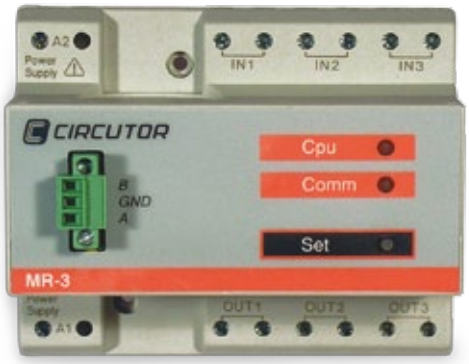
CA-4 / MR-3

Units used to control the maximum demand



Description

- **Quickness of** of load connection / disconnection response
- **Impulse input** to measure the maximum demand being measured by the company's meter (when the supply company allows for its installation). If the supply company does not allow its installation, we can install our own meter with the impulse output for such purposes
- Work with the **most common** maximum demand **systems** (sliding window and fixed window)
- With auxiliary power supply **PS-24**, DC
- Safety times to enter medium voltage lines in the system
- **Simulation system**, to carry out a test before starting the system and prevent unwanted operations
- Top **performance / price**, with incredible short-term investment returns

Features

CA-4	
Power supply circuit	24 V dc (± 25 %)
Consumption	500 mA
Output relays	4 relays
Isolation voltage	1,000 V contact-contact 4 000 V Contact-Coil
Thermal current (Ith)	3 A
Maximum operation power	1,500 V·A
Mechanical working life	3 x 107 operations
Electrical working life	350 operations / hour (at full load)
Digital inputs	4 inputs, potential-free contacts (10 mA - 24 V dc)
Ambient conditions	
Operating temperature	-10 ... +65 ºC
Build features	
Fixing	Can be coupled to DIN 46277 rail (EN 50022)
Cover	Lexan Front
Safety	Category I (EN 61010)
Standards	
EN 50082-1, EN 50082-2, EN 61000-3-2, EN 61000-3-3, EN 61010-1	
MR-3	
Power supply circuit	24 V dc
Consumption	65 mA
Output relays	3 relays 10 A / 250 Vac
Digital inputs	3 polarised inputs
Communications	RS-485
Ambient conditions	
Operating temperature	-10 ... +65 ºC

CA-4 / MR-3

Units used to control the maximum demand

Control of loads

Control of up to 128 loads or groups of loads.

System of priorities, to distinguish the loads with a lower priority and which can be commonly disconnected and the loads with the highest priority that must only be disconnected when needed, in order to avoid exceeding the contracted power.

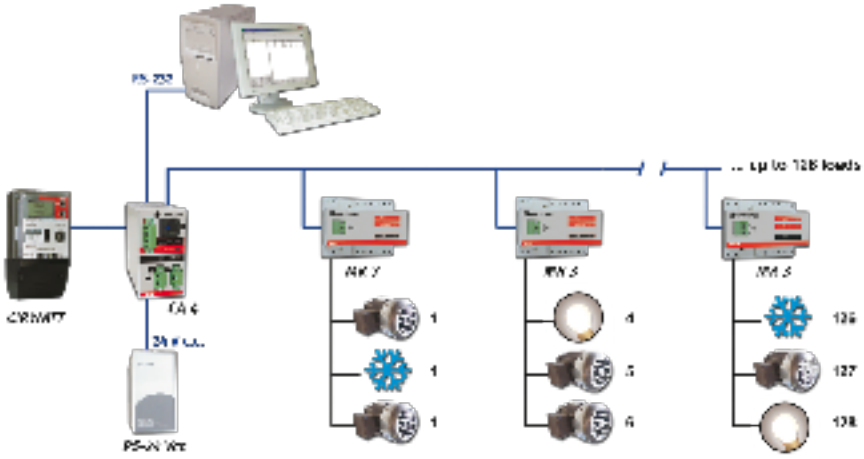
Optional creation of load groups with the same priority and FIFO or LIFO connection / disconnection sequences.

Definition of up to 4 load states: Active, Inactive, Forced active and Forced inactive (for example, in the case of forced inactive, we can carry out the repair of a load with no need to worry about the fact that the said load can be reconnected)It detects when the load is connected or stopped.

Modular system

Modular system adapted to the number of loads in any installation. It only acquires what is needed.

It has a modular system that can connect / disconnect loads near the loads them selves to simplify the cabling structure, reduce cabling distances and improve the response time.



Software

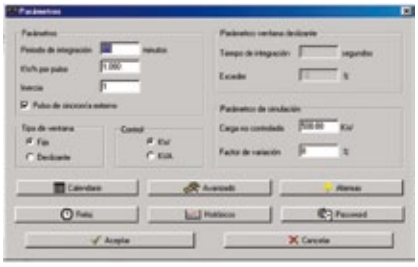
Communications and *software* included to display the information in a PC and store the connections and disconnections of our power control unit.

Optional programming of a contracted power calendar for the next 2 years. Optional programming of contracted power calendars in accordance with the hours of the day, type of day, etc.

Individual calendars available for loads, not only to start and stop them automatically, but also to guarantee the perfect control of power, knowing the loads in operation prior to said tasks.

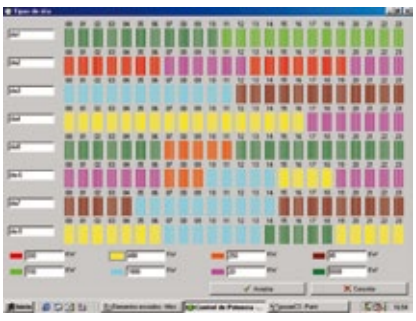
Firstly, the user defines the basic power control parameters, such as the type of window, period of integration, etc.

Likewise, the type of calendar of contracted power or the power ratings we wish to attain will be assigned, as well as the types of dates when the rates used by the electricity company will be applied. The software supports up to 8 types of rate on 8 different dates.



Assignment of basic parameters

Assignment of the calendar



Assignment of the rate

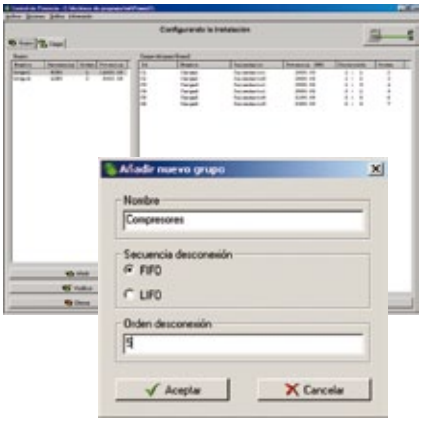
CA-4 / MR-3

Units used to control the maximum demand

Secondly, the groups of loads are defined, the disconnection system of the loads of this group is assigned (FIFO or LIFO) and the disconnection order of the group in relation to others is also assigned (if it is the first one or the last one, etc.)

These groups are created in accordance with the installation (for ex.: groups of compressors or lights, etc.). Next, the loads corresponding to any **MR3** or the same **CA4** are assigned to each group. The loads in each group are unlimited.

We can see that the power disconnection order consumed by each load is displayed at all times, including the total power per group, informing the user whether this is a FIFO or LIFO sequence.



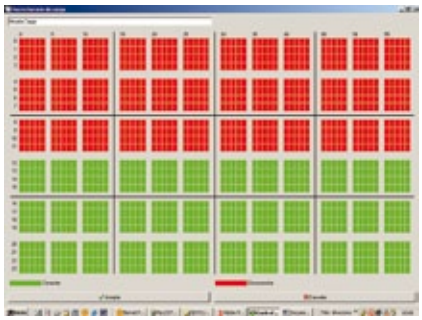
Creation of load groups

After creating the groups, the user must simply program the loads with their corresponding power, the relay that controls them and if a specific calendar can be created for each one.

For example, we can force the disconnection of the machine during a determined time, with no option to connect it again during said period.This period can even be defined over a two year long period, thanks to the memory capacity of the **CA-4**.

Lists of loads

New load

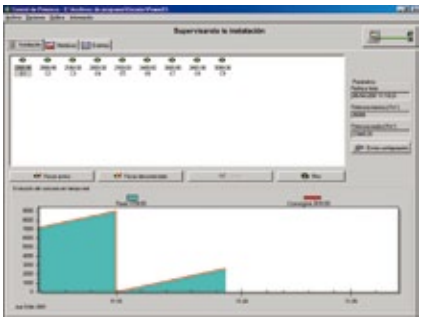


Calendar of loads

When all parameters have been defined, we can create a simulation to check the correct operation and complete the system's configuration.

When the system has been started, the Power Control Software can be used to check the status of loads in real time, stop them manually or even maintain them permanently stopped, by simply selecting the corresponding software.

The load status is clearly defined and the information displayed will vary, depending on the status:



Real-time monitoring

CA-4 / MR-3

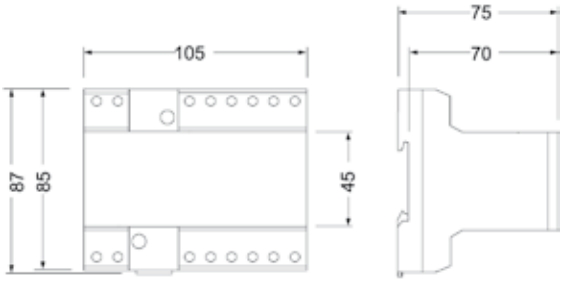
Units used to control the maximum demand

References

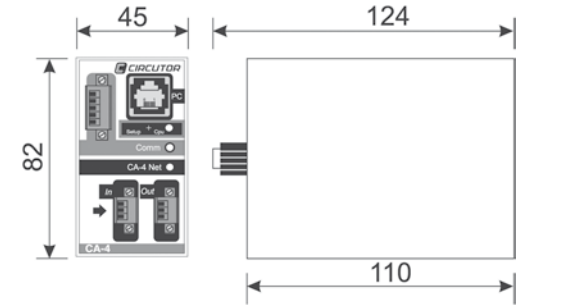
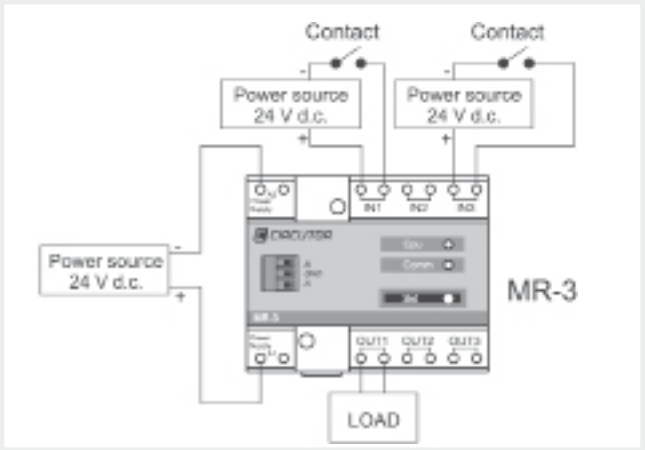
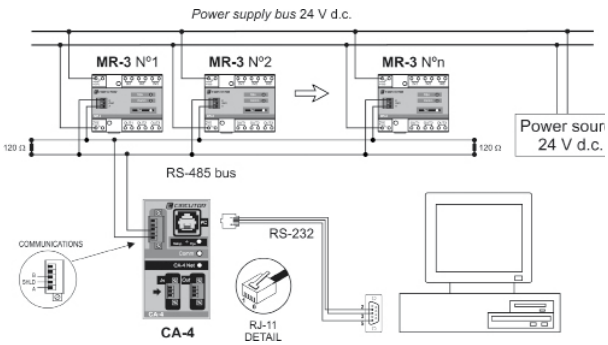
Description	Type	Code
Load controller + software	**CA-4**	**M60411**
3-line expansion	**MR-3**	**M60412**
Basic power control kit (3 Loads): 1 CA-4 controller 1 PS-24 Power Supply 24V dc 1 power control software installed in the box (280 x 280 x 150)	**CPP-B**	**M60421**

Dimensions

MR-3



CA-4



Connections