

ASi-3 4I/4O Module for MOVI-SWITCH®

Mixed input/output slave

Protection category IP67



(figure similar)



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

- (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 Slave (max. 62 AB Slaves/ASi network), 2 AB Slaves (max. 31 modules with 2 AB Slaves), Single Slaves (max. 31 Single Slaves/ASi 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 ASi Slave profiles.

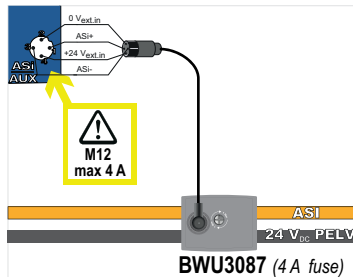
Article no.	BWU2437	BWU2957
Connection		
ASi / AUX connection	profile cable and piercing	M12 ⁽²⁾
Periphery connection	M12	
ASi		
Profile	S-7.F.E, ID1=7 (default)	
Address	1 single slave	
Voltage	30 V (18 ... 31.6 V)	
Required Master profile	≥M0	
Since ASi specification	2.0	
Max. current consumption	400 mA	35 mA
Max. current consumption without sensor/ actuator supply	50 mA	35 mA
AUX		
Voltage	–	24 V (18 ... 30 V)
Max. current consumption	–	350 mA
Input		
Number	4	
Power supply	motor fault inputs: out of ASi sensor inputs: out of ASi	motor fault inputs: out of AUX sensor inputs: out of AUX
Switching threshold	U _{in} < 5 V low, U _{in} > 10 V high	
Output		
Number	3	
Power supply	out of ASi	out of AUX
Max. output current	O1, O3: 10 mA, O4: 350 mA	
Supply of motor	out of ASi, max. 350 mA	out of AUX, max. 350 mA
Power supply of attached sensors	max. 350 mA	
Sum of supply current	sensors + motor: max. 350 mA	
Display		
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 _{DC} AUX off: no 24 V _{DC} AUX
LED FLT/FAULT (red)	no data exchange, peripheral fault	
Environment		
Applied standards	EN 61000-6-2 EN 61000-6-4 EN 60529	
Operating temperature	-30 °C ... +55 °C ⁽¹⁾	
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 _{pp} /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⁾ Temperature range up to -30°C from Ident.No. ≥16378 (BWU2437); Ident.No. ≥16379 (BWU2957)

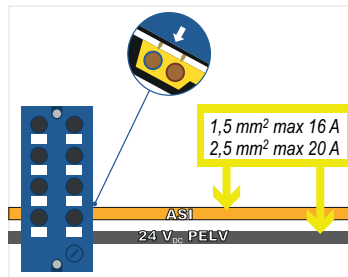
(2) **Line protection:**

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



Programming	Bit setting
Parameter bit	
P0	0 = off/ 1 = on (watchdog)
P1	0 = on/ 1 = off (data input filter 128µs)
P2	0 = on/ 1 = off (synchronous data I/O mode)
P3	not used

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 _{out} of ASi	n.c.	0 V _{out} of ASi	I3	n.c.
	X2	I4 (Input 4)	24 V _{out} of ASi	n.c.	0 V _{out} of ASi	I4	n.c.
	X3	I2 (Input 2)	24 V _{out} of ASi	n.c.	0 V _{out} of ASi	I2	n.c.
	X4	M1 (Motor 1) ⁽¹⁾	O4 (0: 0 V; 1: 24 V)	O1 (0: 0 V; 1: 24 V)	0 V _{out} of ASi	I1 (0: 0 V; 1: 24 V)	O3 (0: 0 V; 1: 24 V)
	ADDR (dummy plug)	connection for ASi addressing device					

⁽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 _{ext out}	n.c.	0 V _{ext out}	I3	n.c.
	X2	I4 (Input 4)	24 V _{ext out}	n.c.	0 V _{ext out}	I4	n.c.
	X3	I2 (Input 2)	24 V _{ext out}	n.c.	0 V _{ext out}	I2	n.c.
	X4	M1 (Motor 1) ⁽¹⁾	O4 (0: 0 V; 1: 24 V)	O1 (0: 0 V; 1: 24 V)	0 V _{ext out}	I1 (0: 0 V; 1: 24 V)	O3 (0: 0 V; 1: 24 V)
	X5	ASi / AUX	ASi+	0 V _{ext in}	ASi-	24 V _{ext in}	-

⁽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)
- Protection caps for unused M12 sockets (article no. BW2368)
- Passive Distributor ASi/AUX to 2 x M12 socket, internal protection via changeable 4 A slow-blow fuses (art. no. BWU3087)
- It is recommended to use pre-assembled cables to connect the power source with the module.