

C15K

Auxiliary power supply group


 Addressee for this information: User | Installer

1 DESCRIPTION

C15K is a power supply group composed of:

- 1 metal housing
- 1 switching power supply unit
- 1 board for power control and delivery, mounted on the front panel, equipped with a LED to indicate mains and output voltage presence and battery state

C15K allows powering devices and recharging semi-stationary solid electrolyte backup batteries with 26 Ah maximum capacity.

The supplied current is 5 A.

C15K implements mains, battery voltage and output voltage presence check.

It features an output to recharge the internal battery of a self-powered siren.

C15K is protected against opening and removal from the mounting surface (using the supplied kit).

C15K is certified IMQ - Security Systems.



Refer to the instruction manual.

2 TECHNICAL DATA



Model	C15K
General features	
Mains input	AC230V 50 Hz +10%-15% (A-type power supply unit)
Power supply	

(1) packed product

Model	C15K	
Maximum power absorption from mains	0.65 A with 5.5 A load (0.85 A @ AC230V typical)	
General features		
Power	91	W
Efficiency	82%	
Output voltages	VOUT output: 10.0 to 14.0 Vdc with backup battery; +14V SIR output: 11.0 to 14.0 Vdc (present only with primary power supply)	
Ripple	25 mV peak-to-peak (200 mV peak-to-peak maximum)	
Working temperature	-10 / +55	°C
Dimensions	W 305 × H 385 × D 210	mm
Weight	5.35 (1)	kg
Certification	IMQ-Alarm EN50131-6 grade 2, environmental class II	

(1) packed product

Current values	
Maximum supplied current	5 A

Current distribution	<p>For grade 2 (12 h autonomy): 0.07 A for board self-consumption; 2.10 A for external devices (26 Ah battery); 0.51 A for external devices (7 Ah battery); 1.40 A for battery recharge.</p> <p>Current distribution with automatic change (4 h autonomy): 0.07 A for board self-consumption; 3.53 A for external devices (26 Ah battery); 1.68 A for external devices (7 Ah battery); 1.40 A for battery recharge.</p>
Output current for general use	$I_{out} = 4 \text{ A}$ $I_{batt} = 0.75 \text{ A}$ $I_{14V SIR} = 0.25 \text{ A}$
	$I_{out} \leq 3.35 \text{ A}$ $I_{batt} = 1.4 \text{ A}$ $I_{14V SIR} = 0.25 \text{ A}$
Control board consumption	67 mA @ 12 V
Max battery recharging current	1.4 A - limited by PTC

Battery	
Compatible battery	7Ah / 12V minimum; 26Ah / 12V (SLA) maximum
Battery charging time (80%)	with 1.40 A for battery recharge: 4 h for 7 Ah battery; 15 h for 26 Ah battery
Low battery indication	$V_{bat} < 10.5$ with no primary supply, reset > 12 V

Protections

- **Protection from short circuits/overload on VOUT:** 110% ÷ 150% of the power supply voltage - current limitation and/or F1 T3.15AL fuse fault (fuse replacement request), signalled by the "TENSIONE USCITA" (output voltage) LED switching off
- **Protection from battery shortcircuit/inversion:** current limited by the self-resetting PTC, signalled by the "CONTROLLO BATTERIA" (battery check) LED lighting on
- **Protection from short circuits/overload on 14V SIR output:** current limited by the self-resetting PTC, signalled by the "TENSIONE USCITA" (output voltage) LED blinking

Technical outputs

- **PRIMARY POWER SUPPLY FAULT (mains presence indication):** PRES.RETE (mains presence) relay output, C-NC-NO free-from-potential contact, max 1A @ DC24V. The total loss of the power supply functions is recognized as fault. Intervention time delayed of 45 s (+/-10%) with instant reset once the fault has ended.
- **BATTERY FAULT (indication of low battery, shorted battery, polarity inversion):** BATT.SCARICA (low battery) relay output, C-NC-NO free-from-potential contact, max 1A @ DC24V. The total loss of the power supply functions is recognized as fault. Intervention time delayed of 45 s

(+/-10%) with instant reset once the fault has ended.

- **TAMPER (indication in case of opening or removal from the mounting surface):** protection microswitch output contacts, NO free-from-potential contact, max 0.5A @ DC50V (case closed and fixed to the mounting surface).

Indications

- AC230V mains presence
- voltage presence at VOUT terminals
- voltage presence at 14V SIR terminals
- battery voltage control

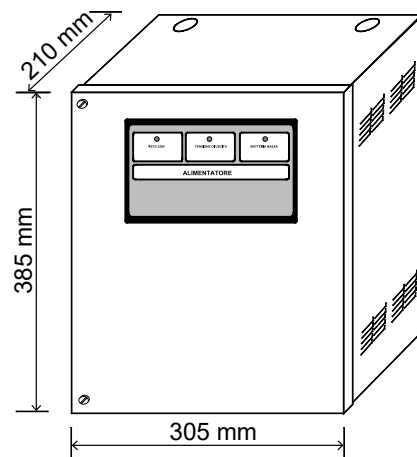
Parts supplied

- power unit
- microswitch against opening
- microswitch for protection against removal
- faston-to-ring adapters
- technical manual

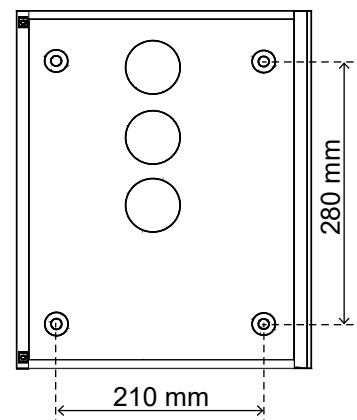
3 INSTALLATION



3.1 View of the case



BOTTOM



3.2 Preliminary warnings

Before proceeding with installation, we suggest consulting CEI 79-3 (installation of security systems) and CEI 64-8 (installation of low voltage systems) regulations. Work following the good practice guidelines.

Note: equipment suitable for mounting at heights lower than or equal to 2 m.

- The battery must be a VRLA-type (Valve Regulated Lead Acid) battery and have UL94V-1 or better flammability rating case. It must comply with IEC 60896-21:2004 and/or IEC 60896-22:2004 regulations. The battery must be replaced by experienced personnel.
- 2500 V CAT II power supply unit. The power supply unit which, once installed, is subject to transient voltages higher than those of the design overvoltage category, requires additional protection from transient voltages external to the equipment.
- All the free-from-potential contacts of the relays mounted on the control unit boards must be wired to circuits that operate with SELV voltages only.
- The end of a stranded conductor must not be bonded with soft soldering where the conductor is subjected to contact pressure.
- An easily accessible disconnecting device must be provided.

3.3 Operations

- open the case removing the screws on door top and extract the supplied package
- fix to a flat surface with screws and plugs using the holes on case bottom

Warning: use specific screws and plugs suitable for the

wall material and for the weight to bear.

- feed the unpowered system cables into the entry holes on case bottom; in case you need to use the top and bottom cable holes, use pipe-box junctions with HB (or better) flammability rating
- properly secure the extra-low-voltage cables in order to avoid any contact with the mains cables
- remove the plastic part covering the power unit terminal board and wire the phase, neutral and earth wires to their terminals

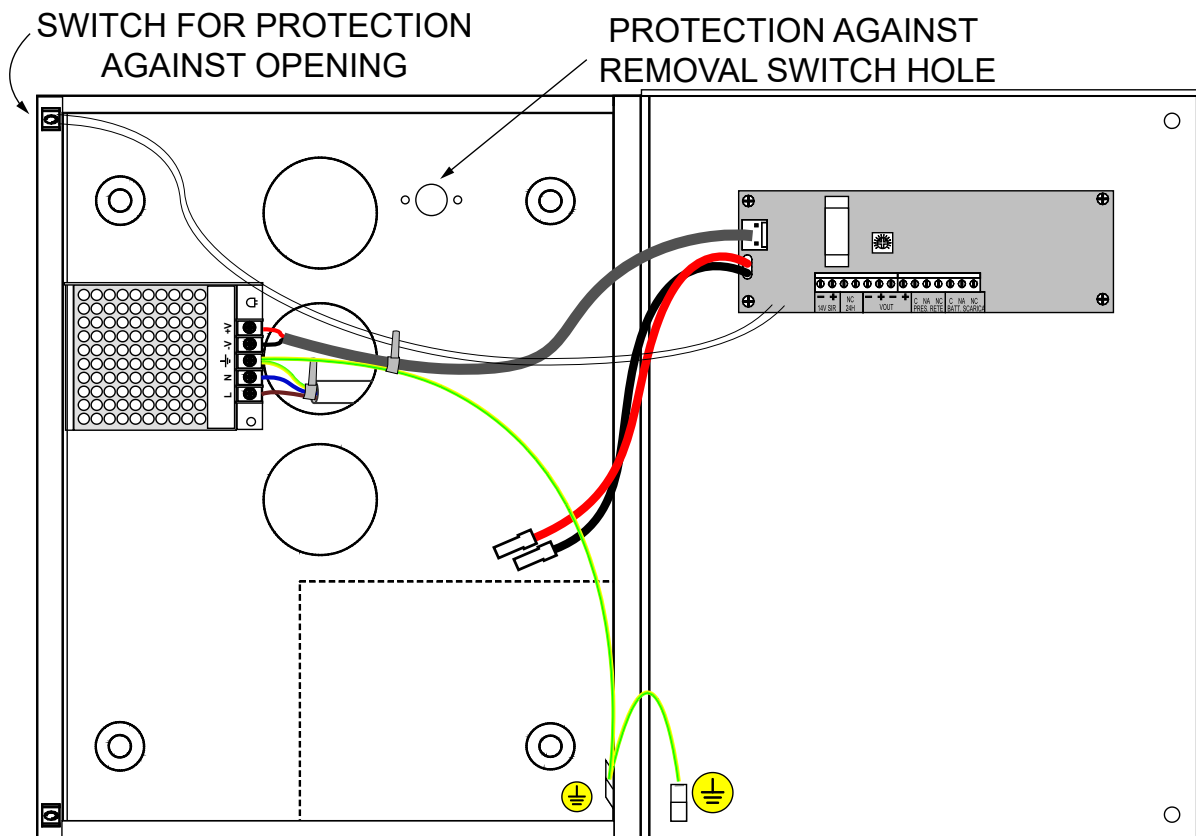
Warning: while connecting the earth wire, pay attention not to remove the other earth wire connected to the power supply group metal case.

- secure the mains wires entering the power supply terminals using a cable tie
- proceed with the required wiring
- carefully check the performed wirings, supply power and wire the red and black wires to the battery respecting polarities

In case batteries with screw terminals are used, it is necessary to use the supplied adapters to convert faston connectors to ring-shaped connectors.

The used battery must have HB or better flammability rating case.

- test the system
- close the case with the supplied screws



3.4 Kit for protection against removal

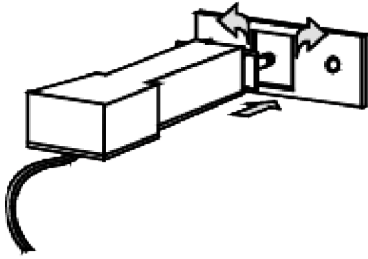
A kit for protection against removal is supplied.

If necessary, install the switch for protection against removal in the appropriate hole on bottom, according to the

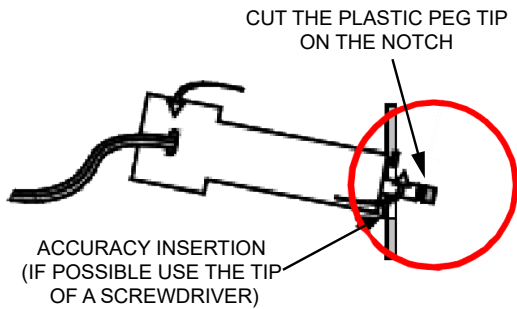
following indications.

Mounting the support metal plate

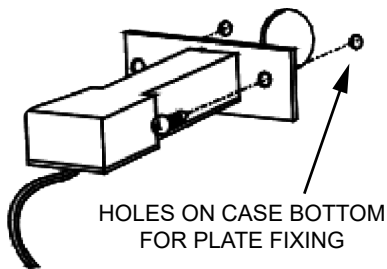
Positioning:



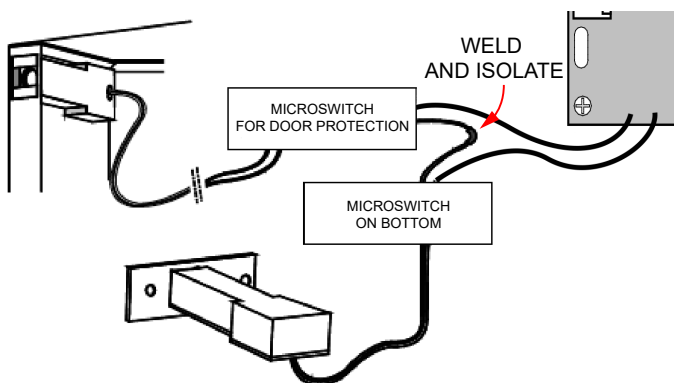
Hooking on bottom (seen from below):



Fixing:

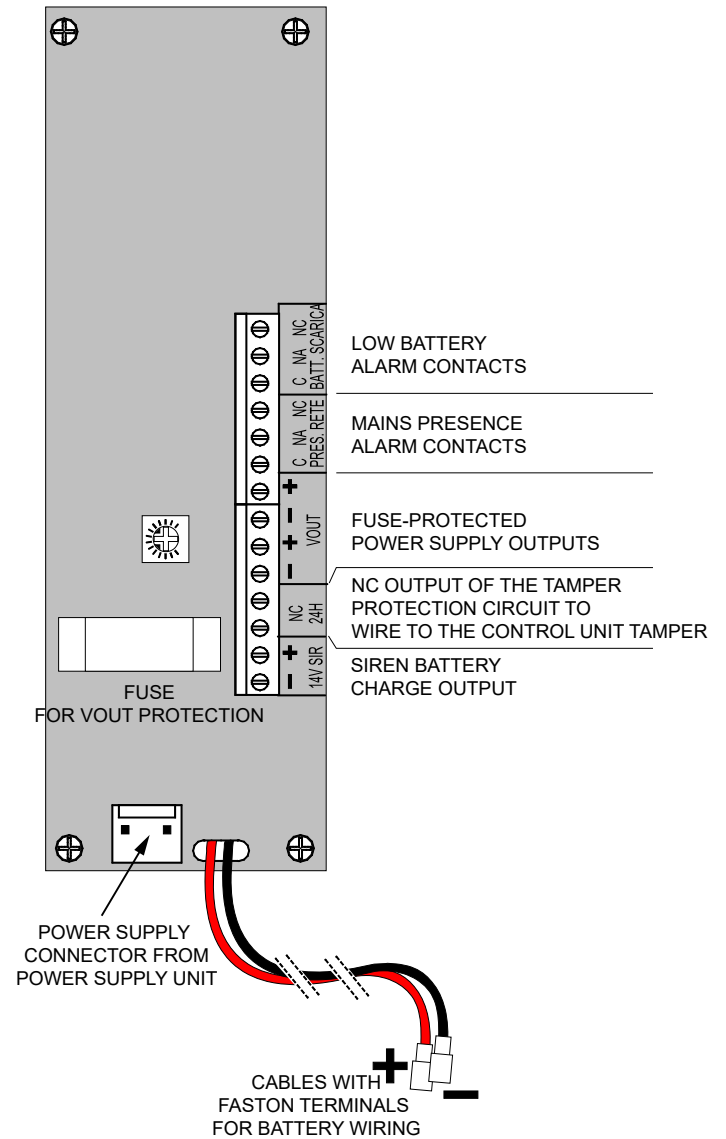


Wiring (NC configuration)



Note: wall mounting the case requires inserting a screw with its dowel in line with the tamper button hole. Tighten the screw until it penetrates 2 mm from the inner edge of the case bottom.

4 CONTROL MODULE



5 FRONT LED INDICATIONS



LED	Indications
RETE 230V (green)	AC230V mains presence On: mains present, regular operating mode. Flashing: mains absent for 45 s. Off: mains absent with intervention of the PRES. RETE relay. Intervention 1s.

LED	Indications
TENSIONE DI USCITA (green)	<p style="text-align: center;">VOUT presence</p> <p>On: voltage present at the terminals. Off: F1 T3.15AL fuse fault. Intervention 1s. Flashing: mains absent and mains LED off. Intervention 1s.</p> <p style="text-align: center;">14V SIR output voltage presence</p> <p>On: voltage present at the terminals. Flashing: voltage at the terminals lower than 7 Vdc or short circuit/overload. Intervention 1s.</p>
CONTROLLO BATTERIA (red)	<p style="text-align: center;">Battery state</p> <p>Off: regular operating mode. On: battery low voltage. Intervention 1 s. Relay intervention after 45 s.</p>

NOTES

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EU DECLARATION OF CONFORMITY

The product complies with current European EMC and LVD directives.

The full text of the EU declaration of conformity is available at the following internet address: www.elmospa.com – registration is quick and easy.



GENERAL WARNINGS



This device has been designed, built and tested with the utmost care and attention, adopting test and inspection procedures in compliance with current legislation. Full compliance of the working specifications is only achieved in the event the device is used solely for its intended purpose, namely:

Auxiliary power supply group

The device is not intended for any use other than the above and hence its correct functioning in such cases cannot be assured. Consequently, any use of the manual in your possession for any purpose other than those for which it was compiled - namely for the purpose of explaining the product's technical features and operating procedures - is strictly prohibited.

Production processes are closely monitored in order to prevent faults and malfunctions. However, the components adopted are subject to an extremely modest percentage of faults, which is nonetheless the case with any electronic or mechanical product.

Given the intended use of this item (protection of property and people), we invite you to adapt the level of protection offered by the system to suit the actual situation of risk (allowing for the possibility of impaired system operation due to faults or other problems), while reminding you that there are specific standards for the design and production of systems intended for this kind of application.

We hereby advise you (the system's operator) to see that the system receives regular routine maintenance, at least in accordance with the provisions of current legislation, and also check on as regular a basis as the risk involved requires that the system in question is operating properly, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. You must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

INSTALLER WARNINGS



Comply strictly with current standards governing the installation of electrical systems and security systems, and with the manufacturer's directions given in the manuals supplied with the products.

Provide the user with full information on using the system installed and on its limitations, pointing out that there are different levels of security

performance that will need to suit the user's requirements within the constraints of the specific applicable standards. See that the user looks through the warnings given herein.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

USER WARNINGS



Check the system's operation thoroughly at regular intervals, making sure the equipment can be armed and disarmed properly.

Make sure the system receives proper routine maintenance, employing the services of specialist personnel who meet the requirements prescribed by current regulations.

Ask your installer to check that the system suits changing operating conditions (e.g. changes in the extent of the areas to be protected, change in access methods, etc...)

MAIN SAFETY RULES

The use of the device is forbidden for children and unassisted disabled individuals.

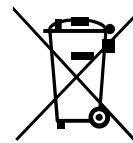
Do not touch the device when bare footed, or with wet body parts. Do not directly spray or throw water on the device.

Do not pull, remove or twist the electric cables protruding from the device even if the same is disconnected from the power source.



Refer to the instruction manual.

DISPOSAL WARNINGS



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In accordance with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), please be advised that the EEE was placed on the market after 13 August 2005 and must be disposed of separately from normal household waste.