

ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/4I

ASi-5 Motor Module for SEW MOVIMOT

Cyclic writing of speed and ramps possible

3x M12 connectors

High protection class 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, ASi-5	SEW MOVIMOT	1	4	-	out of ASi	-	ASi profile cable	1 ASi-5 address	BWU4377

- (1) **Drive:**
"SEW MOVIMOT®": Motor module to control geared motors with frequency inverters.
- (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:** AB addresses (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), Single addresses (max. 31 Single addresses/ASi network), ASi-5 address (max. 62 ASi-5 addresses/ASi network), mixed use allowed. Upon request, ASi-3 nodes are available with specific ASi node profiles.

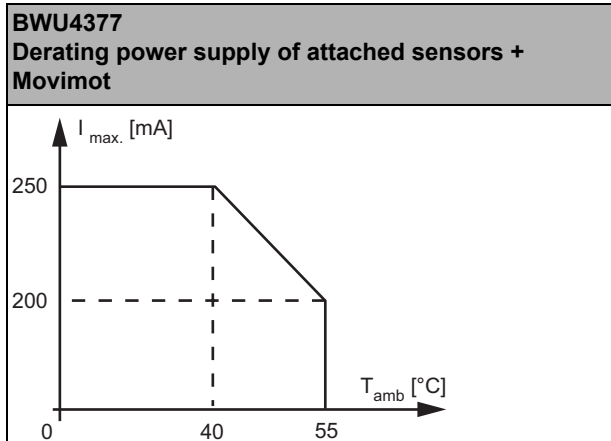
Article no.		BWU4377
Connection		
ASi / AUX connection	profile cable and piercing	
Periphery connection	M12, Y wiring	
ASi		
Address	1 ASi-5 address	
Required Master profile	≥M5	
Since ASi specification	5	
Process data width	7 byte ⁽¹⁾	
Operating voltage	30 V (18 ... 31,6 V)	
Max. current consumption	315 mA	
Max. current consumption without sensor/ actuator supply	65 mA	
Input		
Number	4	
Power supply	out of ASi	
Sensor supply	short-circuit and overload protected according to EN 61131-2	
Power supply of attached sensors	up to +40 °C	Σ(In/Movimot) 250 mA ⁽²⁾
	at +55 °C	Σ(In/Movimot) 200 mA ⁽²⁾
Switching threshold	< 5 V (low), > 15 V (high)	

ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/4I

Article no.		BWU4377
SEW Movimot Port		
Number		1
Interface		RS 485
Baud rates		9600 Bit/s
Power supply		out of ASi
Fuse		short-circuit and overload protected according to EN 61131-2
Max. current	up to +40 °C	$\Sigma(\text{In/Movimot}) 250 \text{ mA}^{(2)}$
	at +55 °C	$\Sigma(\text{In/Movimot}) 200 \text{ mA}^{(2)}$
Visualization		
LED ASI (green)		on: ASi voltage flashing: ASi voltage on, but peripheral fault ⁽³⁾ or address 0 off: no ASi voltage
LED FLT (red)		on: ASi node address 0 or ASi node offline flashing: peripheral fault ⁽³⁾ off: ASi node online
LEDs I1 ... In (yellow)		state of inputs I1 ... I4
LED M1 (yellow)		RS 485 communication active
Environment		
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 ⁽⁴⁾
Operating altitude		max. 2000 m
Ambient operating temperature		-30 °C ... +55 °C ^{(2) (3) (5)}
Storage temperature		-25 °C ... +85 °C
Housing		plastic, for DIN rail mounting or for screw mounting ⁽⁶⁾
Protection category		IP67 ⁽⁷⁾
Pollution Degree		2
Tolerable loading referring to humidity		according to EN 61131-2
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 / 56

(1) The ASi-5 process data bandwidth depends on the ASi-5 profile. Further selectable profiles can be found in the hardware catalog of the Bihl+Wiedemann Suite or in the configuration manual.

(2)

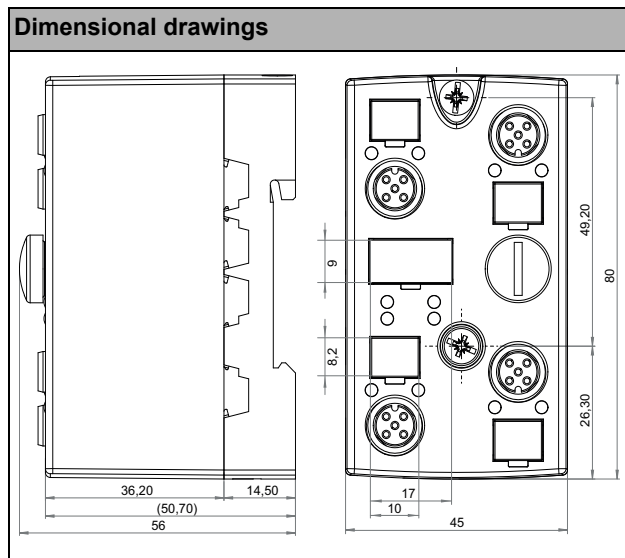


(3) See table "Peripheral fault indication"

ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/4I

- (4) The module is suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors can be assumed for the connection of the two ASi and AUX potentials.
- (5) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada
- (6) Depending on substructure module (see accessories). The substructure module is not included in the scope of delivery.
- (7) Protection category IP67 can only be achieved if all open connections are sealed with suitable end caps fulfilling the same protection category.

UL-specifications (UL508)	
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.



Article no.	Peripheral fault indication				
	Overload sensor supply	Output short circuited	AUX voltage missing	Movimot Communication Error	Movimot Status Error
BWU4377	•	-	-	•	•

Programming (Bit-setting of ASi process data image)

Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
BWU4377	Digital input data								
	0	-	-	-	-	I4	I3	I2	I1
	SEW MOVIMOT process input data PI1 ⁽¹⁾ status word 1								
	1	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	2	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
	SEW MOVIMOT process input data PI2 ⁽¹⁾ output current								
	3	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	4	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
	SEW MOVIMOT process input data PI3 ⁽¹⁾ status word 2								
	5	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	6	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0

(1) For further detailed information, please refer to the SEW MOVIMOT documentation.

ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/4I

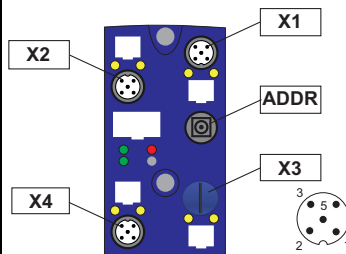
Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
BWU4377	Digital output data								
	0	-	-	-	-	-	-	O2	O1
	SEW MOVIMOT process output data PO1⁽¹⁾ control word								
	1	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	2	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
	SEW MOVIMOT process output data PO2⁽¹⁾ speed [%]								
	3	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	4	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
SEW MOVIMOT process output data PO3 (only for 3-word protocol)⁽¹⁾ ramp									
5	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8	
6	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	

⁽¹⁾ For further detailed information, please refer to the SEW MOVIMOT documentation.

Pin assignment

Signal name	Explanation
Ix	Digital input x
RS 485 TX +	Communication with motor, positive pole (labeling on motor RX +)
RS 485 TX -	Communication with motor, negative pole (labeling on motor RX -)
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
BWU4377	X1	I1/I2	24 V _{out} of ASi	I2	0 V _{out} of ASi	I1	n.c.
	X2	I3/I4	24 V _{out} of ASi	I4	0 V _{out} of ASi	I3	n.c.
	X3	not used					
	X4	M1 (motor)	24 V _{out} of ASi	RS 485 TX -	0 V _{out} of ASi	RS 485 TX +	n.c.
	(protection cap)	connection for ASi-5 addressing plug					



Notice:

- The RS 485 bus address must be set directly on SEW MOVIMOT. For further detailed information, please refer to the SEW MOVIMOT documentation.

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)
- 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 e.g.:
 - Connection cable for SEW MOVIMOT AVT1, M12 cable plug, straight, 4 poles, A coded to M12 cable socket, straight, B coded, cable length 2 m (BW4215)