

Cost efficient solution in IP20

ASi node profile compatible to  
Phoenix ASI IO SV DIO 4/3 AB



(Figure similar)

Figure	Type	Housing	Primary application <sup>(1)</sup>	Inputs digital	Outputs digital	Input voltage (sensor supply) <sup>(2)</sup>	Output voltage (actuator supply) <sup>(3)</sup>	ASi connection <sup>(4)</sup>	ASi address <sup>(5)</sup>	Article No.
	IP20, 22,5 mm x 92 mm 4 x COMBICON	4 x COMBICON	control cabinet	4	3 x electronic	out of AUX	out of AUX	clamps	1 AB address	<b>BWU4183</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).

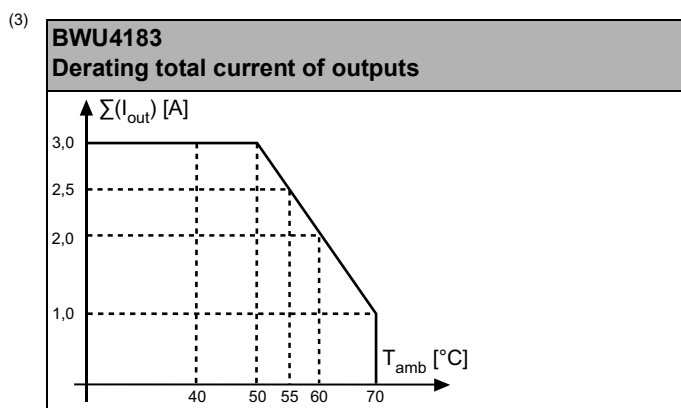
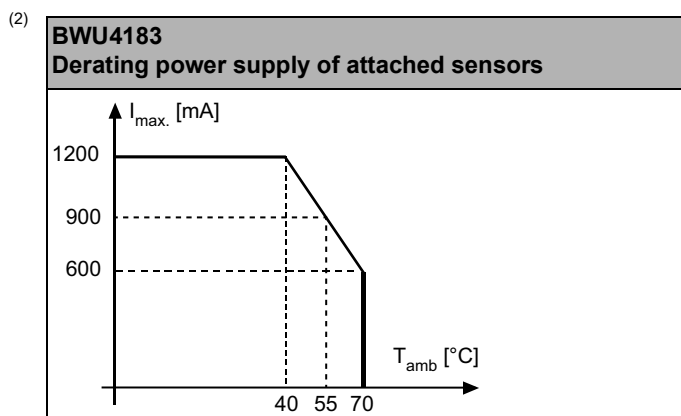
**(5) ASi address:** 1 AB address (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), single addresses (max. 31 single addresses/ASi network), mixed use allowed.

For modules with two ASi nodes the second 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 node profiles.

<b>Article no.</b>	<b>BWU4183</b>
<b>General data</b>	
Device type	input / output
<b>Connection</b>	
ASi / AUX Connection	COMBICON plug
Periphery connection	COMBICON plug
Primary application	control cabinet
Length of connector cable	I/O: unlimited <sup>(1)</sup>
<b>ASi</b>	
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 (18 ... 31.6 V)
Max. current consumption	35 mA
Max. current consumption without sensor/ actuator supply	35 mA
<b>AUX</b>	
Voltage	24 V (18 ... 30 V)
Max. current consumption	4 A

<b>Article no.</b>		<b>BWU4183</b>
<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	1200 mA permanent operation <sup>(2)</sup>
	at +55 °C	900 mA permanent operation <sup>(2)</sup>
	at +70 °C	600 mA permanent operation <sup>(2)</sup>
Switching threshold		U < 5 V (low) U > 15 V (high)
<b>Output</b>		
Number		3 x electronic
Power supply		out of AUX
Actuator supply		short-circuit and overload protected according to EN 61131-2
Max. output current	up to +50 °C	1 A per output, $\Sigma$ (Out) 3,0 A <sup>(3)</sup>
	at +55 °C	1 A per output, $\Sigma$ (Out) 2,5 A <sup>(3)</sup>
	at +70 °C	1 A per output, $\Sigma$ (Out) 1,0 A <sup>(3)</sup>
<b>Display</b>		
LED ASi (green)		an: ASi voltage on, flashing: ASi voltage on, address 0 off: no ASi Voltage
LED FLT/FAULT (red)		an: ASi address 0 or ASi node offline off: ASi node online
LEDs I1 ... In (yellow)		state of inputs I1 ... I4
LEDs O1 ... On (yellow)		state of outputs O1 ... O4
LED AUX (green)		on: 24 V <sub>DC</sub> AUX off: no 24 V <sub>DC</sub> AUX
<b>Environment</b>		
Applied standards		EN 61000-6-2 EN 61000-6-3 EN 61131 EN 60529
Can be used in passively safe paths up to SIL3/PLe		no <sup>(4)</sup>
Operating altitude		max. 2000 m
Ambient temperature		-25 °C ... +55 °C (up to max. +70 °C) <sup>(2)</sup> <sup>(3)</sup> <sup>(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 / 92

<sup>(1)</sup> Loop resistance ≤ 150 Ω



- (4) The module is not suitable for use in passively safe paths because an exclusion of errors cannot be assumed for the connection of the two potentials, ASi and AUX.
- (5) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada.

## Wiring rules

Push-in terminals	
<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: 0.2 ... 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

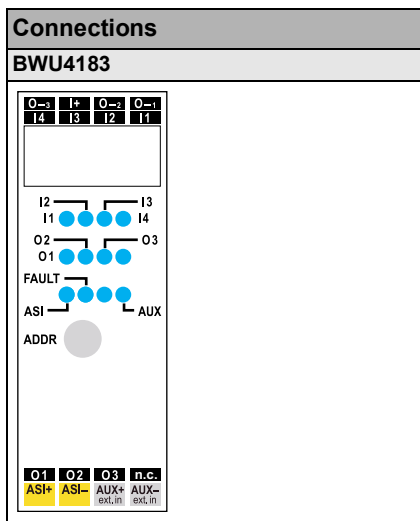
UL-specifications (UL508)	
External protection	An isolated source with a secondary open circuit voltage of ≤30 V <sub>DC</sub> with a 3 A maximum over current protection. Over current protection is not required when a Class 2 source is employed.
In general	UL mark does not provide UL certification for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

Programming	Bit setting			
	D3	D2	D1	D0
	Input			
BWU4183	I4	I3	I2	I1
	output			
BWU4183	–	O3	O2	O1

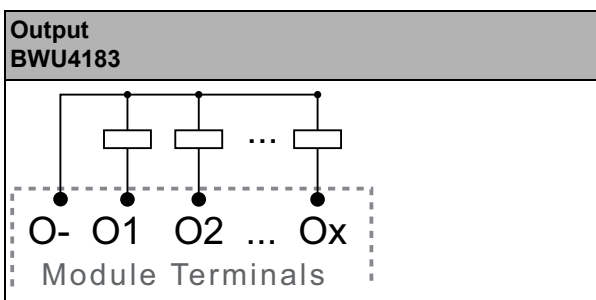
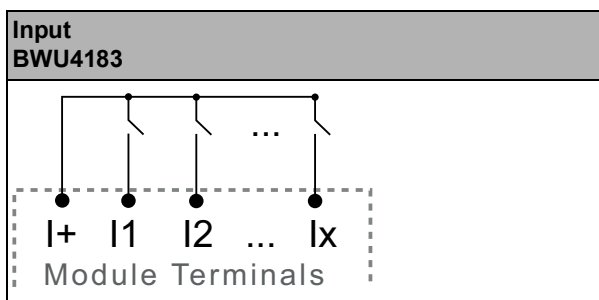
Programming	Bit setting			
	parameter bit			
	P3	P2	P1	P0
BWU4183	not used	0 = on / 1 = off (synchronous I/O mode)	0 = on / 1 = off (data input filter 128 µs)	0 = off / 1 = on (watchdog)

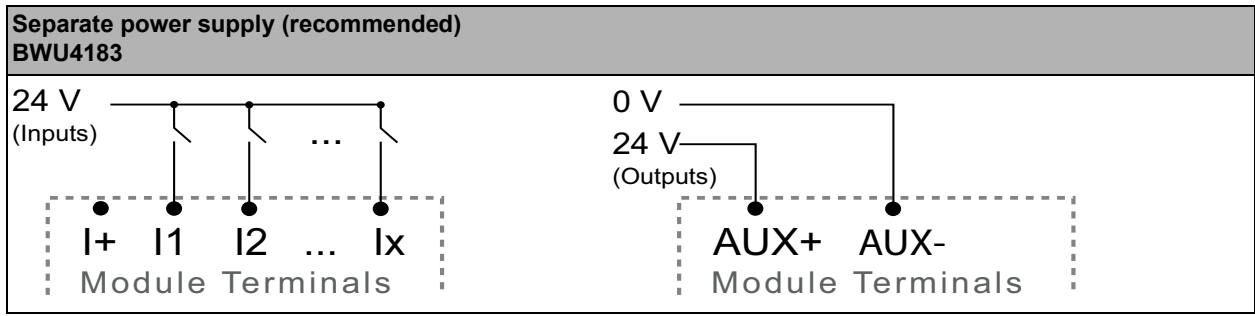
## Connections

Name	Explanation
Ix	digital input x
Ox	digital output x
Ox3, Ox4	relay output x
I+, I+n	sensor supply
O-n	GND for outputs (PNP)
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 addressing device
n.c. (not connected)	not connected



## Power supply PNP





**Accessories:**

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