DIGITAL MICROPROCESSOR TRMS MAXIMUM DEMAND CONTROLLER

Model - KM 8100 B

ONLY INST. IN INDIA WITH 12 DISPLAY

Multifunction Power Meter
MODEL - KM 8100 B

UNIQUE FEATURES :

- Displays 12 parameters simultaneously 3V, 3A, W, Var, WH, VarH, PF, Hz
- Applicable Standard : DIN IEC 688
- Suitable for : 1 2W ; 1 3W; 3 3W; 3 4W systems
- 10 Years Power-Off Memory for set data
- With RS-485 Modbus Output
- User friendly setting of Demand parameters :
- Demand Time interval setting (0-60 minutes)
- Synchronising time with Electricity Board meter timing.
- Maximum Demand (Sanctioned Demand) & Target Demand Setting.
- Displays Demand forecast
- Displays remaining Time interval (of the Demand period)
- Displays Present Demand
- Displays usable remaining Demand.
- Software for Load & Demand Analysis (optional

INSTALLATION & PERFORMANCE

- **Accuracy :** V, A, W, = ± 0.2% Fs+2C at 23°C ± 3°C.
  Var, WH, VarH, PF = ± 0.4% rdg + 2 Count,
  Hz =± 0.02% Fs + 1C at 23°C ± 3°C.
- **Display Range:** V, A, W, Var, PF, Hz, 0.56" Super Red LED 4 Digits
  = 0 ~ 9999 Counts, PT, CT User Selectable. WH; VarH,
  0.36" Super Red LED, 7 Digits = 0 ~ 9999999 Counts.
- **Response Time:**   1 Sec.
- **Memory Capacity:** 10 Years Power Off Memory for set Data.
- **Dielectric Strength:** AC 2.8KV / Min, Input / Power / Case, as per
  DIN IEC 688.
- **Impulse:** 6 KV 1.2 x 50 μS, ANSI C37.90a / 1983 ; DIN IEC 1000.4 -5, 4-4.
- **Stability:**   0.2% / Year
- **Operation Condition:** -10°C ~ + 55°C; 20 ~ 95% RH Non- Condensed.
- **Storage Condition:** -40°C ~ + 75°C; 20 ~ 95% RH Non- Condensed
- **Power Supply:** AC 85 ~ 265V and DC 100 ~ 300V ; 24V DC (optional)
- **Mounting :** Panel Flush Mounting.

GENERAL SPECIFICATIONS :

INPUT :

- ✸ Input Voltage Range : Voltage: 55 ~ 300V AC, 45 ~65Hz or
  300 ~ 600V AC, 45 ~ 65Hz.
  P.T. Ratio programmable upto 9999/KV

- ✸ Input Voltage Over Range : Voltage : 200% Continuous,
  300% of rating for 10 sec.

- ✸ Input Current Range: Current : 110% for rating. 0-1A or 0-5A.
  C.T. Ratio programmable upto 9999/5A.

- ✸ Input Current Over Range : Current : 400% Continuous,
  2000% of rating for 10 Sec.

- ✸ Input Frequency: 45Hz ~ 70 Hz.

- ✸ Input Burden: Voltage 0.25VA / Unit, Current 0.25VA / Unit,
  at 50/60Hz

Model KM 8100 B   ▭ ▭ ▭ N ▭

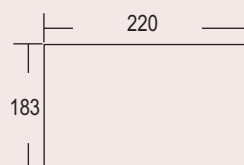| INPUT (V)		INPUT (C)		OUTPUT		AUX. POWER	
A	55 ~ 300V	A	1A	F	RS485 modbus	C	DC 24V
				O	4 Units Analog	F	AC 85 ~265V
C	300 ~ 600V	B	5A	M	4 Units Analog + RS485		DC 100~300V
				N	NONE		
Y	SPECIAL	Y	SPECIAL	Y	SPECIAL	Y	SPECIAL

In 3 4   system Voltage (INPUT (V) : is Line - Neutral Voltage

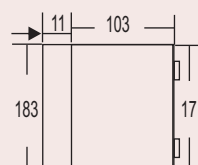When ordering specify Model code number and variable (e.g. 8100B-A-A-F--F)

Code number : Model - Input Voltage - Input Current - Output - Auxillary power.
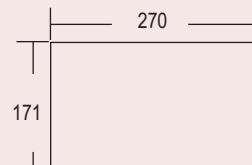
DIMENSION :

FRONT VIEW (mm)

220
183

SIDE VIEW

11 103
183 171

CUT OUT

270
171

All specifications are subject to change without prior notice.

HOW THE MAXIMUM DEMAND CONTROLLER SAVES PENALTY
MODEL KM 8100 B

OUTPUT :

In this Instrument there are 4 Relay outputs for Demand Control : In this instrument we can set the TARGET DEMAND (approx. 10%) below the SANCTIONED demand. When the present demand exceeds the target demand, the relay Output switches ON. These relay outputs can be connected to least priority loads. When the relay turns on , the loads are switched off. When the present demand falls below the target demand, the relay switches ON the loads one by one. Delay time can be set for the relay control. Thus the present demand never exceeds the sanctioned demand & the customer is saved from paying penalty. This instrument also displays the remaining usable Demand, so that the load schedule can be programmed accordingly.

DEMAND MANAGEMENT & DEMAND CONTROL : THE MAXIMUM DEMAND CONTROLLER indicates MAXIMUM DEMAND (SANCTIONED), TARGET DEMAND, PRESENT DEMAND, DEMAND FORECAST & REMAINING USABLE DEMAND & REMAINING TIME DURING ONE CYCLE. THESE FEATURES ARE MOST ESSENTIAL FOR PROPER DEMAND MANAGEMENT.

MAXIMUM DEMAND : It is the Maximum Demand value which is sanctioned by the Electric supply Company at the time of application for sanction of load. E.g.1000 K VA.

TARGET DEMAND : It is the Maximum Demand value which we do not want to exceed. If there is no power cut, Target Demand is equal to Maximum Demand e.g. If there is 25 % power cut then Target Demand will be 750 KVA if Maximum Demand is 1000 K VA.

PRESENT DEMAND : It is zero at the beginning of the demand interval and increases as the load increases within the time interval of the demand period (= 30 minutes). At the end of this period it returns to zero.

DEMAND FORECAST : According to the variation in the connected load this display will indicate the Maximum Demand which will be reached at the end of demand period (= 30 minutes). This will allow the user to plan the load pattern in accordance with the demand forecast , so as to avoid exceeding the Target Demand.
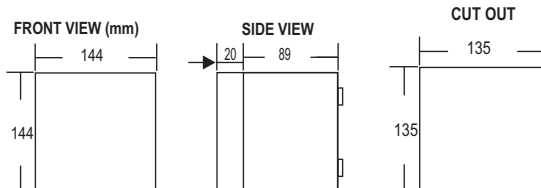
USEABLE REMAINING DEMAND : According to the Current Maximum Demand (connected load) the Demand Controller will calculate the Usable Demand which can be used by the consumer in the remaining demand period (= 30 minutes -   time elapsed) such that the Maximum Demand is within the Target demand Value. E.g. if the target demand is set at 750 KVA and the demand period = 30 minutes, then at the beginning, the useable demand = 750 KVA & the time display = 30 minutes. If the load is 1200 KVA at the beginning (more than the Maximum Demand and Target Demand), then the usable demand shall get reduced from 750 KVA, in the remaining time. 10 Minutes later ,if the load is not changed , if the useable demand displays 600 KVA, and the remaining time displays 20 minutes , it means that the useable demand in the next 20 minutes left is 600 KVA. If the current load is not reduced from 1200 KVA to 600 KVA, then there is a risk of exceeding the Target Demand 20 minutes later. Therefore current load must be reduced so as to reduce the KVA.

On the contrary if the load is less than 750 KVA in the beginning, then the usable remaining demand shall increase. If the usable demand displays 1000 KVA and the remaining time displays 10 minutes and the current load is 600 KVA, it means that 400 KVA more load can be connected for the remaining 10 minutes. The user can self arrange or adjust the load in accordance with the above explanation, so that the user does not exceed the Target Demand.

MAXIMUM DEMAND REPORT OF OCTOBER (Sample Reports) Date : 1 - 10 - 09 Time 9.02am

RECORD	KW	KVA	KVAR	TIME
1	1.04	0.84	0.91	9.02
2	1.05	0.85	0.92	9.05
3	1.09	0.89	0.96	9.20
4	1.11	0.91	0.98	9.27
5	1.23	1.03	1.1	9.43

DIMENSION :

FRONT VIEW (mm)   SIDE VIEW   CUT OUT

144   20   89   135

144   135