Qoltec®

Model: 50886

INSTRUCTION MANUAL

DC UPS MODULE FOR DIN RAIL | 40A | 24V

INTRODUCTION

Thank you for purchasing the DC Emergency Power Module for DIN rail . We are confident that our product will meet your expectations and provide you with a reliable power supply in the event of power cuts. The module has been designed for easy DIN-rail installation and high performance, ensuring continuous operation of equipment in emergency situations. If you have any questions regarding use or installation, our support team is available to assist you.

ABOUT THE PRODUCT

The DIN-rail DC emergency power module is a device that provides a reliable source of power in emergency situations. Designed specifically for DIN-rail mounting, this module integrates easily into an existing power supply system. It is ideal for professional installations that require uninterrupted operation in the event of mains power loss. In the event of a mains power interruption or failure, the module automatically switches to battery power, eliminating the need for manual intervention. The operating time of the unit depends on the capacity of the connected battery, allowing customisation to suit individual needs and system requirements. The UPS module supports 24V systems and offers an impressive load capacity of up to 40A.

SAFETY INSTRUCTIONS

1) Risk of electric shock. Before operating the power supply, switch off the power supply and protect it from accidental switching on. Otherwise contact with electrical components may lead to death or serious injury.
2) Burn hazard. Do not touch the appliance during operation and immediately after switching it off!
3) Risk of fire and short circuit. Avoid introducing foreign objects or liquids into the housing.
4) Do not modify or repair the power supply yourself!
5) Do not install the power supply in damp locations or near water.

METHOD OF INSTALLATION

The dimensions of the device can be found in the appendix to the manual : *Illustration 1*

(1) The power supply should only be installed and commissioned by qualified personnel in accordance with current national standards and regulations.

(2) The appliance should be mounted in an enclosure providing adequate protection against electrical, mechanical and fire hazards.

(3) The power supply is designed to be mounted in a vertical orientation, with the input terminals located on the bottom of the unit. The mounting rail standard is TS 35/7.5 or TS 35/15, in accordance with DIN EN 60715.

(4) Installation instructions: (*Illustration 3 in the appendix*)

- Tilt the unit slightly and place it on top of the DIN rail.

- Press the power pack down until you feel resistance.

- Press the lower part of the unit to lock it onto the rail.

- Gently shake the unit to make sure it is properly locked.

(5) The unit should be installed in a well ventilated location to prevent overheating. Minimum installation distances around the unit: top - 40 mm, bottom - 20 mm, sides - 5 mm. If installing near equipment that is a heat source, increase the space to 10-15 mm.

(6) Use copper wires only and ensure that all the fibres of the wire are fully inserted into the terminal terminal, especially when using multi-stranded wires. Ensure that the screws in the terminals are properly tightened, ensuring full contact and safety.

(7) Recommended cable range: 18-10 AWG (0.8-4 mm^2). The conductors should withstand temperatures of at least 80°C, e.g. UL 1007.

(8) The recommended wire stripping length is 5-7 mm.

(9) The FG (protective earth) connection must be made to PE (protective earth).

Diagram/Illustration 2 in Annex

1. **Power Supply**: Provides power to the system. This can be, for example, the mains power supply.
2. **Load (Load)**: A device or system that consumes energy, either from a power supply or a battery.
3. **Detection Circuit**: Responsible for monitoring system parameters such as battery or power status.

4. **Charge Circuit Limit**: Controls the charging current of the battery to prevent overcharging.
5. **Microcontroller (MCU)**: Manages the entire system, coordinating the operation of the detection and relay circuits.
6. **Relay & LED Display Status (Relay & LED Display Status)**: Indicates the status of the system by means of LEDs:
   - **DC OK (green LED)**: Indicates correct operation of the power supply.
   - **BAT FAIL (red LED)**: Indicates battery failure.
   - **BAT DISCHARGE (yellow LED)**: Indicates that the battery is discharging.
7. **Battery test (BAT. TEST)**: Used to check the status of the battery.
8. **24V** battery: This is the battery that the system charges and monitors.
9. **Output**: The point at which energy is supplied to a load from a power supply or battery.

This system automatically manages the switching between battery and power supply and monitors the battery status, signalling any problems via LEDs.

HOLDING TIME

Discharge current	Holding time		
	7.5AH	12AH	15AH
2.5A	6500s(approx. 1 hour 48 minutes)	14500s(approx. 4 hours 2 minutes)	19000s(approx. 5 hours 16 minutes)
5A	3000s (approx. 50 minutes)	7000s (approx. 1 hour 56 minutes)	9000s (approx. 2 hours 30 minutes)
10A	1200s(approx. 20 minutes	2400s(approx. 40 minutes)	3200s (approx. 53 minutes)
20A	400s (approx. 6 minutes 40 seconds)	1100s(approx. 18 minutes 20 seconds)100s	1500s(approx. 25 minutes)

TECHNICAL SPECIFICATIONS

Input	
Input voltage	24VDC
Input voltage range	24-29VDC
Output	
Input voltage	40A
Input voltage range	24-30V
Frequency	50-60Hz
Performance	88%
Battery	
Type	Lead acid
Capacity	4AH~135AH
Voltage	24V
Charging current	2A
Security	
Overload protection	
Surge protection	
Protection against overheating	
Low battery cut-off	
Reverse polarity protection	
Other	
Type of assembly	TH35
IP	IP20
Operating temperature	-30˚C ~ +70˚C
Storage temperature	-40℃ ~+85℃
Operating humidity	5 ~ 95% RH (non-condensing)
Storage humidity	5 ~ 95% RH (non-condensing)
Color	Silver
Dimensions (L X W X H)	130 x 63 x 125mm
Net weight [kg]	0.432
Gross weight [kg]	0.474

CONSERVATION

1) Regularly check the technical condition, including DIN rail mounting and the condition of the electrical connections.
2) Turn off the power before cleaning.
3) Wipe the unit with a dry cloth. Do not use chemicals or water.

4) If you notice any damage, such as cracks in the casing or burns, immediately unplug the unit and contact an authorised service centre.
5) Do not try to repair it yourself - contact the manufacturer's technical service NTEC SP. Z O.O.
6) The device is appropriately marked, including the CE symbol, serial number and manufacturer's data, which enables the product to be identified and compliant with current legislation.

UTILISATION

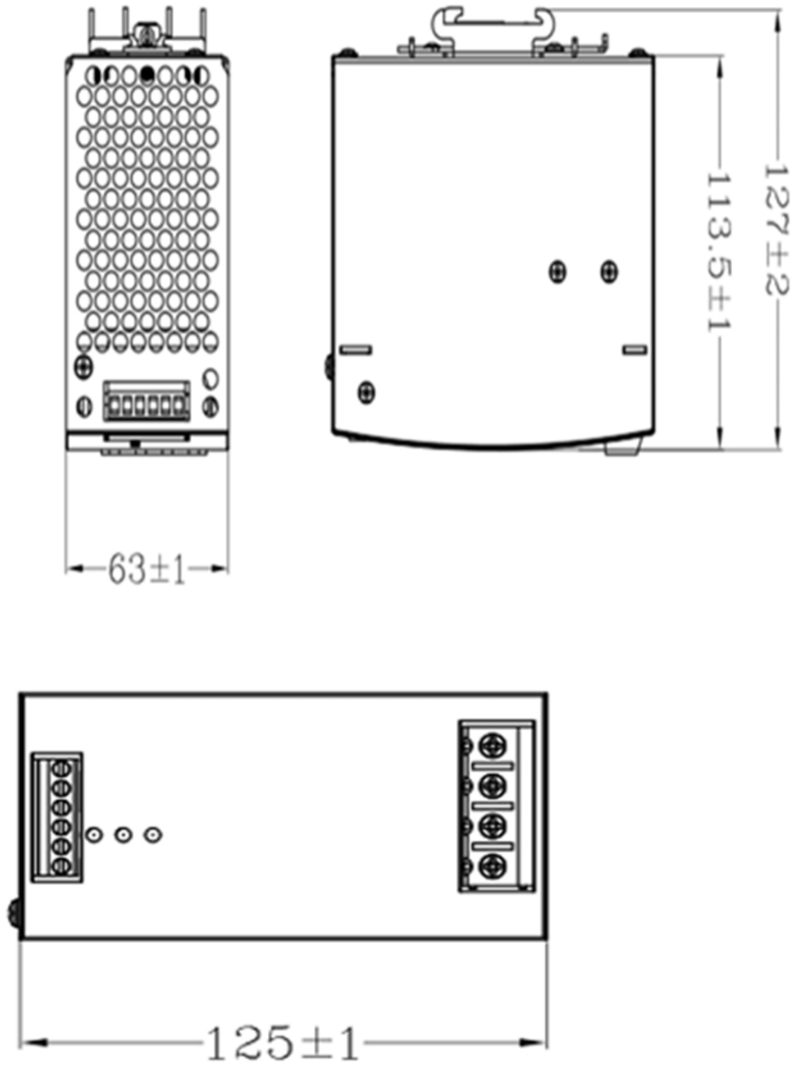
This product is subject to the regulations for the disposal of electrical and electronic equipment (WEEE). It must not be disposed of with municipal waste. Contact the manufacturer or an authorised service centre if you have any questions about disposal.

INFORMATION ON WARRANTY AND SERVICING

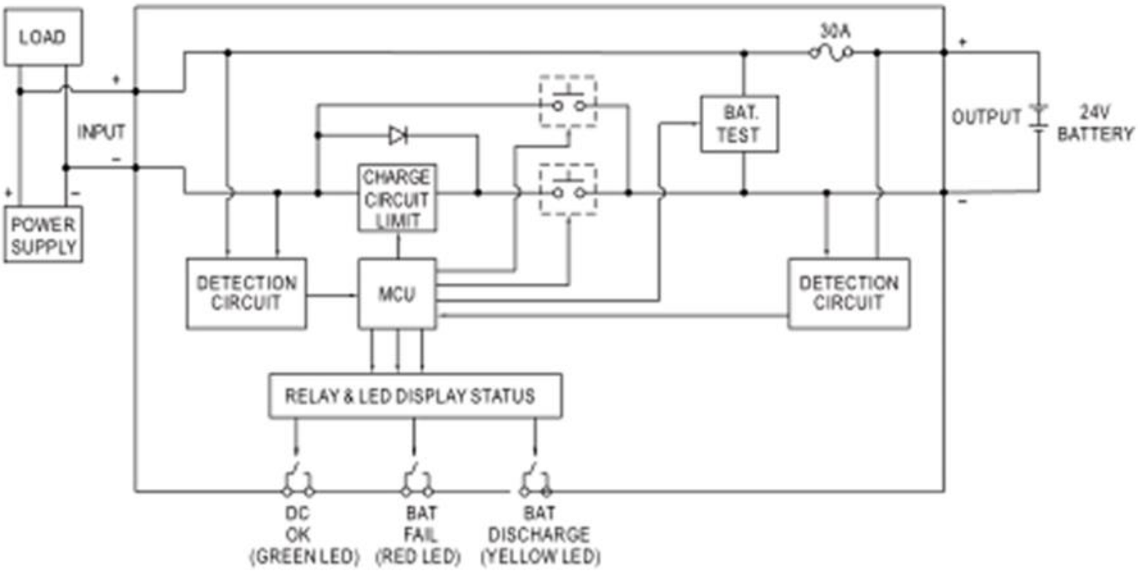
The product is covered by a 24-month manufacturer's warranty from the date of purchase. The warranty covers any defects in materials and workmanship. Please contact our service department if you have any problems with your device to ensure prompt and professional service. The warranty does not cover damage resulting from misuse, falls, mechanical damage, unauthorised repairs or disassembly attempts.

ATTACHMENT

1



2



Output

Pin No.	Assignment	LED
1	BAT Discharge	YELLOW
2		
3	BAT Fail	RED
4		
5	DC OK	GREEN
6		

Input

Pin No.	Assignment
1	BAT INPUT +
2	BAT INPUT -
3	DC INPUT -
4	DC INPUT +

3