MDC-20

MDC-20, Maximum demand control unit

Code: M61410.

> 8 digital inputs for logical states or counting impulse signals (electric energy meters, water meters, gas meters, etc.)

> Load status feedback (inputs/outputs). Expandable via auxiliary LM range units

> Historical records of over one year with a log of up to 4500 electrical variables, averaged every 15 minutes, maximum and minimum values over the period (Period can be modified. Ring buffer)

> RS-485 BUS for connecting up to 12 LM4 i/o

Description

The **MDC-20** is a unit designed to predictive control the maximum demand of an installation. It means that the unit connects and disconnects the installation's electrical loads (non-priority loads) to ensure that the maximum power contracted is not exceeded. Management of the loads is done in accordance with the power rating of the loads, the maximum configured power, and the current energy measured. This system optimises the consumption of energy in the installation because it allows the maximum number of loads to be used simultaneously but does not exceed the contracted power, which would result in high penalties.

The unit is equipped with relay outputs that enable the management of up to 6* electric loads without expanding.
*(It is possible to use the output for some alarms conditions. In this case, the number of free relays to control local loads is 4).

- Peripheral communications fault alarm
- Insufficient loads for the power control
- It is possible to expand the number of controlled loads by the **MDC-20** with up to 12 **LM4I/4O** operated by RS-485 communications.

Its main features are:

- Demand management by disconnecting up to 6 non-priority local loads.
- Expandable until 54 loads with 12 **LM4I/4O** units through the RS-485 port.
- Instantaneous energy value reading through Modbus/RTU communications or the impulse input.
- Synchronising impulse input.
- Ethernet connection to centralize it in other applications or communicating with remote peripherals on the ethernet network.
- Feedback load status control through the logic status of the inputs
- Centralising consumptions by impulses.
- Disabling load management according to schedule.
- Simulation tool for verifying system behaviour.

Creation date: 21/12/2024 - CIRCUTOR, SAU reserves the right to make technical changes or modify the content/images of this document without prior notice, in order to improve its reliability, functionality, design or for other reasons.
It accepts no liability for any errors, inaccuracies or possible lack of information in this document.

MDC-20

Maximum Demand predictive Control

Code: M61410.

Specifications

AC power supply

Consumption	5...8 VA
Frequency	50/60 Hz
Nominal voltage	85 ...264 Vca / 120 ... 300 Vcc

Mechanical characteristics

Size (mm) width x height x depth	105 x 90 x 70 (mm)
Weight (kg)	0,29

Digital inputs

Input/output insulation	Optoisolated
Quantity	8
Type	NPN, potential-free
Minimum signal width	tON/tOFF min.: 50 ms

Digital relay outputs

Type	Relay
Nominal voltage	250 V ~
Resistive load (max.)	5 A
Electrical life	3×10^4
Mechanical life	2×10^7
Maximum switching capacity	750 VA

Serial communication

Protocol	Modbus/RTU
Technology / Type	RS-485

Creation date: 21/12/2024 - CIRCUTOR, SAU reserves the right to make technical changes or modify the content/images of this document without prior notice, in order to improve its reliability, functionality, design or for other reasons.
It accepts no liability for any errors, inaccuracies or possible lack of information in this document.

MDC-20

Maximum Demand predictive Control

Code: M61410.

Dimensions