

Title

LIGHTING & POWER UNIT TYPE LPU57

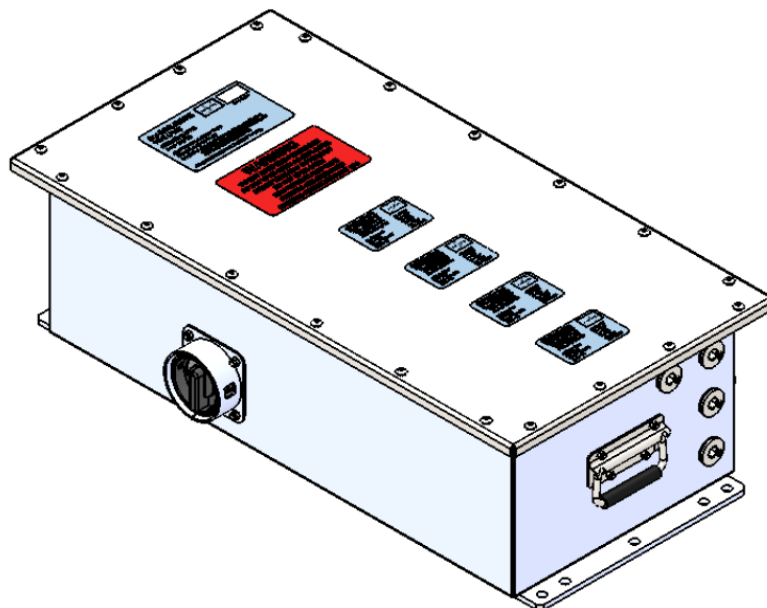
USER MANUAL

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1. GENERAL DESCRIPTION

The Lighting & Power Unit TYPE LPU57 is a series of stainless steel sheet metal enclosures fitted with power input connectors and output connectors. The LPU57 is designed to house a suitably certified equipment such as the Austdac AC36W and other permissible modules.

The LPU57 is available as a 1, 2 or 4 power supply versions. These are identified as LPU57-1, LPU57-2 and LPU57-4.

The LPU57 dimensions are approximately;

LPU57-1	295mm (D) x 340mm (W) x 145mm (H)
LPU57-2	495mm (D) x 340mm (W) x 200mm (H)
LPU57-4	655mm (D) x 340mm (W) x 200mm (H)

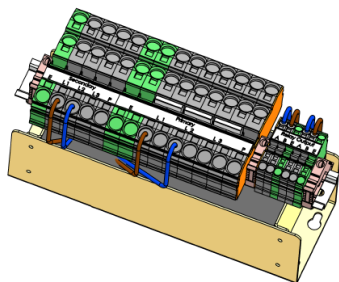
The LPU57 has two integral mounting flanges, screw fastened removable cover, various combinations of power feeder gland ports or connectors and output I.S. connector ports. The interior of the LPU57 has sufficient volume to house an Austdac suitably certified module such as the type AC36W power supply. The LPU57 has an ingress protection rating of IP66.

Power is provided to the enclosed power supply or permissible module via suitable explosion protected cables passed through Ex e gland or Ex de connector mounted in the wall of the LPU57 enclosure. A second Ex e gland or Ex de connector is provided to allow power to be looped in and out of several LPU57 enclosures. Terminal blocks are provided within the LPU57 to terminate incoming and outgoing power feeder cables as well as terminating power input connections of the permissible module. The maximum current in the feeder cable is limited to 35 amperes.

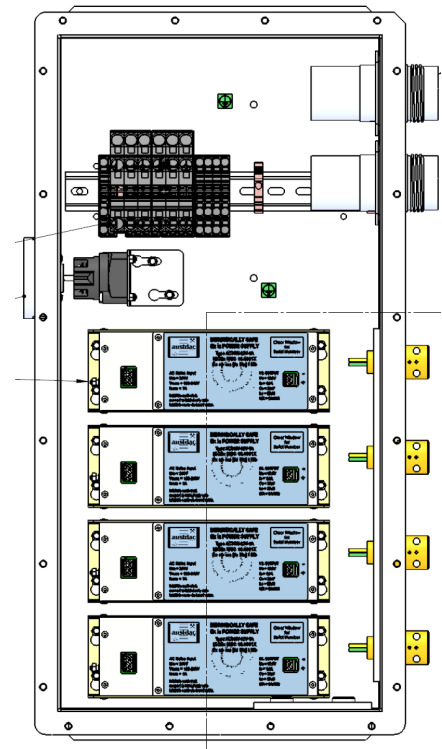
The exterior and interior of the LPU57 enclosure are provided with earth studs to allow connection of earthing facilities to maintain the certification and installation requirements of the separately certified permissible module or power supply unit.

The LPU57 is available with a Dual Feed Change Over Module, this allows continuous power to two of the power supplies should a single feed be interrupted.

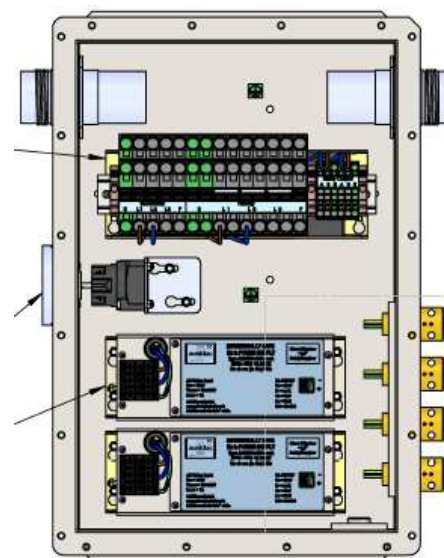
These are identified as LPU57-1R, LPU57-2R and LPU57-4R.



Photograph 2. Dual Feed Change Over Module



Photograph 1.
LPU57-4 with cover removed



Photograph 3.
LPU57-2R with cover removed

2. WARNINGS AND PRECAUTIONS

WARNING

- Lethal voltages and currents are present within the LPU57.
- Mains voltages are present within the LPU57.
- DC Voltages greater than 300V may be present within the LPU57.
- The LPU57 must be earthed.
- An assembled LPU57 weighs in excess of 30kg.

PRECAUTIONS

- Only qualified personnel shall install and service the LPU57.
- Use personal protection equipment.
- Ensure that earth connections are tested.

USER ACCESS

There are no user serviceable parts within the LPU57.

STORAGE, INSTALLATION, USE AND MAINTAINANCE REQUIREMENTS

The LPU57 should only be installed, operated and maintained by qualified personnel. Ensure that all instructions and warnings are observed.

3. INSTALLATION

Prior to installation the LPU57 should be inspected for the following;

- Any external damage to the enclosure.
- Any damage, score marks or foreign debris to any glands or connectors.
- Check all glands and connectors are secured correctly and tighten as necessary.
- The LPU57 may require the lid to be removed for installation. When the lid is removed the following inspection is required;
 - Inspect for any damage or faults with the gasket.
 - Inspect for any damage, score marks or distortion of the gasket sealing surfaces.
 - Check that there are no foreign objects, debris, moisture or contaminants within the LPU57.
 - Ensure that the mains wiring and extra low voltage output wiring are separated by at least 50mm.
 - Check wiring for any signs of damage.
 - Check terminals for any signs of damage.
 - Confirm that the continuity of the earthing of the LPU57, case and external protective earths is less than 0.1 ohms and of a suitably rated cable.

The LPU57 should be installed in a cover area.

The LPU57 should be mounted to a stable surface avoiding areas under constant vibration and shock.

Ensure that the LPU57 is adequately secured to the mounting area.

Ensure that all screws, washers and sealing gaskets are fitted.

Ensure that cabling entering the LPU57 is rated to a minimum of 90°C.

4. PERMISSABLE MODULES

The LPU57 is capable of housing one of several permissible modules depending on the certification status of the individual module.

5. POWER INPUT

Power input to the LPU57 may be via an Ex de connector or via cable and an Ex e gland. The power circuit must include a pilot circuit to de-energise the power in the event that the power circuit is broken. In the case of a cable and gland arrangement the cable should be rated to a minimum of 90°C.

6. CABLE GLANDS

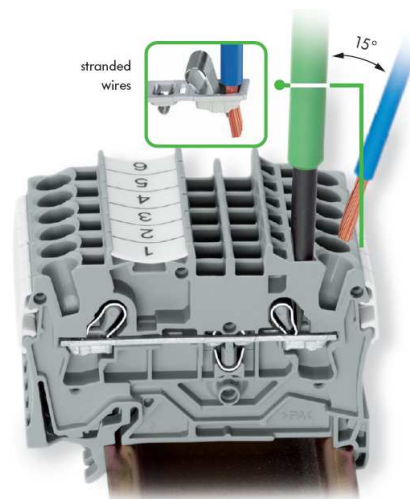
The LPU57 is certified to allow separately certified cable glands to be fitted to allow entry of power feeder cables. The certification of the cable glands must match that of the area of installation and use. Only cable glands that provide a minimum ingress protection rating of IP66 should be used with the LPU57. Cable glands should be installed in accordance with the gland manufacturer's instructions and in such a way to preserve the IP66 ingress protection rating of the enclosure.

7. TERMINATIONS

The LPU57 provides terminals for the termination of the power feeder cables. The LPU57 is supplied with terminals capable of terminating 16mm² conductors. An M6 earth stud is also provided adjacent to power conductor terminations to allow for earth termination of feeder cable screens or braids.

The terminal blocks used within the LPU57 to terminate the feeder cables are off a spring clamp construction i.e. the conductors are not clamped by tightening a screw they are clamped by a spring mechanism. The spring clamp is opened by inserting a 3mm flat blade screw driver into the rectangular control slot of the terminal.

Conductors require 18-20mm of the insulation to be removed. An optional 18mm insulated ferrule may be fitted.



8. CERTIFICATION

The LPU57 has been awarded IECEx certification certificate number IECEx SIM 14.0002X. The LPU57-x marking code is as follows, Ex d e ma [ia] I Mb. The LPU57-xR marking code is as follows, Ex d e ma [ia] mb I Mb.

Please refer to the certificate for further details.

9. SPECIFICATIONS

Size
LPU57-1	295mm (D) x 340mm (W) x 145mm (H)
LPU57-2	495mm (D) x 340mm (W) x 200mm (H)
LPU57-4	655mm (D) x 340mm (W) x 200mm (H)
Mass (no module fitted)	10kg
Material.....	2.0mm 304 #4 stainless steel
Mounting hole size	10mm
Ambient temperature	-20°C - 40°C
Maximum external temperature	85°C
Maximum internal temperature	105°C
Ingress protection.....	IP66
Maximum feeder cable current	35A rms
Maximum operating voltage	limited by module or 250V rms whichever is lower