

# ASi Counter Module, IP67, M12

**2 x 1-Channel Input Module**

**Impulse or frequency counter**

**High protection category IP67**



(Figure similar)

## Article no. BWU3264 ASi Counter Module, IP67, M12, 2 x 1-Channel Input Module

The ASi Counter Module has 2 inputs for standard sensors.

The module counts the impulses or frequency up- or downwards with the 1 channel and outputs the result as a 16 bit value (-32768 ... 32 767) via ASi. Upon reaching the upper (lower) limit the counter makes a roll-over and continues to count.

The start value is -32768.

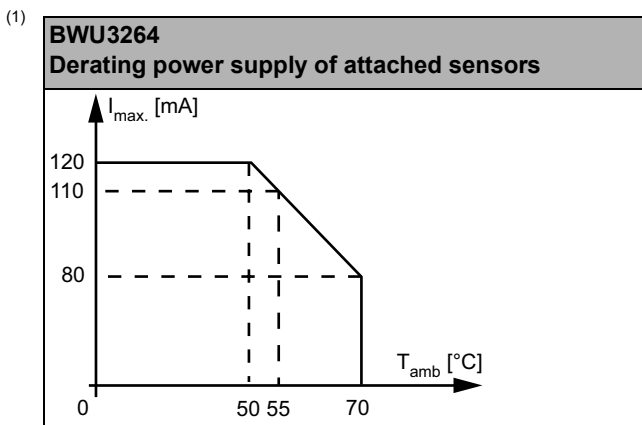
With the help of parameters the module can be set to start value (P0) as well as the counting direction can be defined (P3).

With parameter P2 the user can choose between counting impulses or frequency measurement.

As long as the ASi parameter P0=0 is set the counting is stopped and the counter keeps the start value.

|  |  |                       |
|--|--|-----------------------|
| <b>Article no</b>  | <b>BWU3264</b>   |                       |
| <b>General data</b>                                      |  |                       |
| Device type  | input  |                       |
| <b>Connection</b>  |  |                       |
| ASi/AUX connection                                       | profile cable and piercing   |                       |
| Periphery connection                                     | M12  |                       |
| <b>ASi</b>   |  |                       |
| Profile  | S-7.3.D  |                       |
| Address  | 1 single address   |                       |
| Required Master profile                                  | ≥M3  |                       |
| As of ASi specification                                  | 3.0  |                       |
| Operating voltage  | 30 V <sub>DC</sub> (18 ... 31,6 V)   |                       |
| Max. current consumption                                 | 165 mA   |                       |
| Max. current consumption without sensor/ actuator supply | 45 mA  |                       |
| <b>Input</b>   |  |                       |
| Number   | 2  |                       |
| Counting rate  | max. 4 kHz   |                       |
| Range of value   | impulse: -32768 ... 32767 dec. (start value: -32768)<br>frequency: 0 ... 4000 (1 Hz≅1) |                       |
| Power supply   | out of ASi   |                       |
| Power supply of attached sensors                         | up to +50 °C   | 120 mA <sup>(1)</sup> |
|  | at +55 °C  | 110 mA <sup>(1)</sup> |
|  | at +70 °C  | 80 mA <sup>(1)</sup>  |

|                                 |  |
|---------------------------------|--|
| <b>Article no</b>               | <b>BWU3264</b>   |
| <b>Display</b>                  |  |
| LED ASi (green)                 | on: ASi voltage on<br>flashing: ASi voltage on, but peripheral fault <sup>(2)</sup> or address 0<br>off: no ASi voltage  |
| LED FAULT (red)                 | on: ASi address 0 or ASi participant offline<br>flashing: peripheral fault <sup>(2)</sup><br>off: ASi participant online |
| LED I1, I2 (yellow)             | on: counter input channel 1, 2 active  |
| <b>Environment</b>              |  |
| Applied standards               | EN 61000-6-2<br>EN 61000-6-4<br>EN 60529   |
| Operating altitude              | max. 2000 m  |
| Ambient temperature             | -30 °C ... +55 °C<br>(up to max. +70 °C) <sup>(1)</sup> <sup>(3)</sup>   |
| Storage temperature             | -30 °C ... +85 °C  |
| Housing                         | plastic, for DIN rail mounting   |
| Protection category             | IP67   |
| Max. tolerable shock load       | 30g, 11 ms, acc. EN 61131-2  |
| Max. tolerable vibration stress | 5 ... 8 Hz 50 mm <sub>pp</sub> /8 ... 500 Hz 6g, acc. EN 61131-2   |
| Insulation voltage              | ≥500 V   |
| Weight                          | 100 g  |
| Dimensions (W / H / D) in mm    | 45 / 80 / 42   |



(2) See table "Peripheral fault indication"

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

| Article no. | Peripheral fault indication |   |                    |
|-------------|-----------------------------|---|--------------------|
|             | counter overflow/underflow  | status input channel 1 or 2 invalid (low level) | frequency too high |
| BWU3264     | -                           | •   | •                  |

### Programming (Bit-setting of ASi parameters)

| Bit | P0: Operation (at P2=0)     | P1: Gate time (at P2=1)     | P2: Mode  | P3: Counting direction (at P2=0) |
|-----|-----------------------------|-----------------------------|-----------|----------------------------------|
| 0   | set to start value (-32768) | 8 s gate time for frequency | impulse   | count downwards                  |
| 1   | normal operation            | 1 s gate time for frequency | frequency | count upwards                    |

## Pin assignment

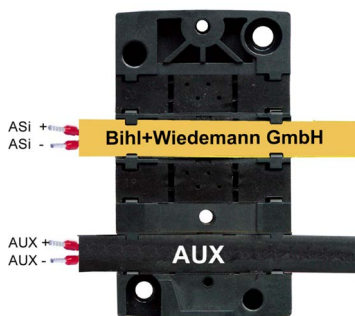
| Signal name               | Explanation   |
|---------------------------|---|
| channel x +               | counter input x   |
| 24V <sub>out of ASi</sub> | power supply, out of ASi, positive pole (sensor supply)                           |
| 0V <sub>out of ASi</sub>  | power supply, out of ASi, negative pole (sensor supply)                           |
| status input channel x    | OK signal of sensor (high level = sensor OK, low level = sensor fault indication) |
| Shield                    | shield  |

| Connections |                   |  |   |                                |                           |                                       |        |
|-------------|-------------------|--|---|--------------------------------|---------------------------|---------------------------------------|--------|
| Article no. | M12 connection    | Marking                                | Pin1                                      | Pin2                           | Pin3                      | Pin4                                  | Pin5   |
| BWU3264     | X1                | I1                                     | 24 V <sub>out of ASi</sub> <sup>(1)</sup> | channel 1 +, pulse/freq. input | 0 V <sub>out of ASi</sub> | status input channel 1 <sup>(1)</sup> | shield |
|             | X2                | I2                                     | 24 V <sub>out of ASi</sub> <sup>(1)</sup> | channel 2 +, pulse/freq. input | 0 V <sub>out of ASi</sub> | status input channel 2 <sup>(1)</sup> | shield |
|             | X3                | rotary switch (no function)            |   |                                |                           |                                       |        |
|             | X4                | not used                               |   |                                |                           |                                       |        |
|             | ADDR (dummy plug) | connection for ASi-3 addressing device |   |                                |                           |                                       |        |

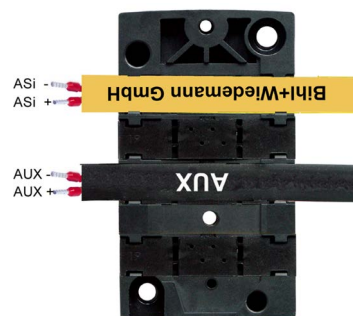
  

(1) To use sensors without status output Pin4 (status input) has to be bridged with Pin1 (24 V).

## Mounting according to cable direction

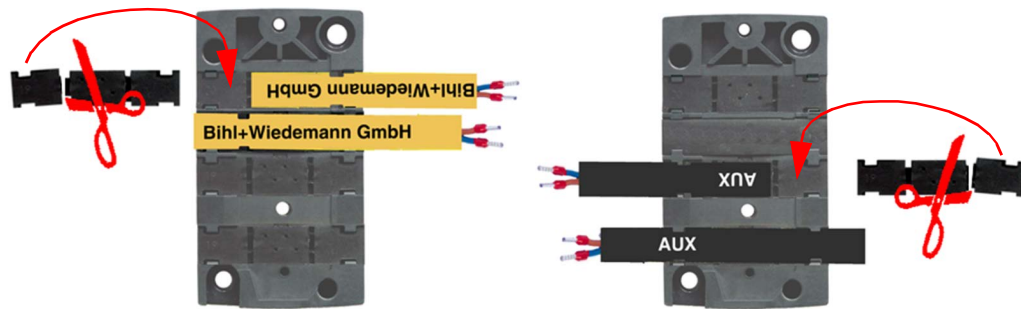


ordinary



turned

## Line termination with sealing profiles / as junction



### Accessories:

- ASi substructure module for 4 channel module in 45 mm housing (art. no. BW2349)
- ASi substructure module (CNOMO) for 4 channel module in 45 mm housing (art. no. BW2350)
- Universal protection cap ASi-5/ASi-3 for M12 sockets, IP67 (art. no. BW4056)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)