

Ziegler

Redefine Innovative Metering

Technical Datasheet

ZIM PROE

DIGITAL AC VOLTMETER / AMMETER

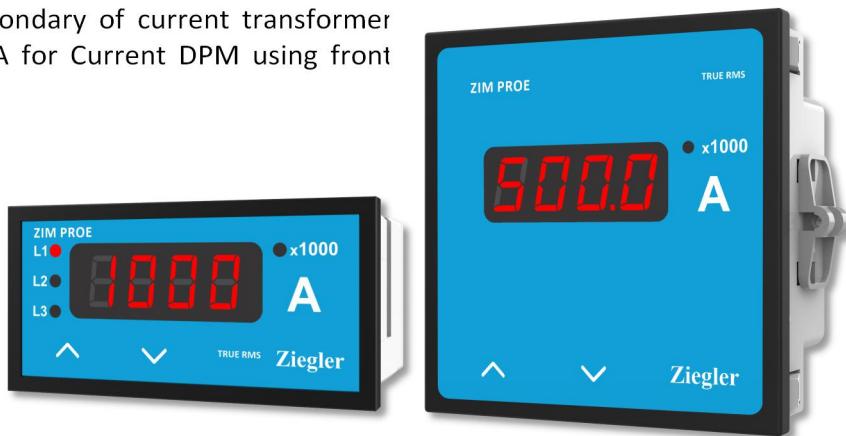
ZIM PROE

DIGITAL AC VOLTMETER / AMMETER

ZIM PROE is a digital panel meter that measures and display a single line quantity one at a time and is ideal for indicating purpose in industrial and laboratory applications. It is capable of measuring and displaying individual parameters like 3 phase and 1 phase alternating Voltage or Current.

Product Features

- **True RMS measurement :** The instrument measures distorted waveform up to 15th Harmonics
- **User selectable CT Primary :** The Primary of current transformer can be programmed on site from 1A to 999kA for Current DPM using front panel keys
- **User selectable CT Secondary :** The Secondary of current transformer can be programmed on site to 1A or 5A for Current DPM using front panel keys
- **User selectable PT Primary :**
 - The Primary of Potential transformer can be programmed on site from 100 V L-L to 999 kV L-L for Voltage DPM (3V) and
 - 57.5 V L-N to 999 kV L-N for Voltage DPM (V) using front panel keys
- **User selectable PT Secondary :**
 - The Secondary of Potential transformer can be programmed on site from 100 V L-L to 500 V L-L for Voltage DPM (3V) and
 - 57.5 V L-N to 300 V L-N for Voltage DPM (V) using front panel keys
- **4 digits LED display :** 14mm ultra bright 4 digits LED display
- **User selectable 3 phase 3 Wire or 4 Wire Network (for 3A/3V) :** User can program on site the network connection as either 3 Phase 3 Wire or 4 Wire network using front panel keys
- **Onsite selection of Auto scroll / Fixed Screen (for 3A/3V) :** User can set the display in auto scrolling mode or fixed screen mode using front panel keys
- **Function keys :** Using two function keys it is possible to display various parameters in Current and Voltage DPM. These function keys are also used for Network selection, CT/PT Primary values, CT/PT Secondary values and Auto Scroll mode selection
- **Screen No. storage :** In case of power failure, the instrument memorizes the last screen stored. For every 1 min. the instrument stores the screen no. in the non-volatile memory
- **Low back depth :** The instrument has very low back depth (behind the panel) of less than 40mm (96x96mm)
- **Enclosure Protection for dust and water :** Conforms to IP 50 (for front face) & IP 20 (for back)



Technical Specifications

Input Voltage

Nominal input voltage ranges (AC RMS) (to be specified while ordering)

Line - Neutral : 57 - 288V L-N ,

Line - Line : 100-500V L-L (For 3V)

Line - Neutral : 57.5 - 300V L-N (For V)

Line - Neutral : 600V-N (only for V(fixed))

Max continuous input voltage

120% of rated value

Nominal input voltage burden

< 0.3 VA approx. per phase

< 0.4 VA approx. (For 600V L-N(1phase))

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System PT primary values	100V L-L to 999kV L-L programmable on site for 3 Phase Voltage (3V) 57.5V L-N to 999kV L-N programmable on site for 1 Phase Voltage (V)
Input Current	
Nominal input current ranges	1A or 5A AC RMS
System CT primary values	From 1A up to 999kA (for 1 or 5Amp)
Max continuous input current	120% of rated value (optional 150% of rated value)
Nominal input current burden	< 0.3 VA approx. per phase
Overload Indication	
“-OL-” indication (If input is greater than 125% of secondary value for Voltage and 125% (optional 155%) of secondary value for current)	
EMC (Electromagnetic Compatibility) : Compliance to International standard IEC 61326	
Interference Emission	IEC 61326-1 : 2005, Class A
Interference Immunity	IEC 61326-1 : 2005
Electrostatic discharge	IEC 61000-4-2 -- 4kV/8kV contact/air. (ESD)
EM Field	IEC 61000-4-3 -- 10 V/m (80 MHz to 1 GHz) - 3 V/m (1.4 GHz to 2 GHz) - 1 V/m (2 GHz to 2.7 GHz)
Burst	IEC 61000-4-4 -- 2 kV (5/50 ns, 5 kHz)
Surge	IEC 61000-4-5 -- 1 kV L-L / 2 kV L-N.
Conducted RF	IEC 61000-4-5 -- 3 V (150 kHz to 80 MHz)
Rated Power Frequency magnetic Field	IEC 61000-4-8 -- 30 A/m
Voltage dip	IEC 61000-4-11 -- 0% during 1 cycle. -- 40% during 10/12 cycles. -- 70% during 25/30 cycles.
Short interruptions	IEC 61000-4-11 -- 0% during 25/30 cycles. 25 cycles for 50 Hz test. 30 cycles for 60 Hz test.
Auxiliary Supply	
AC DCAuxiliary Supply	40-300V AC-DC ($\pm 5\%$) 20-40V AC / 20-60V DC
Frequency range	45 to 65 Hz
VA burden	< 3 VA Approx 1 VA approx at 24 V AC/DC
Overload Withstand	
Voltage	2x rated value for 1 second, repeated 10 times at 10 second intervals
Current	4x rated value for 1 second, repeated 5 times at 5 min intervals
Operating Measuring Ranges	
Voltage Range	10 ... 120% of rated value
Current Range	10 ... 120% of rated value (optional 10 ... 150% of rated value)
Frequency	45...65 Hz

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Reference Conditions for Accuracy	
Reference temperature	23°C +/- 2°C
Input waveform	Sinusoidal (distortion factor 0.005)
Auxiliary supply voltage	Rated Value ±1%
Auxiliary supply frequency	Rated Value ±1%
Voltage Range	20...100% of Nominal Value
Current Range	10...100% of Nominal Value
Input Frequency	50 Hz / 60 Hz
Accuracy	
Voltage	±1.0% of Nominal value (Optional ±0.5% Available)
Current	±1.0% of Nominal value (Optional ±0.5% Available)
Influence of Variations	
Temperature coefficient (for rated value range of use (0...50°C))	0.025%/°C for Voltage 0.05%/°C for Current
Applicable Standards	
EMC	IEC 61326-1: 2005
Safety	IEC 61010-1-2001, Permanently connected use
IP for water & dust	IEC60529
Safety	
Pollution degree	2
Installation category	III
High Voltage Test	2.2 kV AC, 50Hz for 1 minute.
Environmental conditions	
Operating temperature	0 to +55°C
Storage temperature	-25°C to +70°C
Relative humidity	0....90% non condensing
Warm up time	Minimum 3 minute
Shock	15g in 3 planes
Vibration	10.....55 Hz, 0.15mm amplitude
Enclosure	
Front	IP 50 (IP 54 on request)
Back	IP 20
Dimensional Attributes	
96 X 96 DPM	
Bezel size (DIN 43 718)	96 mm x 96 mm
Panel cut-out	92 + 0.8 mm x 92 + 0.8 mm
Overall depth	40 mm
Weight	310 gm. Approx
48 X 96 DPM	
Bezel size (DIN 43 718)	48 mm x 96 mm.
Panel cut-out	43.5 + 0.6 mm x 92 + 0.8 mm.
Overall depth	68 mm.
Weight	250 gm. Approx.

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Parameters measured and Displayed

ZIM PROE 3 V

Network type	Displayed Parameter
1) 3 Phase 4 wire	a. Line - Neutral Voltage VL1 b. Line - Neutral Voltage VL2 c. Line - Neutral Voltage VL3 d. Line - Line Voltage VL1L2 e. Line - Line Voltage VL2L3 f. Line - Line Voltage VL3L1 g. System Voltage
2) 3 Phase 3 wire	a. Line - Line Voltage VL1L2 b. Line - Line Voltage VL2L3 c. Line - Line Voltage VL3L1 d. System Voltage

ZIM PROE 3A

Network type	Displayed Parameter
3 Phase 4 wire and 3 Phase 3 Wire	a. Line Current IL1 b. Line Current IL2 c. Line Current IL3 d. System Current

ZIM PROE V

Network type	Displayed Parameter
1 Phase 2 wire	Line - Neutral Voltage VL

ZIM PROE A

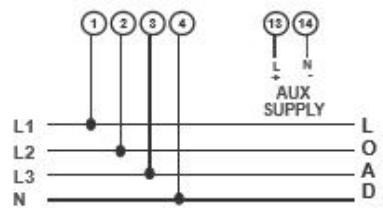
Network type	Displayed Parameter
1 Phase 2 wire	Line Current IL

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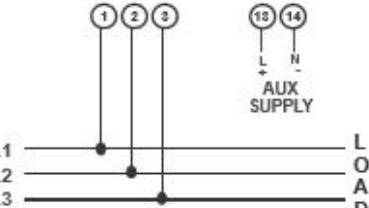
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Connection Diagram and Installation

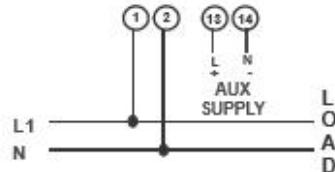
For 96x96 DPM



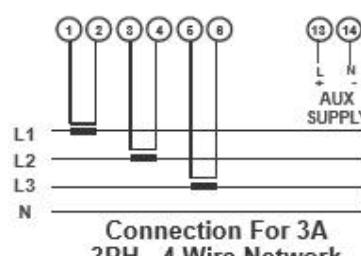
Connection For 3V
3PH - 4 Wire Network



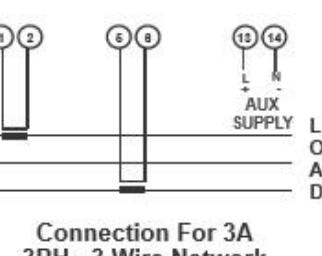
Connection For 3V
3PH - 3 Wire Network



Connection For V
1PH - 2 Wire Network



Connection For 3A
3PH - 4 Wire Network

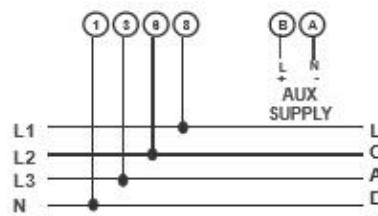


Connection For 3A
3PH - 3 Wire Network

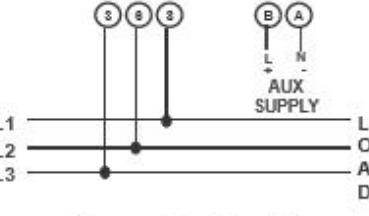


Connection For A
1PH - 2 Wire Network

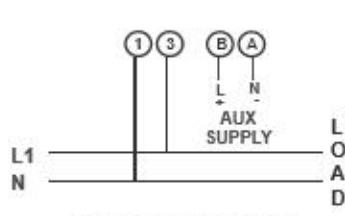
For 48x96 DPM



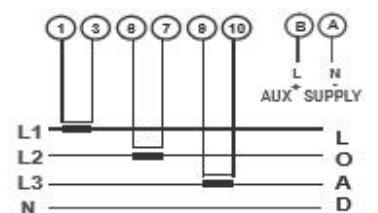
Connection For 3V
3PH - 4 Wire Network



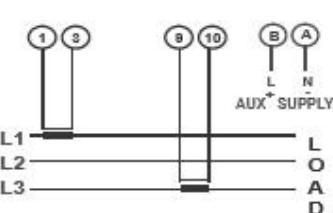
Connection For 3V
3PH - 3 Wire Network



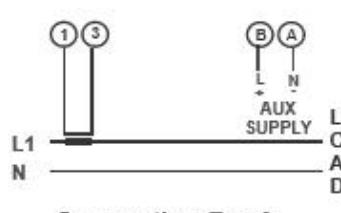
Connection For V
1PH Network



Connection For 3A
3PH - 4 Wire Network

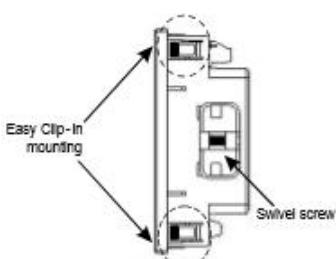


Connection For 3A
3PH - 3 Wire Network



Connection For A
1PH Network

EASY CLIP IN INSTALLATION ON PANEL FOR 96X96 DPM

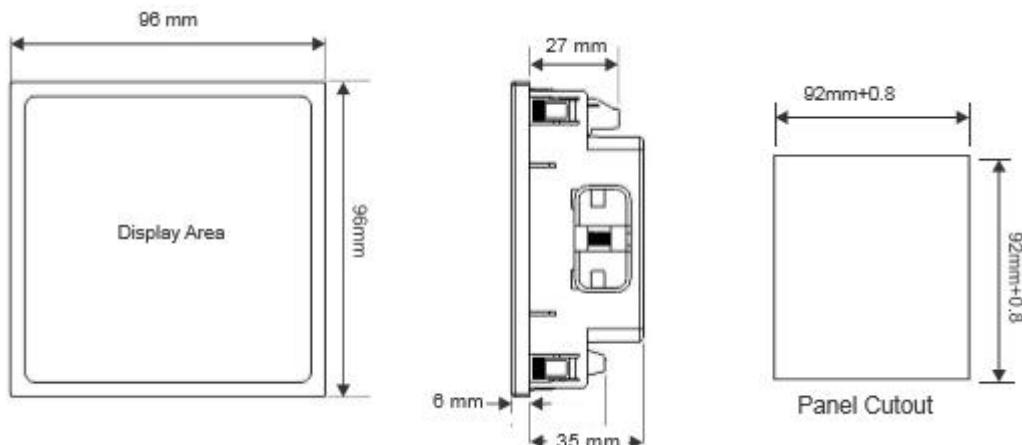


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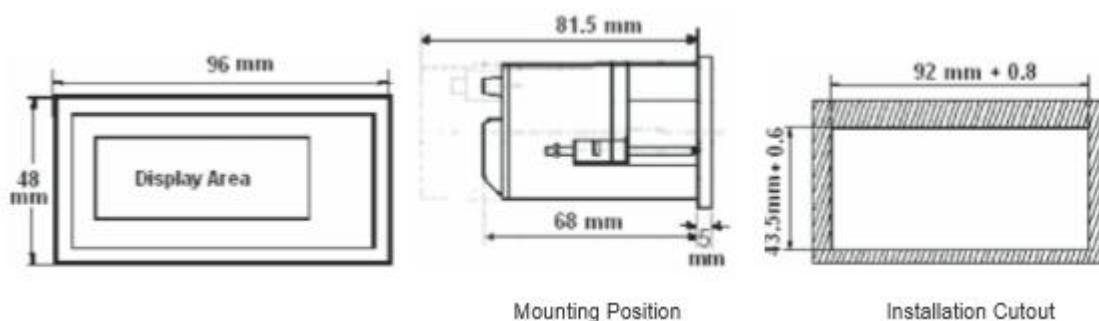
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Dimensions

FOR 96X96 DPM



FOR 48X96 DPM



Ordering Information

ZIM PROE 3 V

Ordering information	(✓)
System Type	
3 Phase (Programmable as 4 wire or 3 wire on site)	
Auxiliary Voltage	
40-300 V AC-DC(±5%)	
20-60V DC/20-40V AC	
Size	
48X96	
96X96	

ZIM PROE V

Ordering information	(✓)
System Type	
1 Phase	
Input Voltage	
57.5 V L-N to 300 V L-N	
600 V L-N	
Auxiliary Voltage	
40-300 V AC-DC(±5%)	
20-60V DC/20-40V AC	
Size	
48X96	
96X96	

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Ordering Example:

ZIM PROE Voltage

i.e ZIM PROE Voltage DPM, 1 Phase, 57.5 to 300 V L-N input voltage, 40-300 V AC-DC Auxiliary Supply, 48x96 Low Depth DPM.

ZIM PROE CURRENT DPM

ZIM PROE 3A / A

Ordering information	(✓)
System Type	
3 Phase (Programmable as 4 wire or 3 wire on site)	
1 Phase	
Auxiliary Voltage	
40-300 V AC-DC(±5%)	
20-60V DC / 20-40V AC	
Size	
48X96	
96X96	

ZIM PROE 3A / A (Current DPM) :

i.e ZIM PROE Current DPM, 3 Phase, 40-300 V AC-DC Auxiliary Supply, 96x96 Low Depth DPM.

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