

AS-i 3.0 4I/4O module for two 24V Itoh Denki roller drives Serie 50XE/XP with 4 binary and 2 analog outputs

Mixed input/output slave

Speed setting of AS-i 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 AS-i AB slave for transmitting rotary information. The speed is defined using AS-i parameters.

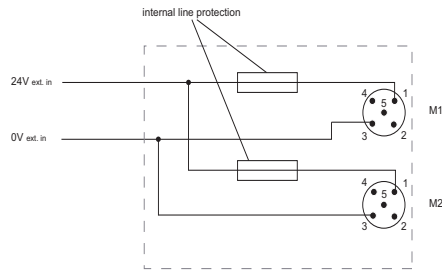
Up to 2 motors and 2 sensors can be connected to the module. The motors are powered by 24V_{ext} and the sensors by AS-i. The module is 35V (AUX) fixed and brake resistor compatible.

Article no.	BWU2901
Connection	
AS-i/AUX connection	profile cable and piercing
Periphery connection	M12
AS-i	
Profile	S-7.A.7, ID1 = 7 (fixed)
Address	1 AB slave
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: AS-i supply
Input level of sensors	U _{in} < 5V low, U _{in} > 10V high
Power supply of attached sensors	120 mA
Outputs	
Number of binary outputs	4
Power supply of outputs	24 V (AUX, galvanic separation)
Overvoltage tolerated by reaction	35 V-resistant brake resistor 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
Indicator	
2x LED I 1, I 2 (yellow)	state of input I 1, I 2
2x LED M 1, M 2 (yellow)	state of output Out 1, Out 2
LED ASI (green)	AS-i voltage on
LED FLT/FAULT (red)	on: AS-i 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)	24 V _{DC} AUX on

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Environment	
Applied standards	EN 61 000-6-2 EN 61 000-6-4
Operating altitude	max. 2000 m
Operating temperature	0°C ... +70°C
Storage temperature	-25°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.

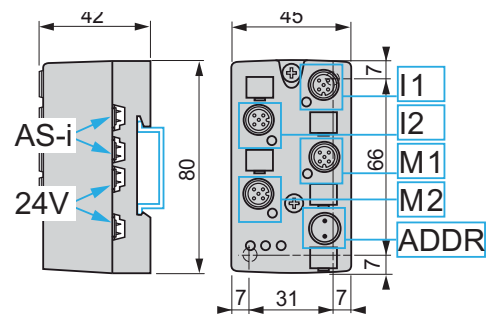


Configuration analog-value

AS-i 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
I 1 (input 1)	24 V _{out} of AS-i	n.c.	0 V _{out} of AS-i	I 1	n.c.
I 2 (input 2)	24 V _{out} of AS-i	n.c.	0 V _{out} of AS-i	I 2	n.c.
M 1 (motor 1)	24 V _{ext in}	O 2 (0: 0V; 1: 24V)	0 V _{ext in}	O 1 (0: 0V; 1: 24V)	analog value
M 2 (motor 2)	24 V _{ext in}	O 4 (0: 0V; 1: 24V)	0 V _{ext in}	O 3 (0: 0V; 1: 24V)	analog value
ADDR	addressing socket (with protection cap)				

Accessories:

- AS-i substructure module for 4-channel module in 45 mm-housing (article no. BW2349)
- AS-i substructure module (CNOMO) for 4-channel module in 45 mm-housing (article no. BW2350)
- Protection caps for not used M12 sockets (article no. BW2368)