



(figure similar)

Figure	Type	Inputs analog	Outputs analog	Input voltage (sensor supply) <sup>(1)</sup>	Output voltage (actuator supply) <sup>(2)</sup>	ASi connection <sup>(3)</sup>	ASi address <sup>(4)</sup>	Article no.
	IP65, 3 x PG	2 x 4 ... 20mA	-	arbitrary, out of ASi or out of AUX, default out of ASi	-	ASi profile cable	1 single slave	<b>BWU1232</b>
	IP65, 3 x PG	2 x 0 ... 10V	-	arbitrary, out of ASi or out of AUX, default out of ASi	-	ASi profile cable	1 single slave	<b>BWU1233</b>
	IP65, 3 x PG	1 x load cell	-	out of ASi	-	ASi profile cable	1 single slave	<b>BWU2240</b>
	IP65, 3 x PG	-	2 x 0 ... 20mA	-	arbitrary, out of ASi or out of AUX, default out of ASi	ASi profile cable	1 single slave	<b>BWU1234</b>
	IP65, 3 x PG	-	2 x 0 ... 10V	-	arbitrary, out of ASi or out of AUX, default out of ASi	ASi profile cable	1 single slave	<b>BWU1235</b>
	IP65, 8 x PG	4 x Pt100	-	out of ASi	-	ASi profile cable	1 single slave	<b>BWU1254</b>
	IP65, 8 x PG	4 x Pt1000	-	out of ASi	-	ASi profile cable	1 single slave	<b>BWU1509</b>

- (1) **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.
- (2) **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.
- (3) **ASi connection**  
Inputs are supplied by ASi as well to AUX (auxiliary 24 V power) is either made via yellow ASi profile cable with piercing technology or via M12 socket (in IP20 via clamps).
- (4) **ASi address**  
AB Slave (max. 62 AB Slaves/ASi network), 2 AB Slaves (max. 31 modules with 2 AB Slaves), Single Slaves (max. 31 Single Slaves/ASi network), mixed use allowed (upon request, slaves are available with specific AS- Slave profiles).

Article no.	BWU1232	BWU1233	BWU1234	BWU1235	BWU1254	BWU1509	BWU2240
<b>General data</b>							
Device type	Input		Output		Input		
<b>Connection</b>							
Periphery connection	cage clamp terminals						
ASi connection	via ASi substructure module						
<b>ASi</b>							
Profile	S-7.3. D ID1=F (default)		S-7.3.5 ID1=F (default)		S-7.3.E ID1=F (default)		S-7.5.5 ID1=F (default)
Address	Single Slave (up to 31)						
Required Master profile	≥ M3						≥ M4
Since ASi specification	2.1						3.0
Operating voltage	30 V <sub>DC</sub> (20 ... 31,6 V)						
Max. current consumption	< 80 mA						
<b>AUX</b>							
Voltage	24 V <sub>DC</sub> (18 ... 30 V)				-		
Max. current consumption	500 mA				-		
<b>Input</b>							
Number	2 x 4 ... 20 mA	2 x 0 ... 10 V	-		4 x Pt100	4 x Pt1000	1 load cell
Resolution	16 Bit/1 μA	16 Bit/1 mV	-		16 Bit/0,1 °C		16 Bit
Range of value	4000 ... 20000 dec.	0 ... 10000 dec.	-		-2000 ... +8500 dec.		adjustable
Internal resistance	50 Ω	100 kΩ	-				
Max. input voltage	-	25 V	-				
Max. input current	40mA	-					
Voltage supply	24 V extern or out of ASi		-		out of ASi		
Power supply of attached sensors	max. 500 mA out of AUX max. 50 mA out of ASi		-				max. 50 mA
<b>Output</b>							
Number	-		2 x 0 ... 20 mA	2 x 0 ... 10 V	-		
Resolution	-		16 Bit/1 μA	16 Bit/1 mV	-		
Range of value	-		0 ... 20000 dec.	0 ... 10000 dec.	-		
Resistance of the actuator	-		max. 600 Ω	100 kΩ	-		
Max. output voltage	-		11,5 V		-		
Max. output current	-		23 mA	-			
Voltage supply	-		24 V extern or out of ASi		-		
Power supply of attached actuators	-		max. 500 mA out of AUX max. 100 mA out of ASi		-		
<b>Environment</b>							
Applied standards	EN 60529 EN 61000-6-3 EN 61000-6-2						
Operating altitude	max. 2000 m						
Operating temperature	0°C ... +55 °C (up to max. +70 °C) <sup>(1)</sup>						
Storage temperature	-25°C ... +85°C						
Housing	plastic, housing for DIN-rail mounting						
Pollution degree	2						
Protection category	IP65						
Voltage of insulation	≥ 500V						
Dimensions (W / H / D) in mm	90 / 80 / 70						

<sup>(1)</sup> Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada

## Programming

Bit	Bit setting			
	P3	P2	P1	P0
BWU1232 / BWU1233	–	1: peripheral fault is indicated 0: peripheral fault is not indicated	0: channel 2 is not projected 1: channel 2 is projected	0: 60 Hz filter in A/D converter active 1: 50 Hz filter in A/D converter active
BWU1254 / BWU1509	0: 3 wire-mode 1: 2 wire-mode	A peripheral fault can be released through channel X (bit combination P1 and P2)		
BWU1234 / BWU1235	–	1: peripheral fault is indicated 0: peripheral fault is not indicated		–

Combination of input bits P1 and P2					
BWU1254, BWU1509					
peripheral fault released through channel					
P1	P2	c.1	c.2	c.3	c.4
0	0	on	off	off	off
0	1	on	on	off	off
1	0	on	on	on	off
1	1	on	on	on	on

Parameter:						
BWU2240						
0	1	B	C	D	E	F
set Tare	delete Tare	filter 4s	filter 3 s	filter 2 s	filter 1 s	no filter

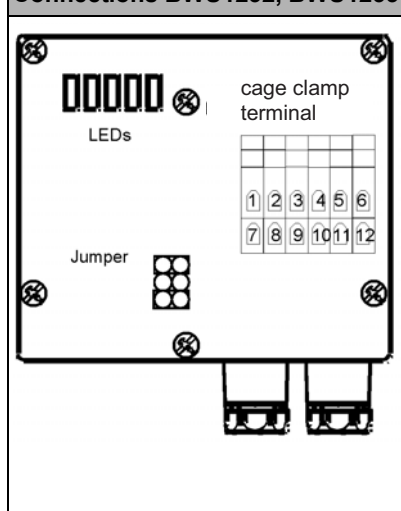
### Programming notice:

Article no.	ID-Code	ID1-Code	ID2-Code	IO-Code
BWU1232, BWU1233	3 <sub>hex</sub>	F <sub>hex</sub> (default)	D <sub>hex</sub>	7 <sub>hex</sub>
BWU1234, BWU1235	3 <sub>hex</sub>	F <sub>hex</sub> (default)	5 <sub>hex</sub>	7 <sub>hex</sub>
BWU1254, BWU1509	3 <sub>hex</sub>	F <sub>hex</sub> (default)	E <sub>hex</sub>	7 <sub>hex</sub>
BWU2240	5 <sub>hex</sub>	F <sub>hex</sub> (default)	5 <sub>hex</sub>	7 <sub>hex</sub>

### UL-specifications (UL508)

BWU1232, BWU1233, BWU1234, BWU1235, BWU1254, BWU1509, BWU2240	
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.

### Connections BWU1232, BWU1233



### Terminal assignment:

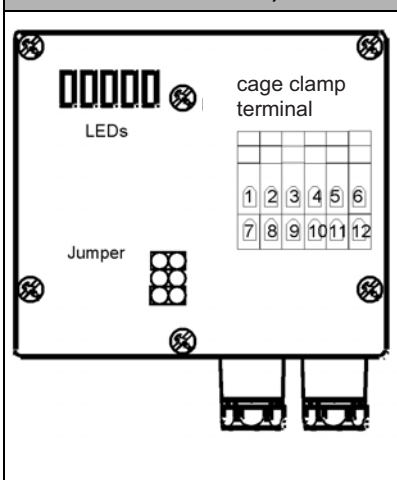
1	24V <sub>ext.</sub>
2	Sig. + Ch2
3	0V <sub>ext.</sub>
4	Sig. - Ch2
5	Shield
6	Shield
7	24V <sub>ext.</sub>
8	Sig. + Ch1
9	0V <sub>ext.</sub>
10	Sig. - Ch1
11	FE (functional earth)
12	FE (functional earth)

### LEDs:

LED PWR (green)	ASi voltage o.k.
LED AUX (green)	AUX voltage o.k.
LED FAULT (red)	communication error or peripheral fault
LED INT (green)	supply voltage for the analog part out of ASi

**NOTICE:** The sensors can be supplied by ASi or external voltage (according to PELV) via the black profile cable

## Connections BWU1234, BWU1235



## Terminal assignment:

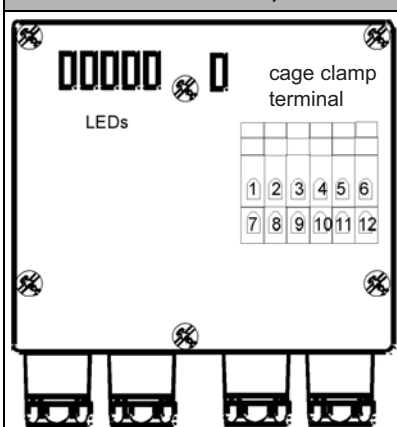
1	24V <sub>ext.</sub>
2	Sig. + Ch2
3	0V <sub>ext.</sub>
4	Sig. - Ch2
5	Shield
6	Shield
7	24V <sub>ext.</sub>
8	Sig. + Ch1
9	0V <sub>ext.</sub>
10	Sig. - Ch1
11	FE (functional earth)
12	FE (functional earth)

## LEDs:

LED PWR (green)	ASi voltage o.k.
LED AUX (green)	AUX voltage o.k.
LED FAULT (red)	communication error or peripheral fault
LED Analog 1 (green)	state of channel 1
LED Analog 2 (green)	state of channel 2

**NOTICE:** The actuators can be supplied by ASi or external voltage (according to PELV) via the black ribbon cable

## Connections BWU1254, BWU1509



## Terminal assignment:

1	Channel 1+
2	Channel 1 Sense -
3	Channel 1 -
4	Channel 2+
5	Channel 2 Sense -
6	Channel 2 -
7	Channel 3+
8	Channel 3 Sense -
9	Channel 3 -
10	Channel 4+
11	Channel 4 Sense -
12	Channel 4 -

## LEDs:

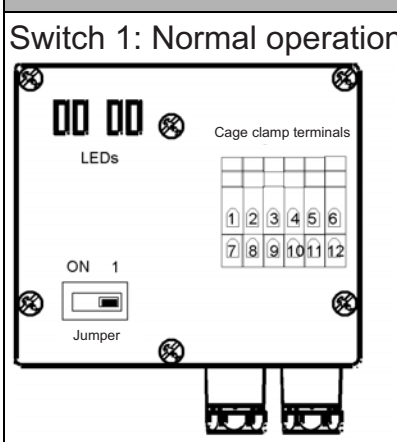
LED PWR (green)	ASi voltage o.k.
LED FAULT (red)	communication error or peripheral fault
LED Analog 1 (green)	state of channel 1
LED Analog 2 (green)	state of channel 2
LED Analog 3 (green)	state of channel 3
LED Analog 4 (green)	state of channel 4

## Measuring range:

-200°C ... +850°C

**NOTICE:** 1, 4, 7, 10 are internally connected

## Connections BWU2240



## Terminal assignment:

Pin	Connection
1, 7	Supply +
2, 8	Sensor cable +
3, 9	Output signal of the load cells +
4, 10	Output signal of the load cells -
5, 11	Sensor cable -
6, 12	Supply -

## LEDs:

LED PWR (green)	ASi voltage o.k.
LED FAULT (red)	communication error or peripheral fault
LED CAL (yellow)	calibration
LED IN (green)	load cell connected

**NOTICE:** In a 4 wired load-cell Pin 7 with 8 and Pin 11 with 12 are bridged

## Accessories:

- ASi substructure module to connect 1 ASi flat cable, 1 flat cable for additional supply (art. no. BW1181)
- ASi substructure module to 1 ASi round cable, 1 round cable for additional supply (art. no. BW1183)
- ASi substructure module to connect 2 ASi flat cables (art. no. BW1180)
- ASi substructure module to connect 2 ASi round cables (art. no. BW1182)