

# Active Distributor ASi-5 Motor Module with IO-Link interface for 24 V motorized rollers

## Active Distributor ASi-5 Motor Module with IO-Link interface for 24 V motorized rollers, IP54, M8 and M12, 1M

- ASi and AUX via profile cable



(figure similar)

### New standard ASi-5

### IO-Link port class A and IO-Link port class B in one housing


### suitable for

- 1 x 24 V motorized rollers SEW I2M

### Cyclical writing of speeds and ramps possible

### Protection degree IP54



Figure	Drive <sup>(1)</sup>	Number of drives	Line protection fuse <sup>(2)</sup>	Inputs digital	Input voltage (sensor supply) <sup>(3)</sup>	Output voltage (actuator supply) <sup>(4)</sup>	Connection	ASi connection <sup>(5)</sup>	Article No.
	SEW	1	yes, 5.0 A (slow-blow)	–	out of AUX	out of AUX	1 x M8 snap-in cable socket, straight, 5 poles, 1 x M12 cable socket, straight, 5 poles	ASi profile cable	<b>BWU5160</b>

(1) **Drive:**

It may also be suitable for controlling motorized rollers from other manufacturers with the same technical data, e.g. Pulseroller IDC. Please compare the manufacturer's specifications with the current values and the pin assignment of the motor module.

(2) **Line protection fuse:**

In the motor module UL approved fuses are placed before each of the motor supply connections. A short circuit in the motor causes this fuse to blow, protecting the connection cable between the module and motor. After blowing the not exchangeable fuse the module is no longer functional and the module needs to be replaced. The characteristics of the fuse must be checked against the motor data before using the module. The protection circuit in the module allows a very simple protection of the motor cables. The fuse for the cable protection is a slow-blow one; without short circuit the robust behavior of the module remains.

(3) **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.

(4) **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.

(5) **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 M8 socket.

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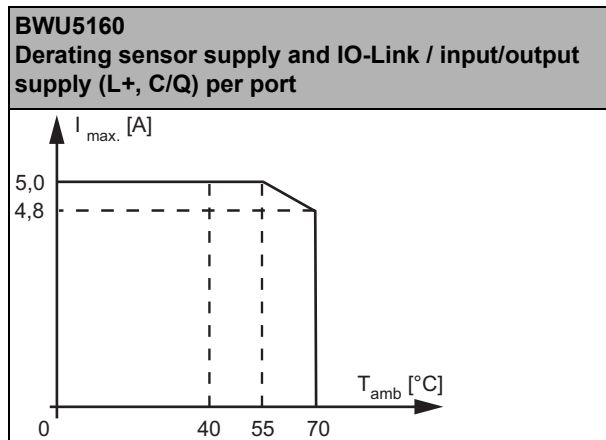
<b>Article No.</b>	<b>BWU5160</b>	
<b>General data</b>		
Motorized rollers	1 x SEW I2M	
<b>Connection</b>		
ASI/AUX connection	profile cable and piercing technology	
Periphery connection	M: 1 x M8 snap-in cable socket, straight, 5 poles I: 1 x M12 cable socket, straight, 5 poles	
Round cable	L1 (IO-Link Class A): 1.0 L2 (M1): 0.4 max. allowed tensile strain 10 N	
<b>ASI</b>		
Address	1 ASi-5 address	
Required ASi specification of the master	ASi-5	
ASi process data width	8 byte <sup>(1)</sup>	
Operating voltage	30 V (18 ... 31.6 V)	
Max. current consumption	35 mA	
Max. current consumption without sensor/actuator supply	35 mA	
<b>AUX</b>		
Voltage	24 V (18 ... 30 V)	
Max. current consumption	5 A	
<b>IO-Link</b>		
Number	1 port Class A 1 x C/Q (IO-Link communication or configurable as digital input or digital output)	
IO-Link data rate	COM1 / COM2 / COM3	
IO-Link data width	up to 32 byte process data + 1 byte PQI per IO-Link port	
IO-Link revision	1.1	
Switching threshold	U<5 V (low) U>15 V (high)	
Power supply	out of AUX	
Power supply of attached sensors (L+)	up to +40 °C	500 mA per port, $\Sigma(L+, C/Q, P24) 5 A^{(2)}$
	at +55 °C	400 mA per port, $\Sigma(L+, C/Q, P24) 5 A^{(2)}$
	at +70 °C	200 mA per port, $\Sigma(L+, C/Q, P24) 4.8 A^{(2)}$
IO-Link / input/output current (C/Q)	up to +40 °C	500 mA per port, $\Sigma(L+, C/Q, P24) 5 A^{(2)}$
	at +55 °C	400 mA per port, $\Sigma(L+, C/Q, P24) 5 A^{(2)}$
	at +70 °C	200 mA per port, $\Sigma(L+, C/Q, P24) 4.8 A^{(2)}$
<b>Drive</b>		
Number of IO-Link ports	1 x port Class B	
Power supply	out of AUX (galvanic separation)	
Overload voltage tolerated by reaction (AUX)	35 V-resistant brake chopper compatible	
Supply of the motors	out of AUX 3 A	
Max. current for motor supply	up to +40 °C	3 A per port, $\Sigma(L+, C/Q, P24) 5 A^{(3)}$
	at +55 °C	3 A per port, $\Sigma(L+, C/Q, P24) 5 A^{(3)}$
	at +70 °C	3 A per port, $\Sigma(L+, C/Q, P24) 4.8 A^{(3)}$
Line protection fuse	yes, 5,0 AT, at 10 A (200%) release between 1 s and 120 s, fuse UL certified <sup>(4)</sup>	

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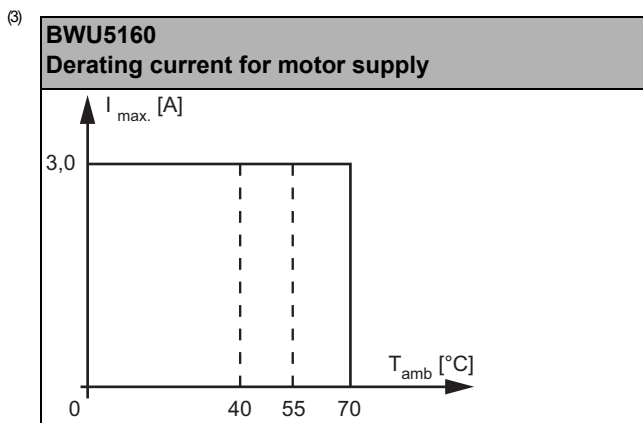
<b>Article No.</b>	<b>BWU5160</b>
<b>Display</b>	
LED ASI (green)	on: ASi voltage OK off: no ASi voltage
LED FLT/FAULT (red)	on: no data exchange flashing: peripheral fault <sup>(5)</sup> off: data exchange ok
LED AUX (red/green)	green: AUX voltage OK red: no 24 V <sub>DC</sub> AUX voltage
LED C/Q1 (red/green)	state of IO-Link port 1: green: IO-Link communication OK yellow: switching signal at input or output at pin4 red: IO-Link communication error or short-circuit
LED I1 (yellow)	state of input I1
LED M1 (red/green)	state of IO-Link motor port M1: green: IO-Link communication OK yellow: switching signal at input or output at pin4 red: IO-Link communication error or short-circuit
<b>Environment</b>	
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 <sup>(6)</sup>
Operating altitude	max. 2000 m
Ambient temperature	-30 °C ... +70 °C <sup>(2)</sup> <sup>(3)</sup>
Storage temperature	-25 °C ... +85 °C
Housing	plastic, for screw mounting, suitable for cable ducts (≥35 mm installation depth)
Pollution degree	2
Protection category	IP54
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)

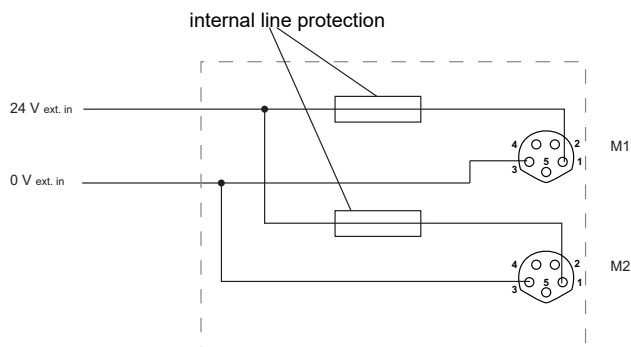


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(4) In the motor module UL approved fuses are placed before each of the motor supply connections. A short circuit in the motor causes this fuse to blow, protecting the connection cable between the module and motor. After blowing the not exchangeable fuse the module is no longer functional and the module needs to be replaced. The characteristics of the fuse must be checked against the motor data before using the module.

The protection circuit in the module allows a very simple protection of the motor cables. The fuse for the cable protection is a slow-blow one; without short circuit the robust behavior of the module remains.



(5) See table "Peripheral fault indication"

(6) 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.

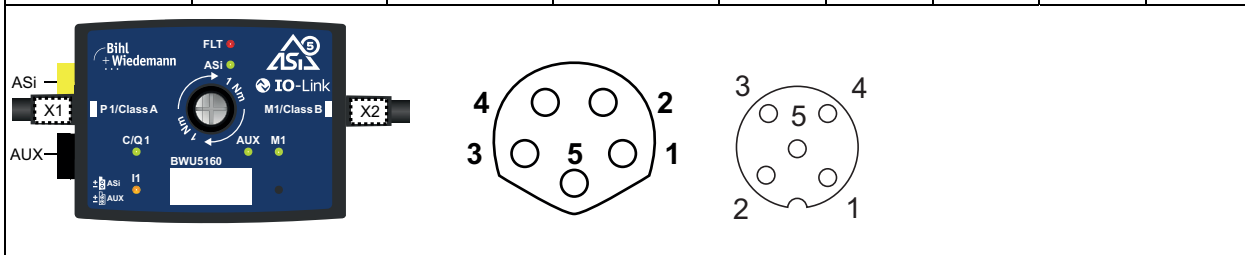
Article no.	Peripheral fault indication				
	Overload output	AUX voltage missing	Overload sensor supply	Motor fuse is blown	IO-Link event
<b>BWU5160</b>	•	•	•		•

## Pin assignment

Signal name	Explanation
I <sub>x</sub>	digital input x
P24 <sub>ext.out</sub>	actuator supply, out of external voltage, positive pole
N24 <sub>ext.out</sub>	actuator supply, out of external voltage, negative pole
L <sup>+</sup> <sub>ext.out</sub>	IO-Link sensor supply out of external voltage, positive pole
L <sup>-</sup> <sub>ext.out</sub>	IO-Link sensor supply, out of external voltage, negative pole
C/Qx <sub>ext.out</sub>	connection x, optionally for IO-Link communication, input or output
ASi+, ASi-	connection to ASi bus
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)
n.c.	not connected

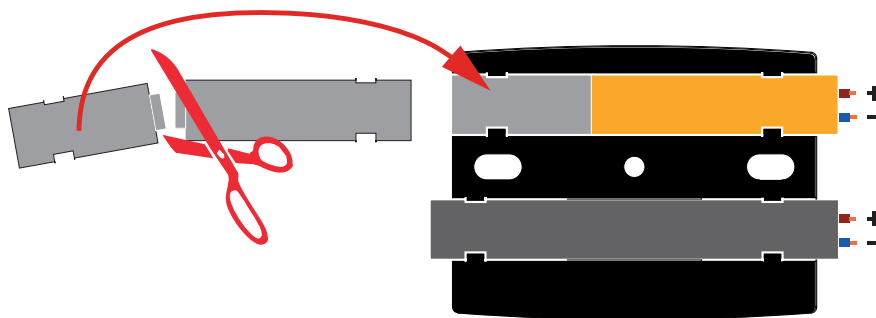
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Connections								
Article no.	M12 connection	Denom.	Function	Pin1	Pin2	Pin3	Pin4	Pin5
BWU5160	X1 (1)	P1	IO-Link port class A	L+1 ext.out	I1	L-1 ext.out	C/Q1 ext.out	n.c.
	M8 connection	Denom.	Function	Pin1	Pin2	Pin3	Pin4	Pin5
	X2 (1)	M1	Motor 1	P24 ext.out	n.c.	N24/L-2 ext.out	C/Q2 ext.out	L+2 ext.out



(1) **Notice**  
 Incorrect wiring at the motor sockets can cause a device defect.

## Line termination with sealing profile



## Accessories:

- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- Magnetic holders for substructure Modules (art. no. BW4779)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)