Security Expert

WARNING:

The equipment is to be installed in accordance with:

The Product installation instructions, UL 681 - Installation & Classification of Burglar & Holdup Systems, UL 827 - Central-Station Alarm Services, CAN/ULC-S301, Central & Monitoring Station Burglar Alarm Systems, CAN/ULC-S302, Installation & Classification of Burglar Alarm Systems for Financial & Commercial Premises, Safes & Vaults, CAN/ULC-S561, Installation & Services for Fire Signal Receiving Centers & Systems, The National Electrical Code, ANSI/NFPA 70, The Canadian Electrical Code, Part I, CSA C22.1, The Local Authority Having Jurisdiction (AHJ).

SP-C
Security Purpose Controller

Installation, Power Limited and Non-Power Limited Wiring

- All circuits comply with the requirements for inherent power limitation and are Class 2.
- A minimum of 1/4" (6.35mm) physical separation must be respected between power limited and non power limited wiring (Battery Wires and AC Wires).

Servicing

- Disconnect DC Power and Telephone Line before servicing.

Earth Ground Connection

- Metallic enclosure must be grounded to earth ground.

CAUTION: INCORRECT WIRING MAY RESULT IN DAMAGE TO THE UNIT

Operating Voltage	11-14V DC
Operating Current	120mA (Typical)
DC Output (Auxiliary)	10.45-13.85VDC 0.7A (Typical) Electronic Shutdown at 1.1A
Bell DC Output (Continuous)	14.4-13.45VDC 8 Ohm 30W Siren or 1.1A (Typical) Electronic Shutdown at 1.6A
Bell DC Output (Inrush)	1500mA
Total Combined Current	3.4A (Max)
Electronic Disconnection	9.0VDC
Communication (Ethernet)	1 10/100Mbps Ethernet Communication Link
Communication (Serial)	1 RS-485 Communication Interface Port
Communication (Modem)	1 2400bps Modem Communication
Readers (Standard Mode)	2 Wiegand or clock data readers providing one Entry/Exit Door or two Entry/Exit only Doors
Readers (Multiplex-reader Mode)	4 Wiegand Readers (connected in Multiplex Reader mode) providing any combination of Entry or Exit for two Doors
Inputs (System Inputs)	8 High Security Monitored Inputs
Outputs	4 50mA (Max) Open Collector Output for reader LED and beeper or general functions
Relay Outputs	2 FORM C Relays - 7A max
Operating Temperature	0° to 49°C (32° to 122°F)
Storage Temperature	-10° to 85°C (14° to 185°F)
Humidity	0% to 85% non condensing, indoor use only (Relative Humidity)
Dimensions (L x W x H)	156 x 90 x 60mm (6.14 x 3.54 x 2.36")
Weight	376g (13.26oz)
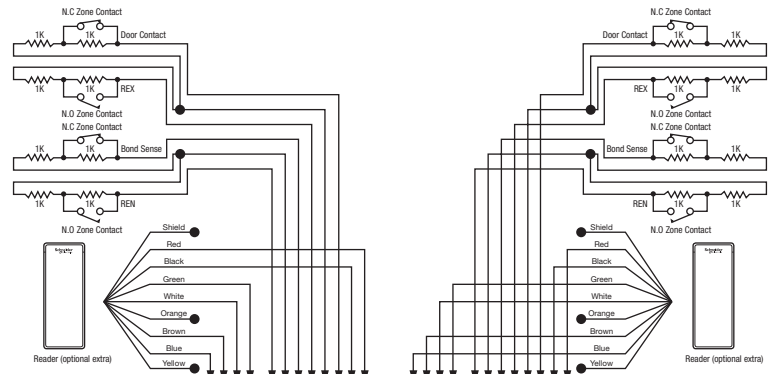
Typical Zone Circuits

EOL Resistor Zone configuration		
Value 1	Value 2	Monitored Status
No Resistor	No Resistor	Open, Closed
1k	1k	Open, Closed, Tamper, Short
2k2	6k8	Open, Closed, Tamper, Short
10k	10k	Open, Closed, Tamper, Short
2k2	2k2	Open, Closed, Tamper, Short
4k7	2k2	Open, Closed, Tamper, Short
4k7	4k7	Open, Closed, Tamper, Short
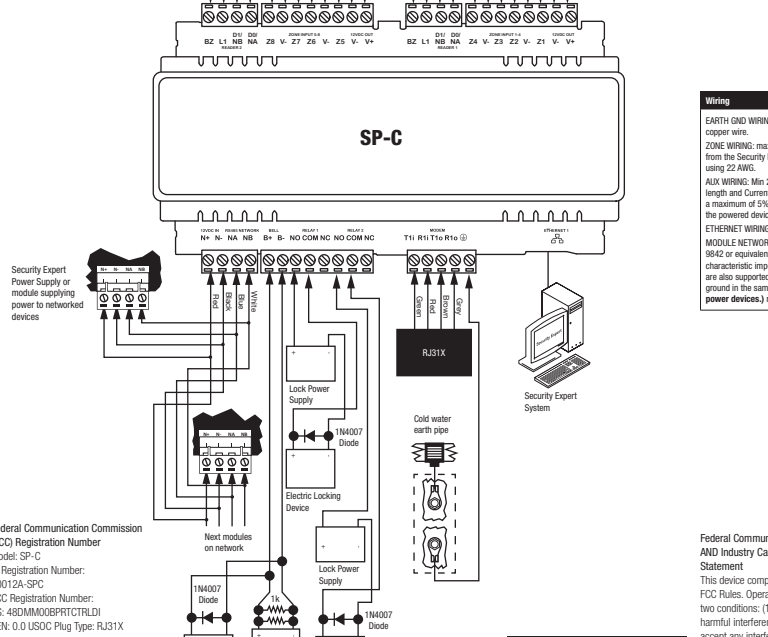
Programmable Outputs (L1 & BZ)

If not used for Reader functions the Reader outputs (L1 & BZ) can be used as general purpose ouputs. They are Open Collector Outputs & switch to 0V. The outputs can be used to activate relays, sounders and lights.
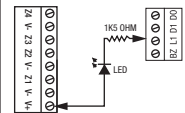
Mounting

The Security Purpose Controller is supplied as a DIN Rail mount module and is designed to mount on standard DIN Rail. Ensure that there is adequate clearance around all sides of the Controller and air flow to the vents of the unit is not restricted.

Installation:
1. Hook the lower tabs under the bottom edge of the DIN Rail.
2. Push the Controller against the DIN Rail mount and press firmly on the top centre of the Controller until the upper tab clips over the upper rail.

Removal:
1. Insert a flat blade screwdriver into the hole in the white tab at the top centre of the Controller.
2. Lever the tab up and rotate the unit off the DIN Rail mount.

Wiring

EARTH GND WIRING: Minimum 14AWG solid copper wire.

ZONE WIRING: maximum distance of 300m (1000ft) from the Security Purpose Controller when using 22 AWG.

AUX WIRING: Min 22AWG Max 16AWG. (Depends on length and Current consumption). For wire/cable size, a maximum of 5% voltage drop at the terminals of the powered device has to be observed.

ETHERNET WIRING: CAT5e / CAT6 max 100m (330 ft)

MODULE NETWORK WIRING: Recommended Belden 9842 or equivalent. (24AWG twisted pair with characteristic impedance of 120ohm or CAT5e / CAT6 are also supported for Data Transmission when using ground in the same cable. **Do not use extra wires to power devices.**) max 900m (3000ft).

External Power Supply

For UL applications, must be powered by a UL Listed (UL 603 or UL 294) power limited power supply capable of supplying at least 4 hours of standby power. For ULC applications, must be powered by a ULC Listed (CAN/ULCS318 or CAN/ULC-S319) power limited power supply capable of supplying at least 24 hours.

Zone Options

The onboard reader ports use zone inputs 1 – 8 as door contact, REX, bond sense and REN inputs respectively. Any of these inputs that are not configured for use with the Onboard Reader may be used as general purpose zone inputs. Refer to the Security Purpose Controller Installation Manual for instructions on programming the onboard reader.

Configuration

Connect Reader 2 D0 to L1 then power cycle the Controller to reset it to factory defaults. Note: this will not reset the Ethernet settings.
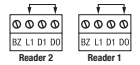
Connect Reader 1 D0 to L1 then power cycle the Controller to force it to use 192.168.111.222 as it's IP address.

LED	Description	
Power	Green	Power is applied
	Off	Low or no power is applied
Status	Flashing green	Normal operation
Fault	Red	A fault has occurred
	Off	Normal operation
Ethernet	Green	Ethernet connection present
	Off	No Ethernet connection detected
	Fast green flash	Active Ethernet data
Modem	Green	The modem has control of the telephone line
	Off	Modem not active
R1 / R2	Short red flash	Data received but format is incorrect
	Long red flash	Correctly formatted data received
Relay 1/2	Red	Relay is closed
	Off	Relay is open
Bell	Green	Bell is turned on
	Off	Bell is connected and turned off
	1 green flash	Bell is turned on, and the circuit is in over-current protection
	2 green flashes	Bell is turned off, and the circuit is cut, damaged or tampered
Zone 1-8	Off	The Input is not programmed
	Red	Input is in the OPEN state
	Green	Input is in the CLOSED state
	Flashing red	Input is in the TAMPERED state
	Flashing green	Input is in the SHORTED state