Ziegler

Redefine Innovative Metering

Technical Datasheet
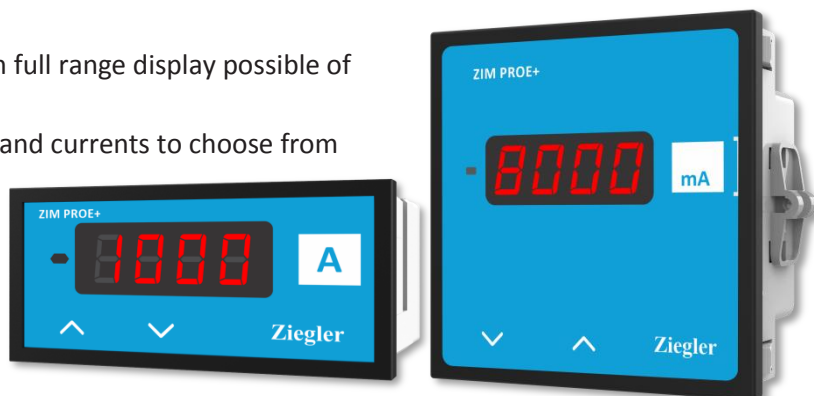
ZIM PROE+

DIGITAL DC VOLTMETER/AMMETER

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DIGITAL DC VOLTMETER/AMMETER

ZIM PROE+ is specially designed to measure electrical parameters like DC Voltage or DC Current signals and display it in terms of any parameter or process value.

Product Features

- **Low Back Depth :** (For 96x96 model) The instrument has very low back depth (behind the panel) of less than 40 mm
- **Programmable Display range :** The meter is completely programmable and user can easily scale the values as per his requirements on- field. Setting for '-ve' sign and decimal point position is also provided
- **Function keys :** Using 2 function keys it becomes easy and convenient for user to program the meter without any difficulty
- **Bent Characteristics :** The meter supports bent characteristics. Hence user can configure the meter as per requirement.
- **Power Factor Display :** The meter can be configured to display power factor also
- **Ambient Temperature Indication :** The meter gives an accurate indication of the ambient temperature in °C and °F.
- **Auxiliary Supply :** The Auxiliary supply 40-300V AC-DC and 20-60V DC / 20-40V AC are supported.
- **4 Full digits Ultra Bright LED display :** 14mm full range display possible of 4 digits having maximum count - 9999
- **Wide Input Range :** Wide range of voltages and currents to choose from
- **Enclosure Protection from dust and water :** Conforms to IP 50 (front face) as per IEC 60529
- **Compliance to International Safety standards**: Compliance to International Safety standard IEC 61010-1- 2010
- **EMC Compatibility :** Compliance to International standard IEC 61326 Class B.

Technical Specifications

Input Ranges	
Model	**ZIM PROE+ Voltage**
Input mV ranges	-75...0...75mV, -150...0...150mV
Input Voltage range	-5...0...5V, -10...0...10V, 0...500V, 0...1000V
Max continuous input voltage	120% of Nominal value
Model	**ZIM PROE+Current**
Input Current ranges	-10...0...10mA, -20...0...20mA, 4……20mA, -1….0……1A, -5……0…….5A
Max continuous input current	120% of Nominal value
Accuracy	
ZIM PROE+ Voltage (Input current < 300µA) **for V/mV**	<0.5% of Display End value ±1 digit
ZIM PROE+ Current(Voltage drop < 600mV) **for A/mA**	<0.5% of Display End value ±1 digit
Ambient Temperature	±3 °C
Influence of Variations	
Temperature coefficient	0.05% / °C
Zero point drift	0.025% / °C

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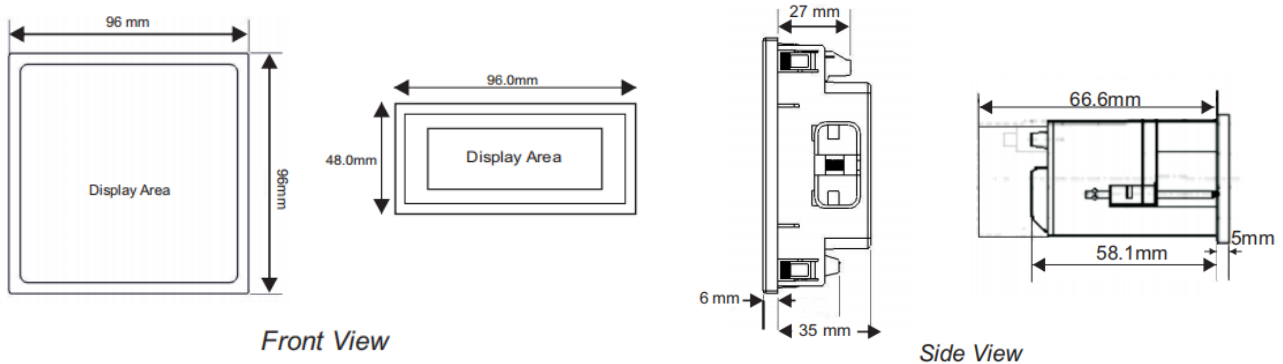| Display	
Type	1 line 4-digit LED display
Display Count Setting	-9999...-10 or +10...+9999 counts
Digit Height	14mm
Decimal point position	Configurable
Negative Display indication	'-'
Overload Indication	" - oL - " (above 125% of nominal value)
Auxiliary Supply	
External Aux	40 - 300V AC-DC
	20 - 60V DC / 20-40V AC
	80 - 300V AC (For 96x96 model only)
Frequency range	45 - 65Hz
VA burden	< 4.5VA approx. at 240V L-N, 50Hz
Reference Conditions for Accuracy	
Reference Temperature	23°C ± 2°C
Auxiliary Supply Voltage	Rated Value ±1%
Auxiliary Supply Frequency	Rated Value ±1%
Applicable Standards	
Electromagnetic Compatibility	IEC 61326-1:2005
Immunity	IEC 61000-4-1 up to 4. Level 3 industrial Low level
Safety	IEC 61010-1:2010, Permanently connected use
IP for water & dust	IEC 60529
Pollution degree	2
Installation category	III
High Voltage Test	2.2 kV AC, 50Hz for 1 minute between all Electrical circuits
Environmental conditions	
Operating temperature	-10 to +55°C
Storage temperature	-20 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
Dimensions and Weight	
Bezel size	96 mm x 96 mm DIN43718 (For 96x96 model)
	48 mm x 96 mm DIN43718 (48x96 model)
Panel cutout	92 + 0.8 mm x 92 + 0.8 mm(For 96x96 model)
	43.5+0.6 mm x 92+0.8 mm (For 48x96 model)
Overall depth	< 40mm (For 96x96 model)
	< 75mm (For 48x96 model)
Weight	310 gm. approx.(For 96x96 model)
	250 gm. approx.(For 48x96 model)

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Connection Diagram and Installation

Easy Clip-in mounting

Swivel screw

96x96 model

66.6mm

58.1mm

5mm

48x96 model

-10...10mA
-20...20mA
-1...1A
-5...5A
-75...75mV
-150...150mV
-5...5V
-10...10V

0...500V
0...1000V

1 2 3

13 14

L N
Aux Supply

96x96 model

0...500V
0...1000V

L N
Aux Supply

48x96 model

Dimensions

96 mm

96mm

Display Area

Front View

96.0mm

48.0mm

Display Area

27 mm

6 mm

35 mm

66.6mm

58.1mm

5mm

Side View
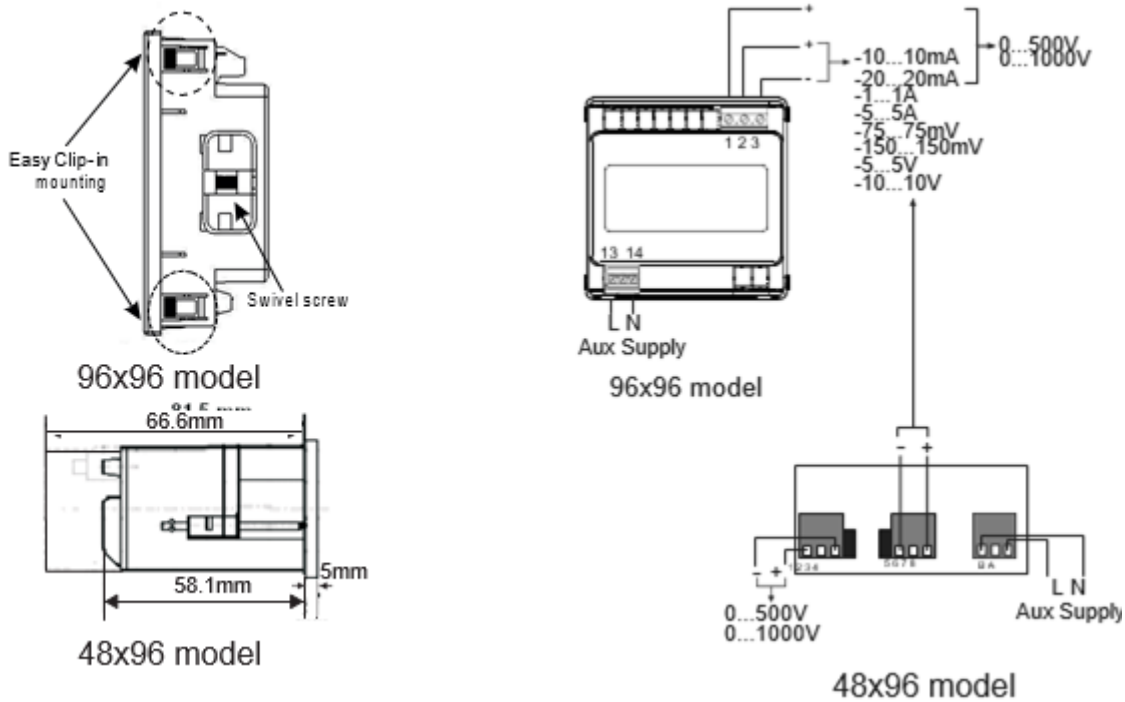
Factor C (The highest value applies if calculated C is less than 1,then C=1

Linear Characeristics:

$$C = \dfrac{1 - \dfrac{Y_0}{Y_2}}{1 - \dfrac{X_0}{X_2}} \ \text{ or } C = 1$$

Bent Characeristics:

For $X_1 \leq X \leq X_2$

$$C = \dfrac{1 - \dfrac{Y_1}{Y_2}}{1 - \dfrac{X_1}{X_2}} \ \text{ or } C = 1$$

For $X_0 \leq X \leq X_1$

$$C = \dfrac{Y_1 - Y_0}{X_1 - X_0} \cdot \dfrac{X_2}{Y_2} \ \text{ or } C = 1$$

X0 = Start value of input, Y0 = Start value of display ,X1 = Elbow value of input ,Y1 = Elbow value of display

X2 = End value of input,Y2 = End value of display

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Ordering Information

Ordering information	(✓)
Model	
ZIM PROE+ Voltage	
Input Voltage	
75mV	
150mV	
0 - 5V	
0 - 10V	
0 - 500V	
0 - 1000V	
Model	
ZIM PROE+ Current	
Input Current	
0 - 10mA	
0 - 20mA	
4 - 20mA	
0 - 1A	
0 - 5A	
Auxiliary Supply	
40-300V AC-DC (±5%)	
20-60V DC / 20-40V AC (±5%)	

ZIM PROE+ Current

i.e. ZIM PROE+ Current, 0-10mA Input Current, 80-300V AC (±5%) Auxiliary Supply

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Ziegler Instrumentation UK Ltd.