

The LNL-200XA Power Supply Unit (PSU)

The LNL-200XA is a high-efficiency and cost-effective power supply designed to house a Lenel controller and reader interface module in an OnGuard® system.

Featuring a regulated 13.8 VDC output, the LNL-200XA supplies continuous full rated current to load. Maximum battery life is assured using deep discharge protection to prevent premature battery failure when operating in standby mode for extended periods. Two sets of volt-free contacts are provided to signal (i) loss of mains and (ii) battery and loss of output faults.

The LNL-200XA can supply a continuous full-rated current to load plus an additional 0.5A for charging a 12V standby battery.

The universal mains input voltage enables the power supply to be used across a wide geographical area. The highly efficient switch mode design ensures low operating costs while generating less heat. The modular construction simplifies maintenance.

- Continuous full-rated current-to-load
- Universal mains input voltage 90-264 VAC
- High-efficiency electronics for reduced running costs and lower operating temperatures
- Mains transient protection circuit
- Lid and removal from wall tamper detection
- Installer-safe design with all high-voltage electronics fully shrouded
- PCB supports and fixings supplied
- Houses an LNL-1300e Single Door IP Interface Module or an LNL-2210 Intelligent Single Door Controller and an LNL-1300 Single Reader Interface Module
- PSU status and diagnostic LEDs (mains present and fault)
- Volt-free contact signaling mains failure (EPS)
- Volt-free contact signaling output and battery faults (GEN)
- Full electronic short circuit and overload protection on load output under mains operation
- Individual battery and output fuse protection
- Three-year warranty

Installation

This unit is only suitable for installation as permanently connected equipment. The PSU is NOT SUITABLE for external installation.

Before installation, ensure that the mains power source has a separate (approved) disconnect device that is fitted with a fuse or other over-current protection rated at 3 A maximum. Ensure that the disconnect device has the appropriate earth fault protection to the applicable standard.

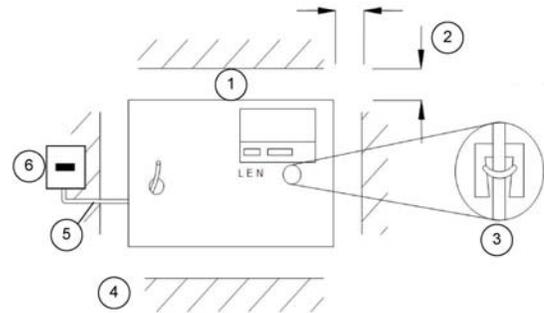
Before connecting the PSU to the mains power source, verify that the external disconnect device is OFF.

Install the PSU according to all relevant safety regulations applicable to the application. EQUIPMENT MUST BE EARTHED.

Mounting

1. Mount the PSU securely in correct orientation allowing minimum clearance.

Mounting the Power Supply



Callout	Description
1	10 cm clearance minimum
2	Load output cable: current rating to match maximum load
3	Fasten cables using cable tie
4	Mains input cable rated: 3 A, 300 VAC minimum
5	3 A minimum
6	Fused spur

2. Route mains and low voltage output cables via different knockouts and/or cable entry holes.

Note: Use bushes and cable glands rated to UL94 HB minimum.

Mains Power-up

1. Attach the appropriately-rated mains cable (minimum 0.5mm² [3A], 300/500 VAC) and fasten using cable ties.
2. Apply mains power. Check for 13.8 VDC on load outputs. Ensure that the green Mains LED is on.
3. Disconnect mains power.

Load Output

1. Attach the appropriately-rated load cable and fasten using cable ties. Note polarity.
2. Apply mains power. Check green Mains LED is on.

Note: The red LED on the PSU may flash to indicate that no battery has been connected. This is normal.

3. Verify load is operating correctly.
4. Disconnect mains power.

Signaling

1. Connect EPS and GEN fault outputs to appropriate inputs of control and indicating equipment (CIE).

Standby Battery

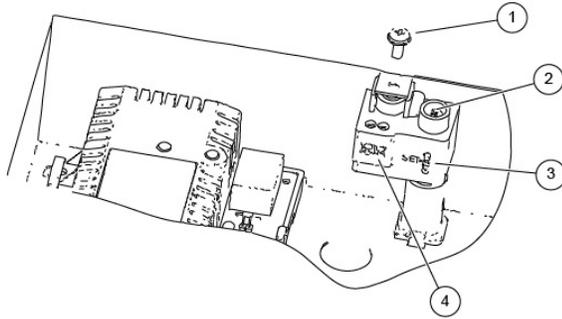
1. Attach supplied battery cables to terminal block and battery.

Note: Ensure correct polarity of battery connections: +ve use **red** lead, -ve use **black** lead.

Tamper

1. Verify that the tamper screw makes good contact with the mounting surface.
2. Check that the tamper switch is CLOSED when the lid is closed and the retaining screw is fitted, OPEN when the retaining screw is removed and the lid is open. Use fine adjustment screw if necessary, no more than one turn in either direction, to align indicator with set point.
3. Close the lid and fasten with screw supplied.

Tamper Arrangement



Callout	Description
1	Retaining screw
2	Fine adjustment screw
3	Set position indicator
4	Tamper switch connections

Operating Instructions

In the event of loss of mains, a battery fault or a GEN fault, the corresponding fault signal contacts will open (see Fault Diagnostic Table for LED indicator status).

Fault Diagnostic Table

Red LED (Fault)	Green LED (Mains)	PSU Status
OFF	ON	Normal. Battery fully charged.
One short flash every second	ON	Normal. Battery charging but not fully charged.
Flashing: one second ON one second OFF	ON	Fault. Output fuse or battery fuse blown, or battery missing.
	OFF	Fault. No mains, output fuse blown.
One short flash every 3 sec	OFF	Fault. No mains, battery supplying load.
OFF	OFF	Fault. No mains, no output, batteries disconnected or completely discharged.

Local Indicators

MAINS LED (Green)	Mains present
FAULT LED (Red)	Flashes (1s period) when: loss of mains, battery disconnected, output fuse fail, battery fuse fail, output short circuit or low output voltage

If the output of the PSU fails, the cause of the failure should be investigated (for example, short circuit load, connection of a deeply discharged battery). Rectify the fault before restoring power to the PSU. Replace any fuses with the correct fuse rating and type as needed.

Explanation of Symbols (not all may apply)

	Fault Indication
	Mains Present
	Protective Earth
	Shock Risk - Isolate before attempting access
	Certification Level
	Do not dispose of in unsorted waste

Maintenance

This unit is intended for use by Service Personnel only. There are NO USER SERVICEABLE parts inside.

There is no regular maintenance required of the PSU other than periodic testing and replacement of the standby batteries. Reference should be made to the battery manufacturer's documentation to determine typical/expected battery life with a view to periodic replacement of the battery.

Specifications

Input Specifications

Voltage (rated)	100 - 240 VAC
Voltage (operating)	90 - 264 VAC
Frequency	50 - 60 Hz
Maximum Current	< 1.0A @ Full load
Mains Input Fuse	T2.0A (20 mm 250 VAC HBC)

Output Specifications

Voltage	12.8 - 14.2 VDC (13.8 VDC nominal) on mains power; 9.8 - 13.0 VDC on battery standby
Maximum Load Current	2 A
Ripple	< 400 mV pk-pk max
Load Output Fuse	F2.0A
Overload	Electronic shutdown until overload or short circuit removed (under mains power only)

Standby Battery

Battery Type	12 V Valve Regulated Lead Acid
Battery Capacity	BS127N 8 Ah (max)
Battery Charging Fuse protection	F2.0A

Mechanical

Enclosure Dimensions	330W x 275H x 80D (mm)
Weight (excluding battery)	3.3 Kg
Enclosure Material	Steel - white powder coated RAL 9003
IP and IK Ratings	IP30/IK08

Environmental

Temperature	-10 to +40° C (operating) 75% RH non-condensing; -20 to +80° C (storage)
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Signaling Outputs

Rating	0.1 0A @ 60 VDC 16 Ohm solid state relay contacts, volt-free
GEN Fault (general)	Open if battery terminal voltage is < 11.5 VDC (when operating in standby with no mains present), battery not present or output and/or battery fuse blown.
EPS Fault (mains)	Open if Loss of mains for > 8s
Tamper	0.5A @ 30 VDC volt-free contact. Open when lid is open or enclosure removed from surface.

Connections

O/P +, -	Power connection to equipment (observe polarity).
EPS Fault	Relay output for mains fail. Open if loss of mains.
GEN Fault	Relay output for General Fault. Open in fault condition.
BATT +, -	Connection to standby battery. Use cables provided (observe polarity).

Compliance

This power supply unit meets the essential requirements of the following European Directives:

- Low Voltage 2014/35/EU
- EMC 2014/30/EU
- WEEE 2012/19/EU
- RoHS2 2011/65/EU

Disposal of Product at End of Life

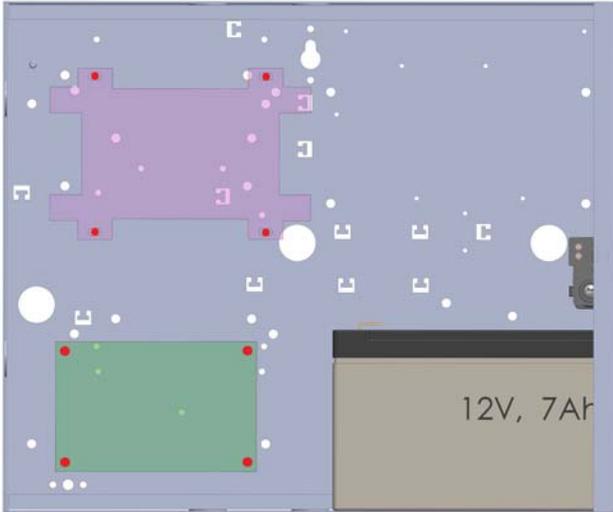
This product falls within the scope of EU Directives 2012/19/EU Waste Electrical and Electronic Equipment (WEEE) and 2013/56/EU (Battery). At the end of life, the product must be separated from the domestic waste stream and disposed via an appropriate approved WEEE disposal route in accordance with all national and local regulations.

Before disposal of the product, any batteries must be removed, and disposed separately via an appropriate approved battery disposal route in accordance with all national and local regulations. Package used batteries safely for onward transport to your supplier, collection point or disposal facility.

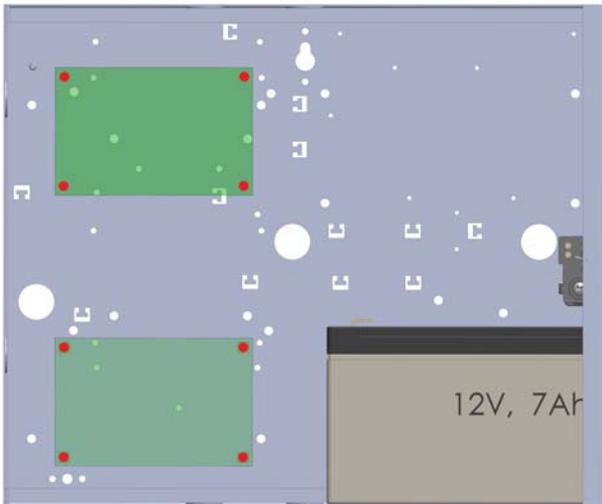
Note: Risk of fire or explosion if bare battery wires are allowed to touch.

Controller and Module Layouts

One LNL-1300e/LNL-2210 and one LNL-1300/LNL-1300-U



Two LNL-1300 Single Reader Interface Modules or Two LNL-1300-U Single Door IP Interface Modules



Product Warnings and Disclaimers

These products are intended for sale to, and installation by, an experienced security professional. UTC Fire & Security cannot provide any assurance that any person or entity buying its products, including any “authorized dealer,” is properly trained or experienced to correctly install security-related products.

For more information on product warnings, refer to <https://www.utcssecurityproducts.eu/productwarning/> or scan the following code:

