

ASi-3 Sercos Gateways with integrated Safety Monitor

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2 master, Sercos slave

- switch integrated

up to 32 release circuits

- up to 6 release circuits SIL 3, cat. 4 on the Monitor

Safe ASi outputs are supported

- up to 64 independent ASi outputs
Multiple safe ASi outputs possible via a single ASi address



(figure similar)

Applications up to category 4/PLe/SIL 3

Chip card for storage of configuration data

ASi Power24V capable

- The device can be operated directly on a 24 V (PELV) power supply
- with integrated data coupling coils and adjustable self-resetting fuses for safe use also of powerful 24 V power supplies



Figure	Type	Inputs Safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASi networks, number of ASi Master ¹	1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies ²	Diagnostic and configuration interface ³	Art. no.
	Safety, Sercos	max. 62 x 2 channels	6 release circuits; 6 x fast electronic safe outputs	max. 64	CIP Safety over Sercos	2 ASi networks, 2 ASi masters	yes, max. 4 A/ASi network	Ethernet diagnostic	BWU2758

¹ **Number of ASi networks, number of ASi Master**
"Double Master": 2 ASi networks, 2 ASi Masters.
"Optional ASi Safety coupling circuit": 2 ASi networks, 1 ASi Master.

² **1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies**
"yes, max. 4 A/ASi network": 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.

³ **Diagnostic and configuration interface**
"Ethernet fieldbus + Ethernet diagnostic": Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet diagnostic interface or Ethernet fieldbus interface.

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

ASi-3 Sercos Gateways with integrated Safety Monitor

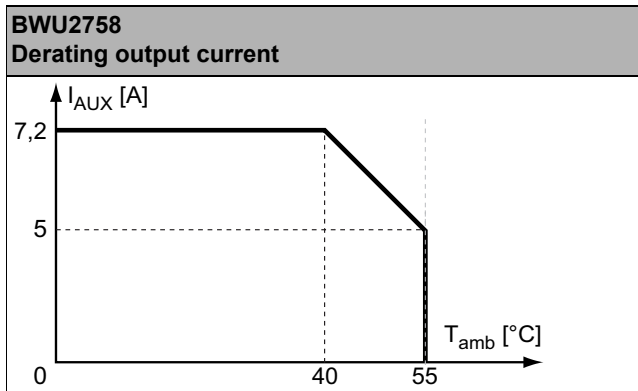
Article no.	BWU2758
Interface	
Ethernet interface	2 x RJ-45: 100MBaud, 2-Port-Switch, Sercos III
Baud rates	100 MBaud
ASi	
Cycle time	150 μ s * (number of slaves + 2)
Operating voltage	ASi voltage 30 V _{DC}
Display	
LCD	indication of slave addresses and error messages in plain text
LED power	power on
LED Sercos	Sercos communication active
LED config error	configuration error
LED U ASi	ASi voltage o.k.
LED ASi active	ASi normal operation active
LED prg enable	automatic addresses programming enabled
LED prj mode	configuration mode active
LED AUX	auxiliary power
LEDs SI1 ... SI6	state of inputs: LED off: open LED on: closed
LEDs SO1 ... SO6	state of outputs: LED off: open LED on: closed
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.
Applied standards	EN 62026-2 EN 61000-6-2 EN 61000-6-4 EN 62061, SIL 3 EN 61508, SIL 3 EN ISO 13849-1, PLe
Environment	
Operating altitude	2000 m
Ambient temperature	0 °C ... +55 °C
Storage temperature	-25 °C ... +85 °C
Housing	stainless steel, for DIN rail mounting
Protection category (EN 60529)	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)	109 / 120 / 106

ASi-3 Sercos Gateways with integrated Safety Monitor

Article no.	BWU2758
Safety monitor	
Start delay	< 10 ms
Max. turn-off time	< 40 ms
Card slot	chip card for storage of configuration data
Connection	
Connection	COMBICON
Length of connector cable	unlimited ¹
Input	
Inputs Safety, SIL3, cat. 4	3 x 2 channels or
Inputs digital, EDM	up to 6 standard inputs
Switching current	statical 4 mA at 24 V, dynamic 15 mA at 2.4V (T=100 µs)
Power supply	out of AUX
Output	
Number of release circuits on the monitor	6
Outputs	semiconductor output max. contact load: 1,2 A _{DC-13} at 30 V, $\Sigma = 7,2 A$ in sum ²
Power supply (semiconductor outputs)	out of AUX
Test pulse (semiconductor outputs)	if output is on: minimum interval between 2 test pulses: 250 ms; maximum pulse width 1 ms

¹ loop resistance ≤ 150 Ω

²



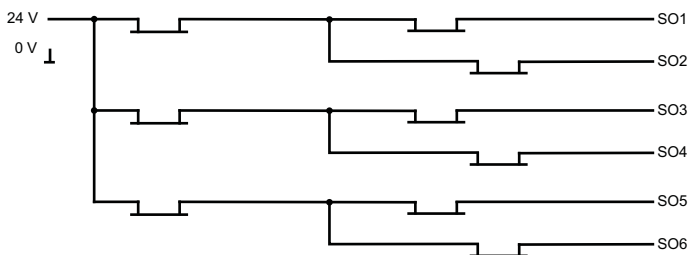
Article no.	Operating current		
	master power supply, approx 300 mA out of ASi network	master power supply, max. 300 mA out of ASi circuit 1 (approx. 70 mA ... 300 mA), max. 300 mA out of ASi circuit 2 (approx. 70 mA ... 300 mA); in sum max. 370 mA	Version „1 Gateway, 1 power supply for 2 ASi circuits“, ca. 350 mA (PELV voltage)
BWU2758	-	-	•

ASi-3 Sercos Gateways with integrated Safety Monitor

	BWU2758
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	•
In version „1 gateway, 1 power supply for 2 ASi circuits“: only 1 gateway + 1 ASi power supply is needed for both 2 ASi circuits	•

Safety outputs block diagram

BWU2758:



Variations of terminal configuration

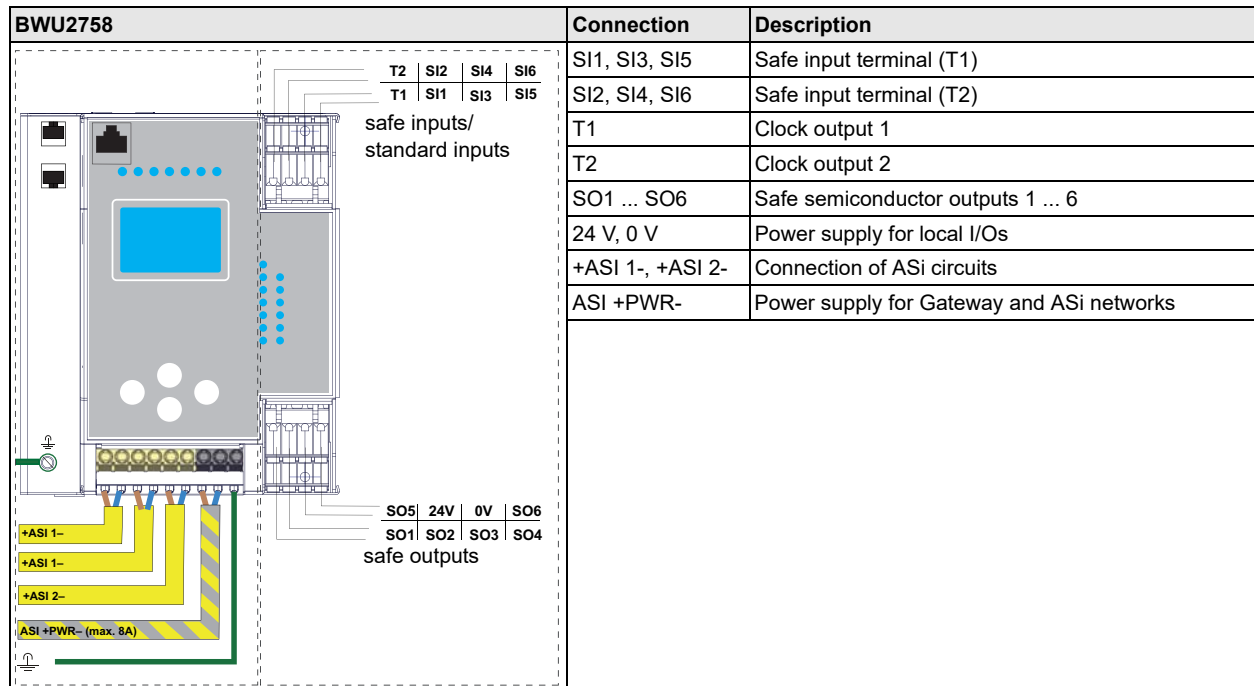
BWU2758:

Terminals	Safe output	Safe input for mechanical contacts in combination with T1, T2	Safe antivalent input	Safe electronic input	Standard input
SI1,2	-	•	•	•	•
SI3,4	-	•	•	•	•
SI5,6	-	•	•	•	•
SO1,2 ¹	•	•	•	-	•
SO3,4 ¹	•	•	•	-	•
SO5,6 ¹	•	•	•	-	•

¹ If outputs are configured as inputs, the input current has to be limited by an external element at ≤ 100 mA.

ASi-3 Sercos Gateways with integrated Safety Monitor

Connections: Gateway + Safety Monitor:



Accessories:

- Safe contact expander, 1 or 2 independent channels (art. no. BWU2548 / BWU2539)
- ASIMON 3 G2 and ASi Control Tools with serial cable for ASi Master/Monitors in Stainless Steel (art. no. BW2071)
- ASi Power Supply 4 A (art. no. BW1649) / ASi Power Supply 8 A (art. no. BW1997)