Active Distributor ASi-5 motor module for SEW MOVI-C

Bihl + Wiedemann

2 x connectors for profile cable

**Periphery connection via
1 x M12 cable plug, D-coded, straight, 4 poles**

for SEW MOVI-C frequency inverter

Control via Modbus TCP

Can be used in passively safe paths up to SIL3/PLe

(figure similar)

Figure	Type	Drive	Number of Drives	Input voltage (sensor supply) [1]	Output voltage (actuator supply) [2]	ASi connection [3]	Connection	ASi address [4]	Art. no.
	IP67, depth 35 mm	SEW MOVI-C	1	out of ASi	-	ASi profile cable	1 x M12 cable plug, D-coded, straight, 4 poles	1 ASi-5 address	**BWU4718**

[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] 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).

[4] 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. For modules with two ASi-3 nodes the 2nd ASi-3 node is turned off as long as the 1st ASi-3 node is addressed to address "0". Upon request, ASi-3 nodes are available with specific ASi node profiles.

Article No.	BWU4718
Interface	
Interface	Modbus TCP
Baud rates	10/100 MBaud (half-duplex/full-duplex)
Connection	
ASi connection	profile cable and piercing
Periphery connection	1 x M12 cable plug, D-coded, straight, 4 poles
Length of connector cable	1 m
	max. allowed tensile strain 10 N
ASi	
Address	1 ASi-5 address
As of ASi specification	ASi-5
ASi process data width	16 byte [1]
Operating voltage	30 V (18 ... 31,6 V)
Max. current consumption	165 mA
Max. current consumption without sensor/ actuator supply	45 mA

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Article No.	BWU4718
Display	
LED ASI (green)	on: ASi voltage on flashing: ASi voltage on, but peripheral fault [2] or address 0 off: no ASi voltage
LED FLT/FAULT (red)	on: node address 0 or node offline flashing: peripheral fault [1] off: node online
LED LINK (green)	on: connection M1 is connected to a network off: connection M1 is not connected to a network
LED ACT (yellow)	flashing: data exchange with motor active off: no data exchange with motor
Environment	
Applied standards	EN 61000-6-2 EN 61000-6-3 EN 61131-2 EN 60529
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	yes [3]
Operating altitude	max. 5000 m
Ambient temperature	-30 °C … +60 °C
Storage temperature	-25 °C … +85 °C
Housing	plastic, screw mounting, suitable for cable ducts (installation depth ≥35mm)
Pollution Degree	2
Protection category	IP67 [4]
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] 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] Protection category IP67 can only be achieved if all open connections are sealed with suitable end caps fulfilling the same protection category (see accessories).

Article no.	Peripheral fault indication		
	Overload sensor supply	Error in frequency inverter	Communication error to frequency inverter
BWU4718	–	●	●

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Programming (ASi pin assignment)

Article no.	Byte	Bit							
BWU4718		**D7**	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
		SEW MOVI-C process input data PI1 [1] status word 1							
	0	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	1	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process input data PI2 [1] actual speed							
	2	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	3	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process input data PI3 [1] error							
	4	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	5	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process input data PI4 [1] torque							
	6	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	7	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process input data PI5 [1] digital inputs							
	8	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	9	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process input data PI6 [1] actual operating mode							
	10	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	11	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process input data PI7 [1] actual position (High Word)							
	12	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	13	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process input data PI8 [1] actual position (Low Word)							
	14	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	15	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0

[1] On: For more detailed information please refer to the SEW MOVI-C documentation.

Article no.	Byte	Bit							
BWU4718		**D7**	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
		SEW MOVI-C process output data PO1 [1] control word 1							
	0	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	1	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process output data PO2 [1] nominal speed							
	2	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	3	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process output data PO3 [1] nominal acceleration							
	4	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	5	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process output data PO4 [1] nominal delay							
	6	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	7	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process output data PO5 [1] digital outputs							
	8	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	9	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process output data PO6 [1] nominal operation mode							
	10	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	11	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process output data PO7 [1] nominal position (High Word)							
	12	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	13	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
		SEW MOVI-C process output data PO8 [1] nominal position (Low Word)							
	14	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
	15	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0

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(1) Off: For more detailed information please refer to the SEW MOVI-C documentation.

Pin assignment

Signal name	Explanation
TX +	Communication with motor (labeling on motor RX +)
TX -	Communication with motor (labeling on motor RX -)
RX +	Communication with motor (labeling on motor RX +)
RX -	Communication with motor (labeling on motor RX -)
ASi+	ASi network, positive potential
ASi-	ASi network, negative potential
n.c. (not connected)	not connected

Connections: M12 cable plug, D-coded, straight, 4 poles					
Article no.	M12 connection	Pin1	Pin2	Pin3	Pin4
BWU4718	X1	TX+	RX+	TX-	RX-

Line termination with sealing profile

max. IP54
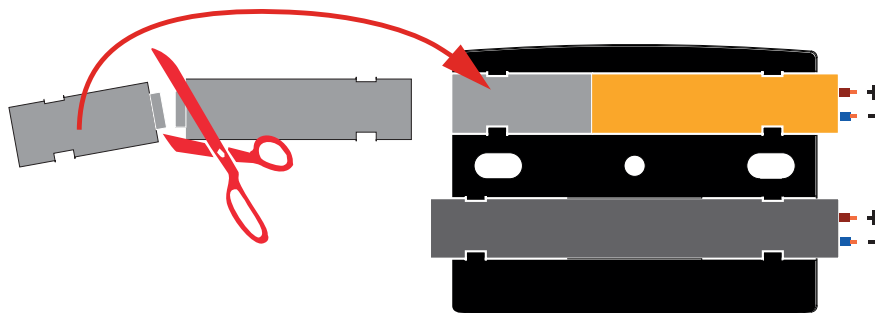
Accessories:
- **Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)**
- **ASi-5/ASi-3 Address Programming Device (art. no. BW4925)**

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