

DEMAND CONTROLLERS



Concept and benefits of the demand controllers

- Energy consumption rationalization.
- By displacing the consumption to the low cost tariff, the lower price per kWh is paid.
- The demand is limited to the contracted value.

Description

- The demand controller connects and disconnects loads during user programmable periods.
- It supervises the energetic demand and limits it to the configured value.
- The user sets priorities for the load disconnection.
- It is possible to choose between 4 measurement methods:
 - pulses coming from the energy meter
 - single-phase with a toroidal sensor
 - three-phase with 2 toroidal sensors
 - three-phase with 3 toroidal sensors

Application I

- The demand controllers can be used in homes that have a fixed price tariff (fixed price per kWh) or in homes that have a different price per kWh depending on the time of the day.
- In the fixed price tariff cases, the demand is limited to the maximum power installed (can be a lower value if it is desired). The time periods can be used but it does not offer any price advantage.

Application II

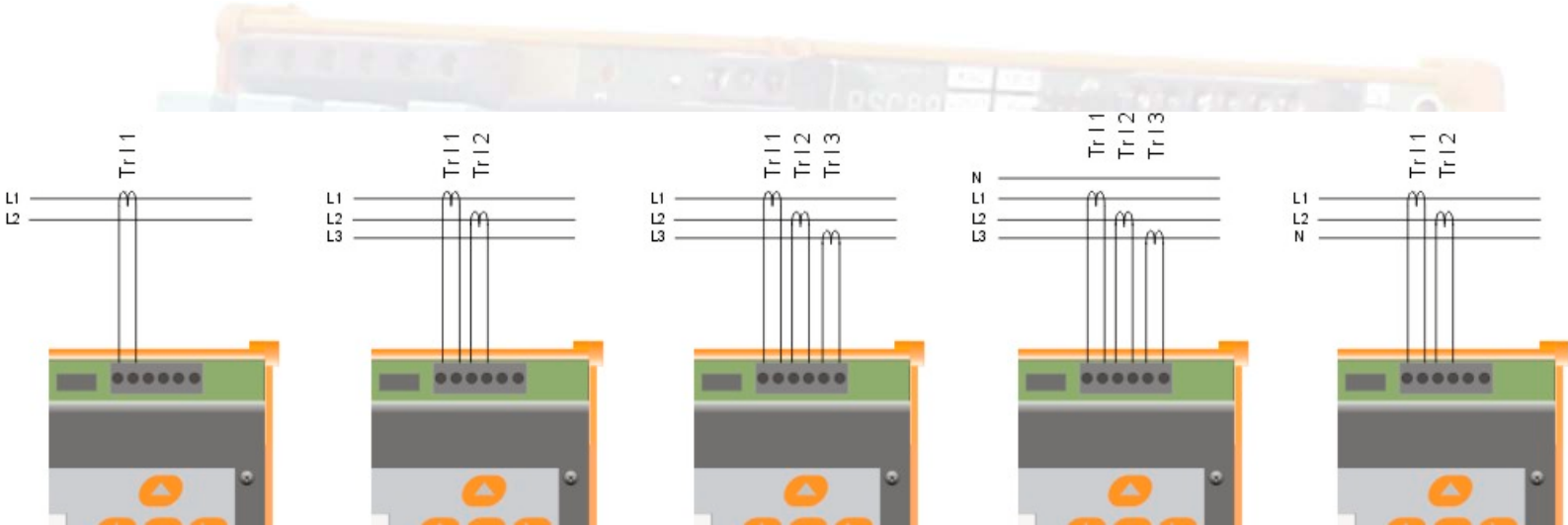
- In a different price per kWh tariff case, the consumption is limited according to the time of the day.
- The loads that imply great energy demand, such as water heating, washing machine operation, are displaced to the time of the day that has lower price per kWh.
- The demand controller allows to do this automatically.
- The result is the same energy consumption paying less.



Operation

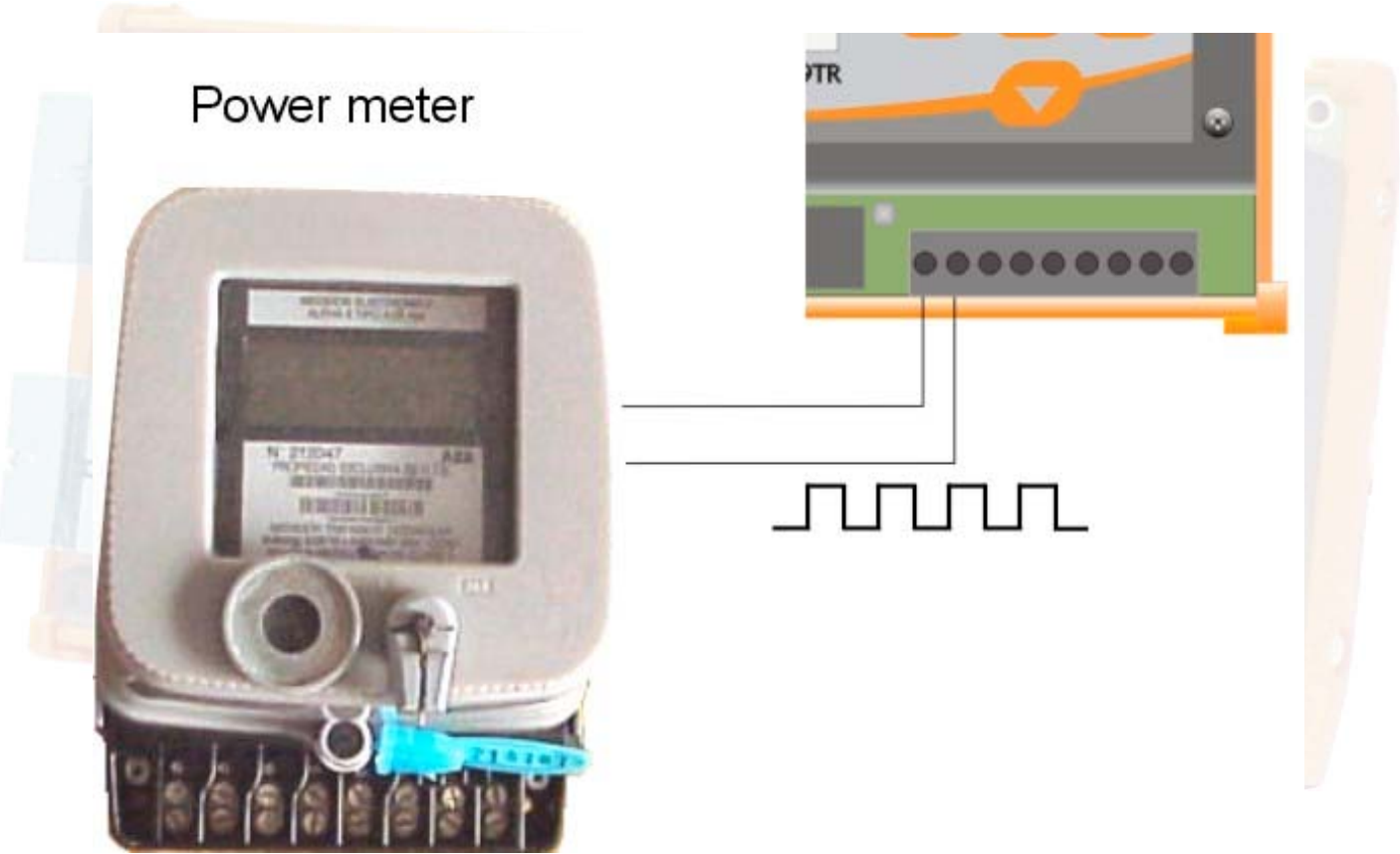
- The loads are connected and disconnected in accordance to dates, time periods and priorities set by the user.
- The demand is constantly monitored and if it exceeds the configured maximum limit or the value of an active period, the controller disconnects loads starting with the ones of lower priority.
- When the demand decreases, it reconnects the higher priority loads.
- When the demand is greater than the limit, the controller cycles the loads of the same priority.

Transducer connections I



- Toroidal sensors
- The three-phase measurement method can't be used in installation with neutral.

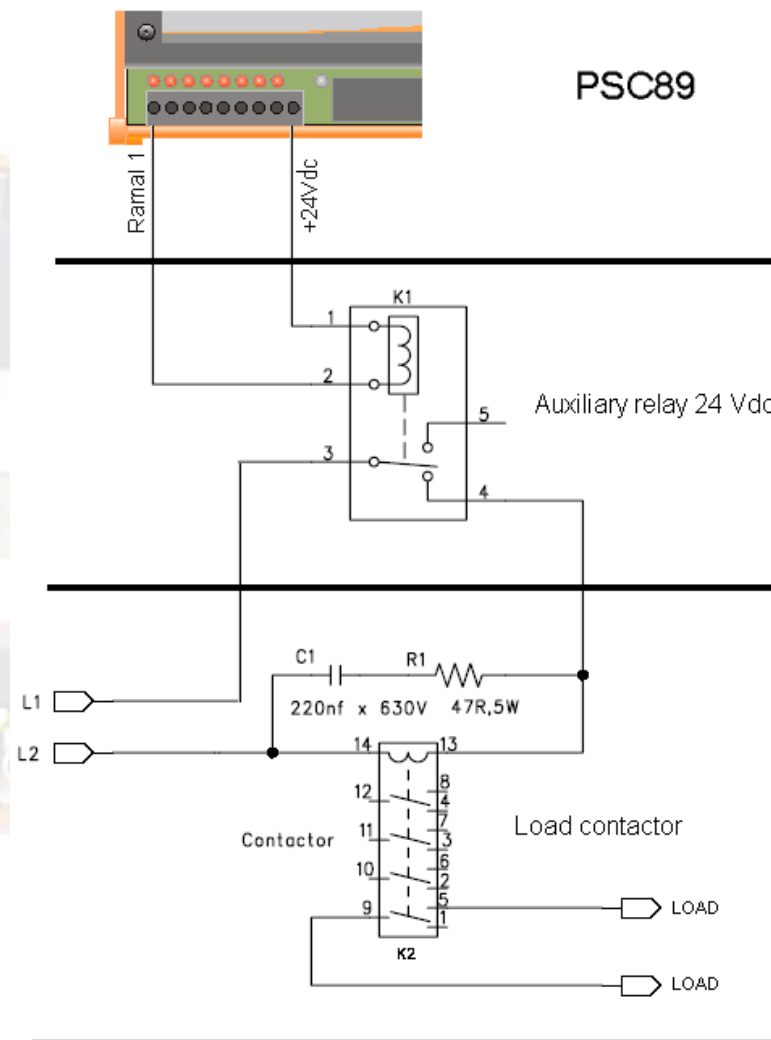
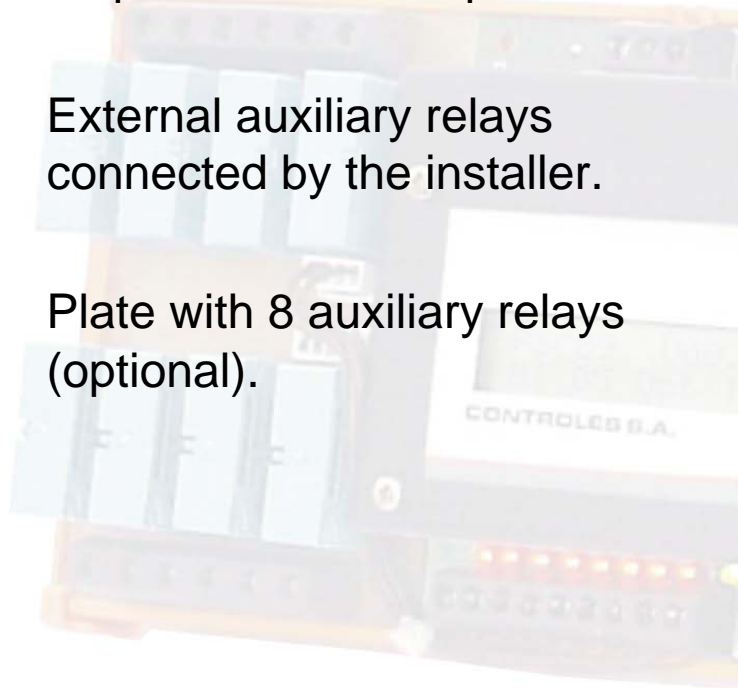
Transducers connections II



Output connection



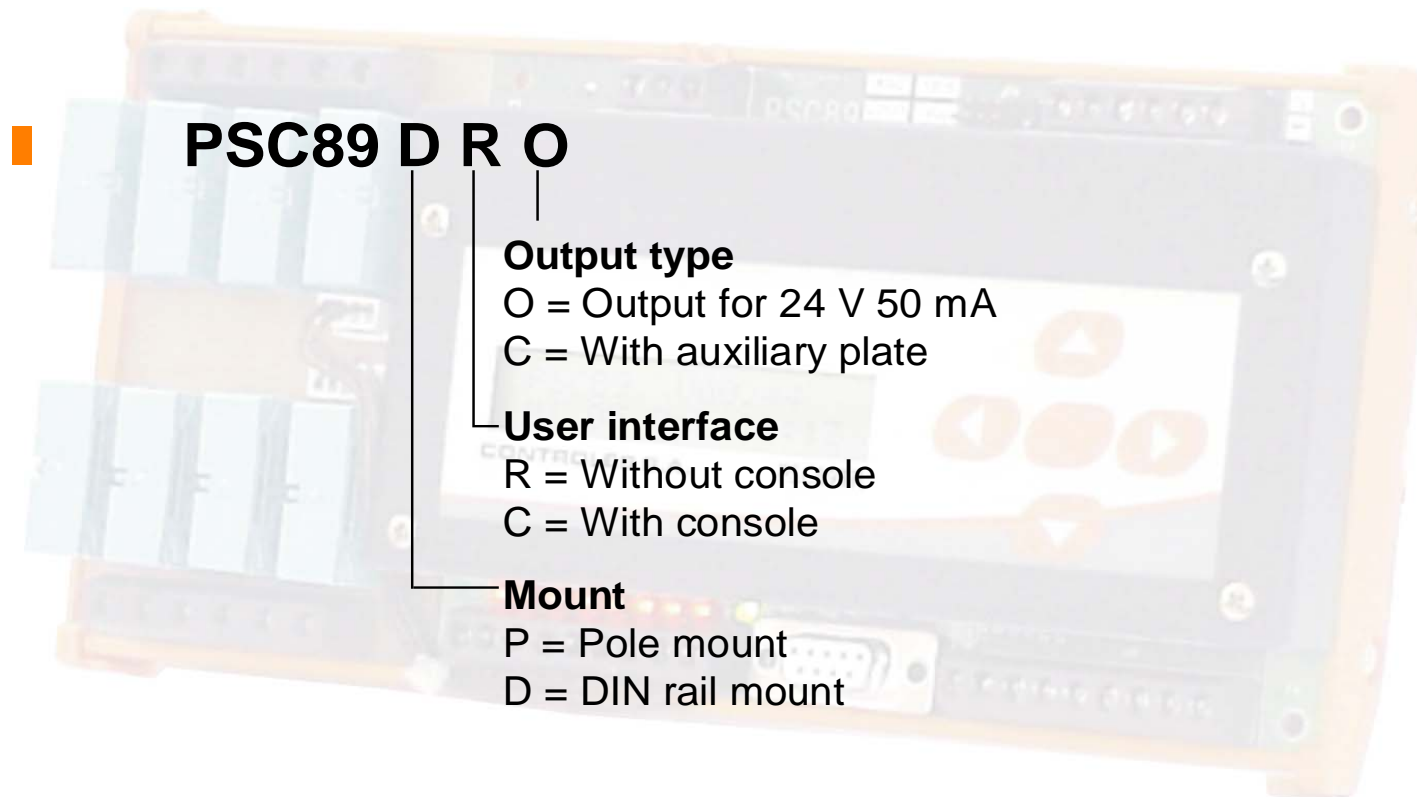
- 8 open collector outputs.
- External auxiliary relays connected by the installer.
- Plate with 8 auxiliary relays (optional).



Models

- PSC89DEC - Controller with console and output relays.
- PSC89DEO - Controller with console and open collector output.
- PSC89DRC - Controller without console and output relays.
- PSC89DRO - Controller without console and open collector output.

Order Code



PSC89 D R O

Output type

O = Output for 24 V 50 mA

C = With auxiliary plate

User interface

R = Without console

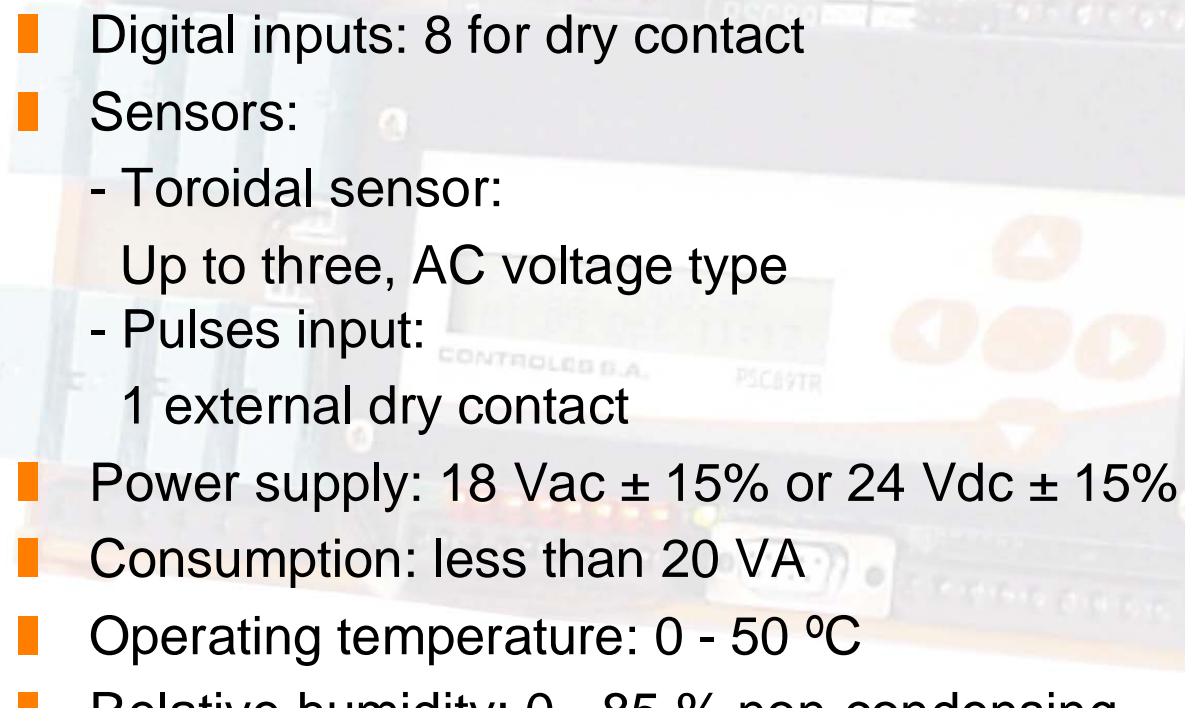
C = With console

Mount

P = Pole mount

D = DIN rail mount

Technical data

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- A semi-transparent background image of a handheld electronic device, possibly a data logger or meter. It has a screen displaying a graph and several buttons. The device is orange and black. Text on the device includes "CONTROLES S.A." and "PSC89TR".
- Digital inputs: 8 for dry contact
 - Sensors:
 - Toroidal sensor:
Up to three, AC voltage type
 - Pulses input:
1 external dry contact
 - Power supply: 18 Vac \pm 15% or 24 Vdc \pm 15%
 - Consumption: less than 20 VA
 - Operating temperature: 0 - 50 °C
 - Relative humidity: 0 - 85 % non-condensing

Accessories

It can be supplied with:

- Power supply transformer.
- Toroidal sensors to measure the current of one, two or three phases.

