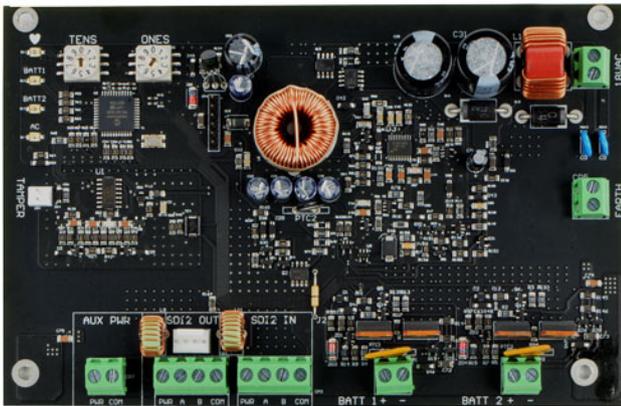


B520 Auxiliary Power Supply Module

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BOSCH
Invented for life



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

The B520 Auxiliary Power Supply Module is a fully supervised, addressable SDI2 bus device that provides an integrated auxiliary power supply solution for Bosch control panels.

System overview

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 back to the control panel all status changes.

Industrial, commercial, and institutional facilities are typical installations for the B520 module. The B520 rotary switches allow for ease of use in 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's.

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 error. 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 sec.) 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 fails (is absent, or low) on the B520, 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

US	<ul style="list-style-type: none"> UL 365 – Police Station Connected Burglar Alarm Units and Systems UL 609 – Local Burglar Alarm Units and Systems UL 636 – Holdup Alarm Units and Systems UL 864 – Control Units and Accessories for Fire Alarm Systems UL 985 – Household Fire Warning System Units UL 1023 – Household Burglar Alarm System Units UL 1076 – Proprietary Burglar Alarm Units and Systems UL 1610 – Central Station Burglar Alarm Units FCC Part 15 Class B
Canada	<ul style="list-style-type: none"> CAN/ULC S303 – Local Burglar Alarm Units and Systems CAN/ULC S304 – Signal Receiving Centre and Premise Alarm Control Units ULC-ORD C1023 – Household Burglar Alarm System Units ULC-ORD C1076 – Proprietary Burglar Alarm Units and Systems ICES-003 – Digital Apparatus

Region	Certification	
USA	UL	20121010-S5579
	CSFM	see our website

Installation/configuration notes

Mounting Considerations

You can mount the B520 Auxiliary Power Supply Module in a variety of enclosures for optimal situations.

Mounting in the D8103 requires the addition on the B12 Mounting plate.

The D8103 enclosure supports up to two 12V, 18Ah batteries. The B10 supports either one 12V, 18Ah or up to two 12V, 7Ah 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).

Parts included

Quantity	Component
1	B520 Auxiliary Power Supply module
1	Hardware pack
1	Literature pack

B520 Kit, B10 Enclosure

Kit contents include:

- B520 Aux Power Supply
- TR1850 transformer
- B10 white enclosure

Order number: **B520-B**

B520 Kit, D8103 Enclosure

Kit contents include:

- B520 Aux Power Supply
- TR1850 transformer
- B12 mounting plate
- D8103 gray, steel enclosure

Order number: **B520-C**

Technical specifications

Properties

Board 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
Compatibility	GV4 Series control panels (Up to 8 B520 Auxiliary Power Supply Modules per control panel) D8103 Enclosure B10 Large Control Panel Enclosure B12 Mounting Plate for the D8103 Enclosure D8108A Attack Enclosure D2203 Enclosure BATB-40 Enclosure AE1, AE2 Enclosures D8004 Transformer Enclosure*
B501-10	Interconnect cables (10 per pack)

*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.

Power Input

Transformer Power Supply	TR1850 (18 VAC, 50 VA) TR1850-CA (18 VAC, 50 VA) for Canada
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Power Output

Current Available (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 Drawn from the 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.

Enclosure Battery Considerations

D8103	Holds up to two 18 Ah, or two 7 Ah batteries
B10	Holds up to one 18 Ah, or two 7 Ah batteries

Environmental Considerations

Operating Temperature	+32° to +120° F (0° to +49°C)
Storage Temperature	-4° to 140° F (-20° to +60° C)
Relative Humidity	5% to 93% at +32° (+90°F) non-condensing
Use	Intended for indoor use.

Ordering information

B520 Auxiliary Power Supply Module

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

Order number **B520**

Accessories

B10 Medium Control Panel Enclosure

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**

D2203 Enclosure

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 Enclosure

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

Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). UL Listed. Includes lock and key set. B520, B4512, and B5512 require the B12 mounting plate.

Order number **D8108A**

AE1 Standard Enclosure (Gray)

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 Standard Enclosure (Red)

Standard red 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 **AE2**

D8004 Transformer Enclosure

For applications such as fire alarm that might require a transformer enclosure.

Order number **D8004**

B12 Mounting Plate for D8103 Enclosure

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

Order number **B12**

TR1850 Transformer

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**

D101 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

The BATB-40 Battery Box holds two dry or wet cell batteries. The box can be used with fire alarm systems or intrusion systems.

Order number **BATB-40**

B520 Kit, B10 Enclosure

B520 Auxiliary Power Supply kit. Includes a TR1850 transformer and a B10 White, steel enclosure.

Order number **B520-B**

B520 Kit, D8103 Enclosure

B520 Auxiliary Power Supply kit. Includes a TR1850 transformer, a B12 mounting plate, and a D8103 Gray, steel enclosure.

Order number **B520-C**

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