

# Active Distributor ASi-5 Motor Module for Rockwell PF525, IP54, 1M

## Active Distributor ASi-5 Motor Module for Rockwell PowerFlex 525 frequency inverter

Cyclic writing of speed and ramps possible

RS 485 communication supplied out of ASi, communication to frequency inverter will stay alive at STO

24 V power supply (AUX) to control the STO of the frequency inverter using passive safety

2 x connectors for profile cable

Periphery connection via

1 x round cable/connecting wires (24 V for STO) +  
1 x RJ45 cable plug, 8 poles (RS 485) +  
1 x M12 cable socket, straight, 5 poles (2 inputs)


1x addressing plug

High protection class IP54



(figure similar)



Figure	Type	Drive <sup>(1)</sup>	Number of Drives	Input voltage (sensor supply) <sup>(2)</sup>	Output voltage (actuator supply) <sup>(3)</sup>	ASi connection <sup>(4)</sup>	Connection	ASi address <sup>(5)</sup>	Art. no.
	IP54, depth 35 mm	Rockwell PF525	1	out of ASi	—	ASi profile cable	1 x round cable/connecting wires + 1 x RJ45 cable plug, 8 poles + 1 x M12 cable socket, straight, 5 poles + 1 x addressing port	1 ASi-5 address	<b>BWU4104</b>

(1) **Drive:**

"Rockwell PF525": 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:** 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 modules are available with specific ASi node profiles.

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<b>Article no.</b>	<b>BWU4104</b>
<b>Connection</b>	
ASi / AUX connection	profile cable and piercing technology
Periphery connection	1 x round cable/connecting wires (24 VDC for STO) + 1 x RJ45 cable plug, 8 poles (RS 485) + 1 x M12 cable socket, straight, 5 poles (2 inputs) 1 x ASi addressing port
Length of connector cable	I1/I2: 1 m M: 1 m 24 V: 1 m ADDR: 0.04 m max. allowed tensile strain 10 N
<b>ASi</b>	
Address	1 ASi-5 address
Required ASi specification	ASi-5
ASi process data width	6 byte
Operating voltage	30 V (18 ... 31,6 V)
Max. current consumption	170 mA
Max. current consumption without sensor/ actuator supply	70 mA
<b>AUX</b>	
Voltage	24 V (18 ... 30 V)
Max. current consumption	90 mA, short circuit and overload protected acc. to EN 61131-2
<b>Input</b>	
Number	2
Power supply	out of ASi
Sensor supply	short circuit and overload protected acc. to EN 61131-2
Power supply of attached sensors	100 mA
Switching threshold	U < 5 V (low) U > 15 V (high)
<b>RS 485 interface</b>	
Number	1
Interface	RS 485
Baud rates	9600 Bit/s
Power supply	out of ASi
<b>Frequency inverter</b>	
Number of drives	1
Supply of drive communication	out of ASi
Supply of additional 24 V (24V)	out of AUX
Max. current for additional 24 V (24V)	90 mA
<b>Visualization</b>	
LED ASi/FLT (red/green)	green: ASi voltage on, ASi node online red: ASi voltage on, but ASi node offline yellow/red flashing: address 0 red/green flashing: peripheral fault <sup>(1)</sup> off: no ASi voltage
LED AUX (green)	on: 24 V <sub>DC</sub> AUX off: no 24 V <sub>DC</sub> AUX
LED M1 (yellow)	RS 485 communication active
LED 24 V (yellow)	state of 24 V power supply for periphery
LEDs I1, I2 (yellow)	state of inputs I1, I2

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<b>Article no.</b>	<b>BWU4104</b>
<b>Environment</b>	
Applied standards	EN ISO 13849-1 PLe EN ISO 13849-2 EN 62026-2 EN 61000-6-2 EN 61000-6-3 EN 61131-2 EN 60529
Can be used in passively safe paths up to SIL3/PLe	yes <sup>(2)</sup>
Operating altitude	max. 2000 m
Ambient temperature	-30 °C ... +60 °C <sup>(3)</sup>
Storage temperature	-25 °C ... +85 °C
Housing	plastic, screw mounting, suitable for cable ducts (installation depth ≥35mm)
Pollution Degree	2
Protection category	IP54
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) see table "Peripheral fault indication"

(2) 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.

(3) Down to -25 °C with flexibly mounted cable, -30 °C only with fixed mounted cable.

Article no.	Peripheral fault indication				
	Overload sensor supply	Output short circuited	AUX voltage missing	Communication error	Motor error
BWU4104	•	–	•	•	•

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

Article no.	Byte	Bit								
		D7	D6	D5	D4	D3	D2	D1	D0	
BWU4104	Digital input data									
	0	reserved						I2	I1	
	1	motor ready	motor running	at reference	direction	motor error	reserved			
	2	actual speed, high byte (0 ... 100%), UINT16								
	3	actual speed, low byte (0 ... 100%), UINT16								
	4	actual current (mA), high byte, UINT16								
5	actual current (mA), low byte, UINT16									

Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
BWU4104	Digital output data								
	0	reserved							
	1	enable	start/stop	cw/ccw	reserved	reset	reserved		
	2	speed setpoint, high byte (0 ... 100%), UINT16							
	3	speed setpoint, low byte (0 ... 100%), UINT16							
	4	ramp (ms), high byte, UINT16							
5	ramp (ms), low byte, UINT16								

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## Pin assignment

Signal name	Explanation
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>out of ASi</sub>	Power supply, out of ASi, positive pole (sensor supply)
0 V <sub>out of ASi</sub>	Power supply, out of ASi, negative pole (sensor supply)
ASi+, ASi-	connection to ASi bus
n.c.	not connected

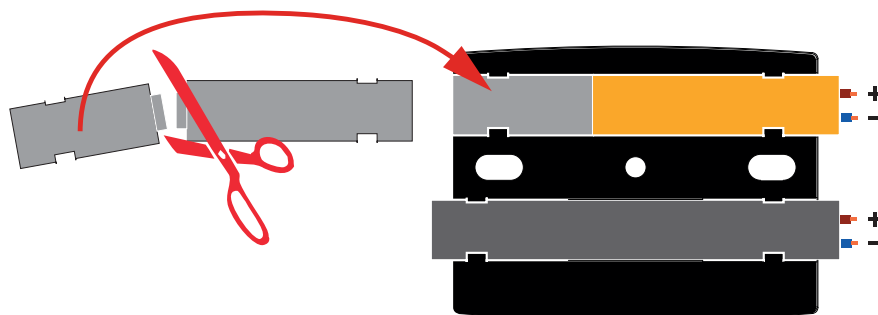
## Connections:

Article no.	RJ45 connection	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	
BWU4104	X1	n.c.	n.c.	n.c.	RS 485 TX +	RS 485 TX -	n.c.	n.c.	n.c.	
	M12 connection	Pin1	Pin2	Pin3	Pin4	Pin5				
	X2	24 V out of ASi	I2	0 V out of ASi	I1	n.c.	-			
	Connecting wires	BN	BU							
	X3	24 V ext out	0 V ext out	-						
	ADDR	Connection for ASi-5 addressing plug								

## 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)