

A/B inputs

Profile 7.3 „Plug and Play“
as simple as digital AS-i I/O

High protection category IP65



Article no. BWU2218: Counter Module 1 x 2-channel input

Article no. BWU2219: Counter Module 2 x 2-channel input

Article no. BWU2189: Counter Module 4 x 2-channel input

The AS-i Counter Module has inputs for standard sensors (24 V, pnp, push-pull). The module counts the impulses with the two channels (BWU2218), twice two channels (BWU2219) or 4 x two channels (BWU2189) up- and downwards and outputs the result as 16 bit value (-32768 ... 32767) via AS-i. The start value is -30768.

As long as the AS-i parameter for setting zero is set the counting is stopped. After the setting to zero of the counting value a pre-divisor or the AS-i parameter for no pre-divisor must be adjusted again.

With the help of parameters the module can be set to zero as well as the counting direction can be defined. Different pre-divisors are available, which can be select via AS-i parameters as well.

The module reports a peripheral fault at counter overflow (under-flow).

Article no.	BWU2218	BWU2219	BWU2189
Inputs	1 M12 input (2 channels)	2 M12 inputs (2 x 2 channels)	4 M12 inputs (4 x 2 channels)
Power supply	out of AS-i		
Sensor supply	short-circuit and overload protected according to EN 61131-2		
Range of value	-32 768 ... 32 767 dec. (start value: -30768)		
Counting rate	max. 20 kHz		
Power supply sensor	max: 150 mA		
AS-i profile	7.3		
ID code	3 _{hex}		
ID2 code	C _{hex}	D _{hex}	E
IO code	7 _{hex}		
Displays			
LEDs green (In 1 - 4)	state of input 1	state of inputs 1 and 2	state of inputs 1, 2, 3 and 4
LED green (PWR)	AS-i voltage		
LED red (FAULT)	AS-i communication error, peripheral fault		
Operating current	< 200 mA		
Operating voltage	30 V (18 ... 31.6 V)		
Voltage of insulation	≥ 500 V		
EMV	EN 61 000-6-2 EN 61 000-6-4		
Ambient operating temperature	0°C ... +70°C		
Storage temperature	-25°C ... +85°C		
Pollution degree	2		
Housing	housing for DIN-rail mounting		
Dimensions (L / W / H in mm)	90 / 80 / 43		
Protection category DIN 40 050	housing IP65		
Tolerable loading referring to humidity	according to EN 61131-2		

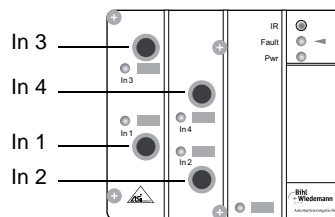
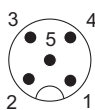
Programming (Bit-setting of AS-i parameters)

Pin assignment

	BWU2218	BWU2219	BWU2189
In 1	✓	✓	✓
In 2	–	✓	✓
In 3	–	–	✓
In 4	–	–	✓

M12 connections

1	24 V out of AS-i
2	channel A
3	0 V out of AS-i
4	channel B



BWU2218

Bit P0	Parameter
1	count upwards In 1
0	count downwards In 1

Bit P1	Parameter
1	counter In 1
0	set zero In 1

Bit P3	Bit P2	Parameter
1	1	no pre-divisor
1	0	pre-divisor = 2
0	1	pre-divisor = 8
0	0	pre-divisor = 32

BWU2219

Bit P0	Parameter
1	count upwards In 1
0	count downwards In 1

Bit P1	Parameter
1	counter In 1
0	set zero In 1

Bit P2	Parameter
1	count upwards In 2
0	count downwards In 2

Bit P3	Parameter
1	counter In 2
0	set zero In 2

BWU2189

Bit P2	Bit P1	Bit P0	Parameter
0	0	0	set zero In 1
0	0	1	set zero In 3
0	1	0	pre-divisor = 32
0	1	1	set zero In 2
1	0	0	pre-divisor = 8
1	0	1	set zero In 4
1	1	0	pre-divisor = 2
1	1	1	no pre-divisor

Bit P3	Parameter
1	count upwards In 1 ... In 4
0	count downwards In 1 ... In 4

Start value:

At power-up, all the counter with 0x87D0 (-30768) are initialized to indicate that there is no zero-setting.

Accessories:

- AS-i substructure module to connect 2 AS-i flat cables (article no. BW1180)
- AS-i substructure module to connect 1 AS-i flat cable, 1 flat cable for additional supply (article no. BW1181)
- AS-i substructure module to connect 2 AS-i round cable (article no. BW1182)
- AS-i substructure module to connect 1 AS-i round cable, 1 round cable for additional supply (article no. BW1183)
- AS-i substructure module to connect 2 AS-i flat cables with addressing socket (article no. BW1438)