

Model KM 7200 A



FEATURES :

3 Displays at one time : 3V, 3A, W, Var, WH,
VarH, PF, Hz (total 12 parameters)
Output / Display / Setting Range User Selectable
Suitable for : 1 2 W ; 1 3 W ; 3 3 W ;
3 4 W Systems.
10 Years Power - Off Memory for WH & VarH

Applicable Standard : DIN IEC 688
With RS - 485 or RS - 232 Communications
Ports, Modbus RTU Output
Software for Load Analysis (optional)
User friendly programming.

SPECIFICATIONS :

INPUT :

Input Voltage Range : Normal Voltage 110 V,
Effective Range 85 ~ 150 V.
Normal Voltage 220 V,
Effective Range 160 ~ 300 V AC
Input Voltage Over Range : Normal AC 110 V,
Over 500 V Continuous.
Input Frequency : 45 H z ~ 70 H z.

Input Current Range : Normal Current 5 A,
Effective Range 0 ~ 7.5 A,
Normal Current 1 A,
Effective Range 0 ~ 1.5 A.
Input Current Over Range : Normal AC 5 A,
Over 15 A Continuous.
Input Burden : Voltage 0.25 VA / Unit,
Current 0.25 VA / Unit, at 50 / 60 H z

OUTPUT :

Output Response time : 1 Sec.
Output Protection : Without Damage for Output Open or Short Circuit.
Digital Output : RS-485 output , 1200, 2400 , 4800, 9600, 19200 Baud rate User Selectable.
D C Current : 0 - 20 mA DC
Load resistance drive : output drive 10 V D C max.
D C Voltage : 0 - 10 V DC
Load resistance drive : output drive 5 mA max.

PERFORMANCE :

Accuracy : V, A, W, = $\pm 0.2\%$ Fs + 2 Counts at 23°C $\pm 3^\circ\text{C}$.

: Var, WH, VarH, PF = $\pm 0.4\%$ RD + 2 Counts

: Hz = $\pm 0.02\%$ Fs + 1 C at 23°C $\pm 3^\circ\text{C}$.

Display Range: V, A, W, Var, PF, Hz, 0.56" Super RED LED

4 Digits = 0 ~ 9999 Counts.

PT, CT User Selectable.

WH; VarH, 0.56" Super RED LED,

6 Digits = 0 ~ 999999 Counts.

Response Time: 1 Sec.

Dielectric Strength: AC 2.8KV / Min, Input / Power / Case, DIN IEC 688.

Impulse: 6 KV 1.2 x 50 μS , ANSI C37.90a / 1983. DIN IEC 255 - 4.

Stability: 0.2 % / Year

Operation Condition: -10°C ~ +55°C; 20 ~ 95 % RH Non - Condensed.

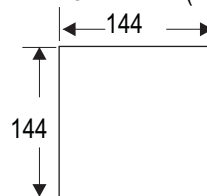
Storage Condition: - 40°C ~ +75°C; 20 ~ 95 % RH Non - Condensed

Power Supply: AC 85 ~ 265 V and DC 100 ~ 300 V Power.

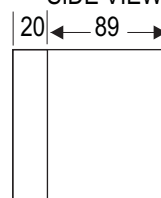
Mounting: Panel Flush Mounting.

DIMENSION :

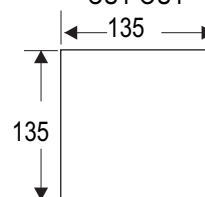
FRONT VIEW (mm)



SIDE VIEW



CUT OUT



Model KM 7200 A

	INPUT (V)	INPUT CURRENT	OUTPUT	SETTING FUNCTION	AUX. POWER
A	55 ~ 300V	A 1A	F RS485 modbus O 4 Units Analog M 4 Units Analog+RS485 Q Full Function	A 4 Units Hi-Lo set	C DC 24V F AC 85~265V DC 100~300V
C	300 ~ 600V	B 5A	N NONE	N NONE	
Y	SPECIAL	Y SPECIAL	Y SPECIAL	Y SPECIAL	Y SPECIAL

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

When ordering Specify Model code number and Variable (e.g. KM - 7200A - A - B - F - N - F)

Code number : Model - Input V - input C - Output - setting - power.

UNIQUE FEATURES :

3 Displays at one time : 3 V, 3 A, W, Var, WH, VarH, PF, Hz (12 parameters)

Applicable Standard : DIN IEC 688

Suitable for : 1 2 W; 1 3 W; 3 3 W;

3 4 W systems

10 Years Power - Off Memory for WH & VarH

With RS - 485 or RS - 232 Communications Ports,

Modbus RTU 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 demanding period)

Displays Present Demand

Displays usable remaining Demand.

Software for Load & Demand Analysis (optional)



Model KM 7200 B

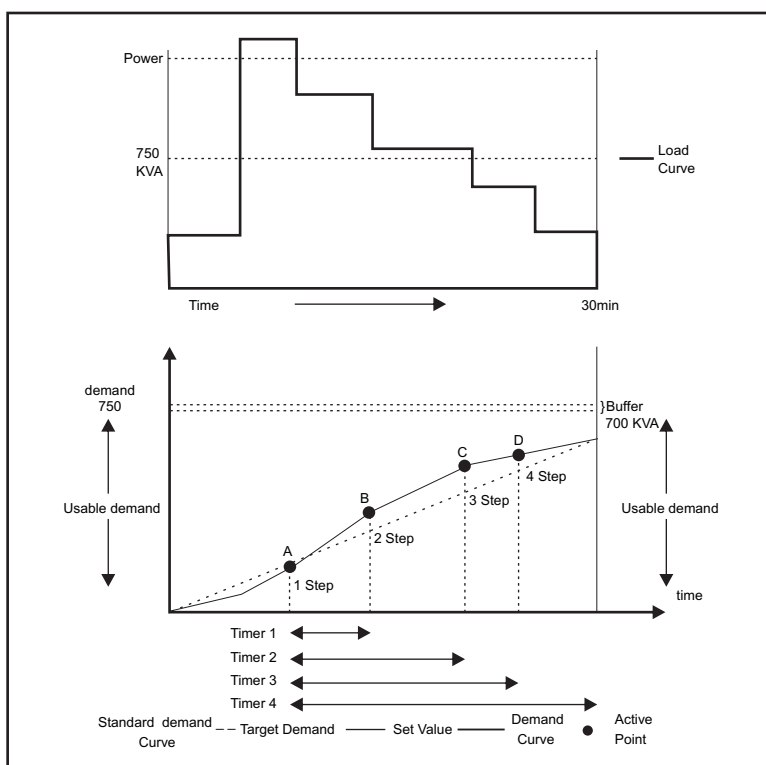
INPUT(V)		INPUT(C)		OUTPUT		AUX. POWER	
A	55 ~ 300V	A	1A	F	RS485 Modbus	C	DC 24V
				O	4 Units Analog	F	AC 85 ~ 265V
B	300 ~ 600V	B	5A	M	4 Units Analog + RS485		DC 100 ~ 300V
				Q	Full Function		
Y	SPECIAL	Y	SPECIAL	N	NONE		
				Y	SPECIAL	Y	SPECIAL

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

When ordering specify Model code number - input V - Input C - Output - Power

(e.g. KM - 7200 B - B - B - F - N - F)

MAXIMUM DEMAND CONTROLLER GRAPH



SPECIFICATIONS :

INPUT :

Input Voltage Range : Normal Voltage 110 V,

Effective Range 85 ~ 150 V. AC

Normal Voltage 220V,

Effective Range 160 ~ 300 V AC

Input Voltage Over Range : Normal AC 110 V,

Voltage Over 500 V Continuous.

Input Current Range : Normal Current 5 A,

Effective Range 0 ~ 7.5 A,

Normal Current 1 A,

Effective Range 0 ~ 1.5 A.

Input Current Over Range : Normal AC 5 A,

Current Over 15 A Continuous.

Input Frequency : 45 Hz ~ 70 Hz.

Input Burden : Voltage 0.25 VA / Unit,

Current 0.25 VA / Unit, at 50 / 60 Hz

PERFORMANCE :

Accuracy : V, A, W, = $\pm 0.2\%$ Fs + 2 Counts at 23° C $\pm 3^\circ$ C.

Var, WH, VarH, PF = $\pm 0.4\%$ RD + 2 Counts,

Hz = $\pm 0.02\%$ Fs + 1C at 23° C $\pm 3^\circ$ C.

Display Range : V, A, W, Var, PF, Hz, 0.56" Super RED LED

4 Digits = 0 ~ 9999 Counts PT,

CT Ratio User Selectable.

WH; VarH, 0.56" Super RED LED,

6 Digits = 0 ~ 999999 Counts.

Response Time : 1 Sec.

Dielectric Strength : AC 2.8 KV / Min, Input / Power / Case,

DIN IEC 688.

Impulse : 6 KV 1.2 x 50 μ S, ANSI C37.90a / 1983.

DIN IEC 255 - 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 ~ 265 V and DC 100 ~ 300 V Power.

Mounting : Panel Flush Mounting.

HOW THE MAXIMUM DEMAND CONTROLLER SAVES PENALTY

MODEL KM 7200 B & 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 KVA.

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 KVA.

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

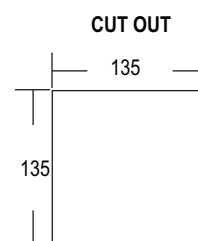
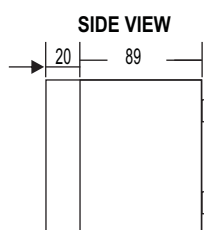
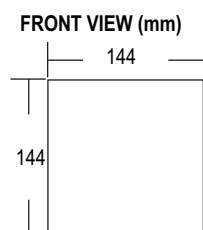
USEABLE REMAINING DEMAND : According to the Current Maximum Demand (connected load) the Demand Controller will calculate the Usable Demand which can be used by the consumer in the remaining demand period (= 30 minutes - time elapsed) such that the Maximum Demand is within the Target demand Value. E.g. 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 useable 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 :



All Specifications are subject to change without prior notice

Model KM 7200 C

UNIQUE FEATURES :

- 3 Displays at one time : 3 V, 3 A, W, Var, WH, VarH, PF, Hz (12 parameters).
- Applicable Standard : DIN IEC 688
- Suitable for : 1 2 W ; 1 3 W ; 3 3 W ; 3 4 W systems
- 10 Years Power- Off Memory for WH & VarH
- With RS - 485 or RS - 232 Communications Ports, Modbus RTU Output.
- Software for Load & Harmonics Analysis (optional)
- Harmonics : Analyses Voltage & Current Harmonics upto 31st Harmonics.
- Displays Voltage & Current Harmonics upto 15th Harmonics
- User friendly programming.
- 4 Units Hi - Lo set

SPECIFICATIONS :

INPUT :

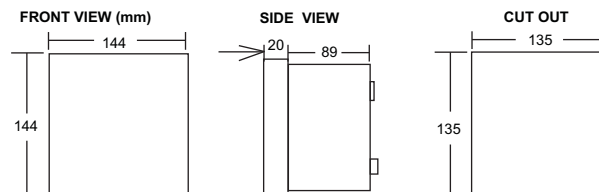
- Input Voltage Range : Normal Voltage 110 V, Effective Range 85 ~ 150 V.
Normal Voltage 220 V, Effective Range 160 ~ 300 V AC.
- Input Voltage Over Range : Normal AC 110 V, Voltage Over 500 V Continuous.
- Input Current Range : Normal Current 5 A, Effective Range 0 ~ 7.5 A,
Normal Current 1 A, Effective Range 0 ~ 1.5 A.
- Input Current Over Range : Normal AC 5 A, Current Over 15 A Continuous.
- Input Frequency : 45 Hz ~ 70 Hz.
- Input Burden : Voltage 0.25 VA / Unit, Current 0.25 VA / Unit, at 50 / 60 Hz

OUTPUT :

- DC Current : 0 - 20 m A D C
- DC Voltage : 0 - 10 V D C
- Digital Output Load : RS 485 Output, Isolate Type with MODBUS RTU mode.
4800, 9600, 19200 Baud Rate, User Selectable.
- Load resistance drive : output drive 10V DC maximum
- Load resistance drive: output drive 5 mA maximum
- Output Protection : Without Damage for Output Open or Short Circuit
- Output Response Time : 1 Sec.



DIMENSION :



Model KM 7200 C

INPUT (V)		INPUT (C)		OUTPUT		SETTING FUNCTION		AUX. POWER	
A	55 ~ 300V	A	1A	F	RS485 modbus	A	4 Units Hi-Lo set	C	DC 24V
C	300 ~ 600V	B	5A	O	4 Units Analog			F	AC 85~265V
				M	4 Units Analog+RS485				DC 100~300V
				Q	Full function				
				N	NONE	N	NONE		
Y	SPECIAL	Y	SPECIAL	Y	SPECIAL	Y	SPECIAL	Y	SPECIAL

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

When ordering Specify code number and variable (e.g.7200 C - A - B - N - N - F)

Code number : Model - Input Voltage - Input Current - Output - Setting - auxiliary power.

PERFORMANCE :

- Accuracy : V, A, W, = $\pm 0.2\%$ Fs + 2 Counts at 23°C $\pm 3^\circ\text{C}$.
- Var, WH, VarH, PF = $\pm 0.4\%$ RO + 2 Counts,
- Hz = $\pm 0.02\%$ Fs + 1C at 23°C $\pm 3^\circ\text{C}$, Thd = $\pm 2\%$
- Display Range : V, A, W, Var, PF, Hz, 0.56" Super Red LED
- 4 Digits = 0~9999 Counts,
- PT, CT User Selectable.
- WH; VarH, 0.56" Super Red LED,
- 6 Digits = 0 ~ 999999 Counts.

Response Time : 1 Sec.

Dielectric Strength : AC 2.8KV / Min, Input/Power/Case, DIN IEC 688.

Impulse : 6 KV 1.2x50 S, ANSI C37.90a / 1983. DIN IEC 255 -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 Power .

Mounting : Panel Flush Mounting.

In this meter, the initial page of the instrument displays 3 Power Parameters at one time (3V, 3A, W, Var, WH, VarH, PF, Hz, (3 parameters per page). Then next 3 pages shows Voltage Harmonics i.e. The 1st, 3rd, 5th, 7th, 9th, 11th, 13th & 15th order of harmonics & the % Total Voltage Harmonics. Then next 3 pages display the current Harmonics i.e. 1st, 3rd, 5th, 7th, 9th, 11th, 13th, 15th order of Harmonics & the percentage of Total Current Harmonics.

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