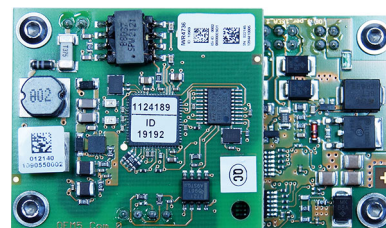


ASi-5 PCB module with self-configuring I/Os

ASi-5 PCB module with self-configuring connections for 16 I/Os

Sensors and actuators can be connected in any combination

Optional assignment of a fixed configuration of the inputs and outputs possible via software



(Figure similar)

Up to 16 digital inputs, depending on configuration

Up to 16 digital outputs, depending on configuration

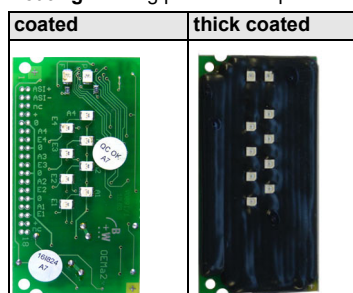
ASi-5 – Great data bandwidth, short cycle times



Figure	Circuit board dimensions ⁽¹⁾	Inputs digital	Outputs digital	Connection	Coated ⁽²⁾	LED status display ⁽³⁾	Input voltage (sensor supply) ⁽⁴⁾	Output voltage (actuator supply) ⁽⁵⁾	ASi address ⁽⁶⁾	Art.no.
	70 mm x 40 mm	up to 16, depending on configuration	up to 16 x electronic, depending on configuration	wiring pins, straight	no	yes	external 24 VDC	out of AUX	1 ASi-5 address	BWR4736

(1) **Circuit board dimensions:** mounting through 4 x M3 female thread.

(2) **Coating:** coating protects components and circuit boards when touched.



(3) **LED status display:** status of in- and outputs is indicated by LEDs. In addition to that, both ASi LEDs (PWR green and FAULT red) show - as usual regarding the ASi nodes - the status of the ASi nodes. Uaux is indicated by a green LED.

(4) **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.

(5) **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.

(6) **ASi address:** AB address (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), single addresses (max. 31 single addresses/ASi network), mixed use allowed. For modules with two ASi nodes the second ASi node is turned off as long as the first ASi node is addressed to address "0". Upon request, ASi nodes are available with specific ASi address profiles.

ASi-5 PCB module with self-configuring I/Os

Article no.		BWR4736
General data		
Device type		input/output
Connection		
ASi /AUX connection		wiring pins, straight
peripheral connection		wiring pins, straight
Length of connector cable		I/O: max. 1,5 m ⁽¹⁾
ASi		
Address		1 ASi-5 address
Since ASi specification		ASi-5
Operating voltage		30 V (18 ... 31,6 V)
Max. current consumption		70 mA
Max. current consumption without sensor/actuator supply		70 mA
AUX		
Voltage		24 V (18 ... 30 V)
Max. current consumption		5,8 A
Input		
Number		up to 16, depending on configuration
Power supply		external 24 V _{DC} , same GND as AUX ⁽²⁾
Sensor supply		external 24 V _{DC} , same GND as AUX ⁽²⁾
Input level		U <5 V (low), U >15 V (high)
Output		
Number		up to 16 x electronic, depending on configuration
Power supply		out of AUX ⁽²⁾
Output		short-circuit and overload protected according to EN 61131-2
Max. current consumption	up to +45 °C	0,35 A per output, Σ (Out) 5,6 A ⁽³⁾
	at +55 °C	0,35 A per output, Σ (Out) 5,6 A ⁽³⁾
	at +70 °C	0,275 A per output, Σ (Out) 4,4 A ⁽³⁾
Display		
LED ASi (green)		on: ASi voltage on flashing: ASi voltage on, but peripheral fault ⁽⁴⁾ or address 0 off: no ASi voltage
LED FLT/FAULT (red)		on: ASi address 0 or ASi node offline flashing: peripheral fault ⁽⁴⁾ off: ASi node online
LED AUX (green)		on: 24 V _{DC} AUX off: no 24 V _{DC} AUX

ASi-5 PCB module with self-configuring I/Os

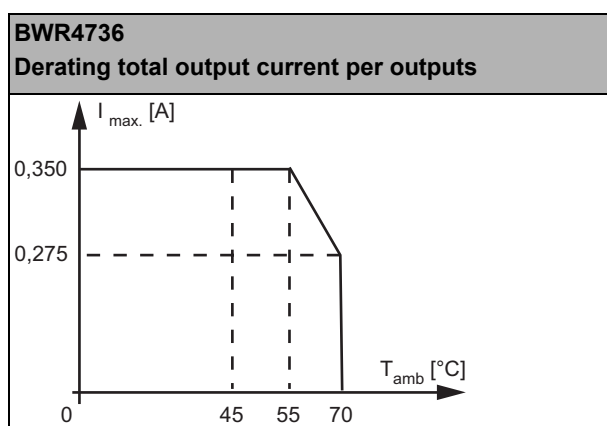
Article no.	BWR4736
Environment	
Applied standards	EN 61000-6-2 EN 61000-6-3 EN 60529
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	yes ⁽⁵⁾
Operating altitude	max. 2000 m
Ambient temperature	-25 °C ... +70 °C, no condensation permitted
Pollution degree	2
Protection class	IP00
Coating	no
Allowed shock and vibration stress	≤15g, T≤11 ms, 10 ... 55 Hz, 0,5 mm amplitude
Weight	50 g
Dimensions (W / H / D in mm)	70 / 40 / 26,5

(1) loop resistance: ≤150 Ω

(2)

BWR4736 Power supply of inputs	BWR4736 Power supply of outputs

(3)



(4) See table "Peripheral fault indication"

(5) 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.

Article no.	Peripheral fault indication	
	Output short circuited	AUX voltage missing
BWR4736	•	•

ASi-5 PCB module with self-configuring I/Os

Programming: ASi bit assignment

Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
		input							
BWR4736	0	I8	I7	I6	I5	I4	I3	I2	I1
BWR4736	1	I16	I15	I14	I13	I12	I11	I10	I9

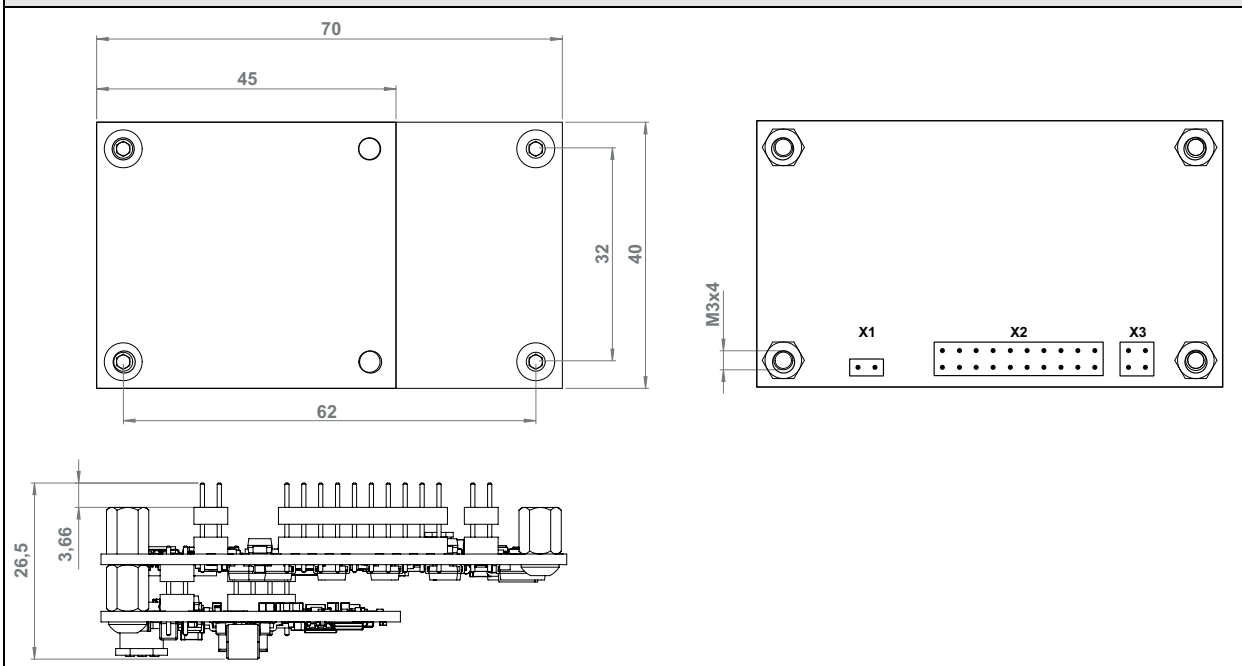
Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
		output							
BWR4736	0	O8	O7	O6	O5	O4	O3	O2	O1
BWR4736	1	O16	O15	O14	O13	O12	O11	O10	O9

Pin assignment

Signal name	Explanation
I/Ox	either digital input x or digital output x
24 V _{ext out}	power supply, out of external voltage, positive pole (AUX)
0 V _{ext out}	power supply, out of external voltage, negative pole (AUX)
ASi +, ASi -	connection to ASi bus
n.c. (not connected)	not connected

Dimensional drawings

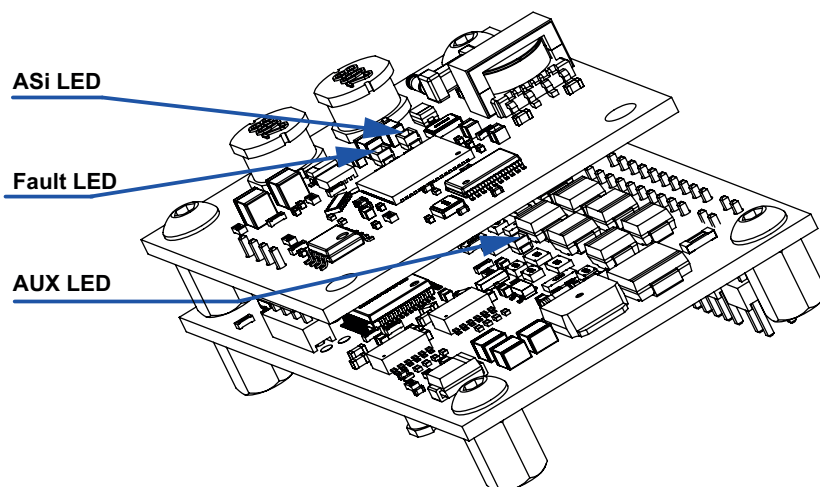
BWR4736



ASi-5 PCB module with self-configuring I/Os

LED assignment

BWR4736



Notice

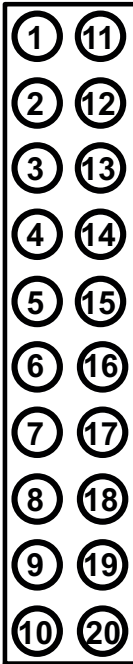
You shall not connect connecting wires with connections marked **n.c.** (**not connected**).

ASi-5 PCB module with self-configuring I/Os

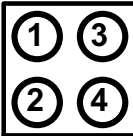
Connection assignment			
BWR4736			
Pin	X1	X2	X3
1	ASi+	I/O1	0 V _{ext.in} ⁽¹⁾
2	ASi-	I/O3	24 V _{ext.in} ⁽²⁾
3	–	I/O5	0 V _{ext.in} ⁽¹⁾
4	–	I/O7	24 V _{ext.in} ⁽²⁾
5	–	GND	
6	–	GND	–
7	–	I/O9	–
8	–	I/O11	–
9	–	I/O13	–
10	–	I/O15	–
11	–	I/O2	–
12	–	I/O4	–
13	–	I/O6	–
14	–	I/O8	–
15	–	GND	–
16	–	GND	–
17	–	I/O10	–
18	–	I/O12	–
19	–	I/O14	–
20	–	I/O16	–



X1



X2



X3

⁽¹⁾ Pin 1 and Pin 3 internally bridged.

⁽²⁾ Pin 2 and Pin 4 internally bridged.