

## ASi Safety Input Modules, IP20

- for optoelectronic protective devices, floating contacts or safety mats
- for antivalent optoelectronic protective devices and floating contacts



(Figure similar)



| Figure | Type   | Housing      | Inputs Safety, SIL 3, Cat. 4 | Outputs digital | Safety signal inputs  | Input voltage (sensor supply.) <sup>(1)</sup> | Output voltage (actuator supply) <sup>(2)</sup> | ASi address <sup>(3)</sup> | Article no.    |
|--------|--|--------------|------------------------------|-----------------|---|---|---|----------------------------|----------------|
|        | IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety  | 3 x COMBICON | 1 x 2 channels               | 2 x electronic  | floating contacts   | out of ASi                                    | out of AUX                                      | 1 single address           | <b>BWU1939</b> |
|        | IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety  | 3 x COMBICON | 1 x 2 channels               | 2 x electronic  | floating contacts   | out of ASi                                    | out of ASi                                      | 1 single address           | <b>BWU2724</b> |
|        | IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety  | 3 x COMBICON | 1 x 2 channels SIL 2, Cat. 3 | 2 x electronic  | safety mats<br>1.2 kΩ or 8.2 kΩ monitoring resistor               | out of AUX                                    | out of AUX                                      | 1 single address           | <b>BWU2661</b> |
|        | IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety  | 3 x COMBICON | 1 x 2 channels               | 2 x electronic  | opto-electronic protective devices                                | out of AUX                                    | out of AUX                                      | 1 single address           | <b>BWU2577</b> |
|        | IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety | 4 x COMBICON | 1 x 2 channels               | 2 x electronic  | floating contacts   | out of AUX                                    | out of AUX                                      | 1 single address           | <b>BWU3013</b> |
|        | IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety | 4 x COMBICON | 2 x 2 channels               | 4 x electronic  | floating contacts   | out of AUX                                    | out of AUX                                      | 2 single addresses         | <b>BWU2707</b> |
|        | IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety | 4 x COMBICON | 2 x 2 channels               | –               | floating contacts + antivalent opto-electronic protective devices | out of AUX                                    | –   | 2 single addresses         | <b>BWU3671</b> |
|        | IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety | 4 x COMBICON | 2 x 2 channels               | –               | floating contacts + opto-electronic protective devices            | out of AUX                                    | –   | 2 single addresses         | <b>BWU3696</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.

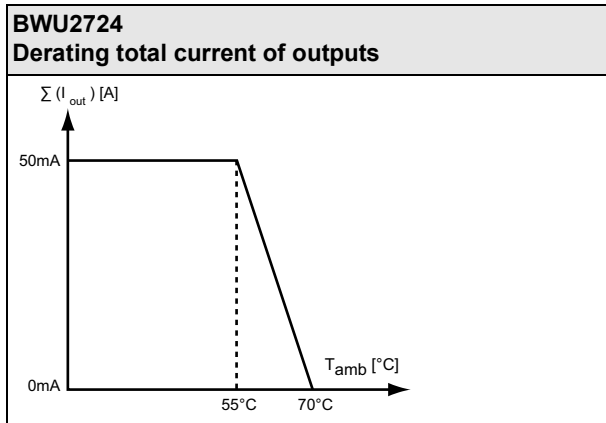
(3) **ASi address:**  
 AB addresses (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), Single addresses (max. 31 Single addresses/ASi network), mixed use allowed.

| Article no.               | BWU2724  |                             | BWU1939                          |                   | BWU2707  |   | BWU3013                                |                                  |
|---------------------------|--|-----------------------------|----------------------------------|-------------------|--|---|--|----------------------------------|
| <b>Connection</b>         |  |                             |                                  |                   |  |   |  |                                  |
| ASi / AUX Connection      | COMBICON plugs, push-in terminals <sup>(1)</sup>           |                             |                                  |                   |  |   |  |                                  |
| Periphery connection      | COMBICON plugs, push-in terminals <sup>(1)</sup>           |                             |                                  |                   |  |   |  |                                  |
| Length of connector cable | I/O: max. 15 m   |                             |                                  |                   | unlimited <sup>(8)</sup>                         |   |  |                                  |
| <b>ASi</b>                |  |                             |                                  |                   |  |   |  |                                  |
| Profile                   | S-7.B.0, ID1=F   |                             |                                  |                   | Node 1: S-7.B.0, ID1=F<br>Node 2: S-7.B.0, ID1=E |   | S-7.B.0, ID1=F                         |                                  |
| Address                   | 1 single address   |                             |                                  |                   | 2 single addresses                               |   | 1 single address                       |                                  |
| Operating voltage         | 30 V <sub>DC</sub> (22 ... 31,6 V)                         |                             |                                  |                   |  |   |  |                                  |
| Required Master profile   | ≥M3  |                             |                                  |                   |  |   |  |                                  |
| Since ASi specification   | 2.1  |                             |                                  |                   |  |   |  |                                  |
| Max. current input        | 100 mA   |                             | 80 mA                            |                   | 60 mA  |   | 35 mA                                  |                                  |
| <b>AUX</b>                |  |                             |                                  |                   |  |   |  |                                  |
| Voltage                   | –  |                             | 24 V <sub>DC</sub> (20 ... 30 V) |                   |  |   |  |                                  |
| Max. current input        | –  |                             | 1,5 A at output short-circuit    |                   |  | 4 A max.  |  |                                  |
| <b>Input</b>              |  |                             |                                  |                   |  |   |  |                                  |
| Number                    | 1 x 2-channels safe input                                  |                             |                                  |                   | 2 x 2-channels safe inputs                       |   | 1 x 2-channels safe input              |                                  |
| Safety signal inputs      | floating contacts  |                             |                                  |                   |  |   |  |                                  |
| Switching current         | static 4 mA at 24 V,<br>dynamic 15 mA at 24 V (T = 100 μs) |                             |                                  |                   |  |   |  |                                  |
| Power supply              | out of ASi   |                             |                                  |                   | out of AUX                                       |   |  |                                  |
| Switching threshold       | 10 mA, R < 150 Ω   |                             |                                  |                   |  |   |  |                                  |
| <b>Output</b>             |  |                             |                                  |                   |  |   |  |                                  |
| Number                    | 2, electronic, short circuit protected                     |                             |                                  |                   | 4, electronic, short circuit protected           |   | 2, electronic, short circuit protected |                                  |
| Power Supply              | out of ASi   |                             |                                  |                   | out of AUX                                       |   |  |                                  |
| Max. output current       | up to 40 °C  | Σ(Out) 50 mA <sup>(2)</sup> |                                  | 200 mA per output |  | 1 A per output, Σ(Out) 3 A <sup>(9)</sup> <sup>(10)</sup>     |  | 1 A per output <sup>(10)</sup>   |
|                           | at 45 °C   |                             |                                  |                   |  | 0,5 A per output, Σ(Out) 1,5 A <sup>(9)</sup> <sup>(10)</sup> |  | 0,5 A per output <sup>(10)</sup> |
|                           | at 55 °C   | Σ(Out) 0 mA <sup>(2)</sup>  |                                  |                   |  | –   |  | –                                |
|                           | at 70 °C   |                             |                                  |                   |  | –   |  | –                                |

| Article no.  | BWU2724   | BWU1939  | BWU2707                       | BWU3013                    |
|--|---|--|-------------------------------|----------------------------|
| <b>Display</b>                                     |   |  |                               |                            |
| LED ASI (green)                                    | on: ASi voltage on<br>flashing: ASi voltage on,<br>but peripheral fault <sup>(3)</sup> or<br>address 0<br>off: no ASi voltage                     | on: ASi power supply on  |                               |                            |
| LED FLT/FAULT (red)                                | on: no data exchange<br>flashing: peripheral fault <sup>(3)</sup>   |  |                               |                            |
| LED ASI/FLT (red/green)                            | –   | green: online<br>red: no data exchange<br>yellow/red flashing: address 0<br>red/green flashing: peripheral fault <sup>(3)</sup>  |                               |                            |
| LED ASI/FLT2 (red/green)                           | –   | green: online<br>red: no data exchange<br>yellow/red flashing:<br>address 0<br>red/green flashing:<br>peripheral fault <sup>(3)</sup><br>red flashing: ASi node 2<br>is switched off because<br>ASi node 1 is addressed<br>0 | –                             |                            |
| LED AUX (green)                                    | –   | on: 24 V <sub>DC</sub> AUX<br>off: no 24 V <sub>DC</sub> AUX   |                               |                            |
| LED CC (red)                                       | cross connection <sup>(3)</sup>   |  |                               |                            |
| LEDs O1 ... On (yellow)                            | state of outputs O1, O2   |  | state of outputs<br>O1 ... O4 | state of outputs<br>O1, O2 |
| LED S1 ... Sn (yellow)                             | state of inputs S1, S2  |  | state of inputs S1 ... S4     | state of inputs<br>S1, S2  |
| <b>Environment</b>                                 |   |  |                               |                            |
| Applied standards                                  | EN 60529<br>EN ISO 13849-2<br>EN 61000-6-2<br>EN 61000-6-4<br>EN 61131-2<br>EN 62026-2<br>EN 62061 SIL3<br>EN ISO 13849-1 PLe cat 4               |  |                               |                            |
| Can be used in passively safe paths up to SIL3/PLe | yes <sup>(4)</sup>  | no <sup>(7)</sup>  |                               |                            |
| Operating altitude                                 | max. 2000 m   |  |                               |                            |
| Ambient temperature                                | -30 °C ... +55 °C<br>(up to max. +70 °C) <sup>(2)</sup> <sup>(5)</sup> <sup>(6)</sup> <sup>(9)</sup> <sup>(10)</sup><br>no condensation permitted |  |                               |                            |
| Storage temperature                                | -25 °C ... +85 °C   |  |                               |                            |
| Housing  | plastic, for DIN rail mounting  |  |                               |                            |
| Pollution Degree                                   | 2   |  |                               |                            |
| Protection category                                | IP20  |  |                               |                            |
| Tolerable loading referring to humidity            | according to EN 61131-2   |  |                               |                            |
| Allowable shock and vibration stress               | ≤ 15 g, T ≤ 11 ms<br>10 ... 55 Hz, 0,5 mm amplitude   |  |                               |                            |
| Weight   | 60 g  |  | 160 g                         |                            |
| Dimensions (W / H / D in mm)                       | 22,5 / 99,6 / 50,5  |  | 22,5 / 99,6 / 114             |                            |

<sup>(1)</sup> see table "Wiring rules"

(2)



(3) see table "Peripheral fault indication"

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

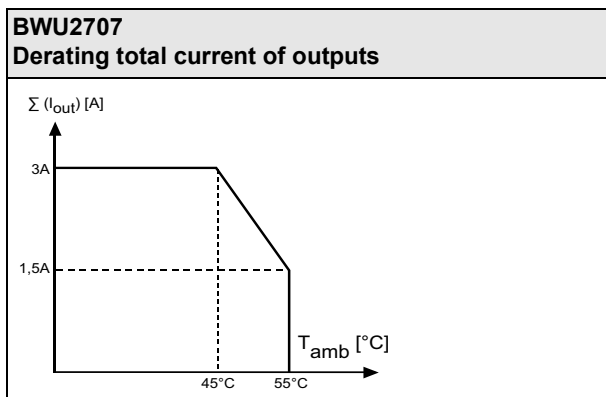
(5) temperature range up to  $-30^{\circ}\text{C}$  from Ident.No.  $\geq 16285$  (BWU2724); Ident.No.  $\geq 16284$  (BWU1939).

(6) Maximum ambient operating temperature  $+55^{\circ}\text{C}$  according UL certificate for the use in the USA and Canada.

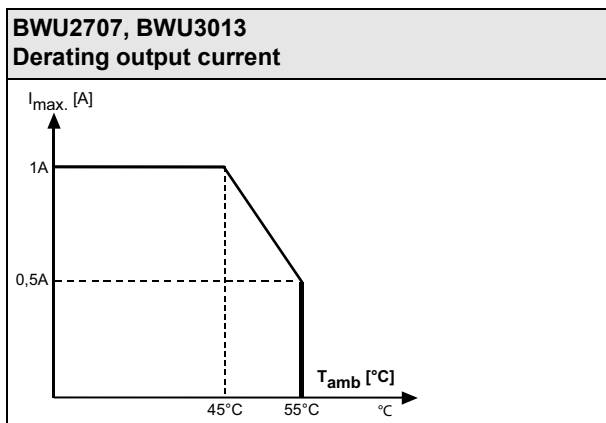
(7) The module is not suitable for use in passively safe paths because an exclusion of errors cannot be assumed for the connection of the two potentials, ASi and AUX.

(8) loop resistance  $\leq 150 \Omega$

(9)



(10)



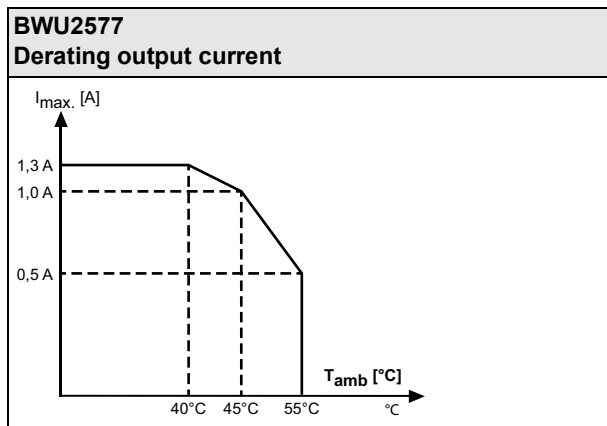
| Article no.                       | BWU2577  |  | BWU2661                         |
|-----------------------------------|--|--|---------------------------------|
| <b>Connection</b>                 |  |  |                                 |
| ASi / AUX Connection              | COMBICON plugs, push-in terminals <sup>(1)</sup>   |  |                                 |
| Periphery connection              | COMBICON plugs, push-in terminals <sup>(1)</sup>   |  |                                 |
| Length of connector cable         | unlimited <sup>(2)</sup>   | I/O: max. 15 m   |                                 |
| <b>ASi</b>                        |  |  |                                 |
| Profile                           | S-7.B.1, ID1=F   |  |                                 |
| Address                           | 1 single address   |  |                                 |
| Operating voltage                 | 30 V <sub>DC</sub> (22 ... 31,6 V)   |  |                                 |
| Required Master profile           | ≥M3  |  |                                 |
| Since ASi specification           | 2.1  |  |                                 |
| Max. current input                | 35 mA  |  |                                 |
| <b>AUX</b>                        |  |  |                                 |
| Voltage                           | 24 V <sub>DC</sub> (20 ... 30 V)   |  |                                 |
| Max. current input                | 4 A max.   |  |                                 |
| <b>Input</b>                      |  |  |                                 |
| Number                            | 1 x 2-channels safe input  |  |                                 |
| Safety signal inputs              | optoelectronic protective devices  | safety mat with 1,2 kΩ or 8,2 kΩ monitoring resistor         |                                 |
| Power supply                      | out of AUX   |  |                                 |
| Power supply for external sensors | 1,8 A out of AUX   | -  |                                 |
| Switching threshold               | V <sub>in</sub> > 11 V for high level,<br>input current ≥ 2,5 mA at 15 V   | -  |                                 |
| OSSD input test pulses            | 0 ... 50 Hz  | -  |                                 |
| OSSD input 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 | -  |                                 |
| <b>Output</b>                     |  |  |                                 |
| Number                            | 2, electronic, short circuit protected   |  |                                 |
| Power Supply                      | out of AUX   |  |                                 |
| Max. output current               | up to 40 °C  | 1,3 A per output <sup>(3)</sup>                              | 1 A per output <sup>(7)</sup>   |
|                                   | at 45 °C   | 1,0 A per output <sup>(3)</sup>                              |                                 |
|                                   | at 55 °C   | 0,5 A per output <sup>(3)</sup>                              | 0,5 A per output <sup>(7)</sup> |
| <b>Display</b>                    |  |  |                                 |
| LED ASI (green)                   | on: ASi voltage on<br>flashing: ASi voltage on, but peripheral fault <sup>(4)</sup> or address 0<br>off: no ASi voltage  |  |                                 |
| LED FLT/FAULT (red)               | on: no data exchange<br>flashing: peripheral fault <sup>(4)</sup>  |  |                                 |
| LED AUX (green)                   | -  | on: 24 V <sub>DC</sub> AUX<br>off: no 24 V <sub>DC</sub> AUX |                                 |
| LED CC (red)                      | -  | sensor cable break <sup>(3)</sup>                            |                                 |
| LEDs O1 ... On (yellow)           | state of outputs O1, O2  |  |                                 |
| LED S1 ... Sn (yellow)            | state of inputs S1, S2   | state of input S1  |                                 |

| Article no.  | BWU2577  | BWU2661                                    |
|--|--|--|
| <b>Environment</b>                                 |  |  |
| Applied standards                                  | EN 60529<br>EN ISO 13849-2<br>EN 61000-6-2<br>EN 61000-6-4<br>EN 61131-2<br>EN 62026-2 |  |
|  | EN 62061 SIL3<br>EN ISO 13849-1 PLe cat 4  | EN 62061 SIL2,<br>EN ISO 13849-1 PLd cat 3 |
| Can be used in passively safe paths up to SIL3/PLe | no <sup>(5)</sup>  |  |
| Operating altitude                                 | max. 2000 m  |  |
| Ambient temperature                                | -30°C ... +55 °C <sup>(3)</sup> <sup>(6)</sup> <sup>(7)</sup>                          |  |
|  | no condensation permitted  |  |
| Storage temperature                                | -25 °C ... +85 °C  |  |
| Housing  | plastic, for DIN rail mounting   |  |
| Pollution Degree                                   | 2  |  |
| Protection category                                | IP20   |  |
| Tolerable loading referring to humidity            | according EN 61131-2   |  |
| Allowable shock and vibration stress               | ≤ 15 g, T ≤ 11 ms<br>10 ... 55 Hz, 0,5 mm amplitude                                    |  |
| Weight   | 60 g   |  |
| Dimensions (W / H / D in mm)                       | 22,5 / 99,6 / 50,5   |  |

(1) see table "Wiring rules"

(2) loop resistance ≤ 150 Ω

(3)

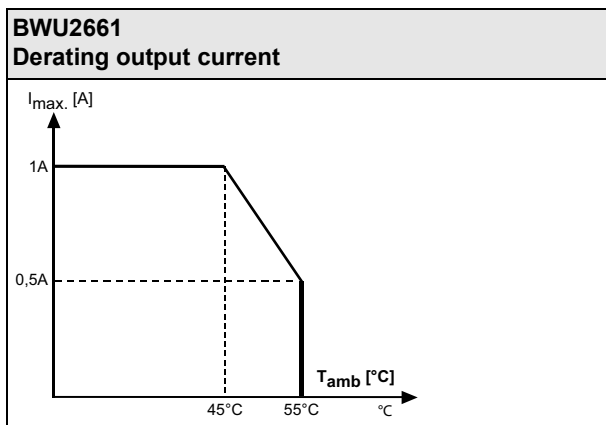


(4) See table "Peripheral fault indication"

(5) The module is not suitable for use in passively safe paths because an exclusion of errors cannot be assumed for the connection of the two potentials, ASi and AUX.

(6) Temperature range up to -30°C from Ident.No. ≥16282 (BWU2577).

(7)

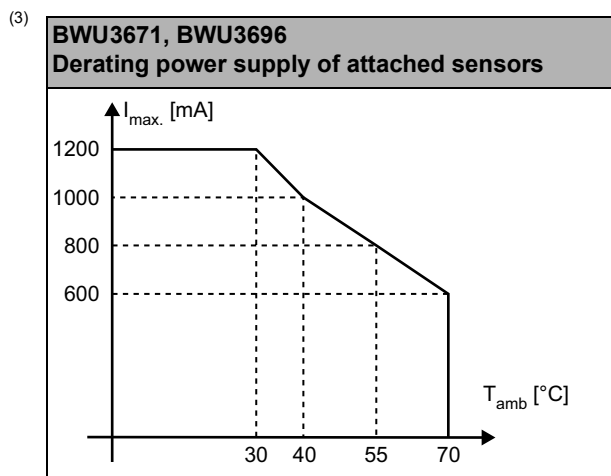


| Article no.  | BWU3671   |  | BWU3696 |
|--|---|--|---------|
| <b>Connection</b>  |   |  |         |
| ASi / AUX Connection                                     | COMBICON plugs, push-in terminals <sup>(1)</sup>  |  |         |
| Periphery connection                                     | COMBICON plugs, push-in terminals <sup>(1)</sup>  |  |         |
| Length of connector cable                                | unlimited <sup>(2)</sup>  |  |         |
| <b>ASi</b>   |   |  |         |
| Profile  | Node 1: S-7.B.0, ID1=F<br>Node 2: S-7.B.0, ID1=E  |  |         |
| Address  | 2 single addresses  |  |         |
| Operating voltage  | 30 V <sub>DC</sub> (18 ... 31,6 V)  |  |         |
| Required Master profile                                  | ≥M3   |  |         |
| Since ASi specification                                  | 2.1   |  |         |
| Max. current consumption                                 | 60 mA   |  |         |
| Max. current consumption without sensor/ actuator supply | 60 mA   |  |         |
| <b>AUX</b>   |   |  |         |
| Voltage  | 24 V <sub>DC</sub> (20 ... 30 V)  |  |         |
| Max. current consumption                                 | max. 1300 mA  |  |         |
| <b>Input</b>   |   |  |         |
| Number   | 2 x 2-channels safe inputs  |  |         |
| Safety signal inputs                                     | floating contacts (ASi node 1) + antivalent opto-electronic protective devices (ASi node 2)   | floating contacts (ASi node 1) + opto-electronic protective devices (ASi node 2)   |         |
| Switching current  | static 4 mA at 24 V,<br>dynamic 15 mA at 24 V (T = 100 μs)  |  |         |
| Power supply   | out of AUX  |  |         |
| Power supply for external sensor                         | up to +30 °C  | 1200 mA out of AUX <sup>(3)</sup>  |         |
|  | at +40 °C   | 1000 mA out of AUX <sup>(3)</sup>  |         |
|  | at +55 °C   | 800 mA out of AUX <sup>(3)</sup>   |         |
|  | at +70 °C   | 600 mA out of AUX <sup>(3)</sup>   |         |
| Switching threshold                                      | for floating contacts: 10 mA, R < 150 Ω<br>for antivalent opto-electronic protective devices:<br>V <sub>in</sub> > 11 V for high level,<br>input current ≥ 2,5 mA at 15 V | for floating contacts: 10 mA, R < 150 Ω<br>for opto-electronic protective devices:<br>V <sub>in</sub> > 11 V for high level,<br>input current ≥ 2,5 mA at 15 V |         |
| OSSD input test pulses                                   | 0 ... 50 Hz   |  |         |
| OSSD input 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   |  |         |

| Article no.  | BWU3671   | BWU3696 |
|--|---|---------|
| <b>Display</b>                                     |   |         |
| LED ASI /FLT1 (red/green)                          | green: online<br>red: no data exchange<br>yellow/red flashing: address 0<br>red/green flashing: peripheral error <sup>(4)</sup>   |         |
| LED ASI /FLT2 (red/green)                          | green: online<br>red: no data exchange<br>yellow/red flashing: address 0<br>red/green flashing: peripheral error <sup>(4)</sup><br>red flashing: ASi node 2 is switched off because ASi node 1 is addressed 0 |         |
| LED AUX (green)                                    | 24 V DC AUX on  |         |
| LED CC (red)                                       | cross connection <sup>(4)</sup>   |         |
| LED S1 ... Sn (yellow)                             | state of inputs S1 ... S4   |         |
| <b>Environment</b>                                 |   |         |
| Applied standards                                  | EN 60529<br>EN ISO 13849-2<br>EN 61000-6-2<br>EN 61000-6-4<br>EN 61131-2<br>EN 62026-2<br>EN 62061 SIL3<br>EN ISO 13849-1 PLe cat 4   |         |
| Can be used in passively safe paths up to SIL3/PLe | no <sup>(5)</sup>   |         |
| Operating altitude                                 | max. 2000 m   |         |
| Ambient temperature                                | -30 °C ... +55 °C (up to max. +70 °C) <sup>(3)</sup> <sup>(6)</sup><br>(no condensation permitted)  |         |
| Storage temperature                                | -25 °C ... +85 °C   |         |
| Housing  | plastic, for DIN rail mounting  |         |
| Pollution Degree                                   | 2   |         |
| Protection category                                | IP20  |         |
| Tolerable loading referring to humidity            | according to EN 61131-2   |         |
| Allowable shock and vibration stress               | ≤ 15 g, T ≤ 11 ms<br>10 ... 55 Hz, 0,5 mm Amplitude   |         |
| Weight   | 160 g   |         |
| Dimensions (W / H / D in mm)                       | 22,5 / 99,6 / 114   |         |

(1) see table "Wiring rules"

(2) loop resistance ≤ 150 Ω



(4) see table "Peripheral fault indication"

(5) The module is not suitable for use in passively safe paths because an exclusion of errors cannot be assumed for the connection of the two potentials, ASi and AUX.

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



## Wiring rules

| Push-in terminals  |   |
|--|---|
| <b>General</b>   |   |
| Nominal cross section  | 2.5 mm <sup>2</sup>                                 |
| <b>Conductor cross section</b>                                     |   |
| Conductor cross section solid                                      | 0.2 ... 2.5 mm <sup>2</sup>                         |
| Conductor cross section flexible                                   | 0.2 ... 2.5 mm <sup>2</sup>                         |
| Conductor cross section flexible, with ferrule                     | without plastic sleeve: 0.2 ... 2.5 mm <sup>2</sup> |
|  | with plastic sleeve: 0.25 ... 2.5 mm <sup>2</sup>   |
| 2 conductors with same cross section, stranded, with TWIN ferrules | without plastic sleeve: 0.5 ... 1.5 mm <sup>2</sup> |
| AWG  | 24 ... 14   |
| Stripped insulation length   | 10 mm   |

| UL-specifications (UL508)  |   |
|--|---|
| <b>BWU1939, BWU2577, BWU2661, BWU2707, BWU2724, BWU2770, BWU2810, BWU3013, BWU3032, BWU3671, BWU3696</b> |   |
| 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.   |

| Article no. | Peripheral fault indication |                        |                 |                     |                    |
|-------------|-----------------------------|------------------------|-----------------|---------------------|--------------------|
|             | Cross connection            | Overload sensor supply | Overload output | AUX voltage missing | Sensor cable break |
| BWU1939     | •                           | –                      | –               | –                   | –                  |
| BWU2577     | –                           | –                      | •               | •                   | –                  |
| BWU2661     | –                           | –                      | •               | •                   | •                  |
| BWU2707     | •                           | –                      | –               | •                   | –                  |
| BWU2724     | •                           | –                      | •               | –                   | –                  |
| BWU2770     | •                           | –                      | –               | •                   | –                  |
| BWU2810     | •                           | –                      | •               | –                   | –                  |
| BWU3013     | •                           | –                      | –               | •                   | –                  |
| BWU3032     | •                           | –                      | –               | –                   | –                  |
| BWU3671     | • (1)                       | • (2)                  | –               | •                   | –                  |
| BWU3696     | • (1)                       | • (2)                  | –               | •                   | –                  |

(1) ASi node 1 only

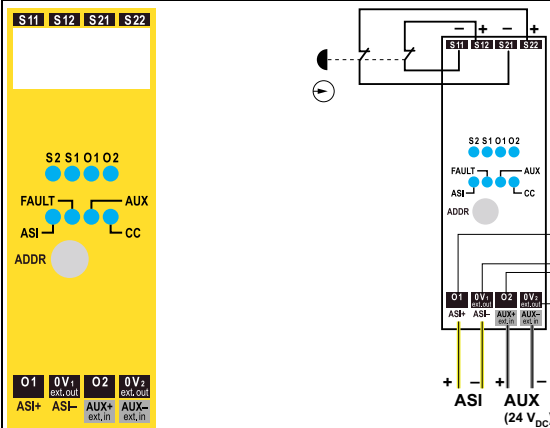
(2) ASi node 2 only

| Programming:  | ASi Bit-setting |    |           |    |
|---|-----------------|----|-----------|----|
|   | D0              | D1 | D2        | D3 |
| <b>Safe input</b>   |                 |    |           |    |
| BWU1939 / BWU2724 / BWU3013 / BWU3671 ASi node 1 / BWU3696 ASi node 1 | S11 / S12       |    | S21 / S22 |    |
| BWU2577   | S1              |    | S2        |    |
| BWU3671 ASi node 2 / BWU3696 ASi node 2                               | S3              |    | S4        |    |
| BWU2661   | sensor          |    |           |    |
| BWU2707 ASi node 1  | S11 / S12       |    | S21 / S22 |    |
| BWU2707 ASi node 2  | S31 / S32       |    | S41 / S42 |    |

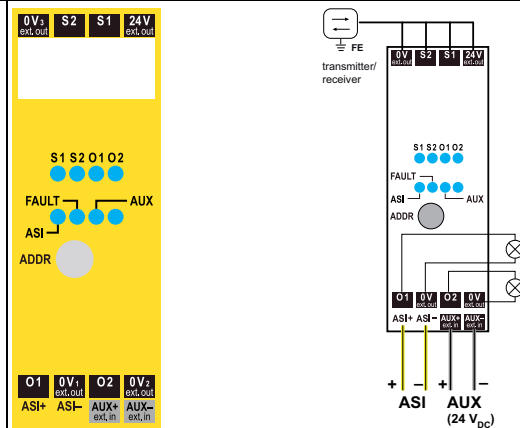
| Output  |                           |          |          |          |
|---|---------------------------|----------|----------|----------|
| BWU1939 / BWU2577 / BWU2724 / BWU2661 / BWU3013           | O1                        | O2       | not used | not used |
| BWU2707 ASi node 1 /                                      | O1                        | O2       | not used | not used |
| BWU2707 ASi node 2  | O3                        | O4       | not used | not used |
| Parameter bit   |                           |          |          |          |
|   | P0                        | P1       | P2       | P3       |
| BWU1939 / BWU2577 / BWU2661 / BWU2707 / BWU2724 / BWU3013 | 0: off / 1: on (Watchdog) | not used | not used | not used |
| BWU3671 / BWU3696   | not used                  | not used | not used | not used |

## Connections:

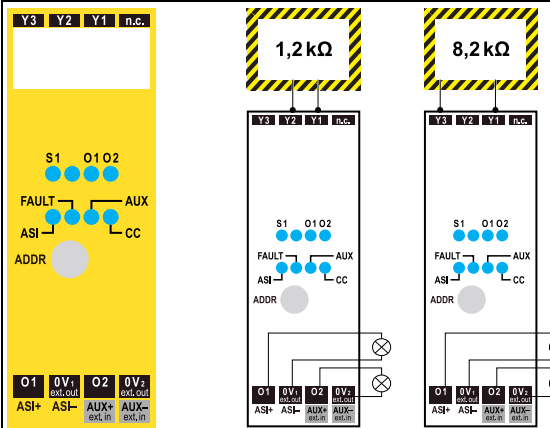
### BWU1939



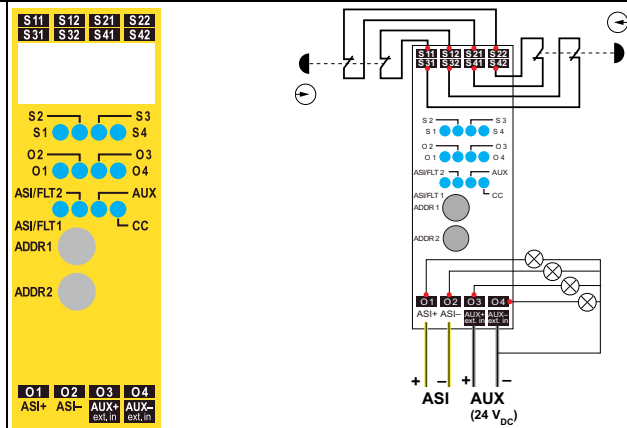
### BWU2577



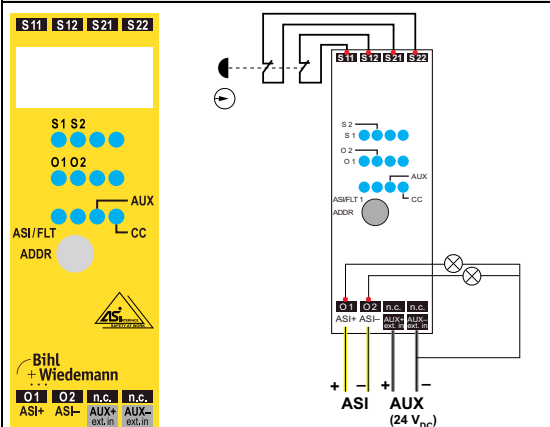
### BWU2661



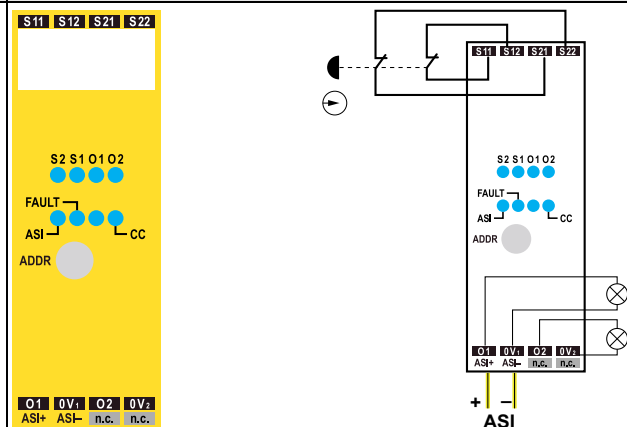
### BWU2707



### BWU3013



### BWU2724



| BWU3671  |   |
|--|---|
| Terminals  | Description   |
| S22, S21, S12, S11                               | terminal safety 2-channels input 1 (ASi node 1) for floating contacts             |
| S4   | terminal safety 2-channels input 2 (ASi node 2) for antivalent OSSD (low active)  |
| S3   | terminal safety 2-channels input 2 (ASi node 2) for antivalent OSSD (high active) |
| 0 V <sub>ext.out</sub> , 24 V <sub>ext.out</sub> | power supply for antivalent OSSDs (ASi node 2)                                    |
| ASi+, ASi-                                       | connection to the ASi bus   |
| ADDR1  | address socket ASi node 1   |
| ADDR2  | address socket ASi node 2   |
| AUX+ <sub>ext.in</sub><br>AUX- <sub>ext.in</sub> | power supply input  |
|  |   |
|  |   |
| BWU3696  |   |
| Terminals  | Description   |
| S22, S21, S12, S11                               | terminal safety 2-channels input 1 (ASi node 1) for floating contacts             |
| S3, S4   | terminal safety 2-channels input 2 (ASi node 2) for OSSD                          |
| 0 V <sub>ext.out</sub> , 24 V <sub>ext.out</sub> | power supply for OSSDs (ASi node 2)   |
| ASi+, ASi-                                       | connection to the ASi bus   |
| ADDR1  | address socket ASi node 1   |
| ADDR2  | address socket ASi node 2   |
| AUX+ <sub>ext.in</sub><br>AUX- <sub>ext.in</sub> | power supply input  |
|  |   |
|  |   |

### Accessories:

- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)