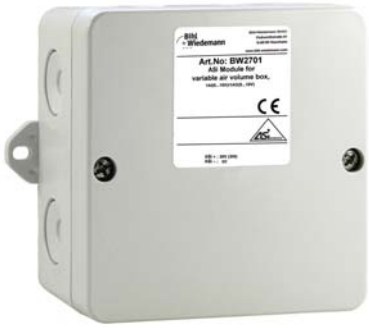
ASi Module to Control Variable Air Volume Terminal Units

1 x analog input 0 ... 10 V
1 x analog output 0 ... 10 V

power supply out of ASi or out of AUX

Housing with external fastening tabs

1 Single Slave



(figure similar)

The ASi module for controlling volumetric flow controllers (variable air volume terminal units aka VAV boxes) meets the requirement of ASi specification 3. It is used to control volumetric flow controllers (0 ... 10 V) using the analog output (0 ... 10 V).

The module also has an analog input (0 ... 10 V), for example to connect sensors for monitoring the air quality or for flap feedback.

The terminations are short-circuit and overload protected. An integrated watchdog function turns the output off when there is no communication on the ASi line. The transmission function is permanently monitored in the integrated ASi slave and ASi master.

Module connections are in the form of spring clamps.

Article no.	**BW2701**
Connection	
ASi/AUX connection	cage clamp terminals
Periphery connection	cage clamp terminals
ASi	
Profile	S-7.5.5
Address	1 single slave
Required Master profile	≥M4
Since ASi specification	3.0
Operating voltage	30 V (26,5 ... 31,6 V)
Max. current consumption	≤200 mA
Quiescent current (inputs = 0, outputs = 0)	≤20 mA
AUX	
Voltage	24 VDC (18 … 30 V)
Max. current consumption	1,5 A
Input	
Number	1 x analog input (0 ... 10 V)
Resolution	16 Bit (1 mV)
Range of value	0 ... 10000 dec.
Internal resistance	130 kΩ
Max. input voltage	25 V
Power supply	selectable, out of ASi or out of AUX
Power supply of attached sensors	∑ (In/Out) max 180 mA (out of ASi) or ∑ (In/Out) max. 1,5 A (out of AUX)
Output	
Number	1 x analog output (0 ... 10 V)
Resolution	16 Bit (1 mV)
Range of value	0 ... 10000 dec
Resistance of the actuators	min 3,3 kΩ
Max. output voltage	11,5 V
Power supply	selectable, out of ASi or out of AUX, Default out of ASi
Max. output current	–
short circuit resistant	yes
Power supply of attached actuators	∑ (In/Out) max 180 mA (out of ASi) or ∑ (In/Out) max. 1,5 A (out of AUX)

ASi Module to Control Variable Air Volume Terminal Units

Article no.	BW2701
Display	
LED ASi (green)	on: ASi voltage on, flashing: ASi voltage on, but peripheral fault (1) or address 0 off: no ASi Voltage
LED AUX (green)	on: 24 V_{DC} AUX off: no 24 V_{DC} AUX
LED FLT (red)	on: slave address 0 or slave offline flashing: peripheral fault (1) off: slave online
LED In1 (yellow)	state of channel In1 on: analog signal inside range of value flashing: analog signal outside range of value
LED Out1 (yellow)	state of channel Out1 on: analog signal inside range of value flashing: analog signal outside range of value
Environment	
Applied standards	EN 61000-6-2 EN 61000-6-3 EN 61000-6-4 EN 60529
Operating altitude	max 2000 m
Ambient temperature	0 °C … +55 °C
Storage temperature	-25 °C … +55 °C
Housing	plastic, for screw mounting
Protection category	IP54
Weight	250 g
Dimensions (W / H / D in mm)	93 / 93 / 55

(1) see table „peripheral fault indication“

Article no.	Peripheral fault indication	
	analog signal outside range of value	power supply out of AUX selected, but AUX not connected
BW2701	•	•

Programming	Bit setting			
Bit	**P0**	**P1**	**P2**	**P3**
BW2701	1: Peripheral fault is indicated 0: Peripheral fault is not indicated	not used	1: 0V and Sig In- bridged internally 0: 0V and Sig In- not bridged	not used

Pin assignment

Signal name	Explanation
Sig In +,Sig_In -	analog input x
Sig Out +, Sig Out -	analog output x
24 V_{out}	power supply, out of external voltage 24 VDC (AUX) or out of ASi, positive pole
0 V_{out}	power supply, out of external voltage 24 VDC (AUX) or out of ASi, negative pole
ASi +, ASi -	connection to ASi bus
24 $V_{ext.in}$, 0 $V_{ext.in}$	connection for external power supply 24 VDC (AUX)
n.c.	not connected

Terminal connections

Connection	Terminal A	Terminal B
1	0 V_{out}	0 $V_{ext.in}$
2	0 V_{out}	0 $V_{ext.in}$
3	Sig Out1+	24 $V_{ext.in}$
4	Sig Out1-	24 $V_{ext.in}$
5	Sig In1+	ASi -
6	Sig In1-	ASi -
7	24 V_{out}	ASi +
8	24 V_{out}	ASi +
9	0 V_{out}	–
10	0 V_{out}	–
ADDR	connection for ASi addressing device	
Switch		
INT	power supply out of ASi	
EXT	external power supply 24 VDC (AUX)