

Active Distributor ASi-5 with Modbus TCP interface



Active distributor ASi-5 to control Modbus TCP devices

Adjustable cycle time

Data bandwidth of the Modbus TCP data and start index parameterizable

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



(figure similar)



Figure	Type	Modbus TCP connection	Input voltage (sensor supply) ⁽¹⁾	Output voltage (actuator supply) ⁽²⁾	ASi connection ⁽³⁾	Connection	ASi address ⁽⁴⁾	Art. no.
	IP67, depth 35 mm	1	out of ASi	-	ASi profile cable	1 x M12 cable plug, D-coded, straight, 4 poles	1 ASi-5 address	BWU5246

- (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.	BWU5246
Interface	
Interface	transparent Modbus TCP interface
Baud rates	10/100 MBaud (half-duplex/full-duplex)
Connection	
ASi connection	profile cable and piercing technology
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	depending on the profile 9, 17, 25 or 31 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.	BWU5246
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 ⁽²⁾ off: node online
LED X1 (yellow)	Modbus TCO communication active
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. 3000 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 Modbus TCP node	Communication error to Modbus TCP node
BWU5246	–	•	•

Programming (ASi pin assignment)

Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
BWU5246	Modbus input data								
	0	Modbus Frame In							
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8	reserved							Valid Bit

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Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
BWU5246	Modbus output data								
	0	Modbus Frame Out							
	1								
	2								
	3								
	4								
	5								
	6								
	7								

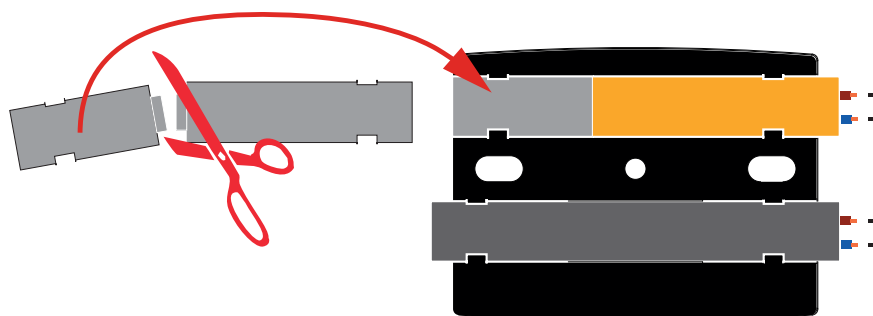
Pin assignment

Signal name	Explanation
TX +	Communication with Modbus TCP node (send)
TX -	Communication with Modbus TCP node (send)
RX +	Communication with Modbus TCP node (receive)
RX -	Communication with Modbus TCP node (receive)
n.c. (not connected)	not connected

Connections: M12 cable plug, D-coded, straight, 4 poles

Article no.	M12 connection	Pin1	Pin2	Pin3	Pin4	
BWU5246	X1	TX+	RX+	TX-	RX-	

Line termination with sealing profile



Accessories:

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