

# W28 Series Power Quality Analyzer



## Measurement

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Voltage

Phase, Line, Average

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Current

Phase, Average, Neutral, Calculated Neutral \*

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PF (Power Factor)

Phase, Average

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P (Active Power)

Phase, Total

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Q (Reactive Power)

Phase, Total

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S (Apparent Power)

Phase, Total

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Frequency

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\*: All models except W2812

## Quality Measurement

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THD (Total Harmonic Distortion)

Phase Voltage

Line Voltage

Current

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TDD (Total Demand Distortion)

Phase

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DPF (Displacement Power Factor)

Phase, Average

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Harmonic – odd, even \*

Phase Voltage

Line Voltage

Current

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Unbalance

Voltage

Current

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KF (K Factor) \*\*

Current

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CF (Crest Factor) \*\*

Voltage

Current

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\*: 2-15<sup>th</sup>: W2820, W2821

2-31<sup>th</sup>: W2830, W2835

2-40<sup>th</sup>: W2840, W2845

\*\* : W2830, W2835, W2840, W2845

## Energy Metering

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Kwh, Kvarh

4 quadrant, Import/Export

6 tariff

Day Off

12 digit

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## Demand

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Fixed Window, Sliding, Thermal

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Maximum, Last, Predictive Demand

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Time Tag

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Reset

Manual: HMI, Modbus

Scheduled: Daily, Weekly, Monthly, Yearly

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Parameter

Phase Current

Import, Export Total Active Power

Inductive, Capacitive Total Reactive Power

Total Apparent Power

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## Min/Max

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Instantaneous

1 sec

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Average

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

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Reset

Manual: HMI, Modbus

Scheduled: Daily, Weekly, Monthly, Yearly

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Time Tag

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Parameter

Phase Voltage

Line Voltage

Phase, Null Current

Phase, Total Active Power

Phase, Total Reactive Power

Phase, Total Apparent Power

Phase True Power Factor

Phase Voltage THD

Line Voltage THD

Phase Current

Unbalance Voltage

Unbalance Current

Import, Export Active Power

Inductive, Capacitive Reactive power

Frequency

Temperature

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## Data Logging

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Last 18000 Records

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Period

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

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Reset

Manual: HMI, Modbus

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Time Tag

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Parameter

Measurement & Quality Measurement

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## Alarm

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Pickup Value/Delay

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Dropout Value/Delay

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Selectable Output (0 – 15)

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Time Tag

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Reset

Manual: HMI, Modbus

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Parameter

Over Phase Voltage

Under Phase Voltage

Over Line Voltage

Under Line Voltage

Over Phase Current

Under Phase Current

Over Active Power

Under Active Power

Over Reactive Power

Over Apparent Power

Over Phase Voltage THD

Over Line Voltage THD

Over Phase Current THD

Over Phase Current TDD

Over Frequency

Under Frequency

Over Last Import Active Power Demand

Over Predictive Import Active Power Demand

Over Last Export Active Power Demand

Over Predictive Export Active Power Demand

Over Last Inductive Reactive Power Demand

Over Predictive Inductive Reactive Power Demand

Over Last Capacitive Reactive Power Demand

Over Predictive Capacitive Reactive Power Demand

Over Last Apparent Power Demand

Over Predictive Apparent Power Demand

Over Temperature

Over Extended Power Factor(EPF,  $P > 0$ )

Over Extended Power Factor(EPF,  $P < 0$ )

Over Neutral Current

Over Unbalance Voltage

Over Unbalance Current

Over Current K Factor\*

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\*: W2830, W2835, W2840, W2845

## Event Recorder

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Event Profile \*

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Reset

Manual: HMI, Modbus

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Time Tag

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Parameter

Power Up

Power Failed

Alarm Activation/Deactivation

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\*: Last 128: W2810, W2811, W2812, W2820, W2821

Last 256: W2830, W2835, W2840, W2845

## Accuracy

	W2810	W2811	W2812	W2820	W2821	W2830	W2835	W2840	W2845
Voltage	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
Current	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
Power Factor	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
Active Power	1	1	1	0.5	0.5	0.5	0.5	0.2	0.2
Reactive Power	2	2	2	1	1	1	1	0.5	0.5
Active Energy	1	1	1	0.5	0.5	0.5	0.5	0.2	0.2
Reactive Energy	2	2	2	1	1	1	1	0.5	0.5
Harmonic	-	-	-	4	4	4	4	4	4
Frequency	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

## Network Connection

Network Frequency  
50 / 60 Hz

PT  
Primary: 100 – 400000  
Secondary : 100 - 200

CT  
Primary: 5 – 5000 / 1 – 1000  
Secondary: 5 / 1

Supported Networks  
4 Wire – Wye  
4 Wire – Delta  
3 Wire – Delta – 2CT  
3 Wire – Delta – 3CT

## Input Rating

Voltage – Phase to Neutral  
0 – 300 V

Current  
0 – 6 A

## HMI

Display  
160 \* 160 Graphic LCD, BW  
White Backlight

Keyboard  
4 button

## Communication Port

RS485  
3 Terminal  
Modbus RTU

WIFI  
Station / Access Point  
Modbus RTU \*  
DNP3 \*\*

\*: All models except W2811, W2812, W2821

\*\* : W2835, W2845

## Input / Output

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### Analog

Voltage: 3 Input, 4 Terminal

Current : 4 Input, 8 terminal – Galvanic Isolated

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### Digital

Input: 1 Opto Isolated

Output : 1 Opto Isolated

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## Supply

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### Switching Power Supply

AC: 80 – 480 V,  $\pm 10\%$ , DC: 100-600 V,  $\pm 10\%$  \*

AC: 80 – 265 V,  $\pm 10\%$ , DC: 100-300 V,  $\pm 10\%$  \*\*

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\*: W2840, W2845

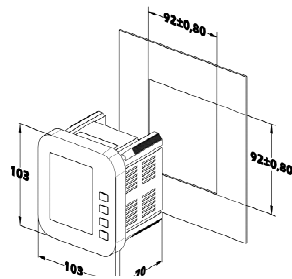
\*\* : All models except W2840, W2845

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## Installation

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### Front Panel Mount



## Environment

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### Operating Temperature

-20 – 70 °C

### Storage Temperature

-30 – 80 °C

### IP Degree Of Operation

54 front panel

### Weight

400 – 410 gr

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## Standard

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IEC 62053-22/23

IEC 62052-11

IEC 61010-11

IEC 60255-27

IEC 62054-21

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