Active Distributor ASi Safety, IP67

Bihl+Wiedemann

2 x connectors for profile cable

**Periphery connection via
1 x M12 cable socket, straight, 8 poles**

**to connect Schmerzal AZM161 and
Fortress amGardPro to ASi**

(Figure similar)

Figure	Inputs Safety, SIL 3, Cat. 4	Outputs digital	Safety signal inputs	Input voltage (sensor supply) [1]	Output voltage (actuator supply) [2]	Connection [3]	ASi address [4]	Special function	Art. no.
	1 x 2 channels	1 x electronic	floating contacts	out of ASi	out of AUX	1 x M12 cable socket, straight, 8 poles	1 single address	to connect Schmerzal AZM161 and Fortress amGardPro to ASi	**BWU4904**

[1] **Input voltage (sensor supply):** inputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, inputs shall not be connected to earth or to external potential.

[2] **Output voltage (actuator supply):** outputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, outputs shall not be connected to earth or to external potential

[3] **Connection**: further connection options are available on request.

M12 cable socket, angled	M12 cable socket, straight	M8 cable socket, straight	round cable / connecting wires	Push in terminals
PUR line: oil resistant				

[4] **ASi address:** 1 AB address (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), Single addresses (max. 31 Single addresses/ASi network), mixed use allowed.
For modules with two nodes the second node is turned off as long as the first node is addressed to address "0".
Upon request, nodes are available with specific ASi address profiles.

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Article No.	BWU4904
General data	
Device type	safe input
Connection	
ASi/AUX connection	profile cable and piercing technology
Periphery connection	1 x M12 cable socket, straight, 8 poles
Round cable	2 m
	max. allowed tensile strain 10 N
ASi	
Profile	S-7.B.0, ID1=F
Address	1 single address
Required Master profile	≥M3
As of ASi specification	2.1
Operating voltage	30 V (21,6 … 31.6 V)
Max. current consumption	100 mA
Max. current consumption without sensor/ actuator supply	40 mA
AUX	
Operating voltage	24 V (20 ... 30 V_{DC}) (PELV)
Max. current consumption	max. 1 A
Input	
Number	1 x 2-channels safe input
Safety signal	floating contacts
Switching current	35 mA (T = 40 µs), continuously 5 mA at 24 V
Power supply	out of ASi
Sensor supply	short-circuit and overload protected according to EN 61131-2
Power supply of attached sensors	–
Switching threshold	2 mA, R ≤ 150 Ω
Output	
Number	1
Power supply	out of AUX
Output	short-circuit and overload protected according to EN 61131-2
Max. output current	1 A
Display	
LED ASI/FLT (red/green)	green: ASi voltage on, ASi node online green/red: ASi voltage on, but ASi node offline green flashing/red: address 0 red/green flashing: peripheral fault [1] off: no ASi voltage
LEDs S1, S2 (yellow)	state of inputs S1, S2
LED O1 (yellow)	state of output O1

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Article No.	BWU4904
Environment	
Applied standards	EN ISO 13849-1 PLe cat4 EN ISO 13849-2 EN 62061 SIL3 EN 62026-2 EN 61000-6-2 EN 61000-6-4 EN 60529
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	no [2]
Operating altitude	max. 2000 m
Ambient temperature	-30 °C … +60 °C [3]
Storage temperature	-25 °C … +85 °C
Housing	plastic, for screw mounting, suitable for cable ducts (installation depth ≥35 mm)
Pollution Degree	2
Protection category	IP67 [4]
Tolerable loading referring to humidity	according to EN 61131-2
Maximum tolerable shock and vibration stress	≤15g, T≤11 ms 10 ... 55 Hz, 0,5 mm amplitude
Insulation voltage	≥500 V
Weight	100 g
Dimensions (W / H / D) in mm	60 / 45 / 35

[1] **see table "Peripheral fault indication"**

[2] The module is not suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors cannot be assumed for the connection of the two ASi and AUX potentials.
If the module is supplied from an unswitched AUX cable, this has no influence on the safety consideration for the paths with passively safe-switched AUX cable. In an ASi circuit, paths supplied from a passively safe-switched AUX cable and paths supplied from unswitched AUX potential can be used together.

[3] Down to -25 °C with flexibly mounted cable, -30 °C only with fixed mounted cable.

[4] Protection category IP67 can only be achieved, if also the cable connector fulfills IP67.

Article no.	Peripheral fault indication		
	Overload sensor supply	**Output short circuited**	**AUX voltage missing**
BWU4904	–	●	●

Programming	ASi bit assignment			
	D3	**D2**	**D1**	**D0**
	safe input			
BWU4904	S2	S2	S1	S1
	output			
BWU4904	–	–	–	O1
	parameter bit			
	P3	**P2**	**P1**	**P0**
BWU3425, BWU3750	not used	not used	0= off / 1= on (peripheral fault if AUX voltage missing)	0= off / 1= on (Watchdog)

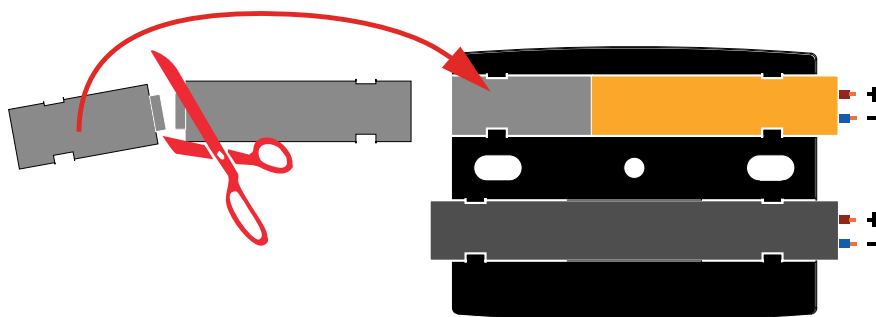Bihl+Wiedemann GmbH · Floßwörthstr. 41 · D-68199 Mannheim · Phone: (+49) 621/33996-0 · Fax: (+49) 621/3392239 · eMail: mail@bihl-wiedemann.de

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Pin assignment

Signal name	Explanation
Sx +, Sx -	safe input x
Ix	digital input x
Ox	digital output x
24V ext out	power supply, out of external voltage, positive pole (AUX, actuator supply)
0V ext out	power supply, out of external voltage, negative pole (AUX, actuator supply)
24V out of ASi	power supply, out of ASi, positive pole (sensor supply)
0V out of ASi	power supply, out of ASi, negative pole (sensor supply)
ASi +, ASi -	connection to ASi bus
n.c. (not connected)	not connected

Connections: M12 cable sockets, straight, 8 poles									
Article no.	connec.	Pin1 (WH)	Pin2 (BN)	Pin3 (GN)	Pin4 (YE)	Pin5 (GY)	Pin6 (PK)	Pin7 (BU)	Pin8 (RD)
BWU4904	X1	S1+	S1-	S2+	S2-	O1	0 V ext out	24 V₃ ext out	n.c.

Line termination with sealing profile

max. IP54

Accessories:

- **Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)**
- **ASi-5/ASi-3 Address Programming Device (art. no. BW4925)**
- **Bihl+Wiedemann Safety Suite License - Safety Software for Configuration, Diagnostics and Commissioning (art. no. BW2916)**

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