

## ASi Safety Input Modules (M12), IP67

for OSSDs, floating contacts or complementary switch

Applications up to category 4/PLe/SIL 3



(Figure similar)

| Figure                                                                             | Inputs Safety, SIL 3, cat. 4 | Safety signal inputs | Outputs digital | Input voltage (sensor supply.) <sup>(1)</sup> | Output voltage (actuator supply.) <sup>(2)</sup> | ASi connection <sup>(3)</sup> | ASi address <sup>(4)</sup> | Special function                                    | Article no. |
|------------------------------------------------------------------------------------|------------------------------|----------------------|-----------------|-----------------------------------------------|--------------------------------------------------|-------------------------------|----------------------------|-----------------------------------------------------|-------------|
|  | 2 x 2 channels               | floating contacts    | -               | out of ASi                                    | -                                                | ASi profile cable             | 2 single addresses         | -                                                   | BWU2631     |
|                                                                                    | 1 x 2 channels               | floating contacts    | 2 x electronic  | out of ASi                                    | out of AUX                                       | ASi profile cable             | 1 single address           | -                                                   | BWU2284     |
|                                                                                    | 1 x 2 channels               | floating contacts    | 2 x electronic  | out of ASi                                    | out of AUX                                       | ASi using M12                 | 1 single address           | -                                                   | BWU2369     |
|                                                                                    | 1 x 2 channels               | OSSDs                | 2 x electronic  | out of AUX                                    | out of AUX                                       | ASi profile cable             | 1 single address           | -                                                   | BWU2270     |
|                                                                                    | 1 x 2 channels               | OSSDs                | 2 x electronic  | out of AUX                                    | out of AUX                                       | ASi profile cable             | 1 single address           | reset output for opto-electronic protective devices | BWU2689     |
|                                                                                    | 1 x 2 channels               | OSSDs                | 2 x electronic  | out of AUX                                    | out of AUX                                       | ASi via M12                   | 1 single address           | -                                                   | BWU2370     |
|                                                                                    | 1 x 2 channels               | OSSDs                | 2 x electronic  | out of ASi                                    | out of ASi                                       | ASi via M12                   | 1 single address           | -                                                   | BWU2960     |
|                                                                                    | 1 x 2 channels               | complementary switch | 2 x electronic  | out of ASi                                    | out of AUX                                       | ASi profile cable             | 1 single address           | -                                                   | BWU2814     |

- (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:** the connection to ASi as well to AUX (auxiliary 24V power) is either made via yellow resp. black ASi profile cable with piercing technology or via M12 socket (in IP20 via clamps).
- (4) **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 address profiles.

| Article no.               | BWU2270                                                                                                                                                               | BWU2370            | BWU2689                               | BWU2960                    |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------|----------------------------|
| Connection                |                                                                                                                                                                       |                    |                                       |                            |
| ASi/AUX connection        | profile cable and piercing technology                                                                                                                                 | M12 <sup>(6)</sup> | profile cable and piercing technology | M12 <sup>(6)</sup>         |
| Periphery connection      | M12                                                                                                                                                                   |                    |                                       |                            |
| Length of connector cable | unlimited <sup>(1)</sup>                                                                                                                                              |                    |                                       |                            |
| ASi                       |                                                                                                                                                                       |                    |                                       |                            |
| Profile                   | S-7.B.1, ID1=F                                                                                                                                                        |                    |                                       |                            |
| Voltage                   | 22 ... 31,6 V                                                                                                                                                         |                    |                                       |                            |
| Required master profile   | ≥M0                                                                                                                                                                   |                    |                                       |                            |
| Max. current consumption  | 60 mA                                                                                                                                                                 |                    |                                       |                            |
| AUX                       |                                                                                                                                                                       |                    |                                       |                            |
| Voltage                   | 24 V (20 ... 30 V <sub>DC</sub> ) (PELV)                                                                                                                              |                    |                                       | –                          |
| Max. current consumption  | 4 A max.                                                                                                                                                              |                    |                                       | –                          |
| Input                     |                                                                                                                                                                       |                    |                                       |                            |
| Number                    | 1 x 2 channel safe input for OSSDs                                                                                                                                    |                    |                                       |                            |
| Safe input                | OSSD                                                                                                                                                                  |                    |                                       |                            |
| Power supply              | out of AUX                                                                                                                                                            |                    |                                       | out of ASi                 |
| Sensor supply             | short-circuit and overload protected according to EN 61131                                                                                                            |                    |                                       |                            |
| Input level               | V <sub>in</sub> > 11 V for High-Level,<br>Input current > 2,5 mA at 15 V                                                                                              |                    |                                       |                            |
| OSSD test pulses          | 0 ... 50 Hz                                                                                                                                                           |                    |                                       |                            |
| OSSD test pulse width     | U <sub>aux</sub> ≥ 21,5 V= 0 ... 1 ms test pulses possible<br>U <sub>aux</sub> ≥17 V= 0 ... 0,8 ms test pulses possible<br>U <sub>aux</sub> <17 V= 0 ... 0,6 ms       |                    |                                       |                            |
| Start delay               | <22 ms                                                                                                                                                                |                    |                                       |                            |
| Output                    |                                                                                                                                                                       |                    |                                       |                            |
| Number                    | 2, electronic                                                                                                                                                         |                    |                                       |                            |
| Power supply              | out of AUX                                                                                                                                                            |                    |                                       | out of ASi                 |
| Output                    | short-circuit and overload protected according to EN 61131                                                                                                            |                    |                                       |                            |
| Max. output current       | 1 A per output                                                                                                                                                        |                    |                                       | Σ = 50mA <sup>(6)</sup>    |
| Display                   |                                                                                                                                                                       |                    |                                       |                            |
| LEDs S1, S2 (yellow)      | state of inputs<br>OSSD1, OSSD2                                                                                                                                       |                    |                                       |                            |
| LEDs O1, O2 (O3) (yellow) | state of outputs<br>O1, O2                                                                                                                                            |                    | state of outputs<br>O2, O3            | state of outputs<br>O1, O2 |
| LED AUX (green)           | 24 V <sub>DC</sub> AUX on                                                                                                                                             |                    |                                       | –                          |
| LED ASi (green)           | ASi voltage on                                                                                                                                                        |                    |                                       |                            |
| LED FLT/FAULT (red)       | LED on: ASi communication error, ASi node does not participate in the normal exchange of data,<br>e.g. ASi address 0<br>LED flashing: peripheral fault <sup>(2)</sup> |                    |                                       |                            |

| Article no.                                                                      | BWU2270                                                                                                                             | BWU2370                        | BWU2689                           | BWU2960                        |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------|--------------------------------|
| <b>Environment</b>                                                               |                                                                                                                                     |                                |                                   |                                |
| Applied standards                                                                | EN ISO 13849-1 PLe Kat4<br>EN ISO 13849-2<br>EN 62061 SIL 3<br>EN 62026-2<br>EN 61000-6-2<br>EN 61000-6-4<br>EN 61131-2<br>EN 60529 |                                |                                   |                                |
| It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe | no <sup>(3)</sup>                                                                                                                   |                                |                                   | yes <sup>(7)</sup>             |
| Operating altitude                                                               | max. 2000 m                                                                                                                         |                                |                                   |                                |
| Ambient temperature                                                              | -30 °C ... +55 °C<br>(up to max. +70 °C) <sup>(4)</sup> <sup>(5)</sup> , no condensation permitted                                  |                                |                                   |                                |
| Storage temperature                                                              | -25 °C ... +85 °C                                                                                                                   |                                |                                   |                                |
| Housing                                                                          | plastic,<br>for DIN rail mounting                                                                                                   | plastic,<br>for screw mounting | plastic,<br>for DIN rail mounting | plastic,<br>for screw mounting |
| Pollution degree                                                                 | 2                                                                                                                                   |                                |                                   |                                |
| Protection category                                                              | IP67                                                                                                                                |                                |                                   |                                |
| Tolerable loading referring to humidity                                          | according to EN 61131-2                                                                                                             |                                |                                   |                                |
| 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                                                                    |                                |                                   |                                |
| Weight                                                                           | 100 g                                                                                                                               |                                |                                   |                                |
| Dimensions<br>(W / H / D in mm)                                                  | 45 / 80 / 42                                                                                                                        | 45 / 116,5 / 47,5              | 45 / 80 / 42                      | 45 / 116,5 / 47,5              |

(1) loop resistance ≤150 Ω

(2) See table „Peripheral fault indication“

(3) The module is not suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors cannot be assumed for the connection of the two ASi and AUX potentials.

If the module is supplied from an unswitched AUX cable, this has no influence on the safety consideration for the paths with passively safe-switched AUX cable. In an ASi circuit, paths supplied from a passively safe-switched AUX cable and paths supplied from unswitched AUX potential can be used together.

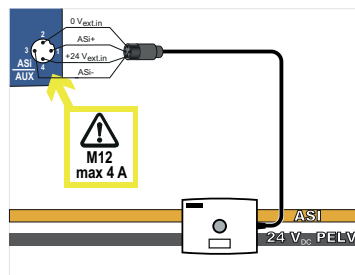
(4) Temperature range up to -30°C from Ident.No. ≥16292 (BWU2270); Ident.No. ≥16294 (BWU2370); Ident.No. ≥16293 (BWU2689); Ident.No. ≥16369 (BWU2960)

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

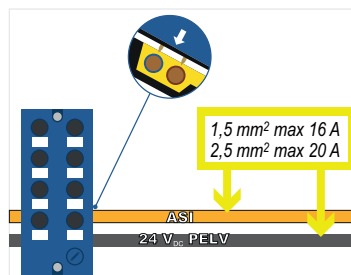
(6) **Line protection:**

If the module is supplied via a M12 connection with A or B coding, it may only be used with a current load of max. 4 A per pin in acc. with IEC 61076-2-101 and IEC 61076-2-109. A fused tap is recommended. There is no such limitation for modules supplied via piercing contacts.

## Connection to ASi and AUX via M12



## via piercing contacts



(7) The module is suitable for use in passively safe paths as it has no connection to an AUX potential.

| Article no.                   | BWU2814                                                                                                                                                            | BWU2284                                       | BWU2369            | BWU2631                                         |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------|-------------------------------------------------|
| Connection                    |                                                                                                                                                                    |                                               |                    |                                                 |
| ASi/AUX connection            | profile cable and piercing technology                                                                                                                              |                                               | M12 <sup>(7)</sup> | profile cable and piercing technology           |
| Periphery connection          | M12                                                                                                                                                                |                                               |                    |                                                 |
| Length of connector cable     | I/O: max. 15 m <sup>(1)</sup>                                                                                                                                      |                                               |                    |                                                 |
| ASi                           |                                                                                                                                                                    |                                               |                    |                                                 |
| Profile                       | S-7.B.0, ID1=F                                                                                                                                                     |                                               |                    | S1: S-7.B.0, ID1=F<br>S2: S-7.B.0, ID1=E        |
| Required master profile       | ≥M0                                                                                                                                                                |                                               |                    |                                                 |
| Voltage                       | 22 ... 31,6 V                                                                                                                                                      |                                               |                    |                                                 |
| Max. current consumption      | 80 mA                                                                                                                                                              |                                               |                    |                                                 |
| AUX                           |                                                                                                                                                                    |                                               |                    |                                                 |
| Voltage                       | 24 V (20 ... 30 V <sub>DC</sub> ) (PELV)                                                                                                                           |                                               |                    | –                                               |
| Max. current consumption      | 3 A max.                                                                                                                                                           |                                               |                    | –                                               |
| Input                         |                                                                                                                                                                    |                                               |                    |                                                 |
| Number                        | 1 x 2 channel safe input for floating contacts                                                                                                                     |                                               |                    | 2 x 2 channel safe inputs for floating contacts |
| Safe input                    | non-equivalent switch                                                                                                                                              | floating contacts                             |                    |                                                 |
| Switching current             | –                                                                                                                                                                  | 15 mA (T = 100 µs), continuously 4 mA at 24 V |                    |                                                 |
| Power supply                  | out of ASi                                                                                                                                                         |                                               |                    |                                                 |
| Sensor supply                 | short-circuit and overload protected according to EN 61131                                                                                                         |                                               |                    |                                                 |
| Input level                   | 10 mA, R≤150 Ω                                                                                                                                                     |                                               |                    |                                                 |
| Output                        |                                                                                                                                                                    |                                               |                    |                                                 |
| Number                        | 2, electronic                                                                                                                                                      |                                               |                    | –                                               |
| Power supply                  | out of AUX                                                                                                                                                         |                                               |                    | –                                               |
| Output                        | short-circuit and overload protected according to EN 61131                                                                                                         |                                               |                    | –                                               |
| Max. output current           | 1 A per output                                                                                                                                                     |                                               |                    | –                                               |
| Display                       |                                                                                                                                                                    |                                               |                    |                                                 |
| LEDs S1, S2 (S3, S4) (yellow) | state of inputs<br>S1, S2                                                                                                                                          |                                               |                    | state of inputs<br>S1.1,S1.2; S2.1, S2.2        |
| LEDs O1, O2 (yellow)          | state of outputs O1, O2                                                                                                                                            |                                               |                    | –                                               |
| LED AUX (green)               | 24 V <sub>DC</sub> AUX on                                                                                                                                          |                                               |                    | –                                               |
| LED ASi (green)               | ASi voltage on                                                                                                                                                     |                                               |                    |                                                 |
| LED FLT/FAULT (red)           | LED on: ASi communication error, ASi node does not participate in the normal exchange of data, e.g. ASi address 0<br>LED flashing: peripheral fault <sup>(2)</sup> |                                               |                    |                                                 |

| Article no.                                                                      | BWU2814                                                                                                                             | BWU2284                        | BWU2369                           | BWU2631                           |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------|-----------------------------------|
| <b>Environment</b>                                                               |                                                                                                                                     |                                |                                   |                                   |
| Applied standards                                                                | EN ISO 13849-1 PLe Kat4<br>EN ISO 13849-2<br>EN 62061 SIL 3<br>EN 62026-2<br>EN 61000-6-2<br>EN 61000-6-4<br>EN 61131-2<br>EN 60529 |                                |                                   |                                   |
| It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe | no <sup>(3)</sup>                                                                                                                   | yes <sup>(6)</sup>             | no <sup>(8)</sup>                 | yes <sup>(9)</sup>                |
| Operating altitude                                                               | max. 2000 m                                                                                                                         |                                |                                   |                                   |
| Ambient temperature                                                              | -30 °C ... +55 °C<br>(up to max. +70 °C) <sup>(4)</sup> <sup>(5)</sup> , no condensation permitted                                  |                                |                                   |                                   |
| Storage temperature                                                              | -25 °C ... +85 °C                                                                                                                   |                                |                                   |                                   |
| Housing                                                                          | plastic,<br>for DIN rail mounting                                                                                                   | plastic,<br>for screw mounting | plastic,<br>for DIN rail mounting | plastic,<br>for DIN rail mounting |
| Pollution degree                                                                 | 2                                                                                                                                   |                                |                                   |                                   |
| Protection category                                                              | IP67                                                                                                                                |                                |                                   |                                   |
| Tolerable loading referring to humidity                                          | according to EN 61131-2                                                                                                             |                                |                                   |                                   |
| 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                                                                    |                                |                                   |                                   |
| Weight                                                                           | 100 g                                                                                                                               |                                |                                   |                                   |
| Dimensions<br>(W / H / D in mm)                                                  | 45 / 80 / 42                                                                                                                        | 45 / 116,5 / 47,5              | 45 / 80 / 42                      | 45 / 80 / 42                      |

(1) loop resistance ≤150 Ω

(2) See table „Peripheral fault indication“

(3) The module is not suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors cannot be assumed for the connection of the two ASi and AUX potentials.

If the module is supplied from an unswitched AUX cable, this has no influence on the safety consideration for the paths with passively safe-switched AUX cable. In an ASi circuit, paths supplied from a passively safe-switched AUX cable and paths supplied from unswitched AUX potential can be used together.

(4) Temperature range up to -30°C from Ident.No. ≥16286 (BWU2369); Ident.No. ≥16295 (BWU2631), Ident.No. ≥22126 (BWU2814); Ident.No. ≥22127 (BWU2284).

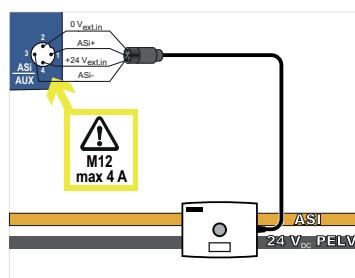
(5) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada.

(6) BWU2284 from Ident. No. ≥20916; The module is suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors can be assumed for the connection of the two ASi and AUX potentials.

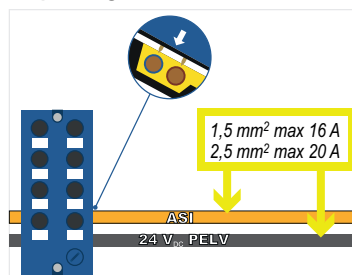
**(7) Line protection:**

If the module is supplied via a M12 connection with A or B coding, it may only be used with a current load of max. 4 A per pin in acc. with IEC 61076-2-101 and IEC 61076-2-109. A fused tap is recommended. There is no such limitation for modules supplied via piercing contacts.

**Connection to ASi and AUX  
via M12**



**via piercing contacts**



- <sup>(8)</sup> The module is not suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors cannot be assumed for the connection of the two ASi and AUX potentials.

If the module is supplied from an unswitched AUX cable, this has no influence on the safety consideration for the paths with passively safe-switched AUX cable. In an ASi circuit, paths supplied from a passively safe-switched AUX cable and paths supplied from unswitched AUX potential can be used together.

- <sup>(9)</sup> The module is suitable for use in passively safe paths as it has no connection to an AUX potential.

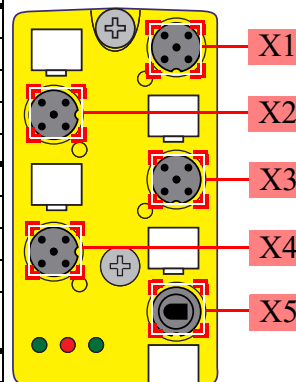
| Article no. | Peripheral fault indication |                 |                     |
|-------------|-----------------------------|-----------------|---------------------|
|             | cross connection S1 to S2   | output overload | AUX voltage missing |
| BWU2270     | —                           | •               | •                   |
| BWU2689     | —                           | •               | •                   |
| BWU2284     | •                           | •               | —                   |
| BWU2814     | •                           | •               | —                   |
| BWU2369     | •                           | •               | —                   |
| BWU2370     | —                           | •               | •                   |
| BWU2631     | •                           | —               | —                   |
| BWU2960     | —                           | •               | —                   |

| UL-specifications (UL508)                                              |                                                                                                                                                                                                     |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BWU2270, BWU2689, BWU2284, BWU2814, BWU2369, BWU2370, BWU2631, BWU2960 |                                                                                                                                                                                                     |
| 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.                                                                                         |

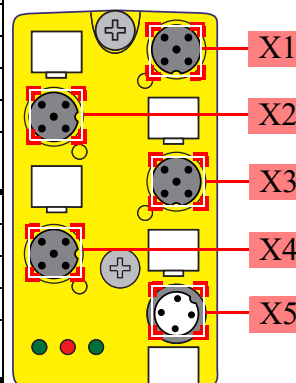
| Programming                                               | ASi bit assignment      |           |       |                                |
|-----------------------------------------------------------|-------------------------|-----------|-------|--------------------------------|
|                                                           | D3                      | D2        | D1    | D0                             |
|                                                           | Safe input (ASi node 1) |           |       |                                |
| BWU2284 / BWU2369 / BWU2631                               | S2                      | S2        | S1    | S1                             |
| BWU2814                                                   | S2 denied               | S2 denied | S1    | S1                             |
| BWU2270 / BWU2370 / BWU2689 / BWU2960                     | OSSD2                   | OSSD2     | OSSD1 | OSSD1                          |
|                                                           | Safe input (ASi node 2) |           |       |                                |
| BWU2631                                                   | S4                      | S4        | S3    | S3                             |
|                                                           | Output                  |           |       |                                |
| BWU2270 / BWU2284 / BWU2369 / BWU2370 / BWU2814 / BWU2960 | not used                |           | O2    | O1                             |
| BWU2689                                                   | not used                | O3        | O2    | not used                       |
|                                                           | Parameter bit           |           |       |                                |
|                                                           | P3                      | P2        | P1    | P0                             |
| BWU2270 / BWU2370 / BWU2689 / BWU2960                     | not used                |           |       | Watchdog<br>(0 = off / 1 = on) |
| BWU2284 / BWU2631 / BWU2369 / BWU2814                     | not used                |           |       |                                |

## Pin assignment

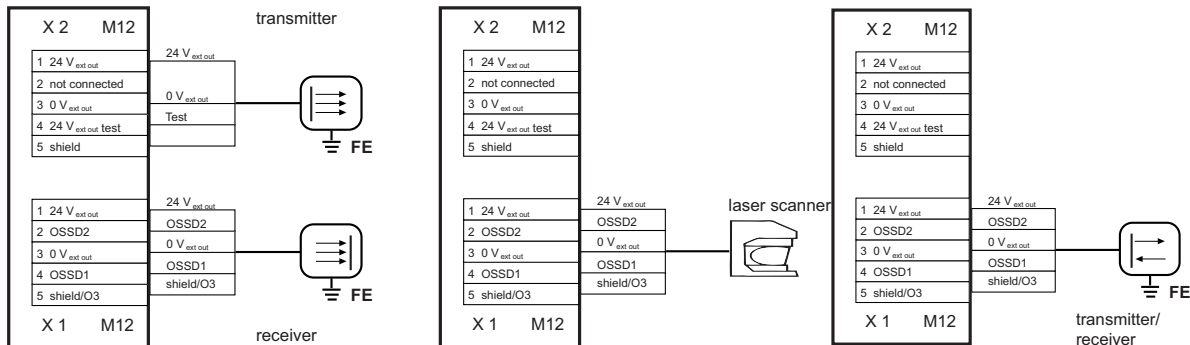
| Connections |                |            |                                                                                |       |                       |                        |        |
|-------------|----------------|------------|--------------------------------------------------------------------------------|-------|-----------------------|------------------------|--------|
| Article no. | M12 connection | Marking    | Pin1                                                                           | Pin2  | Pin3                  | Pin4                   | Pin5   |
| BWU2270     | X1             | S1         | 24V <sub>ext out</sub>                                                         | OSSD2 | 0V <sub>ext out</sub> | OSSD1                  | shield |
|             | X2             | S2         | 24V <sub>ext out</sub>                                                         | n.c.  | 0V <sub>ext out</sub> | 24V <sub>ext out</sub> | shield |
|             | X3             | O1         | n.c.                                                                           | O2    | 0V <sub>ext out</sub> | O1                     | n.c.   |
|             | X4             | O2         | n.c.                                                                           | n.c.  | 0V <sub>ext out</sub> | O2                     | n.c.   |
|             | X5             | ADDR       | connection for ASi-3 addressing plug                                           |       |                       |                        |        |
| BWU2284     | X1             | S1         | S1+                                                                            | S1-   | S2+                   | S2-                    | n.c.   |
|             | X2             | S2         | S2+                                                                            | S2-   | n.c.                  | n.c.                   | n.c.   |
|             | X3             | O1         | n.c.                                                                           | O2    | 0V <sub>ext out</sub> | O1                     | n.c.   |
|             | X4             | O2         | n.c.                                                                           | n.c.  | 0V <sub>ext out</sub> | O2                     | n.c.   |
|             | X5             | ADDR       | connection for ASi-3 addressing plug                                           |       |                       |                        |        |
| BWU2631     | X1             | S1         | S1.1+                                                                          | S1.1- | S1.2+                 | S1.2-                  | n.c.   |
|             | X2             | S2         | S1.2+                                                                          | S1.2- | —                     | —                      | n.c.   |
|             | X3             | S3         | S2.1+                                                                          | S2.1- | S2.2+                 | S2.2-                  | n.c.   |
|             | X4             | S4         | S2.2+                                                                          | S2.2- | —                     | —                      | n.c.   |
|             | X5             | F1/F2 ADDR | connection for ASi-3 addressing plug<br>(ASi node 1: above, ASi node 2: below) |       |                       |                        |        |
| BWU2689     | X1             | S1         | 24V <sub>ext out</sub>                                                         | OSSD2 | 0V <sub>ext out</sub> | OSSD1                  | O3     |
|             | X2             | S2         | 24V <sub>ext out</sub>                                                         | n.c.  | 0V <sub>ext out</sub> | 24V <sub>ext out</sub> | shield |
|             | X3             | O3         | n.c.                                                                           | O2    | 0V <sub>ext out</sub> | n.c.                   | n.c.   |
|             | X4             | O2         | n.c.                                                                           | O3    | 0V <sub>ext out</sub> | O2                     | n.c.   |
|             | X5             | ADDR       | connection for ASi-3 addressing plug                                           |       |                       |                        |        |
| BWU2814     | X1             | S1         | NC contact                                                                     |       | NO contact            |                        | n.c.   |
|             |                |            | S1+                                                                            | S1-   | S2+                   | S2-                    |        |
|             | X2             | S2         | NO contact                                                                     |       | NC contact            |                        | n.c.   |
|             |                |            | S2+                                                                            | S2-   | S1+                   | S1-                    |        |
|             | X3             | O1         | n.c.                                                                           | O2    | 0V <sub>ext out</sub> | O1                     | n.c.   |
|             | X4             | O2         | n.c.                                                                           | n.c.  | 0V <sub>ext out</sub> | O2                     | n.c.   |
|             | X5             | ADDR       | connection for ASi-3 addressing plug                                           |       |                       |                        |        |



| Connections |                |                               |                           |                      |                          |                           |        |
|-------------|----------------|-------------------------------|---------------------------|----------------------|--------------------------|---------------------------|--------|
| Article no. | M12 connection | Marking                       | Pin1                      | Pin2                 | Pin3                     | Pin4                      | Pin5   |
| BWU2369     | X1             | S1                            | S1+                       | S1-                  | S2+                      | S2-                       | n.c.   |
|             | X2             | S2                            | S2+                       | S2-                  | n.c.                     | n.c.                      | n.c.   |
|             | X3             | O1                            | n.c.                      | O2                   | 0V <sub>ext out</sub>    | O1                        | n.c.   |
|             | X4             | O2                            | n.c.                      | n.c.                 | 0V <sub>ext out</sub>    | O2                        | n.c.   |
|             | X5             | ASI/<br>AUX <sub>ext.in</sub> | ASi+                      | 0V <sub>ext in</sub> | ASi-                     | +24V <sub>ext in</sub>    | n.c.   |
| BWU2370     | X1             | S1                            | 24V <sub>ext out</sub>    | OSSD2                | 0V <sub>ext out</sub>    | OSSD1                     | shield |
|             | X2             | S2                            | 24V <sub>ext out</sub>    | n.c.                 | 0V <sub>ext out</sub>    | 24V <sub>ext out</sub>    | shield |
|             | X3             | O1                            | n.c.                      | O2                   | 0V <sub>ext out</sub>    | O1                        | n.c.   |
|             | X4             | O2                            | n.c.                      | n.c.                 | 0V <sub>ext out</sub>    | O2                        | n.c.   |
|             | X5             | ASI/<br>AUX <sub>ext.in</sub> | ASi+                      | 0V <sub>ext in</sub> | ASi-                     | +24V <sub>ext in</sub>    | n.c.   |
| BWU2960     | X1             | S1                            | 24V <sub>out of ASi</sub> | OSSD2                | 0V <sub>out of ASi</sub> | OSSD1                     | shield |
|             | X2             | S2                            | 24V <sub>out of ASi</sub> | n.c.                 | 0V <sub>out of ASi</sub> | 24V <sub>out of ASi</sub> | shield |
|             | X3             | O1                            | n.c.                      | O2                   | 0V <sub>out of ASi</sub> | O1                        | n.c.   |
|             | X4             | O2                            | n.c.                      | n.c.                 | 0V <sub>out of ASi</sub> | O2                        | n.c.   |
|             | X5             | ASI                           | ASi+                      | n.c.                 | ASi-                     | n.c.                      | n.c.   |



## Connection examples BWU2270, BWU2370, BWU2689, BWU2960



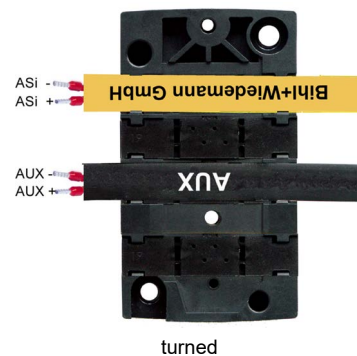
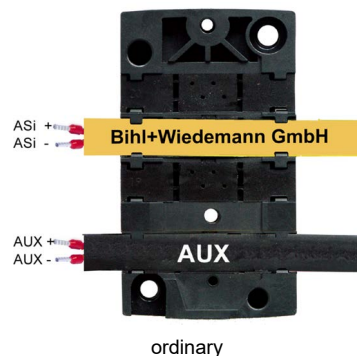
### BWU2270, BWU2284, BWU2631, BWU2689, BWU2814:

The matching substructure modules are available as accessories with two different drilling patterns.

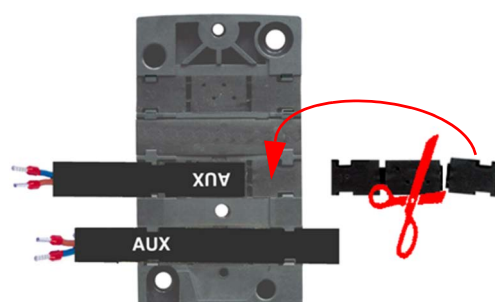
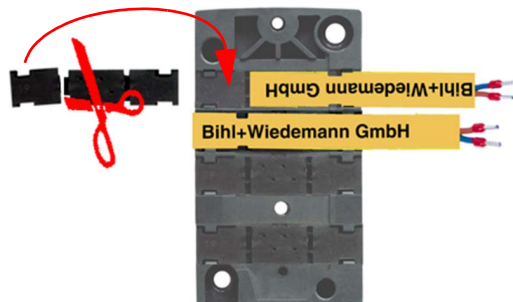
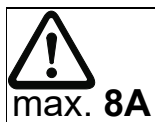
### BWU2369, BWU2370, BWU2960:

They are supplied including mounted substructure modules (no additional profile cable connection possible)

## Mounting according to cable direction



## Line termination with sealing profiles / junction



## Accessories:

- ASi substructure module for 4-channel module in 45 mm-housing (article no. BWU2349)
- ASi substructure module (CNOMO) for 4-channel module in 45 mm-housing (article no. BWU2350)
- Universal protection cap ASi-5/ASi-3 for M12 sockets, IP67 (art. no. BW4056)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)
- Bihl+Wiedemann Safety Suite License - Safety Software for Configuration, Diagnostics and Commissioning (art. no. BW2916)

### Accessories for BWU2369, BWU2960:

- ASi substructure module for 4-channel module in 45 mm-housing (art. no. BWU2349)
- ASi substructure module (CNOMO) for 4-channel module in 45 mm-housing (art. no. BWU2350)
- Passive Distributor ASi to 1 x M12 cable socket, angled, 5 poles, depth 19 mm, IP67 (art. no. BWU3185)
- Passive Distributor ASi to 1 x M12 cable socket, straight, 5 poles, depth 19 mm, IP67 (art. no. BWU3247)
- Universal protection cap ASi-5/ASi-3 for M12 sockets, IP67 (art. no. BW4056)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)
- Bihl+Wiedemann Safety Suite License - Safety Software for Configuration, Diagnostics and Commissioning (art. no. BW2916)