

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	-10°C to 50°C (14°F to 122°F)
Operating Humidity	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.

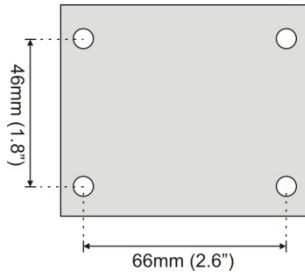


The circuit breaker must be closed to the PS-x25 and must be accessible.

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.



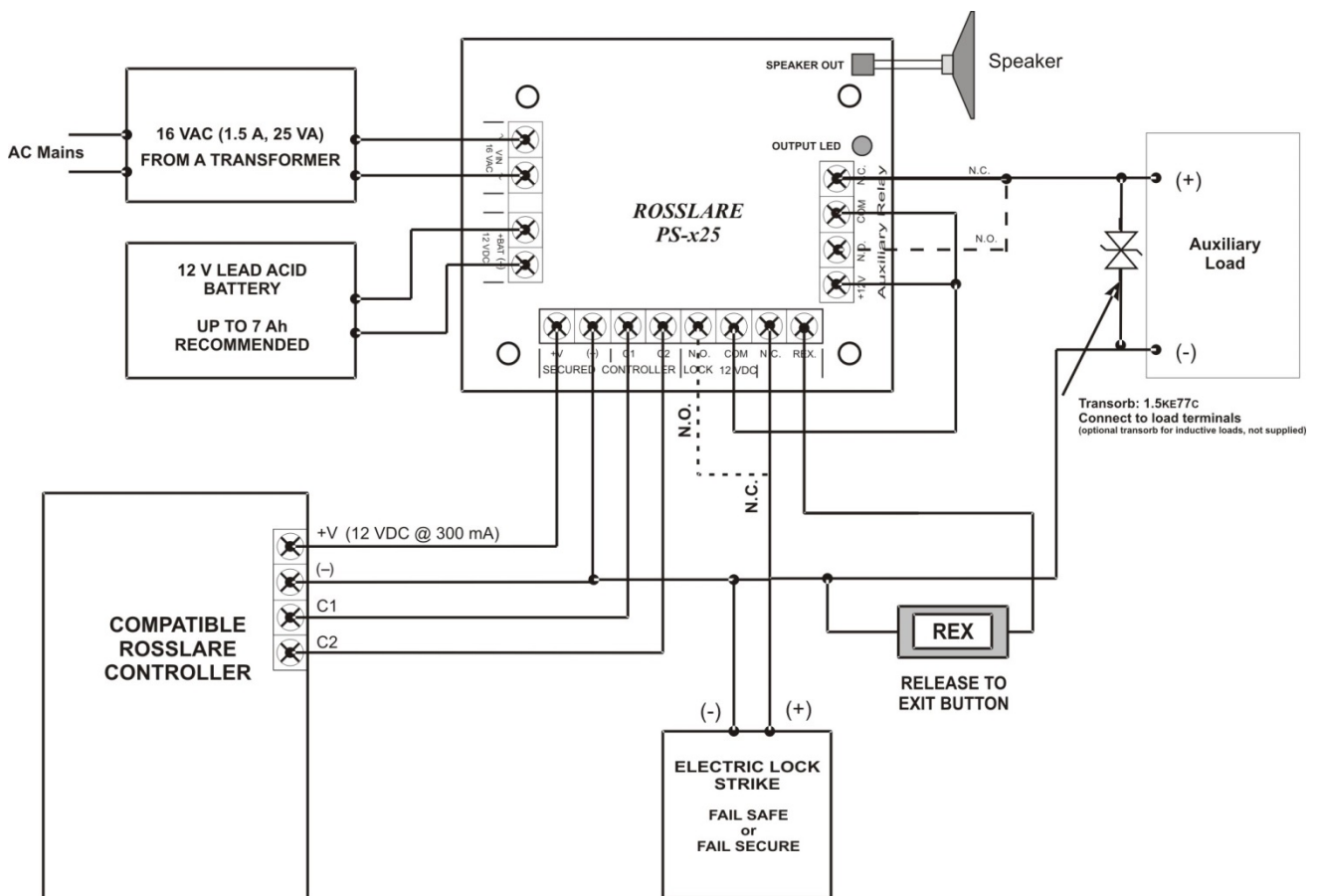
Maximum charging current under discharges is 1.2 A.



Expected battery life is 5 years; however, it is recommended to change batteries in 4 years or less if needed.

Dispose of used batteries according to manufacturers' instructions.

4. Wiring Diagram



Limited Warranty

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Warranty of ROSSLARE'S products extends to the original purchaser (Customer) of the ROSSLARE product and is not transferable.

PRODUCTS COVERED BY THIS WARRANTY AND DURATION

ROSSLARE AND/OR SUBSIDIARIES warrants the PS-x25T/TU/LT Family of Intelligent Dual-Relay Secured Power Supplies to be free from defects in materials and assembly in the course of normal use and service. The warranty period commences with the date of shipment to the original purchaser and extends for a period of 2 years (24 months).

WARRANTY REMEDY COVERAGE

In the event of a breach of warranty, ROSSLARE will credit Customer with the price of the Product paid by Customer, provided that the warranty claim is delivered to ROSSLARE by the Customer during the warranty period in accordance with the terms of this warranty. Unless otherwise requested by a ROSSLARE representative, return of the failed product(s) is not immediately required.

If ROSSLARE has not contacted the Customer within a sixty (60) day holding period following the delivery of the warranty claim, Customer will not be required to return the failed product(s). All returned Product(s), as may be requested at ROSSLARE'S sole discretion, shall become the property of ROSSLARE.

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In the event ROSSLARE chooses to perform a product evaluation within the sixty (60) day holding period and no defect is found, a minimum US\$ 50.00 or equivalent charge will be applied to each Product for labor required in the evaluation.

ROSSLARE will repair or replace, at its discretion, any product that under normal conditions of use and service proves to be defective in material or workmanship. No charge will be applied for labor or parts with respect to defects covered by this warranty, provided that the work is done by ROSSLARE or a ROSSLARE authorized service center.

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This warranty does not cover expenses incurred in the transportation, freight cost to the repair center, removal or reinstallation of the product, whether or not proven defective.

Specifically excluded from this warranty are any failures resulting from Customer's improper testing, operation, installation, or damage resulting from use of the Product in other than its normal and customary manner, or any maintenance, modification, alteration, or adjustment or any type of abuse, neglect, accident, misuse, improper operation, normal wear, defects or damage due to lightning or other electrical discharge. This warranty does not cover repair or replacement where normal use has exhausted the life of a part or instrument, or any modification or abuse of, or tampering with, the Product if Product disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection and testing to verify any warranty claim.

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