MDC-01

Power/Energy

Minimise your energy costs by controlling your maximum demand with this low cost controller

Non-domestic electrical power users often have to pay a maximum demand charge in addition to the usual charge for the number of units consumed. Maximum demand charges are usually based on the highest amount of power used during any specified period (usually 30 mins) during the metering month. The maximum demand charge often represents a large proportion of the total bill and may be based on one isolated episode of high power use. Considerable savings can be realised by monitoring power use and turning off or reducing non-essential loads during periods of high power use. The MDC-01 is a simple load shedding device suitable for small to medium size consumers wishing to reduce their maximum demand in an economical and simple manner. The unit is also suitable for reducing load for other purposes such as limiting cable and transformer loading.

How does it work?

A kWhr transducer is placed on the consumer's incoming electrical supply. The transducer produces a pulse for every 0.1 kWhr consumed. The MDC-01 counts these pulses and stores the count every 10 seconds. 90 such pulse counts are stored on a cyclic basis with each new value replacing one stored 15 minutes previously. The unit sums the 90 pulse counts to obtain a running 15 minute average of the power use in a system commonly referred to as "a sliding window". The MDC-01 is also available in a 30 minute or 60 minute version.

The unit compares the running average with a pre-set target load value and operates a set of relays if the target appears in danger of being exceeded. The relay contacts are used to control non-essential loads and hence reduce the overall load as required.

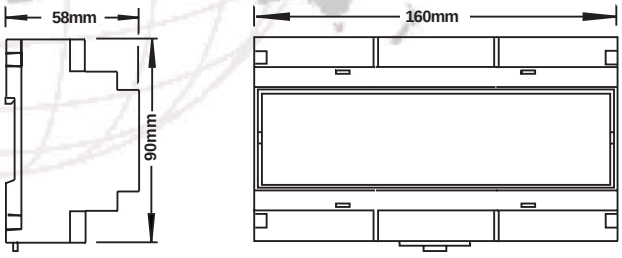
The unit also records the highest value of running average load and operates an alarm relay when a new high is recorded. A visual display is provided of the running average, which can also display the target value or the recorded maximum on request.

The most common demand metering is the block time system, which counts consumption pulses over a fixed period, typically 30 minutes. At the end of this period the count is transferred to a recording device and is reset to commence another period. Sliding window controllers are compatible with such systems if the window length is the same as the block time period. As the MDC-01 does not need synchronizing signals from the supply authority metering it is particularly useful where such signals are not available.

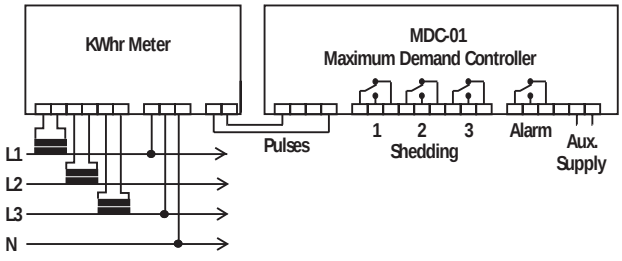
SPECIFICATIONS

Inputs	:	Isolated through optocoupler
	:	Dry contact or NPN open collector
	:	0.1 kWhr (kVAhr) pulses
Outputs	:	Load control
	:	Relay contacts, 8A, 250V ac
	:	Shed level 1: 3% below target setting
	:	Shed level 2: at target setting
	:	Shed level 3: 3% above target setting
	:	Relay hysteresis: 1% of target setting
	:	Alarm
	:	Relay contacts, 8A, 250V ac
	:	Power reading exceeds recorded maximum
Window	:	15, 30 or 60 minutes
Target Setting	:	0 to 999.9 kW (kVA)
Aux. Supply	:	230V ac or 110V ac or 12V dc or 24V dc

DIMENSIONS



CONNECTIONS



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