

Voltage converter 48 V/24 V

Voltage converter AUX 48 V to AUX 24 V

Connections for profile cables 1 x AUX 48 V to 1 x AUX 24 V as profile cable branch

or

Connections for profile cables 1 x ASi + 1 x AUX 48 V to 1 x M12 cable socket, angled, 5 poles for ASi/AUX 24 V

1 A output current

LED



(figure similar)

| Figure | Power supply (1) | Input voltage | Output voltage | Profile cable connection | Connection (2) | Round cable (3) | Protection category | Article no. |
|--------|-----------------------------|-----------------------|-----------------------|-------------------------------|--|-----------------|---------------------|----------------|
| | Voltage converter 48 V/24 V | 48 VDC (AUX) | 24 VDC (AUX) | 1 x AUX 24 V, 1 x AUX 48 V | profile cable branch | – | IP67 | BWU4248 |
| | Voltage converter 48 V/24 V | ASi + 48 VDC (AUX) | ASi + 24 VDC (AUX) | 1 x ASi, 1 x AUX 48 V | 1 x M12 cable socket, angled, 5-poles | 1 m | IP67 | BWU4249 |
| | Voltage converter 48 V/24 V | 48 VDC (AUX) | 24 VDC (AUX) | 1 x AUX 48 V | 1 x M12 cable socket, angled, 5-poles | 1 m | IP67 | BWU4250 |

(1)



Notice

48 V_{DC} **must not** be connected:

- to devices with 24 V_{DC} operating voltage (observe instructions of the manufacturer)
- to the ASi connection of a module
- to the ASi gateway

(2)

Connection: further connection options are available on request.

| M12 cable socket, angled | M12 cable socket, straight | M8 cable socket, straight | round cable / connecting wires |
|--------------------------|----------------------------|---------------------------|--------------------------------|
| PUR line: oil resistant | | | |
| | | | |

(3)

Cable: other cable lengths are available on request.

Under normal conditions (no bus termination or repeater), the permissible total length of the **ASi segment** is **max. 100 m**. The calculation should take into consideration that the length of the connection cable (**round cable**) for each connected **Passive Distributor** must be **doubled**. In the case of the **Active Distributors** (ASi slaves) however only the **one** ASi profile cable is counted.

Voltage converter 48 V/24 V

| Article No. | BWU4248 | BWU4250 | BWU4249 |
|--|---|---|---|
| Input | | | |
| Nominal voltage | – | ASi: 30,5 V _{DC} | |
| | AUX 48 V: 48 V _{DC} | | |
| Voltage range | – | ASi: 29 ... 32 V _{DC} | |
| | AUX 48 V: 48 V _{DC} + 10%/- 20% | | |
| Output | | | |
| Nominal voltage | – | ASi: 30,5 V _{DC} | |
| | AUX 24 V: 24 V _{DC} | | |
| Voltage range | – | ASi: 29 ... 32 V _{DC} | |
| | AUX 24 V: 24 V _{DC} ± 5% | | |
| Direct current | 1 A | | |
| 24 V power supply | short-circuit, overload and open-circuit proof | | |
| Display | | | |
| LED AUX IN (green) | on: AUX voltage 48 VDC at profile cable AUX In (gray) O.K. | | |
| LED AUX OUT (green) | on: AUX voltage 24 VDC at profile cable AUX OUT (black) O.K. | on: AUX voltage 24 VDC at M12 connection AUX OUT O.K. | on: AUX voltage 24 VDC at M12-connection ASi/AUX OUT O.K. |
| LED ASi (green) | – | on: ASi voltage O.K. | |
| Connection | | | |
| Profile cable connection | 1 x AUX 24 V (black) | – | 1 x ASi (yellow) |
| | 1 x AUX 48 V (gray) | | |
| Connection | profile cable branch | 1 x M12 cable socket, angled, 5 poles | |
| Round cable | – | 1 m | |
| | max. allowed tensile strain 10 N | | |
| Environment | | | |
| Applied standards | EN 60529 EN 61000-6-2 EN 61000-6-3 | | |
| Can be used in passively safe paths up to SIL3/PLe | yes ⁽¹⁾ | | no ⁽³⁾ |
| Operating altitude | max. 2000 m | | |
| Ambient temperature | -25 °C ... +70 °C ⁽²⁾ (no condensation permitted) | | |
| Storage temperature | -25 °C ... +85 °C | | |
| Housing | plastic, for screw mounting, suitable for cable ducts (installation depth ≥35 mm) | | |
| Pollution Degree | 2 | | |
| Protection category | IP67 | | |
| Tolerable loading referring to humidity | acc. EN61131-2 | | |
| Maximum tolerable shock and vibration stress | ≤15g, T≤11 ms 10 ... 55 Hz, 0,5 mm amplitude | | |
| Insulation voltage | ≥500 V | | |
| Weight | 120 g | 165 g | |
| Dimensions (W / H / D) in mm | 60 / 45 / 35 | | |

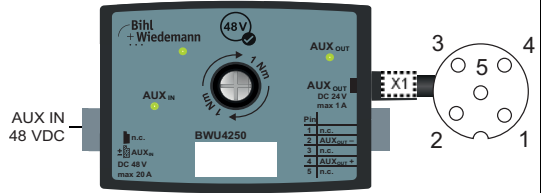
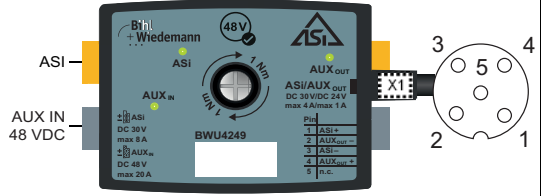
⁽¹⁾ The voltage converter is suitable for use in passively safe paths as it has no connection to any other potential (e.g. ASi).

⁽²⁾ Down to -25 °C with flexibly mounted cable, -30 °C only with fixed mounted cable.

⁽³⁾ The voltage converter 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.

Voltage converter 48 V/24 V

| Connections: M12 | | | | | | |
|------------------|----------------|-------|-----------|-------|-----------|------|
| Article No. | M12 connection | Pin1 | Pin2 | Pin3 | Pin4 | Pin5 |
| BWU4249 | X1 | ASi + | AUX OUT - | ASi - | AUX OUT + | n.c. |
| BWU4250 | X1 | n.c. | AUX OUT - | n.c. | AUX OUT + | n.c. |



| Connections: profile cable branch | |
|-----------------------------------|--|
| BWU4248 | <p>Diagram of BWU4248 voltage converter showing connections: AUX IN 48 VDC, AUX OUT 24 VDC, and AUX OUT connected to profile cable branch.</p> |