

1 x connector for ASi profile cable

Periphery connection via connecting wires

1 x connection for ASi addressing device



(Figure similar)



Figure	Inputs Safety, SIL 3, Cat. 4	Safety signal inputs	Outputs digital	Input voltage (sensor supply) (1)	Output voltage (actuator supply) (2)	Connection (3)	ASi address (4)	Special function	Art. no.
	1 x 2-channels	floating contacts	2 x electronic	out of ASi	out of ASi	1 x round cable/ connecting wires + 1 x ASi addressing cable socket	1 single address	to connect 2 x NC contacts to ASi	BWU3604

(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 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.

Article No.		BWU3604
General data		
Device type	safe input	
Connection		
ASi/AUX connection	profile cable and piercing	
Periphery connection	1 x round cable/connecting wires	
Round cable	2 m ⁽¹⁾	
	ASi addressing cable socket: 0,05 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	245 mA	
Max. current consumption without sensor/ actuator supply	65 mA	
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	2	
Power supply	out of ASi	
Output	short-circuit and overload protected according to EN 61131-2	
Max. output current	up to +45 °C	100 mA per output, ∑(Out) 150 mA
	at +55 °C	
	at +60 °C	
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 alternating green flashing/red flashing: peripheral fault ⁽²⁾ off: no ASi voltage	
LEDs S1, S2 (yellow)	state of inputs S1, S2	
LED O1, O2 (yellow)	state of output O1, O2	

Article No.	BWU3604
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	yes ⁽³⁾
Operating altitude	max. 2000 m
Ambient temperature	-30 °C ... +60 °C ⁽⁴⁾ (no condensation permitted)
Storage temperature	-25 °C ... +85 °C
Housing	plastic, for screw mounting, suitable for cable ducts (installation depth ≥35 mm)
Pollution Degree	2
Protection category	IP54 ⁽⁵⁾
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) from ident.no. ≥18546.

(2) **see table "Peripheral fault indication"**

(3) The module is suitable for use in passively safe paths as it has no connection to an AUX potential.

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

(5) Protection category IP54 can only be achieved, if also the cable connector fulfills IP54.

Article no.	Peripheral fault indication		
	Overload sensor supply	Output short circuited	AUX voltage missing
BWU3604	-	-	-

UL-specifications (UL61010)	
BWU3604	
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.

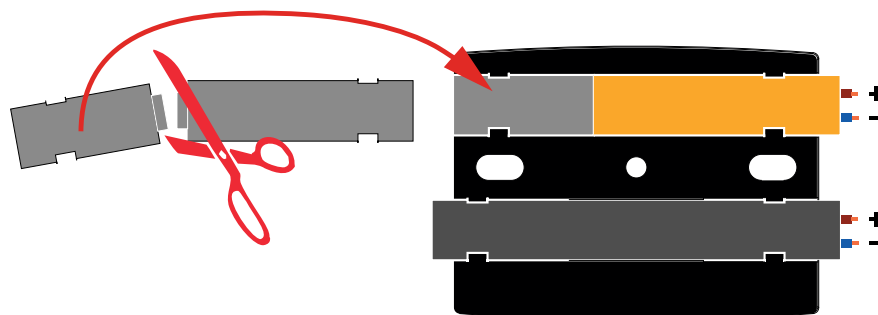
Programming	ASi bit assignment			
	D3	D2	D1	D0
	safe input			
BWU3604	S2	S2	S1	S1
	output			
BWU3604	-	-	O2	O1
	parameter bit			
	P3	P2	P1	P0
BWU3604	not used	not used	not used	0= off / 1= on (Watchdog)

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: round cable/connecting wires											
Article no.	connec.	BN	WH	BU	BK	PK	GY	RD	GN	YE	OG
BWU3604	X1	S1-	S1+	O2	-	0 V out of ASi	O1	-	S2+	S2-	-
	ADDR	connection for ASi-3 addressing plug									

Line termination with sealing profile



Accessories:

- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)
- Bihl+Wiedemann Safety Suite License - Safety Software for Configuration, Diagnostics and Commissioning (art. no. BW2916)