W106 Series

Power Quality Analyzer

affra

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Measurement

Voltage
- Phase, Line, Average

Current
- Phase, Average, Neutral*

PF (Power Factor)
- Phase

P (Active Power)
- Phase, Total

Q (Reactive Power)
- Phase, Total

S (Apparent Power)
- Phase, Total

Frequency

Temperature

*: All models except W106L

Quality Measurement

THD (Total Harmonic Distortion)
- Voltage
- Current

TDD (Total Demand Distortion) *
- Phase

DPF (Displacement Power Factor) *
- Phase

DhPF (Distortion Power Factor) *
- Phase

Harmonic – odd, even **
- Phase Voltage
- Current, Neutral

Unbalance
- Voltage
- Current

KF (K Factor) *
- Current

CF (Crest Factor) *
- Voltage
- Current

*: W106e, W106r

**: 2-15th: W106s

2-31th: W106e, W106r

Energy Metering

Kwh, Kvarh
- 4 quadrant, Import/Export
- 6 tariff
- Day Off
- 12 digit

Demand *

Fixed Window
15 Min

Parameter
Active/Reactive Power (Phase) **
Active/Reactive Power (Total) ***

*: All models except W106L
**: W106e, W106r
**: W106s, W106e, W106r

Min/Max

Instantaneous

Average

Daily

Absolute

Parameter
Phase Voltage
Average Voltage
Line Voltage
Phase Current, Neutral
Current Average
Power Factor
Active Power (Phase, Total)
Reactive Power (Phase, Total)
Apparent Power (Phase, Total)
Phase Voltage THD
Phase Current THD
Voltage Unbalance
Current Unbalance
Displacement Power Factor
Total Demand Distortion
Distortion Power Factor
Distortion Harmonic Power Factor
Voltage Crest Factor
Current Crest Factor
Voltage K Factor
Frequency
Temperature

Data Logging

Last 18000 Records

Period
Selectable: 1,2,5,10,15,20,30,60 minute

Reset
Manual: HMI

Time Tag

Parameter
Measurement & Quality Measurement

Relay Functions *

Pickup

Pickup Delay

Parameter
- Over Voltage
- Under Voltage
- Over Current
- Over Active Power
- Under Active Power
- Over Reactive Power
- Over Voltage THD
- Over Current THD

*: W106e, W106r

Event Recorder

Last 256 Event Profile

Reset
- Manual: HMI

Time Tag

Parameter
- Power On/Off
- Sag/Swell *

*: W106e, W106r

Accuracy

	W106e	W106s	W106L	W106r
Voltage Range : 50 < V < 300	0.2	0.2	0.5	0.2
Current Range : 0.02 In < I < 6	0.2	0.2	0.5	0.5
Power Factor Range : 60 < φ < 90	0.2	0.2	0.5	0.5
Active Power Range : 0.02 Pn < P < Pmax	0.2	0.2	1	1
Reactive Power Range : 0.02 Qn < Q < Qmax	0.5	0.5	2	2
Apparent Power Range : 0.02 Sn < S < Smax	0.2	0.2	1	1
Frequency Range : 45 < F < 55	0.5	0.5	0.5	0.5
Active Energy Range : IEC 62053-22	0.2	0.2	1	1
Reactive Energy Range : IEC 62053-22	0.5	0.5	2	2

Network Connection

Network Frequency
- 50 / 60 Hz

PT
- Primary: 100 – 400000
- Secondary : 100 - 200

CT
- Primary: 5 / 5 - 5000 / 5
- Neutral Turn : 5 / 5 - 5000 / 5

Supported Networks
- PT Up to 400 KV
- CT Up to 5000 A

Input Rating

Voltage – Phase to Neutral
0 – 300 V

Current
0 – 6 A

HMI

Display
160 * 160 Graphic LCD B/W
White Backlight

Keyboard
4 button

Communication Port

USB (OTG) : Offload Stored Data On USB Flash Disk

RS485
Modbus RTU

Ethernet (Optional)
Modbus RTU
Send Data

GSM (Optional)
Send Data

Input / Output

Analog
Voltage: 3 Input, 4 Terminal
Current : 4 Input, 8 terminal – Galvanic Isolated

Digital
Output : 1 Relay

Supply

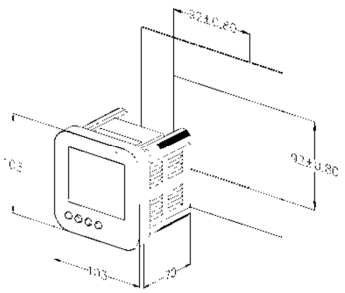
Switching Power Supply
AC: 80 – 460V *
DC: 100-600*

AC: 80 – 265V**
DC: 100-350**

*: W106e, W106r
**: W106s, W106L

Installation

Front Panel Mount



Environment

Operating Temperature
-20 to +70 ◦C
Storage Temperature
-30 to +80 ◦C
IP Degree Of Operation
54 front panel

Standard

IEC62053-22
IEC62052-11