

ASi Module to control damper actuators and for detection the damper position

Supply of motors by external 24V

Runtime monitoring of the damper motor in master possible

Connection via cage clamp terminals or external profile cable branch via passive distributor

ASi Specifications 2.1



Article no. BW2029: ASi Module to control damper actuators, supply of inputs via AUX, supply of outputs via AUX

The ASi module to control damper actuators meets the requirements of the ASi Specifications 2.1. It is used to control the damper actuator and detect the damper position **damper open** and **damper close** as well as the intermediate position „**damper opens**“ or „**damper closes**“.

In addition external contact can be requested, e.g. of an smoke detector or an temperature switch.

The connections are short-circuit -and overload protected. A watchdog function, which switches the outputs to their current-

less switching state if there is no communication on the ASi circuit, is integrated. The transfer function is permanent monitored in the integrated ASi node and in the ASi Master.

This module can be connected via cage clamp terminals or ready to plug via Belimo-compatible connector.

The module is equipped with advanced diagnostic capabilities and is able, by an short circuit at the outputs, to trigger a peripheral error message in the master.

Article no.	BW2029
Connections	
Damper actuator	cage clamp terminals or Belimo-compatible connectors
ASi	Connection via cage clamp terminals or external profile cable branch via passive distributor
Length of connector cable to motor	≤ 30 m ⁽²⁾
ASi	
Profile	S-7.A.E (ID1=7 default)
Address	1 AB address
Required Master profile	≥ M3
Since ASi specification	2.1
Operating voltage	30 V _{DC} (26,5 ... 31,6 V)
Max. current consumption	20mA
Max. current consumption without sensor/ actuator supply	≤20 mA
AUX	
Voltage	24V _{DC} (18 ... 30V)
Max. current consumption	400 mA
Input	
Number	4
Power supply	out of AUX
Sensor supply	short-circuit and overload protected according to EN 61131-2
Power supply of attached sensors	max. 400 mA ∑ (In/Out) ≤ 400 mA
Switching threshold of inputs	≤ 0,8mA (low) ≥ 5mA (high)

Article no.	BW2029
Output	
Number	2 x electronic
power supply	out of AUX
Output	short-circuit and overload protected according to EN 61131-2
Max. output current	400 mA
Loading capacity	400 mA per output $\sum (In/Out) \leq 400 \text{ mA}$
Display	
LED AUX (green)	on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LED ASi (green)	on: ASi voltage on flashing: ASi voltage on, but peripheral fault ⁽³⁾ or address 0 off: no ASi voltage
LED ERR (red)	on: address 0 or offline flashing: peripheral fault ⁽³⁾ off: online
LEDs DI 0, 2, 3,	state of inputs I1, I3, I4
LED DI 1 (blue ⁽¹⁾)	state of input I2
LEDs DO 0, 1	state of outputs O1, O2
Environment	
Applied standards	EN 60529 EN 61161-2 EN 61000-6-2 EN 61000-6-3 EN 61000-6-4
Operating altitude	max. 2000 m
Operating temperature	-25°C ... +60°C
Storage temperature	-40°C ... +70°C
Housing	plastic, for screw mounting
Pollution degree	2
Protection category	IP54
Tolerable loading referring to humidity	according to EN 61131-2
Insulation voltage	≥500 V
Weight	250 g
Dimensions (W / H / D in mm)	90 / 160 / 55

(1) from Ident.No. ≥16892.

(2) Loop resistance ≤ 150 Ω

(3) See table "Peripheral fault indication"

Article no.	Peripheral fault indication		
	Overload sensor supply	Output short circuited	AUX voltage missing
BW2029	-	•	•

Programmierung	Bit setting			
	D3	D2	D1	D0
Input	I4	I3	I2	I1
BW2029	reserved	external contact	damper open	damper closed
Output	O4	O3	O2	O1
BW2029	-	-	close damper	open damper
Parameter bit	P3	P2	P1	P0
BW2029	not used	0= off / 1= on (peripheral fault)	not used	not used

Programmierung	Bit setting			
	D3	D2	D1	D0
Programming				
BW2029	preset: address 0 changeable via busmaster-programming devices			

Terminal connections (Ident.No. ≥ 13067):				
	X1	X2	X3 plug	X4 plug
1	ASi +	-	+24 V _{ext.} out	O1
2	ASi +	-	+24 V _{ext.} out	0 V _{ext.out}
3	ASi -	I3	n.c.	O2
4	ASi -	+24 V _{ext. out}	n.c.	
5	+ 24 V _{ext. in}	I2	I1	
6	+ 24 V _{ext. in}	+24 V _{ext. out}	I2	
7	0 V _{ext. in}	I1		
8	0 V _{ext. in}	+24 V _{ext. out}		
9		I4		
10		+24 V _{ext. out}		
11		O1		
12		0 V _{ext. out}		
13		O2		
14		0 V _{ext. out}		

The diagram shows a terminal block with four sockets: X1 (6 pins), X2 (6 pins), X3 (6 pins), and X4 (3 pins). An ADDR pin is also present. The pin configurations are as follows:

- X1:** 7, 8, 5, 6, 3, 4, 1, 2
- X2:** 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
- X3:** 5, 3, 1, 6, 4, 2
- X4:** 3, 2, 1

X3 (socket for prefabricated AMP plug (6 fold))	
damper position	
X4 (socket for prefabricated AMP plug (3 fold))	
drive	

Warning:
Terminals X2,1 and X2,2 must not be connected!

Accessories:

- Passive Distributor ASi/AUX to 1 x round cable/connecting wires, depth 19 mm, IP67 (art. no. BW3314)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)