

# ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/6I

## ASi-5 Motor Module for SEW MOVIMOT

Cyclic writing of speed and ramps possible

4 x M12 connectors


High protection class IP67

Suitable for option with plug connector AVT1



(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, ASi-5	SEW MOVIMOT	1	6	–	out of AUX	out of AUX	ASi profile cable	1 ASi-5 address	<b>BWU4416</b>

- (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 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) ASi-5 address (max. 62 ASi-5 addresses/ASi network), mixed use allowed (upon request, ASi nodes are available with specific ASi address profiles).

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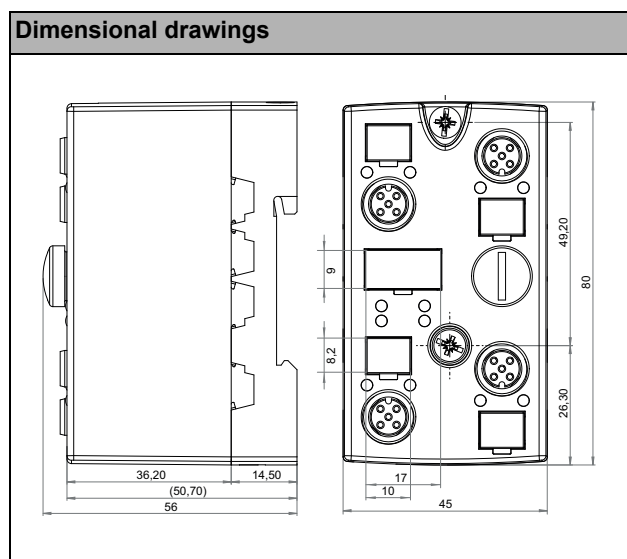
<b>Article no.</b>	<b>BWU4416</b>
<b>Connection</b>	
ASi / AUX connection	profile cable and piercing technology
Periphery connection	M12, Y wiring
<b>ASi</b>	
Address	1 ASi-5 address
Required Master profile	≥M5
Since ASi specification	5
ASi process data width	7 byte <sup>(1)</sup>
Operating voltage	30 V (18 ... 31,6 V)
Max. current consumption	65 mA
Max. current consumption without sensor/ actuator supply	65 mA
<b>AUX</b>	
Voltage	24 V (18 ... 30 V)
Max. current consumption	2 A
<b>Input</b>	
Number	6
Power supply	out of AUX
Sensor supply	short-circuit and overload protected according to EN 61131-2
Power supply of attached sensors	1 A
Switching threshold	< 5 V (low), > 15 V (high)
<b>SEW Movimot Port</b>	
Number	1
Interface	RS 485
Baud rates	9600 Bit/s
Power supply	out of AUX
Fuse	short-circuit and overload protected according to EN 61131-2
Max. current	1 A per port
<b>Visualization</b>	
LED ASi (green)	on: ASi voltage flashing: ASi voltage on, but peripheral fault <sup>(2)</sup> or address 0 off: no ASi voltage
LED FLT (red)	on: ASi node offline flashing: peripheral fault <sup>(2)</sup> off: ASi node online
LED AUX (green)	on: 24 V <sub>DC</sub> AUX off: no 24 V <sub>DC</sub> AUX
LEDs I1 ... I6 (yellow)	state of inputs I1 ... I6
LED M1 (yellow)	RS 485 communication active

# ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/6I

<b>Article no.</b>	<b>BWU4416</b>
<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>(3)</sup>
Operating altitude	max. 2000 m
Ambient operating temperature	-30 °C ... +55 °C (up to max. +70 °C) <sup>(4)</sup>
Storage temperature	-25 °C ... +85 °C
Housing	plastic, for DIN rail mounting <sup>(5)</sup>
Protection category	IP67 <sup>(6)</sup>
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 <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 / 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) **See table "Peripheral fault indication"**
- (3) 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.
- (4) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada
- (5) Depending on the substructure module (see accessories). The substructure module is not included in the scope of delivery.
- (6) Protection category IP67 can only be achieved if all open connections are sealed with suitable end caps fulfilling the same protection category.

<b>UL-specifications (UL508)</b>	
External protection	An isolated source with a secondary open circuit voltage of ≤30 V <sub>DC</sub> 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.



# ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/6I

Article no.	Peripheral fault indication				
	Overload sensor supply	Output short circuited	AUX voltage missing	Movimot Communication Error	Movimot Status Error
BWU4416	•	–	•	•	•

## Programming (Bit-setting of ASi process data image)

Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
BWU4416	Digital input data								
	0	–	–	I6	I5	I4	I3	I2	I1
	SEW MOVIMOT process input data PI1 <sup>(1)</sup> 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 <sup>(1)</sup> 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 <sup>(1)</sup> 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	

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

Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
BWU4416	Digital output data								
	0	–	–	–	–	–	–	–	reserved
	SEW MOVIMOT process output data PO1 <sup>(1)</sup> 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 <sup>(1)</sup> 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) <sup>(1)</sup> 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	

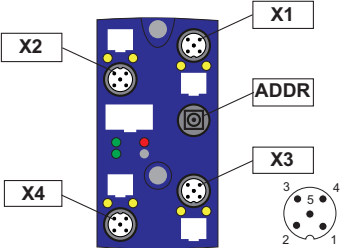
<sup>(1)</sup> For further detailed information, please refer to the SEW MOVIMOT documentation.

## Pin assignment

Signal name	Explanation
I <sub>x</sub>	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 -)
24 V <sub>ext out</sub>	Power supply, out of external voltage, positive pole (AUX, actuator supply)
0 V <sub>ext out</sub>	Power supply, out of external voltage, negative pole (AUX, actuator supply)
24 V <sub>ext in</sub>	Input voltage, positive pole (AUX+)
0 V <sub>ext in</sub>	Input voltage, negative pole (AUX-)
ASi+	ASi network, positive potential
ASi-	ASi network, negative potential
n.c.	not connected

# ASi-5 Motor Module for SEW MOVIMOT, IP67, M12, 1M/6I

Connections							
Article no.	M12 Connection	Marking	Pin1	Pin2	Pin3	Pin4	Pin5
BWU4416	X1	I1/I2	24 V <sub>ext out</sub>	I2	0 V <sub>ext out</sub>	I1	n.c.
	X2	I3/I4	24 V <sub>ext out</sub>	I4	0 V <sub>ext out</sub>	I3	n.c.
	X3	I5/I6	24 V <sub>ext out</sub>	I6	0 V <sub>ext out</sub>	I5	n.c.
	X4	M1 (motor)	24 V <sub>ext out</sub>	RS 485 TX -	0 V <sub>ext out</sub>	RS 485 TX +	n.c.
	ADDR (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 (art. no. BW4215)
  - Connection cable for SEW frequency inverters (art. no. BW2799)