

Active Distributors AS-i Safety, IP67, 1SI/1I/1O



2 x connectors for profile cable AS-i/AUX

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

1 x 2 channel safe input (SIL 3, cat. 4)

1 x digital output

1 x diagnostic input



(Figure similar)



Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital	Outputs digital	Safety signal inputs	Input voltage (sensor supply) (1)	Output voltage (actuator supply) (2)	AS-i connection (3)	Connection (4)	AS-i address (5)	Special function	Art. no.
	IP67, depth 19 mm Safety	1 x 2 channels	1	1 x electronic	OSSDs	out of AUX	out of AUX	AS-i profile cable	1 x M12 cable socket, straight, 8 poles	1 single slave	to connect Schmersal AZM400 to AS-i	BWU3565
	IP67, depth 19 mm Safety	1 x 2 channels	1	1 x electronic	OSSDs	out of AUX	out of AUX	AS-i profile cable	1 x M12 cable socket, straight, 8 poles	1 single slave	to connect Schmersal AZM200 to AS-i	BWU3635

- (1) **Input voltage (sensor supply):** inputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, inputs shall not be connected to earth or to external potential.
- (2) **Output voltage (actuator supply):** outputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, outputs shall not be connected to earth or to external potential
- (3) **AS-i connection:** the connection to AS-i as well to AUX (auxiliary 24 V power) is made via yellow resp. black AS-i profile cable with piercing technology or via M12 socket (in IP20 via clamps).
- (4) **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 and abrasion resistant, appropriate for conveyor chains				

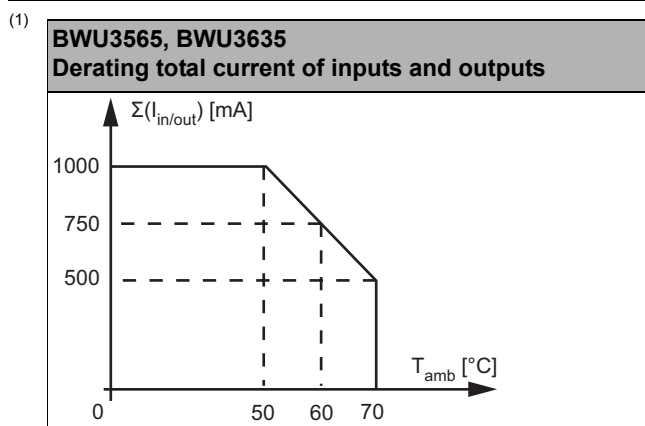
- (5) **AS-i address:** 1 AB Slave (max. 62 AB Slaves/AS-i network), 2 AB Slaves (max. 31 modules with 2 AB Slaves), Single Slaves (max. 31 Single Slaves/AS-i network), mixed use allowed.
For modules with two slaves the second slave is turned off as long as the first slave is addressed to address "0".
Upon request, slaves are available with specific AS-i Slave profiles.

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Article No.	BWU3565		BWU3635
General data			
Device type	safe input		
Connection			
AS-i/AUX connection	profile cable and piercing		
Periphery connection	1 x M12 cable socket, straight, 8 poles		
Round cable	1 m, max. allowed tensile strain 10 N		
AS-i			
Profile	S-7.B.1, ID1=F		
Address	1 single slave		
Required Master profile	≥M3		
As of AS-i specification	2.1		
Operating voltage	30 V (21,6 ... 31.6 V)		
Max. current consumption	60 mA		
Max. current consumption without sensor/ actuator supply	60 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 + 1 x standard input		
Safety signal	OSSDs		
Power supply	out of AUX		
Power supply of attached sensors	up to +50 °C	750 mA, Σ (In/Out) 1000 mA ⁽¹⁾	
	at +60 °C	750 mA, Σ (In/Out) 750 mA ⁽¹⁾	
	at +70 °C	500 mA, Σ (In/Out) 500 mA ⁽¹⁾	
Switching threshold safe input	V _{in} >11 V for High-Level, input current>2,5 mA at 15 V		
Switching threshold standard input	U<5 V (low) U>15 V (high) (data bit inverted)		
OSSD test pulses	0 ... 50 Hz		
OSSD test pulse width	U _{aux} ≥21,5 V= 0 ... 1 ms test pulses possible U _{aux} ≥17 V= 0 ... 0,8 ms test pulses possible U _{aux} <17 V= 0 ... 0,6 ms		
Start delay	<22 ms		
Output			
Number	1		
Power supply	out of AUX		
Max. output current	up to +50 °C	750 mA, Σ (In/Out) 1000 mA ⁽¹⁾	
	at +60 °C	750 mA, Σ (In/Out) 750 mA ⁽¹⁾	
	at +70 °C	500 mA, Σ (In/Out) 500 mA ⁽¹⁾	
Display			
LED ASI/FLT (red/green)	green: AS-i voltage on, slave online red: AS-i voltage on, but slave offline yellow/red flashing: address 0 red/green flashing: peripheral fault ⁽²⁾ off: no AS-i voltage		
LED AUX (green)	on: 24 V _{DC} AUX off: no 24 V _{DC} AUX		
LEDs S1, S2 (yellow)	state of inputs S1, S2		
LEDs I1 (yellow)	state of input I1		
LED O1 (yellow)	state of output O1		

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Article No.	BWU3565	BWU3635
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	
Operating altitude	max. 2000 m	
Ambient temperature	-30 °C ... +60 °C ⁽¹⁾ ⁽³⁾ (up to max. +70 °C)	
Storage temperature	-25 °C ... +85 °C	
Housing	plastic, for screw mounting, suitable for cable ducts (installation depth ≥19 mm)	
Pollution Degree	2	
Protection category	IP67	
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 / 19	



(2) see table "Peripheral fault indication"

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

Article no.	Peripheral fault indication		
	Overload sensor supply	Output short circuited	AUX voltage missing
BWU3565	-	•	•
BWU3635	-	•	•

Programming	AS-i bit assignment			
	D0	D1	D2	D3
	safe input			
BWU3565, BWU3635	OSSD1	OSSD1	OSSD2	OSSD2
	standard output			
BWU3565, BWU3635	O1	-	-	-
	parameter bit			
	P0	P1	P2	P3
BWU3565, BWU3635	0= off / 1= on (Watchdog)	I1 (inverted)	not used	

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 AS-i}	power supply, out of AS-i, positive pole (sensor supply)
0V _{out of AS-i}	power supply, out of AS-i, negative pole (sensor supply)
AS-i+, AS-i-	connection to AS-i bus
n.c. (not connected)	not connected

Connections: M12 cable sockets, straight, 8 poles										
Article no.	connection	Pin1 (WH)	Pin2 (BN)	Pin3 (GR)	Pin4 (YE)	Pin5 (GY)	Pin6 (PK)	Pin7 (BU)	Pin8 (RD)	
BWU3565	X1	24 V _{ext out}	O1 (2)	0 V ₁ (3) _{ext out}	OSSD 1	I1	0 V ₂ (3) _{ext out}	OSSD 2	O1 (2)	
BWU3635	X1	24 V ₁ (1) _{ext out}	24 V ₂ (1) _{ext out}	0 V _{ext out}	OSSD 2	I1 (4)	24 V ₃ (1) _{ext out}	OSSD 1	O1	

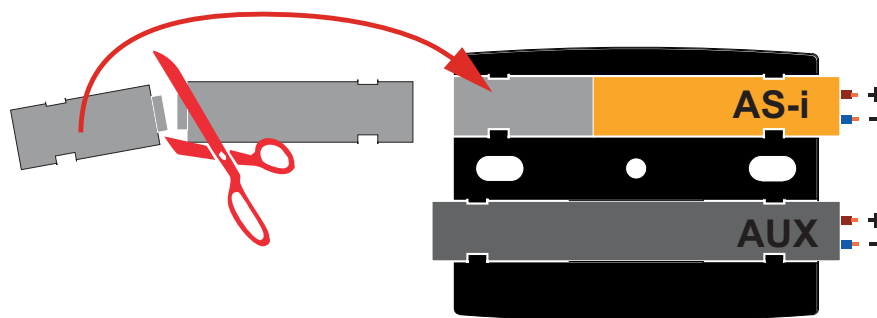
(1) Pin1/Pin2/Pin6 are bridged internally.

(2) Pin2/Pin8 are bridged internally.

(3) Pin3/Pin6 are bridged internally.

(4) Data bit inverted

Line termination with sealing profile



Accessories:

- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- AS-i addressing cable with M12 connector, connecting cable for handheld AS-i address programming devices for the addressing of active distributors (art. no. BW3304)
- AS-i addressing cable with COMBICON connector, connecting cable for AS-i Master/Gateways for the addressing of active distributors (art. no. BW3305)