

Maximum Demand Controller- MDC 1000



Electrical power users often have to pay a maximum demand charge in addition to the usual charge for the number of units consumed. This charge usually based on the highest amount of power used during some period (say 15 mins.). The maximum demand charge often represents a large proportion of the total bill. Considerable savings can be realized by monitoring power use & turning off or reducing non-essential loads during such periods of high power use. The **MDC-1000** reduced their maximum demand in an economical manner.

Maximum demand is calculated by two different modes 1) fixed window technique 2) Sliding window technique and is synchronized with RTC. This meter is also monitor the line Voltage, Current, Frequency, Power factors, Active power, Reactive power, Apparent power, Active energy, Reactive energy, & Apparent energy in a Three phase system or Single phase system. It has an in-built real time clock.

In short it serves as a useful tool in conserving and saving energy. It also has some important feature like setting the P.T. ratio and C.T. ratio, by which a user can read the actual voltages and currents in places where high voltage P.T. or C.T. is used (to monitor high tension lines) . It has a password feature so that nobody can tamper with the setting, and the energy data is retained in case of power failures. So this unit finds applications in almost all the industries, building complexes, hospitals, electrical generating & substations, hotels etc.

ELECTRICAL SPECIFICATIONS :

- ◆ TYPE : 3Ph 3EL 4W
- ◆ MEASUREMENT : True R.M.S.
- ◆ INPUT VOLTAGE : 240V / 440VAC, Burden 0.5VA
- ◆ INPUT CURRENT : 5A Burden 0.5VA
- ◆ OPERATING FREQ. : 45Hz to 65Hz
- ◆ OPERATING PF : 0.1 lag unity 0.1 lead
- ◆ AUX. SUPPLY : 90VAC 265VAC, 120VDC to 300VDC, 5VA
- ◆ ACCURACY : Power : $\pm 1\%$ of full scale
Energy : $\pm 1\%$ of the reading
PF : $\pm 2^\circ$
Voltage & Current : $\pm 0.5\%$ of full scale
Frequency : $\pm 2\%$ of centre frequency
- ◆ RESOLUTION : Power : $\pm 2\%$ of full scale
Voltage & Current : $\pm 0.1\%$ of full scale
PF : $\pm 0.3^\circ$
Frequency : 0.01% of centre frequency
- ◆ DISPLAY : 16Char. X 2rows backlit LCD display
- ◆ RESPONSE TIME : Less than 500ms
- ◆ OVER VOLTAGE : 1.5 times for 10 seconds
- ◆ OVER CURRENT : 10 times for 3 seconds
- ◆ INSULATION RESISTANCE : Greater than 20M ohms at 500VDC
- ◆ DIELECTRIC TEST : 2kV RMS for one minute
- ◆ OPERATING TEMPERATURE : 0 - 55°C
- ◆ STORAGE TEMPERATURE : -20°C to 70°C
- ◆ HUMIDITY : Upto 95% RH

MECHANICAL SPECIFICATIONS

- ◆ SIZE : 144 X 144 X 70mm
- ◆ WEIGHT : 680 gms (Approx.)
- ◆ PANEL CUTOUT : 138 X 138^{+0.8} mm

MDC-3 Relay :

1. Predictive demand limit, range to be selected, Alarm
2. Tripping, When touch total cutting of power to Avoid Penalty
3. Reinstoration

LED Indication :

1. Lower limit Trip-Relay (50-80% of Watt)
2. Upper limit Trip-Relay (120% of Watt)
3. Maximum Demand Watt Trip-Relay (100% of Watt)
4. Alarm-Relay

TYPICAL WIRING DIAGRAM:

