 61508. SIL 3 EN ISO 13849-1, PLe
Operating altitude	2000 m
Ambient temperature	-25 °C … +55 °C (no condensation permitted)
Storage temperature	-25 °C … +85 °C
Pollution degree	2
Housing	stainless steel, for DIN rail mounting
Protection category	IP20
Maximum tolerable shock and vibration stress	according to EN 61131-2
Voltage of insulation	≥500 V
Weight	800 g
Dimensions (W / H / D in mm)	85 / 120 / 106

(1) **ASi 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.

(2)

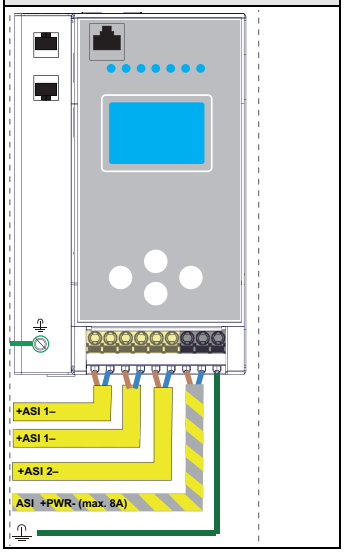
BWU3845
Derating current in summ (ASi)



	BWU3845
Data decoupling integrated in the gateway	●
Redundant power supply out of ASi: all fundamental functions of the device remain available even in case of power failure in one of the two ASi networks	–
Current measurement of the ASi circuits	●
Self-resetting adjustable fuses	●
ASi earth fault monitor distinguishes between ASi cable and sensor cable	●
Cost-effective power for 2 ASi networks with 1 power supply	●

Connections: Gateway

BWU3845



Accessories:

- **Safe contact expander, 1 or 2 independent channels (art. no. BWU2548 / BWU2539)**
- **Chip card, memory capacity 512 kB (art. no. BW4055)**
- **Bihl+Wiedemann Safety Suite - Safety Software for Configuration, Diagnostics and Commissioning (art. no. BW2916)**
- **Power supplies, e.g.: 30 V power supply, 4 A, 1 phase (art. no. BW4218), 30 V power supply, 8 A, 1 phase (art. no. BW4219), 30 V power supply, 8 A, 3 phases (art. no. BW4220), 30 V Power Supply, 16 A, 1 phase (art. no. BW4221), 30 V Power Supply, 16 A, 3 phases (art. no. BW4222) (for further power supply units visit *www.bihl-wiedemann.de/en/products/accessories/power-supplies*)**