



(figure similar)

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

- (1) **Input voltage (sensor supply)**  
Inputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, inputs shall not be connected to earth or to external potential.
- (2) **Output voltage (actuator supply)**  
Outputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, outputs shall not be connected to earth or to external potential.
- (3) **AS-i connection**  
Inputs are supplied by AS-i as well to AUX (auxiliary 24 V power) is either made via yellow AS-i profile cable with piercing technology or via M12 socket (in IP20 via clamps).
- (4) **AS-i address**  
AB Slave (max. 62 AB Slaves/AS-i network), 2 AB Slaves (max. 31 modules with 2 AB Slaves), Single Slaves (max. 31 Single Slaves/AS-i 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						
AS-i connection	via AS-i substructure module						
<b>AS-i</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 AS-i 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 AS-i		-		out of AS-i		
Power supply of attached sensors	max. 500 mA out of AUX max. 50 mA out of AS-i		-				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 AS-i		-		
Power supply of attached actuators	-		max. 500 mA out of AUX max. 100 mA out of AS-i		-		
<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

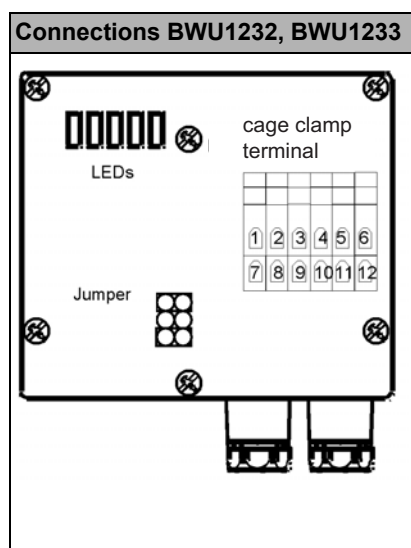
## Programming

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

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
<b>BWU1232, BWU1233</b>	3 <sub>hex</sub>	F <sub>hex</sub> (default)	D <sub>hex</sub>	7 <sub>hex</sub>
<b>BWU1234, BWU1235</b>	3 <sub>hex</sub>	F <sub>hex</sub> (default)	5 <sub>hex</sub>	7 <sub>hex</sub>
<b>BWU1254, BWU1509</b>	3 <sub>hex</sub>	F <sub>hex</sub> (default)	E <sub>hex</sub>	7 <sub>hex</sub>
<b>BWU2240</b>	5 <sub>hex</sub>	F <sub>hex</sub> (default)	5 <sub>hex</sub>	7 <sub>hex</sub>

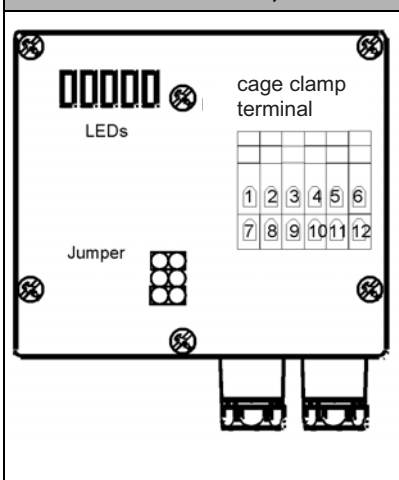


Terminal assignment:	
1	24V <sub>ext.</sub>
2	Sig. + Ch2
3	0V <sub>ext.</sub>
4	Sig. - Ch2
5	Shield
6	Shield
7	24V <sub>ext.</sub>
8	Sig. + Ch1
9	0V <sub>ext.</sub>
10	Sig. - Ch1
11	FE (functional earth)
12	FE (functional earth)

LEDs:	
LED PWR (green)	AS-i 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 AS-i

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

## Connections BWU1234, BWU1235



## Terminal assignment:

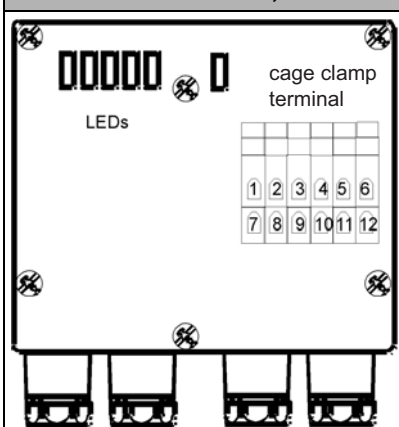
1	24V <sub>ext.</sub>
2	Sig. + Ch2
3	0V <sub>ext.</sub>
4	Sig. - Ch2
5	Shield
6	Shield
7	24V <sub>ext.</sub>
8	Sig. + Ch1
9	0V <sub>ext.</sub>
10	Sig. - Ch1
11	FE (functional earth)
12	FE (functional earth)

## LEDs:

LED PWR (green)	AS-i 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 AS-i 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:

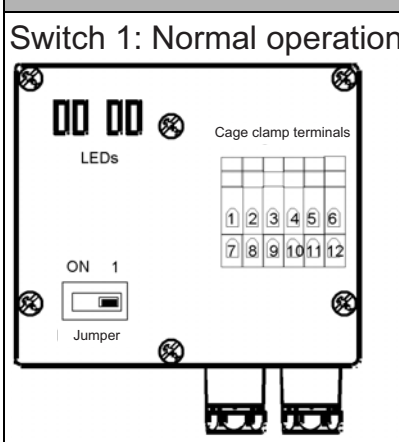
LED PWR (green)	AS-i voltage o.k.
LED FAULT (red)	communication error or peripheral fault
LED Analog 1 (green)	state of channel 1
LED Analog 2 (green)	state of channel 2
LED Analog 3 (green)	state of channel 3
LED Analog 4 (green)	state of channel 4

## 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)	AS-i 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:

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