


Cost efficient solution in IP20



(Figure similar)



Figure	Type	Housing	Primary application (1)	Inputs digital	Outputs digital	Input voltage (sensor supply) (2)	Output voltage (actuator supply) (3)	ASi connection (4)	ASi address (5)	Article No.
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	6 x COMBICON	control cabinet	4	4 x relay	out of AUX	–	clamps	1 AB address	<b>BWU4184</b>

(1) **Primary Application**

**Control cabinet:** Cost-optimized modules whereby the supply voltage for the sensors and actuators is connected via additional patch terminals. Optimal application in the main control cabinet.

**Decentralized control cabinet:** Ideal for use in decentralized control cabinets. 3-wire sensors or actuators can be connected directly to terminals in the module without additional patch terminals or the module has an extremely flat design.

(2) **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.

(3) **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

(4) **ASi connection:** the connection to ASi as well to AUX (auxiliary 24 V power) is made via yellow resp. black ASi profile cable with piercing technology or via M12 socket (in IP20 via clamps).

(5) **ASi address:** 1 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.

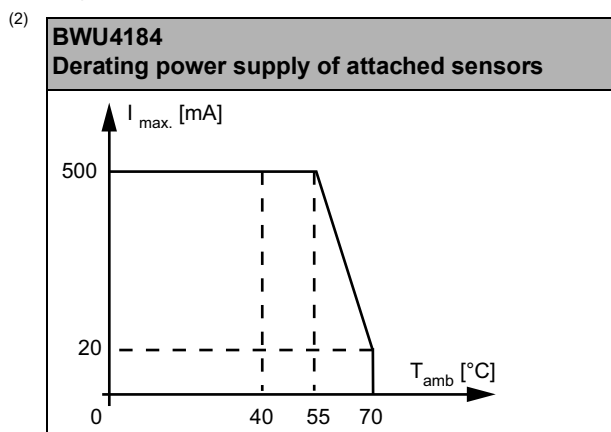
For modules with two asi nodes the second node is turned off as long as the first node is addressed to address "0".

Upon request, slaves are available with specific ASi node profiles.

<b>Article no.</b>		<b>BWU4184</b>
<b>General data</b>		
Device type	input / output	
<b>Connection</b>		
ASi / AUX connection	COMBICON plug	
Periphery connection	COMBICON plug	
Primary application	decentralized control cabinet	
Length of connector cable	I/O: unlimited <sup>(1)</sup>	
<b>ASi</b>		
Profile	S-7.A.7, ID=7(fixed)	
Address	1 AB address	
Required Master profile	≥M4	
Since ASi specification	3	
Operating voltage	30 V (26,5 ... 31.6 V)	
Max. current consumption	45 mA	
Max. current consumption without sensor/ actuator supply	45 mA	
<b>AUX</b>		
Voltage	24 V (18 ... 30 V <sub>DC</sub> )	
Max. current consumption	500 mA	
<b>Input</b>		
Number	4	
Power supply	out of AUX	
Sensor supply	short-circuit and overload protected according to EN 61131-2	
power supply of attached sensors	up to +40 °C	500 mA <sup>(2)</sup>
	at +55 °C	500 mA <sup>(2)</sup>
	at +70 °C	20 mA <sup>(2)</sup>
Switching threshold	U<5 V (low) U>15 V (high)	
<b>Output</b>		
Number	4 x relay outputs, normally open, 230 VAC/2A/AC-14, 30 VDC/2A/DC-13 Σ (Out) 8 A	
Relay control	out of ASi	
Max. output current	–	
<b>Display</b>		
LED ASI (green)	an: ASi voltage on, flashing: ASi voltage on, but peripheral fault <sup>(3)</sup> or address 0 off: no ASi Voltage	
LED FLT/FAULT (red)	an: ASi address 0 or ASi node offline flashing: peripheral fault <sup>(3)</sup> off: ASi node online	
LED AUX (green)	on: 24 V <sub>DC</sub> AUX off: no 24 V <sub>DC</sub> AUX	
LEDs I1 ... In (yellow)	state of inputs I1 ... I4	
LEDs O1 ... On (yellow)	state of outputs O1 ... O4	

<b>Article no.</b>	<b>BWU4184</b>
<b>Environment</b>	
Applied standards	EN 61000-6-2 EN 61000-6-3 EN 61131 EN 60529
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	yes <sup>(4)</sup>
Operating altitude	max. 2000 m
Ambient temperature	-25 °C ... +55 °C (up to max. +70 °C) <sup>(2) (5)</sup> no condensation permitted
Storage temperature	-25 °C ... +85 °C
Housing	plastic, for DIN rail mounting
Pollution Degree	2
Protection category	IP20
Tolerable loading referring to humidity	according to EN 61131-2
Voltage of insulation	≥500 V
Weight	120 g
Dimensions (W / H / D in mm)	22,5 / 99 / 114

(1) Loop resistance ≤150 Ω



(3) see table "Peripheral fault indication"

(4) 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.

(5) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada.

### Wiring rules

Push-in terminals, 2 poles/4 poles (pitch 5 mm)	
<b>General</b>	
Nominal cross section	2.5 mm <sup>2</sup>
<b>Conductor cross section</b>	
Conductor cross section solid	0.2 ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 ... 2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule	without plastic sleeve: 0.25 ... 2.5 mm <sup>2</sup> with plastic sleeve: 0.25 ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, with TWIN ferrules	without plastic sleeve: 0.5 ... 1.5 mm <sup>2</sup>
AWG	24 ... 14
Stripped insulation length	10 mm

UL-specifications (UL508)	
External protection	An isolated source with a secondary open circuit voltage of $\leq 30 V_{DC}$ with a 3 A maximum over current protection. Over current protection is not required when a Class 2 source is employed.
In general	UL mark does not provide UL certification for any functional safety rating or aspects of the above devices.

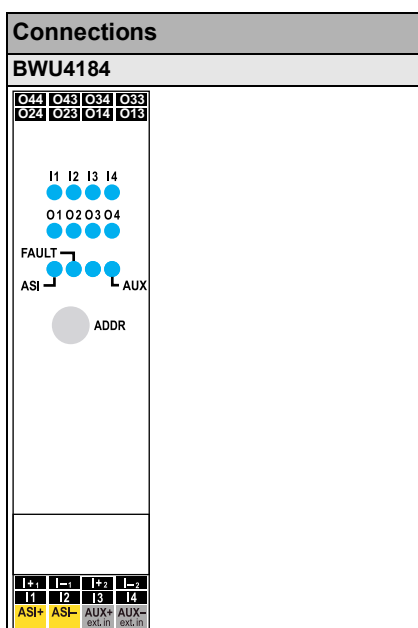
Article no.	Peripheral fault indication	
	Overload sensor supply	AUX voltage missing
BWU4184	•	•

Programming	Bit setting			
	D3	D2	D1	D0
	input			
BWU4184	I4	I3	I2	I1
	Output			
BWU4184	O4	O3	O2	O1

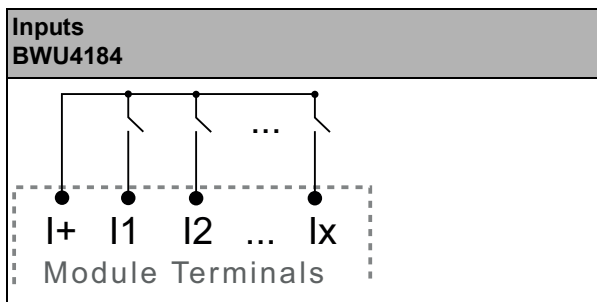
Programming	Bit setting			
	P3	P2	P1	P0
BWU4184	not used	0 = on / 1 = off (synchronous I/O mode)	0 = on / 1 = off (data input filter 128 $\mu$ s)	0 = off / 1 = on (watchdog)

**Connections**

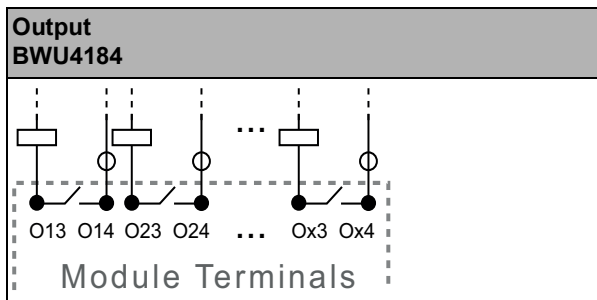
Name	Explanation
Ix	digital input x
Ox	digital output x
Ox3, Ox4	relay output x
I+, I-, I+n, I-n	sensor supply
O-n	GND for outputs (PNP)
O+n	GND for outputs (NPN)
AUX +ext.in	power supply, out of external voltage, positive pole (AUX, actuator supply)
AUX -ext.in	power supply, out of external voltage, negative pole (AUX, actuator supply)
ASi +, ASi -	connection to ASi bus
ADDR	connection for ASi-3 addressing plug
n.c. (not connected)	not connected



**Power supply PNP**



**Connection relay output**



**Note**

To achieve passive safety, the device must be installed in a switching cabinet with protection class IP54.

**Accessories:**

- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)