

# SL24+ Installation Guide

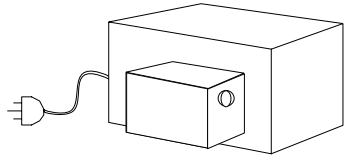
Premise unit location and wiring methods shall be in accordance with the National Electrical Code, ANSI / NFPA 70-1987.

**WARNING** - Installation of other equipment or devices within the SL24+, or powering of non-approved equipment or devices from the SL24+, may cause system failure or damage, may void all warranties, and may void the UL Listing.

## Specifications

**SL24+ POWER SUPPLY** - Do not connect to a receptacle controlled by a switch.

INPUT - 115 V AC 60 Hz, 1 A  
OUTPUT - 24 V AC, 56 VA



**STANDBY/SURGE BATTERY PACKS**  
Both battery packs must always be installed.

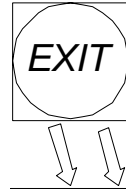
System Battery - 24 V DC, 1.2 AH  
Lock Battery - 24 V DC, 1.2 AH

UPS load test should be performed at least once per year. With the primary AC fuse removed for 5 minutes, the system must function normally while powered only by the standby batteries.

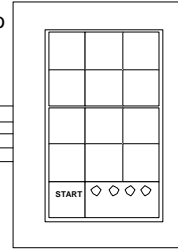
**FUSES** - All fuses are 5mm x 20mm, 250V, Time-Delay (Slo-Blo).

Power Supply	1 A
F1 Auxillary Keypad Power	1 A
F2 24 V AC Power	2 A
F3 SYS BAT Power	10 A
F4 SYS BAT Charge	0.5 A
F5 LOCK BAT Charge	0.5 A
F6 LOCK BAT Power	10 A

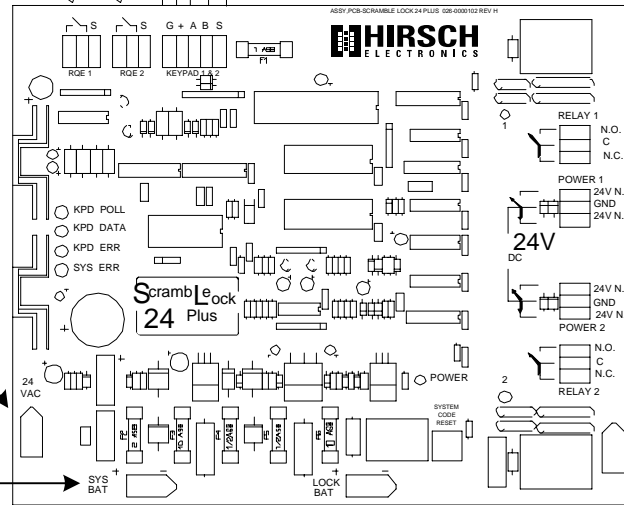
Request-to-Exit devices.  
Normally Open contact.  
Cable is 22 gauge twisted shielded pair.



SCRAMBLEPAD® connection.  
Maximum 2 keypads. Refer to *ScramblePad Installation Guide*.



UL Note:  
Keypad annunciates continuously when box TAMPER is active. Keypad stops annunciation after SL24+ door has been closed 15 seconds.



## SYSTEM CODE RESET PUSHBUTTON

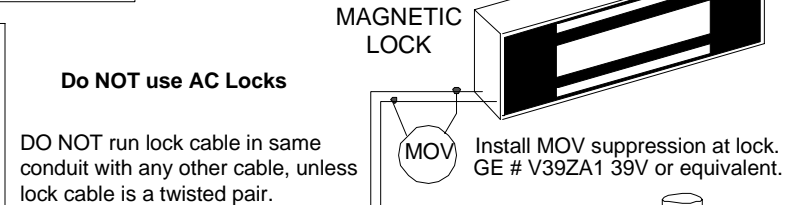
1 Second	Resets any actuated relay.
5 seconds	Resets system security code to factory default 123.
30 seconds	Resets system. Clears all memory.

## SYSTEM STATUS LEDS

POWER	On with AC or DC power.
KPD POLL	Flash indicates system polling keypads.
KPD DATA	Flash indicates keypad poll response.
KPD ERR	Flash on keypad data errors.
SYS ERR	On steady for system failure.
RELAY 1,2	On while relay is actuated.

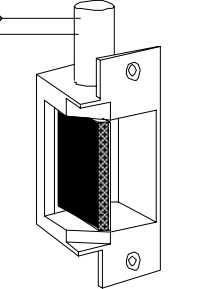
SCRAMBLEPAD Cable - 2 twisted shielded pairs. 4 conductor twisted shielded acceptable.

AWG	DS37L	DS37L-HI	2 DS37L	DS37L + DS37L-HI	2 DS37L-HI
22	750'	450'	375'	275'	225'
18	1850'	1150'	925'	700'	575'



## RELAY CONTACT RATINGS

Powered Contacts	24 V DC unregulated (18V-27V), 16A inrush current for 0.5 second, 0.3A continuous holding current
Unpowered Contacts	10A resistive at 24 V DC



## 24 V DC LOCK POWER CABLE - DISTANCE VS WIRE GAUGE CALCULATION

The maximum distance for the lock power cable is a function of wire gauge and lock current:

$$\text{DISTANCE (feet)} = \frac{\text{Lock Inrush Current}}{\text{WGV}}$$

1. Choose the wire gauge, and use the "WGV" value from the following table:

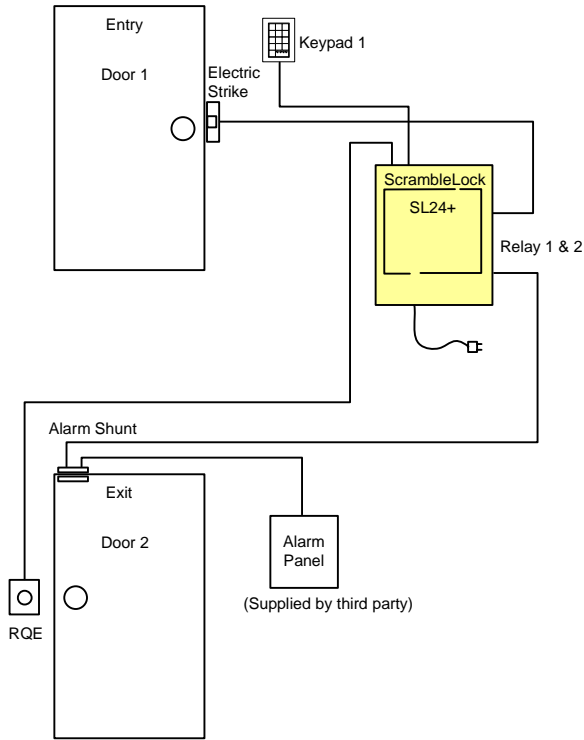
Wire Gauge	22	20	18	16	14	12
WGV	123	198	312	500	794	1258

2. Determine lock inrush current. Always calculate cable distance based on lock inrush current, NOT on lock holding current. Unless otherwise specified:

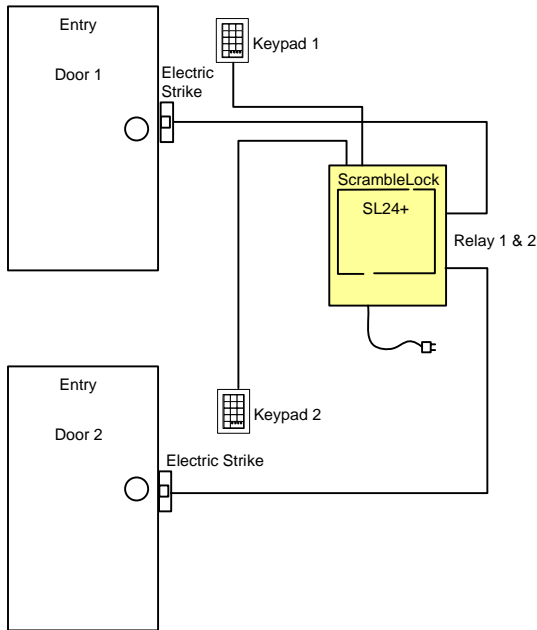
$$\text{Lock Inrush Current} = \frac{24 \text{ V}}{\text{Lock Coil Ohms}}$$

3. If the necessary wiring distance is longer than the calculated maximum:  
a) choose a larger wire gauge and re-calculate, or  
b) install the SL24+ closer to the lock.

MFG: \_\_\_\_\_  
(date)



**One-Door System**



**Two-Door System**

**Specifications**

System Power	115 VAC 60 Hz, 15A circuit 230 VAC 50 Hz
Controller Power	24 VAC, 56VA internal transformer
Standby Power	24V, 1.2Ah Gel Cell Battery Pack
Keypad Power	28 VDC, sufficient for 2 DS37L/DS47L keypads
Keypad Compatibility	DS37L/DS47L
Relay Contact Rating	10A @ 240V AC/28V DC Dry contacts – no power
Lock Power Output	16A Inrush per lock 250mA Holding per lock
Data A&B Interface	Hirsch Enhanced Serial
Temperature	32° to 120° F (0° to 49° C)
Relative Humidity	0% to 90% non-condensing
Size	12 x 12 x 4 inches
Shipping Weight/ Shipping Size	16.1 lbs. 19 x 13¼ x 5¼ inches
Standard Documentation	Installation Notes and Programming Guide
Warranty	One year

SL24P-IN2-2005

Hirsch Electronics  
1900 Carnegie Ave., Building B  
Santa Ana, CA 92705  
(949) 250-8888

# SL24+ ScrambleLock

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