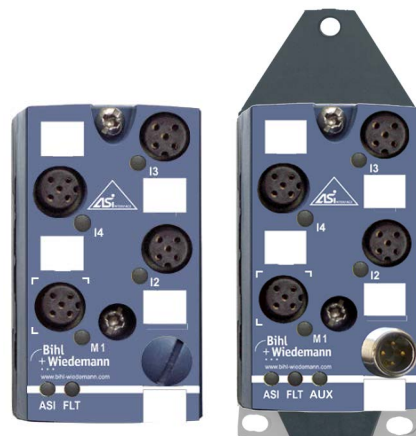




## ASi 3I Module for MOVI-SWITCH®

Mixed input/output module

Protection category IP67



(figure similar)

Figure	Type	Drive <sup>(1)</sup>	Number of drives	Inputs digital	Outputs digital	Input voltage (sensor supply) <sup>(2)</sup>	Output voltage (actuator supply) <sup>(3)</sup>	ASi connection <sup>(4)</sup>	ASi address <sup>(5)</sup>	Art. no.
	IP67, 4 x M12	SEW MOVI-SWITCH 1E	1	3	—	out of ASi	out of ASi	ASi profile cable	1 single address	<b>BWU2437</b>
	IP67, 4 x M12	SEW MOVI-SWITCH 1E	1	3	—	out of AUX	out of AUX	ASi using M12	1 single address	<b>BWU2957</b>

- (1) **Drive:**  
"SEW MOVI-SWITCH® 1E": Motor module to control motor starters MOVI-SWITCH® 1E.
- (2) **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.
- (3) **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
- (4) **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).
- (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 node are available with specific ASi address profiles.

Article no.	BWU2437	BWU2957
<b>Connection</b>		
ASi / AUX connection	profile cable and piercing technology	M12 <sup>(3)</sup>
Periphery connection	M12	
<b>ASi</b>		
Profile	S-7.F.E, ID1=7 (default)	
Address	1 single address	
Voltage	30 V (18 ... 31.6 V)	
Required Master profile	≥M0	
Since ASi specification	2.0	
Max. current consumption	400 mA	35 mA
Max. current consumption without sensor/ actuator supply	50 mA	35 mA
<b>AUX</b>		
Voltage	–	24 V (18 ... 30 V)
Max. current consumption	–	350 mA
<b>Input</b>		
Number	3 (I2 ... I4)	
Power supply	out of ASi	out of AUX
Power supply of attached sensors	Σ (In+Motor) ≤350 mA	
Switching threshold	U <sub>in</sub> <5 V low, U <sub>in</sub> >10 V high	
<b>Drive</b>		
Number	1 (I1, O1, O3, O4)	
Power supply	out of ASi	out of AUX
Max. output current	O1, O3:10 mA, O4: 350 mA Σ (In+Motor) ≤350 mA	
<b>Display</b>		
LEDs I2, I3, I4 (yellow)	State of inputs I2, I3, I4	
LED M1 (yellow)	State of output O1	
LED ASi (green)	ASi voltage ON	
LED AUX (green)	–	on: 24 V <sub>DC</sub> AUX off: no 24 V <sub>DC</sub> AUX
LED FLT/FAULT (red)	no data exchange, peripheral fault	
<b>Environment</b>		
Applied standards	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 <sup>(1)</sup>	no <sup>(4)</sup>
Operating temperature	-30 °C ... +55 °C <sup>(2)</sup>	
Storage temperature	-25 °C ... +85 °C	
Housing	plastic, for DIN rail mounting	plastic, for screw mounting
Protection category	IP67	
Max. tolerable shock load	30g, 11 ms, acc. EN 61131-2	
Max. tolerable vibration stress	5 ... 8 Hz 50 mm <sub>pp</sub> /8 ... 500 Hz 6g, acc. EN 61131-2	
Isolation voltage	≥500 V	
Weight	100 g	
Dimensions (B / H / T in mm)	45 / 80 / 42	45 / 116,5 / 47,5

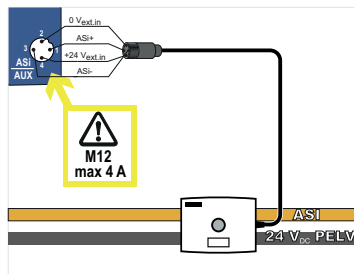
(1) The module is suitable for use in passively safe paths as it has no connection to an AUX potential.

(2) Temperature range up to -30°C from Ident.No. ≥16378 (BWU2437); Ident.No. ≥16379 (BWU2957)

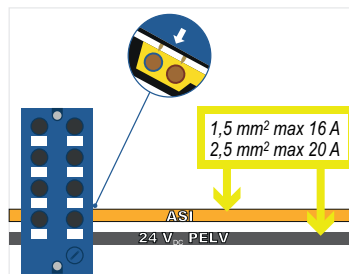
**(3) Line protection:**

If the module is supplied via a M12 connection with A or B coding, it may only be used with a current load of max. 4 A per pin in acc. with IEC 61076-2-101 and IEC 61076-2-109. A fused tap is recommended. There is no such limitation for modules supplied via piercing contacts.

**Connection to ASi and AUX via M12**



**via piercing contacts**



**(4) 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.

Programming	Bit assignment			
	Parameter bit			
	D3	D2	D1	D0
<b>input</b>				
<b>BWU2437, BWU2957</b>	I4	I3	I2	I1 (Motor)
<b>output</b>				
<b>BWU2437, BWU2957</b>	O4 (Motor)	O3 (Motor)	O2 (Motor)	O1 (Motor)
	P3	P2	P1	P0
<b>BWU2437, BWU2957</b>	not used	0 = on/ 1 = off (synchronous data I/O mode)	0 = on/ 1 = off (data input filter 128µs)	0 = off/ 1 = on (Watchdog)

UL-specifications (UL508) BWU2437, BWU2957	
External protection	An isolated source with a secondary open circuit voltage of $\leq 30 V_{DC}$ 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.

**Pin assignment**

Signal name	Explanation
Ix	Digital input x
24 V_ext out	Power supply, out of external voltage, positive pole (AUX, actuator supply)
0 V_ext out	Power supply, out of external voltage, negative pole (AUX, actuator supply)
24 V_ext in	Input voltage, positive pole (AUX+)
0 V_ext in	Input voltage, negative pole (AUX-)
ASi +	ASi network, positive potential
ASi -	ASi network, negative potential
24 V_out of ASi	Power supply, out of ASi, positive pole (sensor supply)
0 V_out of ASi	Power supply, out of ASi, negative pole (sensor supply)
n.c.	not connected

Connections							
Article no.	M12 Connection	Marking	Pin1	Pin2	Pin3	Pin4	Pin5
BWU2437	X1	I3 (Input 3)	24 V <sub>out</sub> of ASi	n.c.	0 V <sub>out</sub> of ASi	I3	n.c.
	X2	I4 (Input 4)	24 V <sub>out</sub> of ASi	n.c.	0 V <sub>out</sub> of ASi	I4	n.c.
	X3	I2 (Input 2)	24 V <sub>out</sub> of ASi	n.c.	0 V <sub>out</sub> of ASi	I2	n.c.
	X4	M1 (Motor 1) <sup>(1)</sup>	O4 (0: 0 V; 1: 24 V)	O1 (0: 0 V; 1: 24 V)	0 V <sub>out</sub> of ASi	I1 (0: 0 V; 1: 24 V)	O3 (0: 0 V; 1: 24 V)
	ADDR (protection cap)	connection for ASi-3 addressing plug					

(1) See table: Pin assignment of M1 (Motor 1) socket

Connections							
Article no.	M12 Connection	Marking	Pin1	Pin2	Pin3	Pin4	Pin5
BWU2957	X1	I3 (Input 3)	24 V <sub>ext out</sub>	n.c.	0 V <sub>ext out</sub>	I3	n.c.
	X2	I4 (Input 4)	24 V <sub>ext out</sub>	n.c.	0 V <sub>ext out</sub>	I4	n.c.
	X3	I2 (Input 2)	24 V <sub>ext out</sub>	n.c.	0 V <sub>ext out</sub>	I2	n.c.
	X4	M1 (Motor 1) <sup>(1)</sup>	O4 (0: 0 V; 1: 24 V)	O1 (0: 0 V; 1: 24 V)	0 V <sub>ext out</sub>	I1 (0: 0 V; 1: 24 V)	O3 (0: 0 V; 1: 24 V)
	X5	ASi / AUX	ASi+	0 V <sub>ext in</sub>	ASi-	24 V <sub>ext in</sub>	-

(1) See table: Pin assignment of M1 (Motor 1) socket

Pin assignment of M1 (Motor 1) socket	
Pin1	O4: Supply/reset of motor control (24 V)
Pin2	O1: Start/stop motor (RUN)
Pin3	0V: GND
Pin4	I1: Motor OK (OK)
Pin5	O3: optional (e.g. 1RUN to vent the brake when motor with MLK option is at a standstill)

### Accessories:

- ASi substructure module for 4-channel module in 45 mm-housing (art. no. BW2349)
- ASi substructure module (CNOMO) 4-channel module in 45 mm-housing (art. no. BW2350)
- Universal protection cap ASi-5/ASi-3 for M12 sockets, IP67 (art. no. BW4056)
- Passive Distributor ASi/AUX to 2 x M12 socket, internal protection via changeable 4 A slow-blow fuses (art. no. BWU3087)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)
- It is recommended to use pre-assembled cables to connect the power source with the module.