

POWER QUALITY METER

PQM-16

MULTISPAN

Johannesburg Branch

MIMIC COMPONENTS

Cape Town Branch

Mimic Cape

PQM 16

3P-4W

L1

L2

L3

MIN MAX

DMD

NET

2302

2310

2286

6898

205806830

kV

MW

A

M var

Hz

MVA

NSYS

PF

THD%

kWh

VAF

THD

P/PF

E

MULTISPAN

TECHNICAL SPECIFICATION

PARAMETER SPECIFICATION	
Input Signal	3Ø 3 Wire / 3Ø 4Wire / 1Ø 2Wire up to 9999A (Programmable)
CT Primary	5 Amp/1 Amp selectable
CT Secondary	100V to 520kV (Programmable)
PT Primary	100V to 520V (L-L) (Programmable)
PT Secondary	100V to 520V (L-L) (Programmable)
True PF Avg. & Per Phase	-1.000 to 1.000
Displacement PF	-1.000 to 1.000
Frequency (Hz)	45.00 - 60.00 Hz
Load hours	9999.59 Hrs/Min.
No load hours	9999.59 Hrs/Min.
On Hour	9999 Hour
RPM	3600 RPM @ 60 Hz & 2 pole
POWER	
kW Total	0.000 - 9999 MW
kW Per Phase	0.000 - 9999 MW
kVA Total	0.000 - 9999 MVA
kVA Per Phase	0.000 - 9999 MVA
kVar Total	0.000 - 9999 MVar
kVar Per Phase	0.000 - 9999 MVar
ENERGY	
Import kWh	000.000 - 999999999 MWh
Export kWh	000.000 - 999999999 MWh
Net kWh	000.000 - 999999999 MWh
Total kWh	000.000 - 999999999 MWh
Kvah Total	000.000 - 999999999 MVAh
Import kVArh	000.000 - 999999999 MVArh
Export kVArh	000.000 - 999999999 MVArh
Lag kVArh	000.000 - 999999999 MVArh
Lead kVArh	000.000 - 999999999 MVArh
Total kVArh	000.000 - 999999999 MVArh

DISPLAY & KEY :		
Display	Upper	4 Digit, 4 Line 7 Seg 0.37",LCD
	Lower	9 Digit, 1 Line 7 Seg 0.26",LCD
Key	PROGRAM, VAF, THD%, POWER/PF, ENERGY	

AUXILIARY SUPPLY :	
Supply voltage	100 to 300V AC/DC, 50/60Hz
Power consumption (VA RATING)	Approx 3 VA @ 230V AC

ACCURACY:	
Class 0.5 (Standard)	

ENVIRONMENT CONDITION:	
Operating Temp.	0°C to 55°C
Relative Humidity	UP to 95% RH (non-condensing)
Protection Level (AS Per Request)	IP-65 (Front side) As per IS/IEC 60529 : 2001

MECHANICAL INSTALLATION

Outline Dimension (mm)

98

98

46

91

Panel Cutout Dimension (mm)

92

92

TERMINAL CONNECTION

S1

L1

S2

L2

S3

L3

S2

16

15

14

13

12

11

+

-

Pulse

O/P

CAT III

Made in India

100~300V AC/DC

60/60 Hz, 3W

Current: 10mA To 5A AC

Voltage (L-L) : 50-600V AC

(L-N) : 30-350V AC

Primary PT : 100V to 520kV

Secondary PT : 100V to 520V

Primary CT: Up to 9999A AC

Secondary CT: By 5A/1A AC

System: 1Ph-2W/3Ph-3W/3Ph-4W

Accuracy Class: 0.5

MULTISPAN

www.multispanindia.com

V1

L1

V2

L2

V3

L3

N

1

2

3

4

5

6

7

8

9

10

KEY OPERATION	
FUNCTION	PRESS KEY
OPERATOR MODE	
To view VAF Pages	VAF
To view THD Page	THD
To view Power & Power Factor	P/PF
To view Energy Page	E
To scroll & hold pages	Press E For 5Sec
PARAMETER SETTING MODE	
To Set Parameter Value	Press For 5 Sec
To Increment parameter value	P/PF
To Decrement parameter value	E
To Exit from parameter setting	

Resolution	
PT Ratio x CT Ratio	Pulse/kWh
<15	0.01kWh
<150	0.1kWh
<1500	1kWh
<15000	10kWh
<150000	100kWh
>150000	1000kWh

- INSTALLATION GUIDELINES
1. This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.

2. Do not allow pieces of metal, wire clippings, or fine metallic fillings from installation to enter the product or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.

3. Circuit breaker or mains switch must be installed between power source and supply terminal to facilitate power 'ON' or 'OFF' function. However this mains switch or circuit breaker must be installed at convenient place normally accessible to the operator.

4. Use and store the instrument within the specified ambient temperature and humidity ranges as mentioned in this manual.

MECHANICAL INSTALLATION GUIDELINES

1. Prepare the panel cutout with proper dimensions as shown above.

2. Fit the unit into the panel with the help of clamp given.

3. The equipment in its installed state must not come in close proximity to any heating source, caustic vapors, oils steam, or other unwanted process byproducts.

4. Use the specified size of crimp terminal (M3 screws) to wire the terminal block. Tightening the screws on the terminal block using the tightening torque of the range of 1 N.m.

5. Do not connect anything to unused terminals.

MAINTENANCE

1. The equipment should be cleaned regularly to avoid blockage of ventilating parts.

2. Clean the equipment with a clean soft cloth. Do not use isopropyl alcohol or any other cleaning agent.

3. Fusible resistor must not be replaced by operator.

SAFETY PRECAUTION

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If all the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment.

Read complete instructions prior to installation and operation of the unit.

WARNING : Risk of electric shock.

WARNING GUIDELINES

WARNING : Risk of electric shock.

1. To prevent the risk of electric shock, power supply to the equipment must be kept OFF while doing the wiring arrangement. Do not touch the terminals while power is being supplied.

2. To reduce electro magnetic interference, use wire with adequate rating and twists of the same of equal size shall be made with shortest connection.

3. Cable used for connection to power source, must have a cross section of 1mm or greater. These wires should have insulations capacity made of at least 1.5kV.

4. A better anti-noise effect can be expected by using standard power supply cable for the instrument.

PARAMETER SETTING

Basic Parameter Setting : Network, CT/PT Selection.

10

PASSWORD

Enter Password 10

Long Press key To Enter into parameter Change by & E key

3P4W

NETWORK

Network Selection (3P-4W/3P-3W/1P-2W) Change by & E key

5

CT PRIMARY

CT Primary (5 Amp to 9999 Amp selectable) Change by & E key Digit Shift by THD Key

5 A

CT SECOND

CT Secondary (5 Amp/1 Amp selectable) Change by & E key

240

PT PRIMARY

PT Primary (100V to 520kV selectable) Change by & E key Digit Shift by THD Key

240

PT SECOND

PT Secondary (100V to 520V selectable) Change by & E key Digit Shift by THD Key

Press key to save & exit from parameter setting

Advance Parameter Setting : Load Hour %, No Load Hour, RPM, Demand, Pulse Output

25

PASSWORD

Enter Password 25

Long Press key To Enter into parameter Change by & E key

Enb

LOAD HOUR

Load Hour Enable / Disable Change by & E key

25

LOAD PERC

Load Hour Percentage (5 to 50%) Change by & E key

Enb

RPM

RPM Enable / Disable Change by & E key

2

RPM POLE

Pole (2 to 128) Change by & E key

100

PLSE TIME

Pulse ON Time (10 to 500ms) Change by & E key

Auto

PLSE MODE

Pulse Mode Auto / Manual Change by & E key

0001

PLSE OUT

Pulse Out 0.01, 0.1,1,10,100, 1000 Change by & E key

5

dMd TIME

Demand Time 1,2,3,5,10,15, 30Minit Change by & E key

bl oC

dMd MODE

Demand Mode Sliding / Block Change by & E key Press key to save & exit from parameter setting

Continue

Reset Parameter : kWh, kVAh, kvarh, Load Hour, No Load Hour, Max kW, Max kVA, Max kVar, Max Voltage Amp, Max Demand, Power Intrup On Hour, Min Voltage

15

PASSWORD

Enter Password 15

Long Press key To Enter into parameter Change by & E key

no

RESET ALL

Reset All Parameter (Yes/No) Change by & E key

no

RESET kWh

Reset kWh (Yes/No) Change by & E key

no

RESET kVAh

Reset kVAh (Yes/No) Change by & E key

no

RESET kvarh

Reset kvarh (Yes/No) Change by & E key

no

RESET LHRH

Reset Load Hour (Yes/No) Change by & E key

no

RESET NHRH

Reset No Load Hour (Yes/No) Change by & E key

no

RESET ONHR

Reset On Hour (Yes/No) Change by & E key

no

RESET Power Intrup

Reset Power Intrup (Yes/No) Change by & E key

Continue

no

MAX dMd

Reset Max Demand (Yes/No) Change by & E key

no

MAX kW

Reset Max kW (Yes/No) Change by & E key

no

MAX kVA

Reset Max kVA (Yes/No) Change by & E key

no

MAX kVAR

Reset Max kVar (Yes/No) Change by & E key

no

MAX A V

Reset Max Amp, Voltage (Yes/No) Change by & E key

no

MIN VOLT

Reset Minimum Voltage (Yes/No) Change by & E key

Press key to save & exit from parameter setting

DISPLAY PAGES for Key

1) Voltage L-N

13) AVG V(L-L)-A-PF ,Hz

2) Voltage L-L

14) Max Voltage L-N

3) Current

15) Min Voltage L-N

4) Current, Neutral Current

16) Max Voltage L-L

5) Angle

17) Min Voltage L-L

6) L1 Voltage Ampere, PF, Hz

18) Max Current

7) L2 Voltage Ampere, PF, Hz

19) Load Hour

8) L3 Voltage Ampere, PF ,Hz

20) No Load Hour

9) AVG V(L-N)-A-PF, Hz

21) RPM

10) L12 Voltage Ampere, PF, Hz

11) L23 Voltage Ampere, PF ,Hz

12) L31 Voltage Ampere, PF ,Hz

DISPLAY PAGES for Key

1) kW PER PHASE

2) kVA PER PHASE

3) kVAR PER PHASE

4) True Power Fector

5) Displacement PF

6) L1 kVA, kVAR, kW, PF

7) L2 kVA, kVAR, kW, PF

8) L3 kVA, kVAR, kW, PF

9) Total kW,kVA,kVar, Sys PF

10) Max kW PER PHASE

11) Max kVA PER PHASE

12) Max kVAR PER PHASE

13) Max Total Power kW,kVA,kVar

14) Max Demand kW,kVA

15) Power Intrup

16) On Hour

DISPLAY PAGES for Key

1) Import kWh

2) Export kWh

3) NET kWh

4) Total kWh

5) Total kVAh

6) Import kVArh

7) Export kVArh

8) Leg kVArh

9) Lead kvarh

10) Total kvarh

DISPLAY PAGES for Key

1) Voltage(LN) THD%

2) Current THD%

3) Individual Harmonics Up to 32 Order

Order Change By
Press  Key Up
To 32 Order.