

Active Distributor ASi Safety, IP67, 1SI/1I/1O

2 x connectors for profile cable ASi/AUX

Periphery connection via M12 cable sockets, straight, 8 poles

1 x 2 channels safe input (SIL 3, Kat. 4)

1 x digital output

1 x diagnose 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)	ASi connection (3)	Connection (4)	ASi address (5)	Special function	Article No.
	IP67, depth 19 mm Safety	1 x 2 channels	1 x	1 x electronic	OSSDs	out of AUX	out of AUX	ASi profile cable	1 x M12 cable socket, straight, 8 poles	1 single address	-	BWU3638

- (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) **ASi connection:** the connection to ASi as well to AUX (auxiliary 24 V power) is made via yellow resp. black ASi 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 resistant				

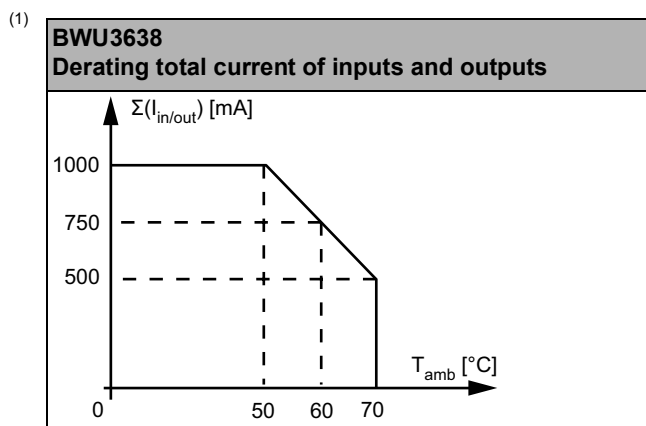
- (5) **ASi address:** 1 AB address (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), Single addresses (max. 31 Single addresses/ASi network), mixed use allowed.
For modules with two ASi nodes the second ASi node is turned off as long as the first ASi node is addressed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

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Article No.		BWU3638
General data		
Device type		safe input
Connection		
ASi/AUX connection		profile cable and piercing
Periphery connection		1 x cable socket M12, straight, 8 poles
Round cable		1 m, max. allowed tensile strain 10 N
ASi		
Profile		S-7.B.1, 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		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 ⁽¹⁾
Input		
Number		1 x 2-channels safe input + 1 x standard input
Safety signal		OSSDs
Supply voltage		out of AUX
Sensor supply		short-circuit and overload protected according to EN 61131-2
Power supply of attached sensors	up to +50 °C	750 mA, $\sum(\text{In/Out})$ 1 A ⁽¹⁾
	at +60 °C	750 mA, $\sum(\text{In/Out})$ 750 mA ⁽¹⁾
	at +70 °C	500 mA, $\sum(\text{In/Out})$ 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)
Switching threshold		0 ... 50 Hz
OSSD test pulses		$U_{aux} \geq 21,5$ V = 0 ... 1 ms test pulses possible $U_{aux} \geq 17$ V = 0 ... 0,8 ms test pulses possible $U_{aux} < 17$ V = 0 ... 0,6 ms
OSSD test pulse width		< 22 ms
Output		
Number		1
Power supply		out of AUX
Output		short-circuit and overload protected according to EN 61131-2
Max. output current	up to +50 °C	750 mA, $\sum(\text{In/out})$ 1000 mA ⁽¹⁾
	at +60 °C	750 mA, $\sum(\text{In/Out})$ 750 mA ⁽¹⁾
	at +70 °C	500 mA, $\sum(\text{In/Out})$ 500 mA ⁽¹⁾
Display		
LED ASi/FLT (red/green)		green: ASi voltage on, ASi node online red: ASi voltage on, but ASi node offline yellow/red flashing: address 0 red/green flashing: peripheral fault ⁽²⁾ off: no ASi voltage
LED AUX (green)		on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LEDs S1, S2 (yellow)		state of inputs S1, S2
LED I1 (yellow)		state of output I1
LED O1 (yellow)		state of output O1

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Article No.	BWU3638
Environment	
Applied standards	EN ISO 13849-1 PLe Kat4 EN ISO 13849-2 EN 62061 SIL 3 EN 50295 EN 61000-6-2 EN 61000-6-4 EN 61131-2 EN 60529
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	no ⁽³⁾
Operating altitude	max. 2000 m
Ambient temperature	-30 °C ... +60 °C (up to max. +70 °C) ^{(1) (4)} (no condensation permitted)
Storage temperature	-30 °C ... +85 °C
Housing	plastic, for screw mounting, suitable for cable ducts
Pollution Degree	2
Protection category	IP67
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 / 19



(2) see table "Peripheral fault indication"

(3) 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.

(4) 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
BWU3638	-	•	•

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Programming	ASi bit assignment			
	D0	D1	D2	D3
	safe input			
BWU3638	OSSD1	OSSD1	OSSD2	OSSD2
	output			
BWU3638	O1	-	-	-
	parameter bit			
	P0	P1	P2	P3
BWU3638	0= off / 1= on (Watchdog)	I1 (inverted)	not used	not used

Pin assignment

Signal name	Explanation
Ix	digital input x
OSSDx	safe 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)
ASi+, ASi-	connection to ASi bus
n.c. (not connected)	not connected

Connections: Round cable

Article no.	connec- tion	Pin1 (WH)	Pin2 (BN)	Pin3 (GR)	Pin4 (YE)	Pin5 (GY)	Pin6 (PK)	Pin7 (BU)	Pin8 (RD)	
BWU3638	X1	0 V ₁ ⁽¹⁾ ext out	24 V ext out	0 V ₂ ⁽¹⁾ ext out	I1	OSSD 1	OSSD 2	0 V ₃ ⁽¹⁾ ext out	O1	

(1) Pin1/Pin3/Pin7 are internally bridged.

Accessories:

- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)