

Security Control Panel Assembly Mounted in a 24 in. x 30 in. Enclosure

Installation Instructions

Part No. 24-10613-39, Rev. C
Issued December 2017

SPA1B100-1D10, SPA1B200-1D10, SPA1B300-2D10, SPA1B400-2D10

Refer to the [QuickLIT Web site](#) for the most up-to-date version of this document.

Applications

The 24 in. x 30 in. Security Control Panel is a pre-wired, preassembled standard control panel and enclosure that contains a CK721-A network controller and/or S300-DIN-RDR2SA (also called RDR2S-A) modules. The control panel is shipped complete, mounted in a steel enclosure. The panel is equipped with the required number of 120 VAC/24 VDC power supplies. The power supply has Uninterruptible Power Supply (UPS) capability with the addition of factory-wired gel cell batteries (S300-BAT), which are sold separately. These enclosures are designed specifically for security control requirements, with battery brackets that do not need to be removed to install the batteries, a lift-off door, a pre-wired door tamper switch, and a lockable door with key. Space is reserved on specific models for the addition of future components.

Repair Information

If the Security Control Panel Assembly fails to operate within its specifications, replace the failed component. Contact Global Security Solutions Technical Support at (866) 893-0423 or (414) 524-1214, or by email at support.globalsecuritysolutions@jci.com. End users can contact their local branch or authorized dealer. For the nearest office, visit <http://www.johnsoncontrols.com/location-finder>.

Refer to the *Security Enclosure Components Catalog Page* (LIT-1900572) to order components separately.

Parts Included

- 24 in. x 30 in. (61 cm x 76.2 cm) enclosure, Type 1 with keyed lock, door tamper switch, and battery support brackets
- CK721-A network controller and up to four RDR2S-A two-door interface modules
- One or two S300-DIN-L-PS 24 VDC, 5 A power supplies



Figure 1: Security Control Panel Mounted in a 24 in. x 30 in. Enclosure

Cable Requirements

Description	Recommended Cable Type ^{1, 2}	Maximum Segment Length
CK721-A: RS485A, RS485B RDR2S-A: RS485+/-	Listed, 22 AWG, stranded, copper, hook-up wire	Limited to within cabinet.
	Listed, 18 AWG, 3-conductor, stranded, shielded, copper	4,000 ft (1,219 m) maximum
CK721-A: ICOM1, ICOM2 RDR2S-A: Door Contact	Belden® 8442, 22 AWG, 1 twisted pair, stranded, unshielded, copper	500 ft (152 m)
CK721-A: OUT1 RDR2S-A: Door Strike, Shunt	Belden 9740, 18 AWG, 1 twisted pair, stranded, unshielded, copper	Depends on power requirements of the device. Voltage to the device must not be reduced more than 10% over the 18 AWG wire, measured when energized.
Request to Exit (RDR2S-A only)	Belden 8442, 22 AWG, 1 twisted pair, stranded, unshielded, copper	500 ft (152 m)
Reader Power (RDR2S-A only)	Belden 9740, 18 AWG, 1 twisted pair, stranded, unshielded, copper	Refer to reader manufacturer's specification for power requirements.
Reader Data0/Data1 (RDR2S-A only)	Belden 9744, 22 AWG, 2 twisted pairs, stranded, unshielded, copper	500 ft (152 m). Refer to reader manufacturer's specification for data requirements.
RS232 A, RS232 B	Listed DB9 F/F AT Null Modem cable	25 ft (7 m). Cable must remain in the same room as the CK721-A.
Ethernet	Listed, Category 5, 24 AWG, solid, 2 pair or 4 pair type	354 ft (100 m). Cable, RJ45 connector, and RJ45 crimp tool to be supplied by customer.

1. All data cables should be physically separated from power lines. If conduit is used, do not run data cables in the same conduit as power cables or certain door strike cables, such as strike voltage greater than 42 V or magnetic door locks without Electromagnetic Interference (EMI) suppression. All cables must conform with National Electrical Code, NFPA 70; or for Canadian installations, refer to the Canadian Electric Code C22.1.
2. Shielded cable is not required but is strongly recommended to minimize the effects of electromagnetic interference or radio frequency noise.

UL 294 Performance Levels

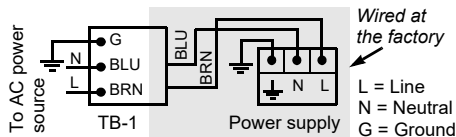
	Destructive Attack	Line Security	Endurance	Standby Power
SPA1B100-1D10	Level I	Level II	Level IV	Level II
SPA1B200-1D10	Level I	Level II	Level IV	Level II
SPA1B300-2D10	Level I	Level II	Level IV	Level II
SPA1B400-2D10	Level I	Level II	Level IV	Level II

Mounting and Connecting the Panels

- Mount the panel on a wall or other mounting surface located in a restricted-access area.
- The horizontal distance between the mounting holes is 16.75 in. (42.5 cm); the vertical distance is 27.5 in. (69.9 cm). Mounting hole diameter is 0.436 in. (1.1 cm).
- Ensure the door can swing fully open.
- Mount the panel in a location where airflow is uninhibited over the exposed surfaces.
- Remove the back plate before securing the panel to the mounting surface and reinstall it when mounting is complete.

AC Power Connection

- Put the AC power wiring through a knockout.
- Connect the AC power wiring to terminal block TB-1.
- Do not connect the DC power cable to the module until all wiring is complete



WARNING: Risk of Electric Shock.

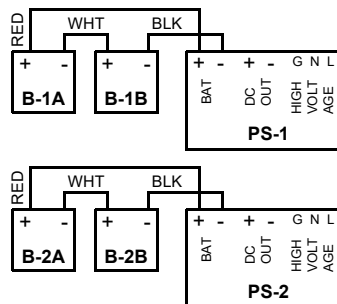
Disconnect the power supply before making electrical connections. Contact with components carrying hazardous voltage can cause electric shock and may result in severe personal injury or death.

S300-BAT Battery Connection

The optional S300-BAT feature uses two PowerSonic, Model PS-1270, 12 VDC, 7 Ah, sealed lead acid batteries per power supply. The batteries should be replaced every three years to ensure proper operation.

The RED (+), BLK (-), and WHT cables are provided with the enclosure.

Replace the batteries whether or not they have been placed into use by an AC power failure. Observe the polarity when connecting the batteries.



Field Devices

For information on wiring the CK721-A controller or the RDR2S-A module, refer to the documentation provided with these devices. Use a separate Class 2 transformer or power supply for door strike power. Under no circumstances connect a door strike to the enclosure power supply.

Selection Chart

Product Code Number	Description
SPA1B100-1D10	24 in. x 30 in. (61 cm x 76.2 cm) security control panel with CK721-A controller, RDR2S-A module, and one power supply
SPA1B200-1D10	24 in. x 30 in. (61 cm x 76.2 cm) security control panel with CK721-A controller, two RDR2S-A modules, and one power supply

Product Code Number	Description
SPA1B300-2D10	24 in. x 30 in. (61 cm x 76.2 cm) security control panel with CK721-A controller, three RDR2S-A modules, and two power supplies
SPA1B400-2D10	24 in. x 30 in. (61 cm x 76.2 cm) security control panel with CK721-A controller, four RDR2S-A modules, and two power supplies

Technical Specification

Security Control Panel Assembly Mounted in a 24 in. x 30 in. Enclosure	
Electrical Rating	SPA1B100-1D10: 120 VAC, 1.8 A, 50/60 Hz SPA1B200-1D10: 120 VAC, 1.8 A, 50/60 Hz SPA1B300-2D10: 120 VAC, 3.6 A, 50/60 Hz SPA1B400-2D10: 120 VAC, 3.6 A, 50/60 Hz
Enclosure Rating	NEMA Type 1
Ambient Operating Condition	32 to 122°F (0 to 50°C), 10 to 85% RH, noncondensing
Dimensions (Width x Height x Depth)	24 in. x 30 in. x 6.62 in. (61 cm x 76.2 cm x 16.8 cm)
Ambient Storage Condition	-4 to 158°F (-20 to 70°C), 5 to 95% RH, noncondensing
Compliance	United States: UL Listed under UL 1076 for Proprietary Burglar Alarm Units and Systems, and under UL 294 for Access Control Systems Units; This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna. • Increase the separation between the equipment and receiver. • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Consult the dealer or an experienced radio/TV technician for help. The user is cautioned that changes and modifications made to the equipment without approval of the manufacturer could void the user's authority to operate this equipment. Canada: CAN ICES-3 (B)/NMB-3(B); cUL Listed under ULC/ORD-C1076 Proprietary Burglar Alarm Units and Systems Europe: CE Mark – Johnson Controls, declares that this product is in compliance with the EMC Directive and the Low Voltage Directive.



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