

PS-x25T/TU/LT

Intelligent Dual-Relay Secured Power Supply Installation Manual

1. Introduction

The PS-x25 family of secured power supplies converts AC power to 12 VDC power limited output (see Section 2) with an integrated battery charger, designed for use with all of Rosslare's convertible and secure access controller units (ACU).

The PS-x25 family contains two power supplies, one for the lock output and the other for the ACU.

This design isolates the lock from the ACU, securing the functionality of the lock even if the ACU is tampered with.

When a valid code is entered via the ACU, it communicates with the PS-x25 family using a Rosslare proprietary protocol sending a command to activate the lock or auxiliary relay.

Similarly, the Release-to-Exit (REX) button is attached directly to the PS-x25 unit.

If the data line between the ACU and the PS-x25 unit is cut, the system immediately detects that the data line has been tampered with and generates a one-minute siren and closes the lock output. In addition, the auxiliary relay can be activated by the ACU.

A sealed lead acid battery charger is built-in to provide backup power for the ACU and the lock. The PS-x25 can also power an external speaker to announce bell and siren tones.




Figure 1: PS-A25T/TU/LT



Figure 2: PS-C25T/TU/LT

2. Technical Specifications

2.1 Electrical Characteristics

	PS-A25T*	PS-C25T*	PS-C25TU
Input	230 VAC, 50 Hz, 0.14 A		16 VAC (25 VA)
			x25LT models: 16 to 24 VAC (25 VA)
Internal Transformer	230/16 VAC, 25 VA		N/A
DC Output	DC output: 11.7~13.2 VDC, 1 A max. combined ACU output and lock power supply		
Lock Output	5 A, SPDT relay. Max Switched current: 5 A Max Switched voltage: 150 VDC or 300 VAC UL Rating: 5 A at 30 VDC or 5 A at 125 VAC		
Auxiliary Output	5 A, SPDT relay. Max Switched current: 5 A Max Switched voltage: 150 VDC or 300 VAC UL Rating: 5 A at 30 VDC or 5 A at 125 VAC		
Speaker	In casing	In casing	External
Speaker Output	8 Ohm, 0.25 W (minimum) for bell chime and siren alerts		
Space for Backup Battery	No	Yes	
Battery Backup	N/A	Built-in charger for sealed UL certified 7 Ah battery lead acid or gel Maximum charge current 1.2 A Automatic switch over to stand-by battery when AC fails	
	 Risk of explosion when battery is replaced with a wrong battery type.		
Visual Indicators	DC output LED indicator on PCB		
Additional Features	Short circuit and thermal overload protection Includes battery leads		
Communications	Rosslare proprietary protocol		

*Model not UL listed

2.2 Environmental Characteristics

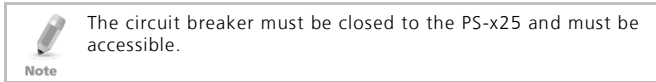
Operating Temperature Range	-10°C to 50°C (14°F to 122°F)
Operating Humidity Range	0 to 85% (non-condensing)

2.3 Physical Characteristics

	PS-A25T	PS-C25T/LT	PS-C25TU
Dimensions (H x W x D)	182 x 80 x 68 mm (7.2 x 3.1 x 2.7 in.)	225 x 230 x 76 mm (8.85 x 9.05 x 3.00 in.)	
Weight	1.24 kg (2.73 lb)	2.44 kg (5.38 lb)	1.5 kg (3.3 lb)

3. Installation

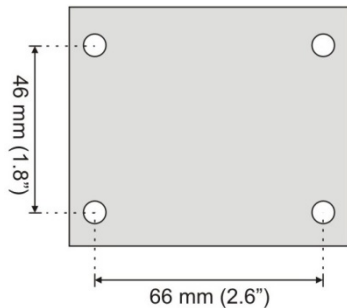
The PS-x25 should be installed in accordance with article 760 of the National Electric Code NFPA 72 as well as applicable local codes.



3.1 Mounting

The PCB mounting holes dimensions for the C-box are provided in Figure 3.

Figure 3: PCB Mounting Holes Dimensions



3.2 Wiring

Refer to the wiring diagram in Section 4.

To wire the unit:

1. Mount the PS-x25 within the secured perimeter.
2. Connect AC power (16.5 VAC, 60 Hz) to the marked terminals, " ~ VIN ~ ". Use a Class 2 transformer such as DSC Part No. PTC1640U.

Use 18 AWG or larger for all power connections (battery, DC output).

Ensure that the power-limited circuit is wired separately from the non-power limited wiring (16.5 VAC, battery)

3. Connect the ACU's power input to the power terminal marked [SECURED CONTROLLER +V and (-)]
4. Connect the two lock outputs to the power terminal marked [LOCK 12VDC N.C or N.O]
5. Connect the auxiliary relay if needed.
6. [OPTIONAL] Connect the battery terminal to power terminal marked [12V DC +Bat and (-)] (Battery leads included)
A backup battery is optional. When a battery is not used, loss of AC results in the loss of output voltage. When using a backup battery, it must be a UL certified "lead acid" or "gel" type.
7. Panic hardware shall not be used with this device.

3.3 Maintenance

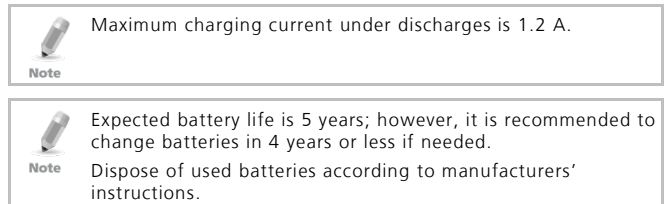
For proper operation, the unit should be tested at least once a year.

3.3.1 Output Voltage Test

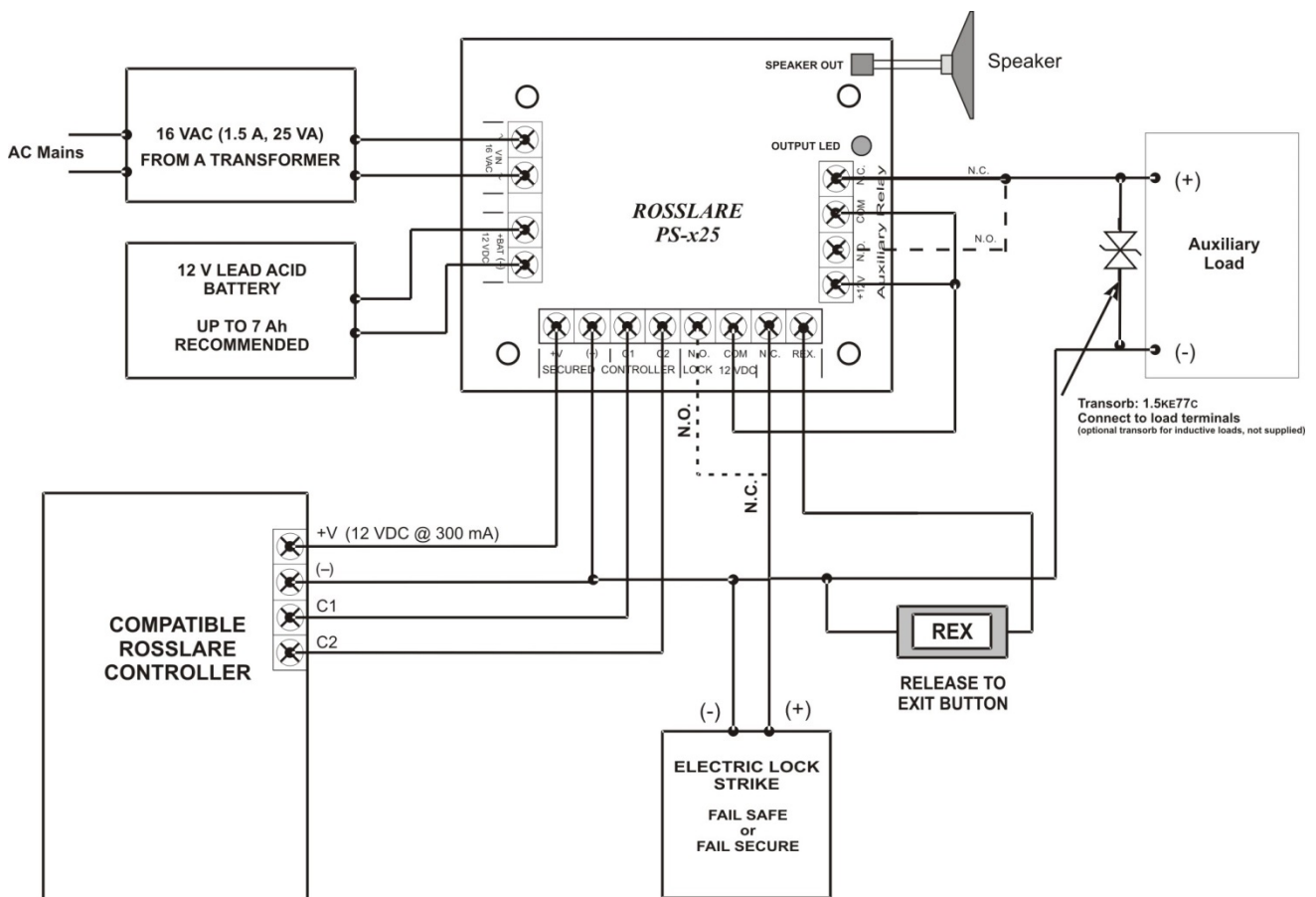
Check DC output for proper voltage level under normal load conditions.

3.3.2 Battery Test

Check specified voltage, at both battery terminal and board terminals marked [12VDC +Bat and (-)] under normal load conditions, verify that the battery is fully charged and insure there is no break in the battery connection wires.



4. Wiring Diagram



Limited Warranty

The full ROSSLARE Limited Warranty Statement is available in the Quick Links section on the ROSSLARE website at www.rosslaresecurity.com.

Rosslare considers any use of this product as agreement to the Warranty Terms even if you do not review them.

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