

ASi-5 cable duct motor module for 24 V motorized rollers EC5000 BI

ASi-5 cable duct motor module for 2 x 24 V motorized rollers

- ASi and AUX via profile cable

New standard ASi-5

Suitable for 2 x 24 V motorized rollers Interroll EC5000 BI with
20 W/35 W, motor connection via M8 snap-in cable sockets

Cyclic writing of speed and ramps possible

Current consumption and temperature of motorized rollers can be
read

4 x digital inputs for sensor connection

Protection category IP54



(figure similar)



Figure	Drive	Number of drives	Line protection fuseMotor supplye ⁽¹⁾	Inputs digital	Input voltage (sensor supply) ⁽²⁾	Output voltage (actuator supply) ⁽³⁾	Motor supply	Connection	ASi connection ⁽⁴⁾	Article No.
	Interroll EC5000 BI (20 W/ 35 W/ 50 W)	2	yes, separately for each motor, 5,0 A (slow-blow fuse)	4	out of ASi	—	out of AUX	2 x M8 Snap-in cable sockets, straight, 5 poles, 2 x M8 cable sockets, straight, 4 poles, 1 x addressing cable socket	ASi profile cable	BWU5178

(1) 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.

(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 M8 socket.

ASi-5 cable duct motor module for 24 V motorized rollers EC5000 BI

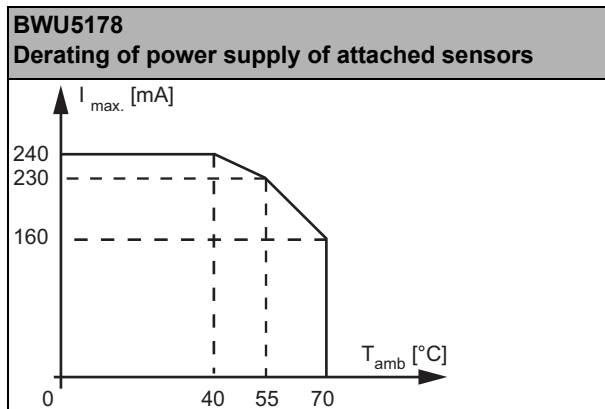
Article no.		BWU5178
General data		
Motorized rollers		2 x Interroll (EC5000 BI, 24V, 20 W/35 W/ 50 W)
Connection		
ASi/AUX connection		profile cable and piercing technology
Periphery connection		M: 2 x M8 Snap-in cable sockets, straight, 5 poles I: 2 x M8 cable sockets, straight, 4 poles 1 x addressing cable socket
Cable(L in m)		L1 (I3/I4): 0,50 L2 (I1/I2): 0,50 L3 (ADDR): 0,04 L4 (M1): 1,0 L5 (M2): 1,0 max. allowed tensile strain 10 N
ASi		
Address		1 ASi-5 address
Required ASi specification of master		ASi-5
Operating voltage		30 V (18 ... 31,6 V)
Max. current consumption		320 mA
Max. current consumption without sensor/ actuator supply		80 mA
AUX		
Voltage		24 V (18 ... 30 V)
Max. current consumption		at 20 W: 2,8 A continuously, 6,0 A peak at 35 W: 4,8 A continuously, 10,0 A peak at 50 W: 6,8 A continuously, 10,0 A peak
Input		
Number		4
Power supply		out of ASi
Power supply of attached sensors	up to +40 °C	240 mA ⁽²⁾
	at +55 °C	230 mA ⁽²⁾
	at +70 °C	160 mA ⁽²⁾
Switching threshold		U _{in} < 5 V (low) U _{in} > 10 V (high)
Output		
Number of drives		2
Power supply		out of AUX (galvanic separation)
Overload voltage tolerated by reaction (AUX)		35 V-resistant brake chopper compatible
Max. output current		10 mA per output
Supply of motors		out of AUX per motor: 1,4 A continuously at 20 W per motor: 2,4 A continuously at 35 W per motor: 3,4 A continuously at 50 W
Max. current for motor supply	up to +40 °C	per motor: 3,4 A continuously ⁽³⁾
	at +55 °C	per motor: 3,4 A continuously ⁽³⁾
	at +70 °C	per motor: 2,0 A continuously ⁽³⁾
Line protection fuse		yes, separately for each motor, 5,0 AT, at 10 A (200%) release between 1 s and 120 s, fuse UL certified ⁽⁴⁾

ASi-5 cable duct motor module for 24 V motorized rollers EC5000 BI

Article no.	BWU5178
Display	
LED ASi (green)	on: ASi voltage on off: no ASi voltage
LED FLT/FAULT (red)	on: no data exchange flashing: peripheral fault ⁽⁵⁾ off: data exchange ok
LED AUX (green)	on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LEDs I1 ... I4 (yellow)	state of inputs I1 ... I4
LEDs M1, M2 (yellow)	on: communication w3ith motor M1 ... M2 active off: communication w3ith motor M1 ... M2 not active
LEDs ERR1, ERR2 (red) ⁽¹⁾	on: motor M1, M2 is not connected to the module or the fuse of motor M1 ... M2 is blown flashing: Motor M1, M2 is signaling fault condition ⁽⁵⁾
Environment	
Applied standards	EN 61000-6-2, EN 61000-6-4, EN 60529 EN 61131-2
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	yes ⁽⁶⁾
Operating altitude	max. 2000 m
Operating temperature	-30 °C ... +70 °C ⁽²⁾ ⁽³⁾
Storage temperature	-25 °C ... +85 °C
Housing	plastic, for screw mounting suitable for cable ducts (≥19 mm installation depth)
Pollution degree	2
Protection category	IP54
Tolerable loading referring to humidity	according to EN 61131-2
Max. tolerable shock load	according to EN 61131-2
Max. tolerable vibration stress	according to EN 61131-2
Isolation voltage	≥ 500 V
Weight	approx. 305 g
Dimensions (W / H / D in mm)	130 / 60 / 28

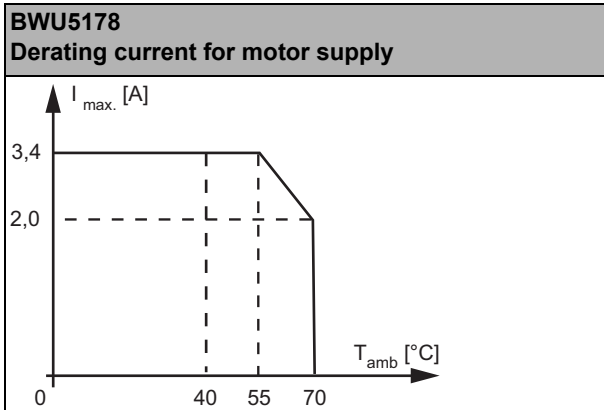
(1) The ERR LED is not controlled when the motor ports are deactivated

(2)



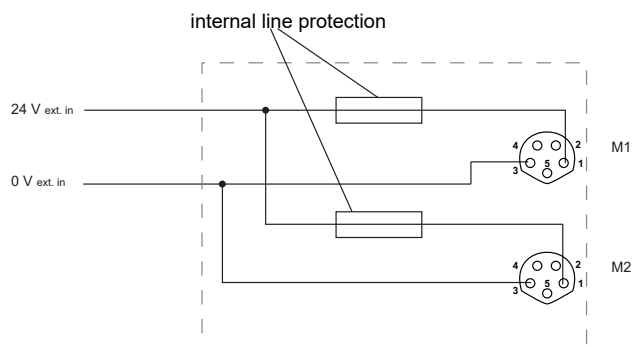
ASi-5 cable duct motor module for 24 V motorized rollers EC5000 BI

(3)



- (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.

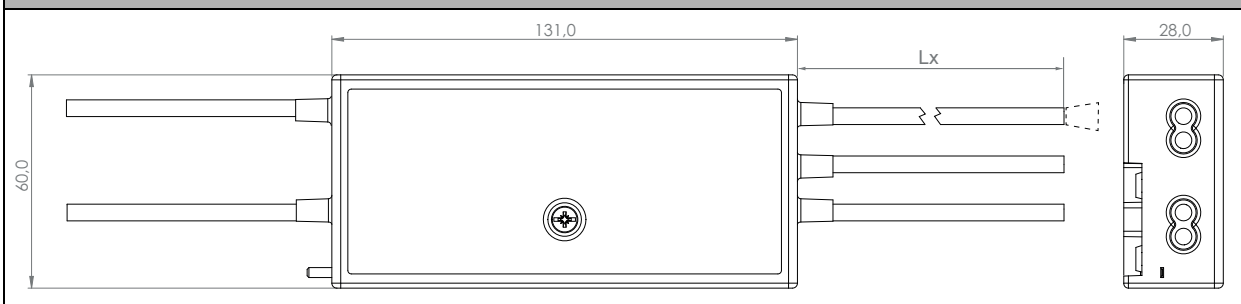
The protection circuit in the module allows a very simple protection of the motor cables. The fuse for the cable protection is a slow-blow one; without short circuit the robust behavior of the module remains.



- (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.

Dimensional drawings



Article no.	Peripheral fault indication			
	Overload output	AUX voltage missing	Overload sensor supply	at least 1 motor fuse is blown or 1 motor in fault condition or is not connected to the module
BWU5178	-	•	•	•

ASi-5 cable duct motor module for 24 V motorized rollers EC5000 BI

Programming (ASi bit assignment)

Article no.	Byte	bit							
		D7	D6	D5	D4	D3	D2	D1	D0
		input							
BWU5178	0	reserved				I4	I3	I2	I1
	1	reserved	Temperature Error	Voltage Error	reserved	Fuse M2	Fuse M1	Error M2 ⁽¹⁾	Error M1 ⁽¹⁾
	2	AUX voltage (mV), high byte, UINT16							
	3	AUX voltage (mV), low byte, UINT16							
	4	Motor current M1 (mA), high byte, UINT16							
	5	Motor current M1 (mA), low byte, UINT16							
	6	Motor current M2 (mA), high byte, UINT16							
	7	Motor current M2 (mA), low byte, UINT16							
	8	Motor temperature M1 (°C), high byte, INT16							
	9	Motor temperature M1 (°C), low byte, INT16							
	10	Motor temperature M2 (°C), high byte, INT16							
	11	Motor temperature M2 (°C), low byte, INT16							

⁽¹⁾ The motor ports can be deactivated individually using the software ASIMON360 (BW2916) or ASi Control Tools360 (BW2902).

Article no.	Byte	bit							
		D7	D6	D5	D4	D3	D2	D1	D0
		output							
BWU5178	0	Speed M1 ⁽¹⁾ (speed motor 1) (- 100 ... 0 ... 100 %), INT8							
	1	Speed M2 ⁽¹⁾ (speed motor 2) (- 100 ... 0 ... 100 %), INT8							
	2	ramp M1 (0 ... 25,5 s), UINT8 ⁽²⁾							
	3	ramp M2 (0 ... 25,5 s), UINT8 ⁽²⁾							

⁽¹⁾ The motor ports can be deactivated individually using the software ASIMON360 (BW2916) or ASi Control Tools360 (BW2902).

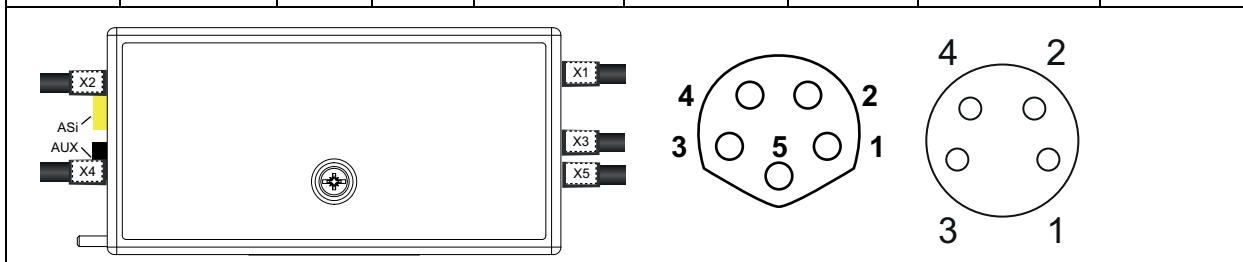
⁽²⁾ Time for setpoint step by $\pm 100\%$ (acceleration, deceleration)

Pin assignment

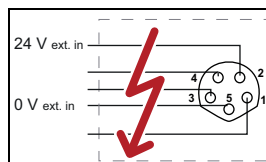
Signal name	Explanation
Ix	digital input x
CAN-H	communication with the motor, plus pole
CAN-L	communication with the motor, minus pole
24 V _{ext out}	power supply, out of external voltage, positive pole (AUX, actuator supply)
0 V _{ext out}	power supply, out of external voltage, negative pole (AUX, actuator supply)
ASi+, ASi-	connection to ASi bus
24 V _{out of ASi}	power supply, out of ASi, positive pole (sensor supply)
0 V _{out of ASi}	power supply, out of ASi, negative pole (sensor supply)
n.c.	not connected

ASi-5 cable duct motor module for 24 V motorized rollers EC5000 BI

Connections								
Article no.	M8 connection	Name	Function	Pin1	Pin2	Pin3	Pin4	Pin5
BWU5178	X1	I3/I4	inputs 3, 4	24 V _{out} of ASi	I4	0 V _{out} of ASi	I3	-
	X2	I1/I2	inputs 1, 2	24 V _{out} of ASi	I2	0 V _{out} of ASi	I1	-
	X3	ADDR	Connection for ASi-5 address programming device					
	X4 ⁽¹⁾	M1/ERR1	motor 1	24 V _{ext} out	CAN-H	0 V _{ext} out	CAN-L	n.c.
	X5 ⁽¹⁾	M2/ERR2	motor 2	24 V _{ext} out	CAN-H	0 V _{ext} out	CAN-L	n.c.



(1)



Notice

Incorrect wiring at the motor sockets can cause a device defect.

Accessories:

- Magnetic holders for substructure Modules (art. no. BW4779)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)