UNINTERRUPTIBLE POWER SUPPLY

SLC CUBE 3+

USER'S MANUAL -OPTIONS-

General index

This information is complementary to the hardcopy or CD/Pendrive «User, installation and start up manual» supplied together with the equipment. In it there are only references to parts, elements and/or particular specifications, which means a partial modification of itself, with no change in the basic structure of the product.

Pay attention to the particular chapter of «Safety warning» and the EK266*08 document as regards to «Safety instructions». Before doing any action in the UPS, read carefully any information regarding safety.

The equipment may include one or more optional, so we will proceed accordingly.

1. Relay interface to terminals strip communications electronic card.

Relay interface, to terminal strip electronic communications unit

Any connection manoeuvring in the dry contacts, in the same way as in the rest of the equipment, will be done with no voltage and with the equipment in rest (Off).

To have access to the interface terminal strip, follow the next described steps:

- Open the front door of the equipment.
- To release the three locks **(A)**, loosen in counter-clockwise till unblocking them (see Fig. 1).

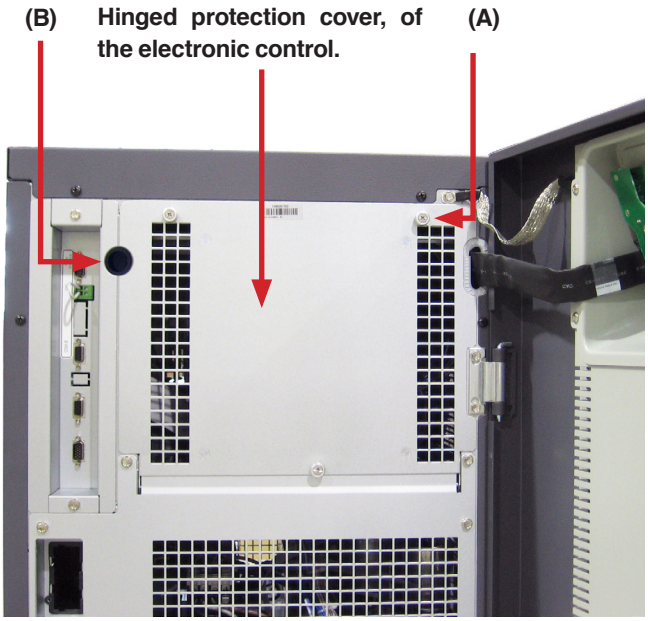

Fig. 1. *UPS front view with open door.*

- Pull from them to open the hinged protection cover, of the electronic control and drop it till the stopper (see Fig. 2).
- Communication electronic card will be accessible to make the needed connections to the dry contact terminal strip (see Fig 2).

  Cable trunk will be passed through the cable gland **(B)** previously.
- Dry contact is supplied in the communication electronic card in both DB9 serial connector and optional terminal strip. Maximum applicable voltage and current will be:
  - ❒ DB9 serial connector: 2A 30V DC or 2A 100V AC.
  - ❒ Optional terminal strip.
    - For relays RL1 to RL4: 6A 30 V DC or 6A 100 V AC.
    - For relay RL5: 6A 30 V DC, 0.2A 110 V DC, 0.12A 220V DC or 6A 250V AC.

Do not use both means of communication, DB9 and terminal strip, otherwise in case of applying different voltages in each one there will be a short-circuit.

The equipment has a «Shutdown» input, which allows shutdown the inverter when it is applied a voltage between (5V÷12V). This input is available in the DB9 connector only and it doesn't interfere with the dry contact signals.

- Table 1 shows the dry contact pin-out of the terminal strip and the type of contact. By default, all common pins are connected together.
- Like in the rest of connections, once the respective tasks are finalised, leave the equipment with the covers put back and fixed, as well as the front door closed.

Nr pin (RG)	Relay	Type of alarm	Contact N.C.-N.O.
1	RL1	Equipment on bypass	Common
2			N.C. (Normally closed)
3			N.O. (Normally opened)
4	RL2	Discharge - Mains fault	Común
5			N.C. (Normally closed)
6			N.O. (Normally opened)
7	RL3	Low battery	Común
8			N.C. (Normally closed)
9			N.O. (Normally opened)
10	RL4	General alarm	Común
11			N.C. (Normally closed)
12			N.O. (Normally opened)
13	RL5	Configurable (OPTIONAL)	Común
14			N.C. (Normally closed)
15			N.O. (Normally opened)

❒ Contacts change their status when the alarm is triggered.

❒ All common terminals are connected together.

Table 1. *Dry contact pin-out of the terminal strip.*

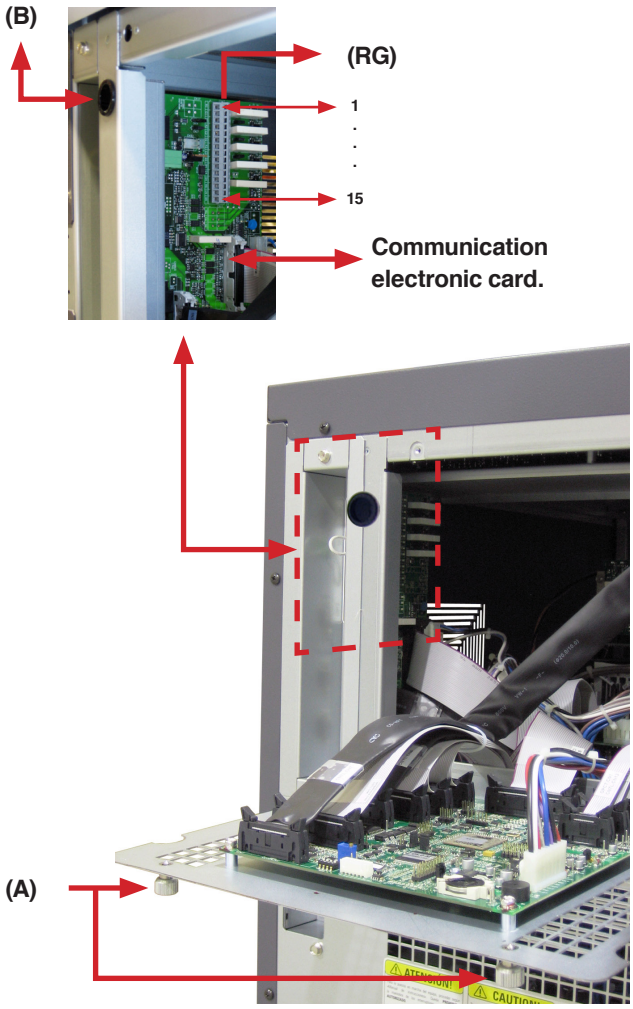

Fig. 2. *Location communication electronic board.*

2. Adaptable equipments to input and output configurations.

UPSs from CUBE3+ series can be supplied from factory ready for their setting in any of the different input and/or output topologies stated in table 2.

Although this setting does not mean an important «hardware» change, it requires a higher particular and specific «software» knowledge than a simple end-user, so this setting is delegated to our S.T.S (Service and Technical Support) only or, failing that, to authorised staff with specific training.

Rectifier input configuration	Bypass input configuration (*)	Output configuration
three phase	three phase	three phase
three phase	single phase	single phase
single phase	single phase	single phase
single phase	three phase	three phase

(*) Separate static bypass line is an option. Obviously, the typology of this line will always be the same as the output.

Tabla 2. *UPS input and output configurations.*

Fig. 3 illustrations are not contractual and they do not represent the complete range, but they are useful as a mere reference guide.

Unless it is not stated, by default the equipments are set to three phase input and output from factory, nevertheless Fig. 3 shows the single phase / single phase configuration for the purpose of showing how the copper rods **(PLT)** are located in the power terminals.

To change any configuration, either from the factory origine or any other changed later on, proceed as follows and pay attention to Table 3 and Fig. 3:

1. ⚠ **VERY IMPORTANT!**. If you do not belong to our **S.T.S. (Service and Technical Support)** or you are not authorised staff with the specific training, do not proceed with the configuration setting, because you could make a mistake in the connection (copper rods **(PLT)** installation) and/or switch manoeuvring **(Qinv)**), which could cause its incompatibility or conflict with the preset selected «Software» option, which can only be set through «Password», and it is never provided to the end-user.
2. Open the front door of the equipment.
3. Check that the equipment is completely shutdown and the power terminals are not alive; no voltage (switches from switchgear panel are turned to «Off»).
4. Remove the screws **(t_1)** that fix the terminal cover **(TB)** and take it out. The power terminals will be at the front.
5. Copper rods (PLT) are supplied together with the equipment, they are designed to the joint the terminals of the three input, bypass and/or output phases, depending on the final required configuration. Table 3 shows the copper rods and terminal group to fit it in. Proceed accordingly.
6. ⚠ Equipments with single phase output only.

   Take the cover **($T_{inv.}$) out**. To do it, remove the two screws **(t_3) that fix it previously**.

   There will be access to the inverter switch **(Q_{inv})**. Turn the switch to «1».

   Put the cover **($T_{inv.}$)** and its fixing screws **(t_3) back**.
7. Supply voltage to the UPS input terminals (switches from switchgear panel are turned to «On»).
8. Turn the input switch **(Q1a)** and the static bypass (Q4a), if any, to «On».
9. Through the control panel with LCD, enter into the «SETTING» menu by means of the «Password» and select the equipment configuration, which must corresponds with the actions done over the «Hardware» in the previous steps.
10. Proceed to start it up as the user's manual states.

Terminal group	Configuration	Copper rod to joint the 3 phases (PLT)	Switch (Q_{inv}) position
Rectifier input	Three phase	DO NOT fit it in	X
	Single phase	Fit it in	X
Bypass input (*)	Three phase	DO NOT fit it in	0
	Single phase	Fit it in	1
Output	Three phase	DO NOT fit it in	0
	Single phase	Fit it in	1

(*) Separate static bypass line is an option. Obviously, the typology of this line will always be the same as the output.

Tabla 3. *Connection copper rods and inverter switch position.*

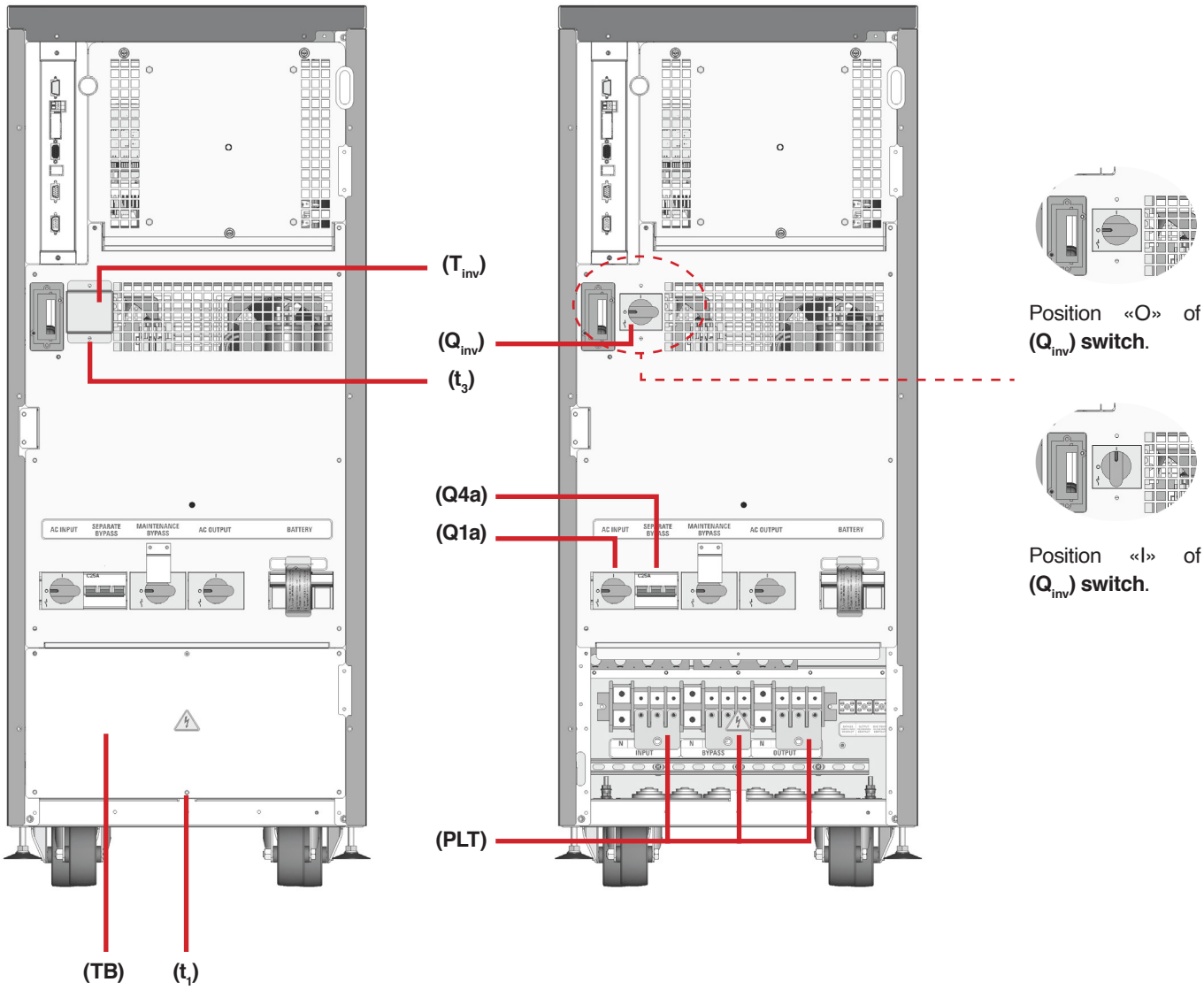

Fig. 3. *UPS rear view as a reference mode, ready for the possible power supply and loads typology configurations.*

3. Automatic detection of the type of power network.

Each equipment of the parallel system has a suitable Firmware for detecting the mains power supply typology and to discriminate the single phase input voltage from the three phase mains.

Regarding the quantity of power supply wires, they do not differ, because the cables of the three phases will be connected either to each one of them or to a single common terminal, the corresponding one to the phase and the wire corresponding to the neutral to it.

Respect the Neutral wire connection to its terminal, otherwise it will cause a short-circuit, with the result of destruction, faults and possibility of fire.

Pay attention to the Neutral cable section, in special to the single phase power supply typology, by respecting the cross sections stated in the "Recommended Installation" information.

It should be noted that the shifting from one typology to the other, its necessarily involves a break at the UPS input during the blackout, the loads connected to the UPS output will still be supplied, as long as there is energy in the batteries.

salicru

Avda. de la Serra, 100
08460 Palautordera
BARCELONA
Tel. +34 93 848 24 00
902 48 24 00 (Only Spain)
Fax. +34 94 848 11 51
salicru@salicru.com
Tel. (S.T.S.) +34 93 848 24 00
902 48 24 01 (Only Spain)
Fax. (S.T.S.) +34 93 848 22 05
sst@salicru.com
SALICRU.COM

BRANCHES AND SERVICES AND TECHNICAL SUPPORT (S.T.S.)

BARCELONA
BILBAO
GIJÓN
LA CORUÑA
LAS PALMAS DE G. CANARIA
MADRID
MÁLAGA
MURCIA
PALMA DE MALLORCA
PAMPLONA
SAN SEBASTIÁN
SEVILLA
VALENCIA
VALLADOLID
ZARAGOZA

SUBSIDIARIES

CHINA
FRANCIA
HUNGRÍA
MARRUECOS
MÉXICO
PORTUGAL
REINO UNIDO
SINGAPUR

REST OF WORLD

ALEMANIA
ARABIA SAUDÍ
ARGELIA
ARGENTINA
BÉLGICA
BRASIL
CHILE
COLOMBIA
CUBA
DINAMARCA
ECUADOR
EGIPTO
FILIPINAS
HOLANDA
INDONESIA
IRLANDA
JORDANIA
KUWAIT
MALASIA
PERÚ
POLONIA
REPÚBLICA CHECA
RUSIA
SUECIA
SUIZA
TAILANDIA
TÚNEZ
UEA
URUGUAY
VENEZUELA
VIETNAM

Product Range

Uninterruptible Power Supply (UPS)
Lighting Flow Dimmer-Stabilizers (ILUEST)
Switch Mode Power Supplies
Static Inverters
Photovoltaic Inverters
Voltage Stabilisers and Power Line Conditioners

Nota: Salicrú can give other electronics solutions according to the application specifications or technical specifications.