

Security Control Panel Assembly Mounted in a 20 in. x 42 in. Enclosure

Installation Instructions

Part No. 24-10638-12, Rev. A
Issued March, 2012

SPA1D20012F10, SPA0D20012F10, SPA1D200-2F10, SPA0D200-2F10

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

Applications

The 20 in. x 42 in. Security Control Panel is a pre-wired, preassembled standard control panel and enclosure that contains two S300-DIN-RDR8S (also called RDR8S) modules, and, optionally, a CK721-A network controller. 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, mounted on the panel door. The power supply has Uninterruptible Power Supply (UPS) capability. Using the factory cables, the UPS function is activated by connecting batteries (S300-BAT). These enclosures are designed specifically for door access control for up to 16 doors, with battery brackets, a wiring trough for excess cables, a lift-off door, 5 A circuit breaker for controllers, channels for wiring routing, quick disconnects for power, a pre-wired door tamper switch, and a lockable door with key.

Repair Information

If the Security Control Panel Assembly fails to operate within its specifications, replace the failed component. For a replacement, contact the nearest Johnson Controls® representative.

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

Parts Included

- 20 in. x 42 in. (50.8 cm x 106.7 cm) enclosure, Type 1 with keyed lock, 120 VAC outlet (optional), 5 A circuit breaker, door tamper switch, and battery support brackets
- CK721-A network controller (optional) and two RDR8S eight-door interface modules
- Two S300-DIN-L-PS 24 VDC, 5 A power supplies

Mounting and Connecting the Panels

- Mount the panel on a wall or other mounting surface located in a restricted-access area.
- Use the mounting template supplied with the panel.
- The horizontal distance between the mounting holes is 17 in. (43.2 cm); the vertical distance is 40.4 in. (102.7 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.
- Leave the 2 black plastic button caps in place until all pipe or conduit connections are completed. The button caps prevent dust and metal chips from accidentally getting into the cabinet electronics.



Figure 1: Security Control Panel Mounted in a 20 in. x 42 in. Enclosure

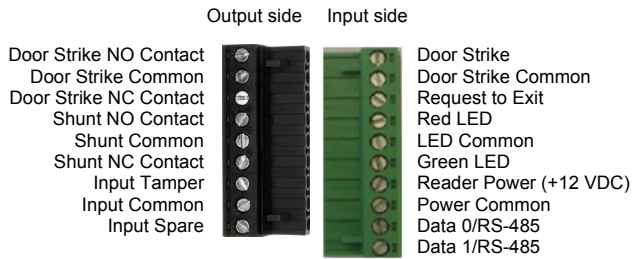
Cable Requirements

Description	Recommended Cable Type ^{1, 2}	Recommended Composite Cable Type ¹	Maximum Segment Length
CK721-A: RS485A, RS485B RDR8S: RS485+/-	Listed, 18 AWG, 3-conductor, stranded, shielded, copper	Listed, 18 AWG, 3-conductor, stranded, shielded, copper	4,000 ft (1,219 m) maximum
CK721-A: ICOM1, ICOM2 RDR8S: Door Contact	Belden® 8761, 22 AWG, 1 twisted pair, stranded, unshielded, copper	Belden B558AFS Shielded Riser Rated or Belden B658AFS Shielded Plenum Rated	500 ft (152 m)
CK721-A: OUT1 RDR8S: Door Strike, Shunt	Belden 8760, 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 (RDR8S only)	Belden 8761, 22 AWG, 1 twisted pair, stranded, unshielded, copper		500 ft (152 m)
Reader Power (RDR8S only)	Belden 8760, 18 AWG, 1 twisted pair, stranded, unshielded, copper		Refer to reader manufacturer's specification for power requirements.
Reader Data0/Data1 (RDR8S only)	Belden 8723, 22 AWG, 2 twisted pairs, stranded, shielded, 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	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	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 30 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.

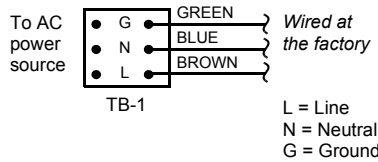
Door Termination

- Terminate door 1 to 4 first, since the connectors are located at the back rows.
- Single Door Connector Termination (typical of 8):



AC Power Connection

- Put the AC power wiring through a knockout.
- Connect the AC power wiring to terminal block TB-1.



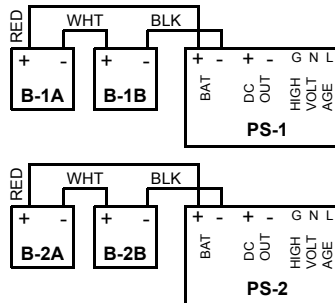
WARNING: Risk of Electric Shock.

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. To ensure proper operation, the batteries should be replaced every three years whether or not they have been placed into use by an AC power failure.

The RED (+), BLK (-), and WHT cables are provided with the enclosure. Observe the polarity when connecting the batteries.



Field Devices

For information on wiring the CK721-A controller or the RDR8S 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
SPA1D20012F10	20 in. x 42 in. (50.8 cm x 106.7 cm) security control panel with a CK721-A controller, two RDR8S modules, a 5 A circuit breaker, a 120 VAC outlet, and two power supplies
SPA0D20012F10	20 in. x 42 in. (50.8 cm x 106.7 cm) security control panel with two RDR8S modules, a 5 A circuit breaker, a 120 VAC outlet, and two power supplies
SPA1D200-2F10	20 in. x 42 in. (50.8 cm x 106.7 cm) security control panel with a CK721-A controller, two RDR8S modules, a 5 A circuit breaker, and two power supplies
SPA0D200-2F10	20 in. x 42 in. (50.8 cm x 106.7 cm) security control panel with two RDR8S modules, a 5 A circuit breaker, and two power supplies

Technical Specification

Security Control Panel Assembly Mounted in a 20 in. x 42 in. Enclosure	
Electrical Rating	SPA1D20012F10: 120 VAC, 3.6 A, 50/60 Hz SPA0D20012F10: 120 VAC, 3.6 A, 50/60 Hz SPA1D200-2F10: 120 VAC, 3.6 A, 50/60 Hz SPA0D200-2F10: 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)	20 in. x 42 in. x 7.5 in. (50.8 cm x 107 cm x 19.1 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; FCC compliant to the limits for a Class B digital device, pursuant to Part 15 of the FCC rules Canada: Class B digital apparatus, complies with Canadian ICES-003; cUL Listed for Signaling Appliance Europe: CE Mark – Johnson Controls, Inc., declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and LVD 2006/95/EC. Australia and New Zealand: C-Tick Mark, Australia/NZ Emissions Compliant



Installation of Ferrite Clamps for CE Compliance

- Clamp the ferrite clamp provided with the panel to the panel input power at the circuit breaker (see the left picture).
- Wrap the Ethernet cable once around the clamp, and clamp it to the cable (see the right picture).



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