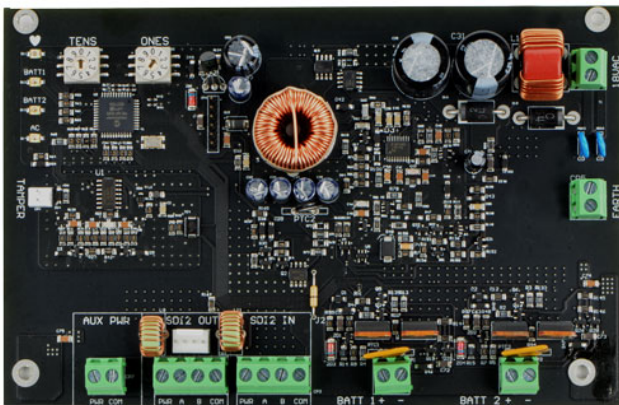


B520 Auxiliary power supply module, 2A 12V

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Invented for life



- ▶ Provides up to 2 A of 12 V standby current for Fire or Burglar Applications (4 A of Burglary alarm current)
- ▶ Supervises up to two 12 V 7-18 Ah batteries independently for up to 36 Ah of capacity
- ▶ Provides up to 80 hours of standby time
- ▶ Easy-to-read switch addressing
- ▶ Uses the Bosch standard TR1850 plug-in transformer

The B520 Auxiliary Power Supply Module is an auxiliary power supply expansion device that connects to compatible control panels through the SDI2 bus. This module is supervised and communicates all status changes to the control panel.

Industrial, commercial, and institutional facilities are typical installations for the B520 module. The B520 address switches allow for easy device addressing. The SDI2 Out terminals provide auxiliary power for SDI2 expansion devices, such as keypads. The AUX PWR terminals provides added auxiliary power capabilities for additional devices such as PIR motion detectors.

Functions

Supervision monitoring

The module monitors and communicates status information over the SDI2 bus for the following:

- Operation (Heartbeat)
- Battery 1 (BATT 1)
- Battery 2 (BATT 2)
- AC input power (AC)
- Battery OK
- Low Battery
- Missing Battery

Indicators

- Heartbeat [icon]. Blue LED flashing On and Off when system is operating normally. A steady On or Off LED indicates a system fault. Triple flash indicates communication failure.
- BATT 1 LED. Green steady On LED indicates the battery status of BATT 1 is operating normally. Flashing indicates low battery. Triple flash indicates battery charger failure. Off LED indicates a missing battery.
- BATT 2 LED. Green steady On LED indicates the battery status of BATT 2 is operating normally. Flashing indicates low battery. Triple flash indicates battery charger failure. Off LED indicates a missing battery.
- AC LED. Green steady On LED indicates the AC power is operational. A pulsating LED (3 pulses per second) occurs when a battery test is being performed. Flashing indicates low or failed AC.

Battery charging

Fully charged batteries, connected to the battery terminals, sustain power to the B520 in the event that the AC power fails.

If AC power input for the B520 fails (is absent, or low), the B520 automatically switches from primary power (AC) to secondary power (battery). When AC power is present, the B520 performs periodic battery tests to ensure battery life and usability.

Certifications and approvals

| Region | Regulatory compliance/quality marks | |
|--------|-------------------------------------|---|
| Europe | CE | |
| USA | UL | UL 365 - Police Station Connected Burglar Alarm Units |
| | UL | UL 609 - Standard for Local Burglar Alarm Units and Systems |
| | UL | UL 636 - Holdup Alarm Units and Systems |
| | UL | UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems (10th edition) |
| | UL | UL 985 - Household Fire Warning System Units (6th edition) |
| | UL | UL 1023 - Household Burglar Alarm System Units |
| | UL | UL 1076 - Proprietary Burglar Alarm Units and Systems |
| | UL | UL 1610 - Central Station Burglar Alarm Units |
| | CSFM | California State Fire Marshal |
| | FCC | Part 15 Class B |
| Canada | ULC | CAN/ULC S303 - Local Burglar Alarm Units and Systems |
| | ULC | CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm |
| | ULC | ULC-ORD C1023 - Household Burglar Alarm System Units |
| | ULC | ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems |
| | IC | ICES-003 - Information Technology Equipment (ITE) |

Installation/configuration notes

Mounting considerations

You can mount the B520 in a variety of enclosures. The B8103/D8103 enclosure supports up to two 12 V, 18 Ah batteries. Mounting in the B8103/D8103 requires the B12 Mounting Plate for D8103 Enclosure. The B10 supports either one 12 V, 18 Ah or up to two 12 V, 7 Ah batteries.

Wiring considerations

The B520 connects to a control panel using the SDI2 IN connections (PWR, A, B, COM). Use 12 AWG to 22 AWG (1.5 mm to 0.6 mm) wires from the power supply to the control panel.

The B520 provides auxiliary power to expansion modules via the SDI2 OUT (PWR, A, B, COM), or AUX Power (AUX PWR) connections using the screw terminal strip, or by using the interconnect wiring connection. Use 12 AWG to 22 AWG (1.5 mm to 0.6 mm) wires from the module to the SDI2 expansion module(s).

Compatibility

| | |
|----------------------------|---|
| Control panels | B9512G/B9512G-E (Up to 8 modules) B8512G/B8512G-E (Up to 4 modules) B6512 (Up to 4 modules) B5512/B5512E (Up to 4 modules) B4512/B4512E (Up to 2 modules) B3512 (Up to 2 modules) D9412GV4 v 2.xx (Up to 8 modules) D7412GV4 v2.xx (Up to 8 modules) |
| Enclosures | B8103 Universal Enclosure and D8103 Universal Enclosure (holds up to two 18 Ah, or two 7 Ah batteries) B10 Medium Control Panel Enclosure (Holds up to one 18 Ah, or two 7 Ah batteries) B12 Mounting Plate for the D8103 Enclosure D8108A Attack Resistant Enclosure D2203 Enclosure BATB-40 Enclosure AE1/AE2 Enclosures D8004 Transformer Enclosure* *The D8004 Transformer Enclosure is required when the B520 and TR1850 (18 VAC, 50 VA) Transformer are used in UL 864 Fire, or Combination Burg and Fire applications. |
| Transformer power supplies | TR1850 (18 VAC, 50 VA) TR1850-CA (18 VAC, 50 VA) for Canada |
| SDI2 interconnect cables | B501-10 (10 per pack) |

Parts included

| Quantity | Component |
|----------|---------------------|
| 1 | Module |
| 1 | Hardware pack |
| 1 | Installation manual |

Technical specifications

Properties

| | |
|------------------------------|---|
| Dimensions | 11.43 cm x 17.62 cm x 2.9 cm (4.5 in x 6.94 in x 1.15 in) |
| Maximum distance – Wire size | 305 m (1000 ft) - 0.65 mm (22 AWG) 305 m (1000 ft) – 2 mm (18 AWG) Unshielded wire only |

Power

| | |
|---|---|
| Input power | 18 VAC, 50 VA |
| Current output (maximum) | 2.0 A SDI2 Out and AUX Power (Combined) (up to 4.0 A of alarm current for Burglar Applications) |
| Current reserved for charging batteries | 150 mA |
| Current draw (from the control panel) | 15 mA |
| Voltage (rated range) | 11.5 to 12.2 VDC (special application) |
| Battery configuration | Supports two*, separate 12 V sealed lead acid batteries (7-18 Ah) for up to 36 amp. *Battery 1 is required for normal operations. Battery 2 is optional. |

Environmental considerations

| | |
|-------------------------|--|
| Temperature (operating) | +32° to +120° F (0° to +49°C) |
| Temperature (storage) | -4° to 140° F (-20° to +60° C) |
| Relative humidity | 5% to 93% at +32° (+90°F) non-condensing |

Ordering information**B520 Auxiliary power supply module, 2A 12V**

Provides auxiliary power to 12 VDC devices or to SDI2 modules.

Order number **B520**

Accessories**B10 Steel enclosure, medium, white**

White, steel enclosure. Accepts an optional lock and tamper switch. Measures 35.6 cm x 31.8 cm x 7.6 cm (14 in x 12.5 in x 3 in).

Order number **B10**

B8103 Universal enclosure, white

White steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.).

Order number **B8103**

D2203 ENCLOSURE, D2212

Gray steel enclosure. Accepts an optional lock and tamper switch. Measures 35.6 cm x 31.8 cm x 7.6 cm (14 in x 12.5 in x 3 in).

Order number **D2203**

D8103 Steel enclosure, large, grey

Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.).

Order number **D8103**

D8108A Attack resistant enclosure, large, grey

Grey steel enclosure measuring 41.5 cm x 41.5 cm x 9 cm (16 in. x 16 in. x 3.5 in.).

UL Listed. Includes a lock and key set.

Order number **D8108A**

AE1 Steel enclosure, medium, grey

Standard gray enclosure with keyed lock. Measures 35.6 cm x 31.8 cm x 7.6 cm (14 in x 12.5 in x 3 in).

Order number **AE1**

AE2 Fire enclosure, 14x12.5x3", red

Standard red enclosure with keyed lock. Measures 14 in. x 12.5 in. x 3 in. (35.6 cm x 31.8 cm x 7.6 cm).

Order number **AE2**

D8004 Transformer enclosure kit, grey

For applications that might require a remote transformer in an enclosure. Can be used with B Series control panels and D9412GV4/D7412GV4 control panels.

Order number **D8004**

B12 Mounting plate for D8103 enclosure

Required for mounting select control panels and other devices in B8103, D8103, D8108A, D8109, and BATB Battery Box enclosures.

Order number **B12**

TR1850 Transformer plug-in, 18V 50VA

For use in North America. Plug-in transformer with input: 120 VAC, 60 Hz, 0.50 A; output 18 VAC, 50 VA output.

Order number **TR1850**

TR1850-CA Transformer, plug-in, 18V 50VA, Canada

For use in Canada. Plug-in transformer with input: 120 VAC, 60 Hz, 0.50 A; output 18 VAC, 50 VA output.

Order number **TR1850-CA**

D101 Enclosure lock and key set

Short-body lock set with one key supplied. Uses the D102 (#1358) replacement key.

Order number **D101**

ICP-EZTS Dual tamper switch

Combination tamper switch with a wire loop for additional tamper outputs.

Order number **ICP-EZTS**

BATB-40 Battery box/enclosure, 22x21x7.25"

22 x 20.75 x 7.25" (56 x 53 x 18.5 cm). Holds two dry or wet cell batteries. Optional BATB-SHELF battery shelf increases number of batteries. Suitable for residential/commercial fire or burglary applications.

Order number **BATB-40**

B520-B Auxiliary power supply kit w/B10, SDI2

B520 Auxiliary Power Supply Module kit. Includes a TR1850 transformer, and a B10 Medium Control Panel Enclosure.

Order number **B520-B**

B520-C Auxiliary power supply kit w/D8103, SDI2

B520 Auxiliary Power Supply Module kit. Includes a TR1850 transformer, a B12 mounting plate, and a B8103 Universal Enclosure.
Order number **B520-C**

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