

ASi Motor Module for 24 V motorized rollers, 2M/2I

**ASi-3 module for two 24V Itoh Denki roller drives
Serie PM500XE/XP, PM605XE/XP with 4 binary and
2 analog outputs**

Mixed input/output module

Speed setting of ASi parameter

Protection category IP67

Suitable for applications up to -35 °C



The BWU2901 is a control module for up to 2 roller drives. The module uses an ASi AB address for transmitting rotary information. The speed is defined using ASi parameters.

Up to 2 motors and 2 sensors can be connected to the module. The motors are powered by 24V_{ext} and the sensors by ASi.

The module is 35V (AUX) fixed and brake resistor compatible.

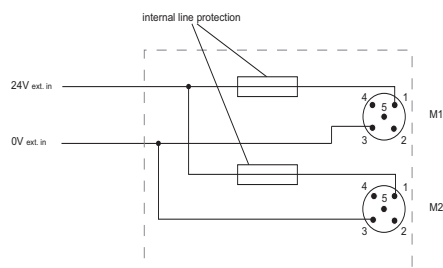
Article no.	BWU2901
General data	
Motorized rollers	2 x Itoh Denki (PM500XE/XP, PM605XE/XP)
Connection	
ASi/AUX connection	profile cable and piercing technology
Periphery connection	M12
ASi	
Profile	S-7.A.7, ID1 = 7 (fixed)
Address	1 AB address
Voltage	30 V _{DC} (18 ... 31,6 V)
Max. current consumption	200 mA
AUX	
Voltage	24 V _{DC} (18 ... 30 V)
Max. current consumption	8 A continuously, 11 A peak
Inputs	
Number	2
Power supply of inputs	Sensor inputs: ASi supply
Input level of sensors	U _{in} < 5V low, U _{in} > 10V high
Power supply of attached sensors	120 mA
Drive	
Number	2 (O1 ... O4)
Power supply of outputs	24 V (AUX, galvanic separation)
Overvoltage tolerated by reaction	35 V-resistant brake chopper compatible
Number of analog outputs	2
Max. output current	10 mA each
Supply of motors	out of AUX, 4 A continuously, 5,5 A max.
Line protection fuse	yes, ⁽¹⁾ separately for each motor, 3,5 AT, at 7 A (200%) release between 1 s and 120 s, fuse UL certified

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Indicator	
LED ASI (green)	ASi voltage on
LED FLT/FAULT (red)	on: ASi communication error flashing: AUX voltage is missing, overload output, an output is short circuited or at least one motor fuse has blown
LED AUX (green)	on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LEDs I1, I2 (yellow)	state of inputs I1, I2
LEDs M1, M2 (yellow)	state of outputs Out 1, Out 2
Environment	
Applied standards	EN 61000-6-2 EN 61000-6-4
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	yes ⁽²⁾
Operating altitude	max. 2000 m
Operating temperature	-35 °C ... +70 °C
Storage temperature	-35 °C ... +85 °C
Housing	plastic, for DIN rail mounting
Protection class (EN 60529)	IP67
Weight	100 g
Dimensions (W / H / D in mm)	45 / 80 / 42

- (1) 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 fuse the module is no longer functional and 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) BWU2901 from Ident. No. ≥ 19460 ; 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.

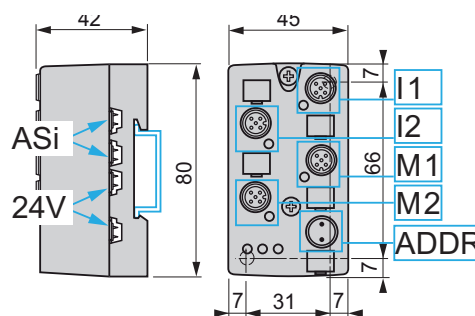
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Configuration analog-value

ASi parameter			Analog-value Pin 5	
P2	P1	P0	fast= 1	slow = 0
0	0	0	1,5V	0V
0	0	1	3,5V	1,5V
0	1	0	4,5V	2,5V
0	1	1	5,5V	2,5V
1	0	0	6,5V	3,5V
1	0	1	7,5V	3,5V
1	1	0	8,5V	4,5V
1	1	1	10V	5,5V

Bit assignment

Data bit		Function
DI0	I1	Input I1
DI1	I2	Input I2
DI2	I3	not used
DI3	I4	not used
DO0	O1	Motor 1: start / stop
DO1	internal	Motor 1+2: fast= 1/ slow= 0
DO2	O3	Motor 2: start / stop
DO3	O2, O4	Motor 1+2: direction



Assignment M12	Pins				
Name / number	1	2	3	4	5
I1 (input 1)	24 V _{out} of ASi	n.c.	0 V _{out} of ASi	I1	n.c.
I2 (input 2)	24 V _{out} of ASi	n.c.	0 V _{out} of ASi	I2	n.c.
M1 (motor 1)	24 V _{ext in}	O 2 (0: 0V; 1: 24V)	0 V _{ext in}	O1 (0: 0V; 1: 24V)	analog value
M2 (motor 2)	24 V _{ext in}	O 4 (0: 0V; 1: 24V)	0 V _{ext in}	O3 (0: 0V; 1: 24V)	analog value
ADDR	addressing socket (with protection cap)				

Accessories:

- ASi substructure module for 4-channel module in 45 mm-housing (article no. BW2349)
- ASi substructure module (CNOMO) for 4-channel module in 45 mm-housing (article no. BW2350)
- Universal protection cap ASi-5/ASi-3 for M12 sockets, IP67 (art. no. BW4056)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)