

Instruction manual

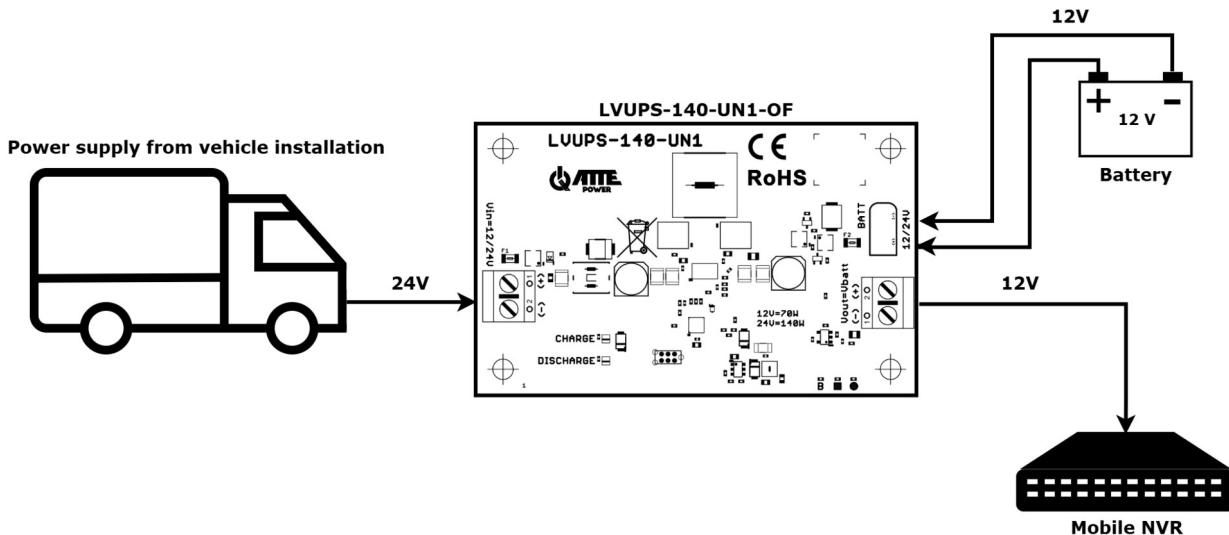
LVUPS-140-UN1-OF

Universal buffer module for vehicle installation 12V/24V

Operation Indication

- LED CHARGE** – Charge voltage detected at Vin connector:
 - **Blue** – converter configuration
 - **Green** (LED flashes) – battery charged
 - **Green** – high level of battery capacity
 - **Yellow** – medium level of battery capacity
 - **Red** – low level of battery capacity
 - **Red** (LED flashes) – no input voltage
- LED DISCHARGE** – No Vin input voltage (battery operation):
 - **Green** – high level of battery capacity
 - **Yellow** – medium level of battery capacity
 - **Red** – low level of battery capacity
 - **Red** (LED flashes) – no battery

Basic application



Description

LVUPS-140-UN1-OF is a universal buffer module designed for use in 12V or 24V vehicle installations. It enables an additional battery to be connected to an existing vehicle installation and simultaneously powers output devices such as mobile NVRs or IP cameras.

The buffer module automatically detects the operating state of the vehicle (ignition/rest) based on the supply voltage. While the vehicle is moving, the additional battery is charged and, when the vehicle is stopped, it takes over as the power source for the connected devices.

LVUPS-140-UN1-OF can operate with either 12V or 24V batteries. Operating parameters depend on the module configuration used.

Battery charging current is equal to the maximum current minus the output power consumption. As the battery voltage increases, the charging current decreases.

The OF (Open Frame) design allows for installation in ABOX enclosures and mounting plates thanks to the system punchings in the 10.8 mm grid.

Installation

1. Mount the unit at the desired location in the vehicle installation, protect the module from the weather conditions.
2. Connect the power cables from the installation to the screw terminals of the Vin strip.
3. Connect the load wires to the Vout screw terminal.
4. Connect a 12V or 24V battery to the BATT connector.
5. Apply power by starting the vehicle.

Troubleshooting

Q1. No voltage at Vout output.

A1. The module's output voltage appears when an ignition voltage of 13.2...15V or 26.2...29V is applied to the Vin input.

The value of the output voltage depends on the battery connected.

If there is no voltage at the output you should:

1. Check the voltage at the Vin connector. If it is outside the acceptable input range, no voltage will be available at the output.
2. Verify the voltage and condition of the battery. If the battery is damaged, no voltage will be present at the Vout output.
3. Check the power consumption at the output of the unit. If the load is too high, the LVUPS-140-UN1-OF will not operate properly.

Technical Specification

| | |
|------------------------|--|
| Battery | 1x or 2x 12V gel or AGM batteries |
| Output voltage | 14.4 VDC +/-2% - for 12V battery 28.8 VDC +/-2% - for 24V battery |
| Input voltage | 13.2..15 VDC 26.2..29 VDC |
| Efficiency | 92% @Vin = 13,8 VDC, Pout = 60 W |
| Output power | 70 W - when input or battery voltage is 12V 140 W - when input and battery voltage is 24V |
| Maximum output current | For input voltage 13.2..15V: With 12V battery – 5A With 24V battery – 2.5A For input voltage 26.2..29 VDC: With 12V battery – 5A With 24V battery - 5A |
| Charging current | < 5 A - The charging current is equal to the maximum current minus the output power consumption |
| Converter idle current | 27 mA @Vin = 13,8 VDC |
| Protection | Surge protection Overload protection set at 5A Reverse polarity battery protection Deep discharge battery protection: 10.8VDC - for 12V battery 21.6VDC - for 24V battery |
| Operation indication | LED CHARGE – Charge voltage detected at Vin connector: - Blue – converter configuration - Green (LED flashes) – battery charged - Green – high level of battery capacity - Yellow – medium level of battery capacity - Red – low level of battery capacity - Red (LED flashes) – no input voltage LED DISCHARGE – No Vin input voltage (battery operation): - Green – high level of battery capacity - Yellow – medium level of battery capacity - Red – low level of battery capacity - Red (LED flashes) – no battery |
| Housing Construction | None - built-in module |
| Assembly | Snap-on distance plugs, mounting holes in 10.8 mm grid |
| Operating Temperature | -25 ... +65°C |
| Dimensions | 86 x 53 x 16 mm |
| Weight | 0,033 kg |

Find out more

**LVUPS-140-UN1-OF
on the WWW site**



**ATTE Technical
Support Portal**



Safety Precautions

- The device is intended for installation by a qualified installer who has appropriate competences and permits and authorizations (if required for a given country) to connect (interfere with) low-voltage installations.
- The device should be installed indoors. About normal air humidity and temperature. The method of mounting the device and laying the cabling should ensure free air flow. It is recommended to use ABOX series housings, which allow for convenient installation outdoors, indoors and in RACK cabinets.
- For proper operation of the module, appropriate voltage and current capacity of the power source must be ensured.
- Any maintenance operations may only be performed after disconnecting the power supply. Under normal conditions, the device does not require any maintenance.
- In case of damage or doubts as to the correct operation of the device, stop using it immediately.
- In the case of fiber optic devices, do not look into the fiber optic port when the device is turned on. The invisible beam can damage the retina of the eye.
- Before connecting PoE PASSIVE receivers (e.g. WiFi antenna), make sure that the voltage value and polarization on the RJ45 pins of the switch or power adapter are consistent with the values allowed by the receiver.

Before installation and during maintenance make sure that the mains voltage 230VAC is disconnected

This symbol on the product or on its packaging indicates that the product must not be disposed of with normal household waste. Instead such equipment must be disposed of by arranging to return it to a designated collection point for the recycling of waste electrical and electronic equipment.

