

Ziegler

Redefine Innovative Metering

Technical Datasheet

ZAM DC00

DC ENERGY METER – 1 CHANNEL

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ZAM DC00 – 1Channel A versatile DC energy meter is specially designed to measure, display and communicate DC Voltage, Current, Power and Energy to monitor and control an external system control.

Product Features

- 1 - line 8 digit Ultra-bright LED Display
- Bi-Directional Voltage & Current measurement
- Isolated Voltage Channel
- Import & Export measurement
- Onsite Configuration USB-based Serial Interface or through RS485 (MODBUS)
- Data-logging (Optional)
- Direct Remote Access (optional)
- Relay Functions
 - Limit Switch / Pulse Output
 - Timer
 - Remote Operation
 - Reverse Locking Alarm
 - RTC Relay
- Conforms to IP 54 (front face) as per IEC60529
- Compliance to International Safety standard IEC 61010 - 1 - 2010
- EMC Compatibility : IEC 61326 – 2012



Technical Specifications

Display	
Type	1 line 8-digit LED Display
Display Height	9 mm
Overload Indication	-oL- (Above 126% of nominal value)
Range	Voltage 0 to ±9999, Current 0 to ±9999, Power 0 to ±9999, Energy (Import & Export) 0 to 99999999
Real Time Clock (RTC):	Uncertainty ±2 minutes / month (23°C +/- 2°C)

Display Parameters

- Voltage , Current & Power
- Energy (Import and Export kWh, Ah)
- Demand / Max Demand (Import and Export A, kW)
- Min Max (V, I)
- Run Hour, On Hour & Number of Interruptions

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Input Voltage	
Nominal Input Voltage	10 - 60 VDC / 61 - 200 VDC / 201 - 1000 VDC
Operating Measuring Range	±5 to ±125% of nominal value
Burden	< 0.4 W approx
Max continuous input voltage	125% of nominal value
Overload Capacity	2 x UN for 1 second, repeated 10 times at 10 second intervals
Input Current	
Current Sensor	External Shunt
Shunt Setting Range	50 - 150 mV
Full Scale Setting Range	1 A to 20 kA
Operating Measuring Range	±0.2 to ±125% of nominal value
Burden	< 0.1 W approx
Max continuous input current	125% of nominal value
Overload Capacity	20 x IN for 1 second, repeated 5 times at 5 minute intervals

Output Data	
Impulse LED	For Energy Testing
Relay Output (Optional)	250 VAC / 30 VDC, 5 A
Modbus (Optional)	RS485, max. 1200 m Baud rate: 4800, 9600, 19200, 38400, 57600 bps
USB (Optional)	Baud rate: 57600 bps

Power Supply	
Auxiliary Supply	60 to 300 VAC/DC (Burden : < 6 VA approx) 45 to 65 Hz Or 12 to 60 VDC (Burden : < 6 VA approx)

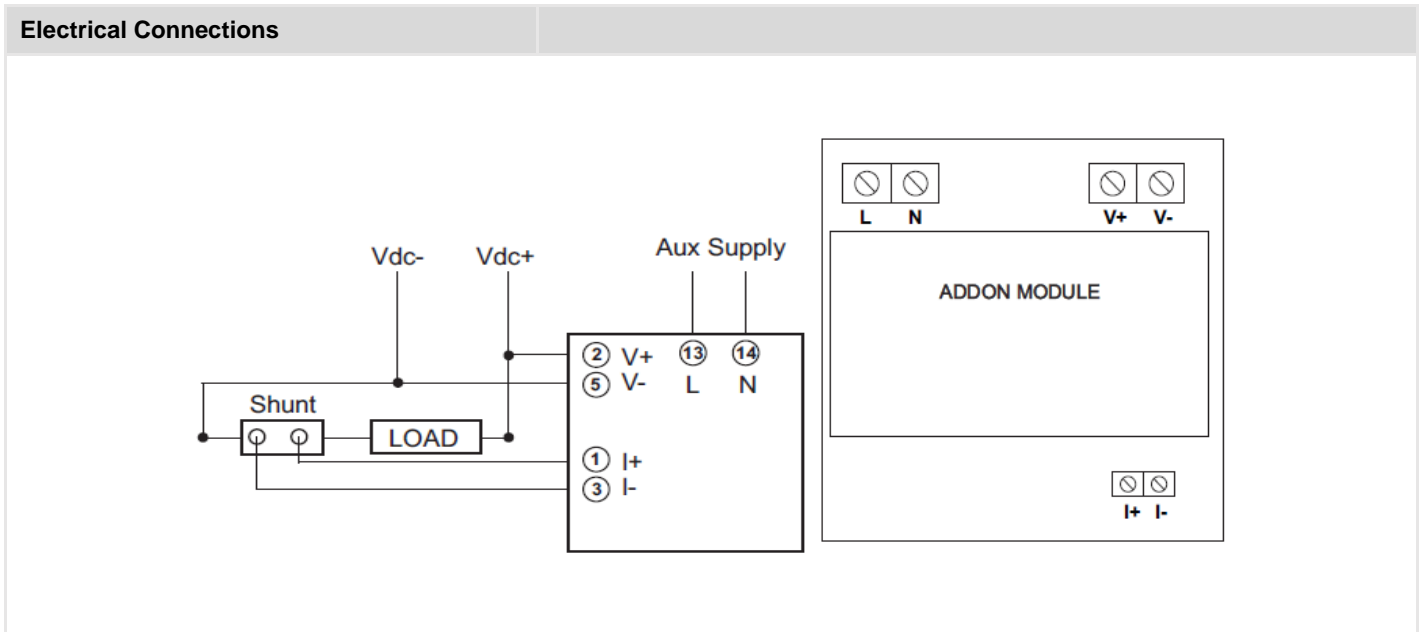
Accuracy	
Voltage	± 0.5% of Nominal value
Current	± 0.5% of Nominal value
Power	± 0.5% of Nominal value
Energy (kWh)	Class 0.5
Reference conditions for Accuracy	
Ambient temperature	23°C +/- 2°C
Temperature Drift	0.05%/°C

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Applicable Standards	
EMC	IEC 61326-1:2012, Table 2
Safety	IEC 61010-1-2010 , Permanently connected use
IP for water & dust	IEC60529
Pollution degree	2
Installation category	1000V CATII, 600V CATIII (Measuring Inputs) 300V CATIII (Power Supply)
High Voltage Test	6.22 kV DC, Enclosure versus all electrical circuits 5.23 kV DC, Auxiliary Supply versus all other electrical circuits 6.22 kV DC, Measuring Terminals versus all other electrical circuits 3.11 kV DC, Relay versus Relay 5.23 kV DC, USB & RS485 versus all other electrical circuits

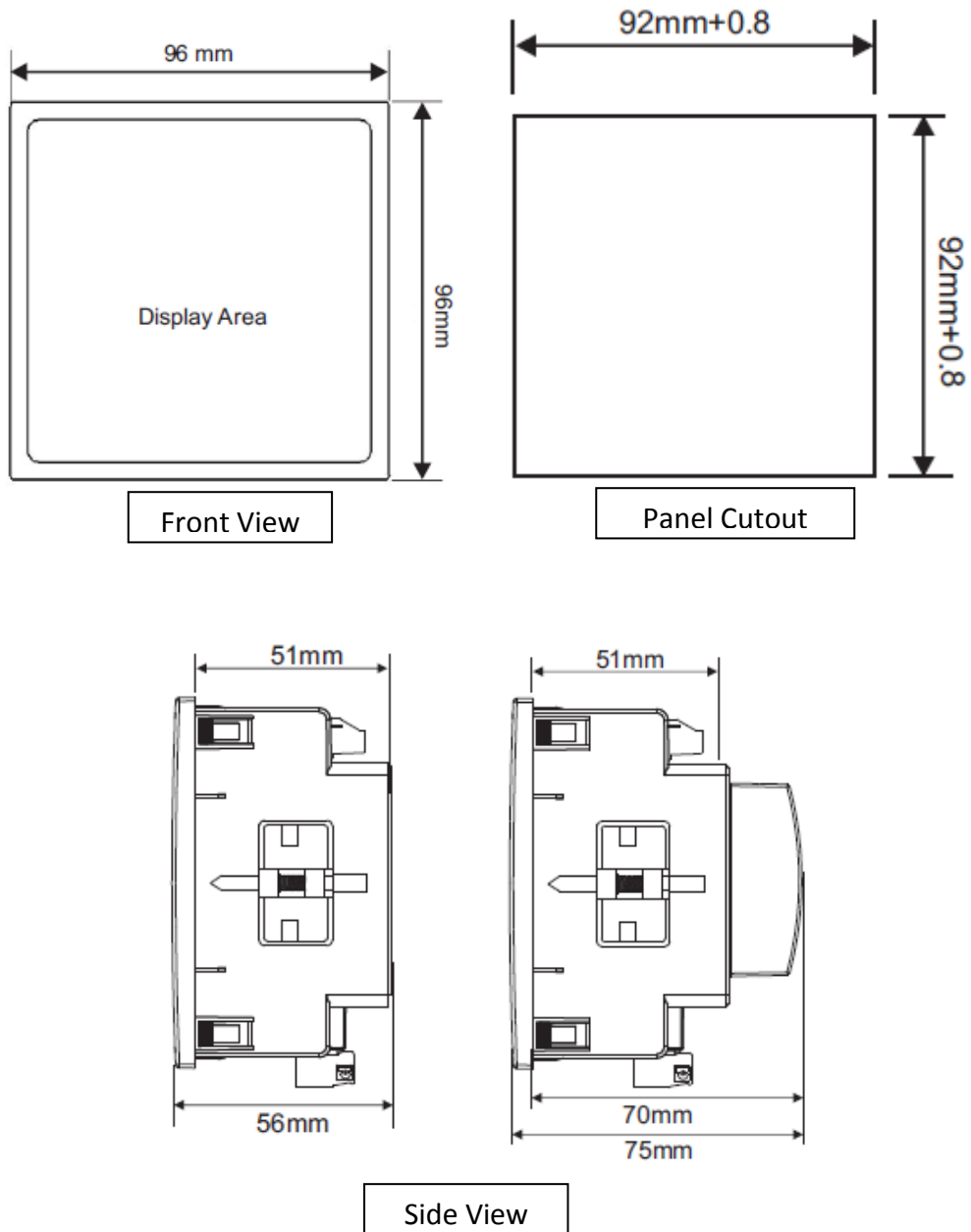
Environmental	
Nominal range of use	-10 to +60°C
Storage temperature	-20 to +70°C
Relative humidity of annual mean	0... 90% non condensing
Warm up time	Minimum 3 minute
Enclosure	IP54 (Front Side) and IP20 (Terminal Side)



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Dimensions (In mm)



Bezel Size - 96 mm x 96 mm DIN 43 718

Panel Cut-out - 92 + 0.8 mm x 92 + 0.8 mm

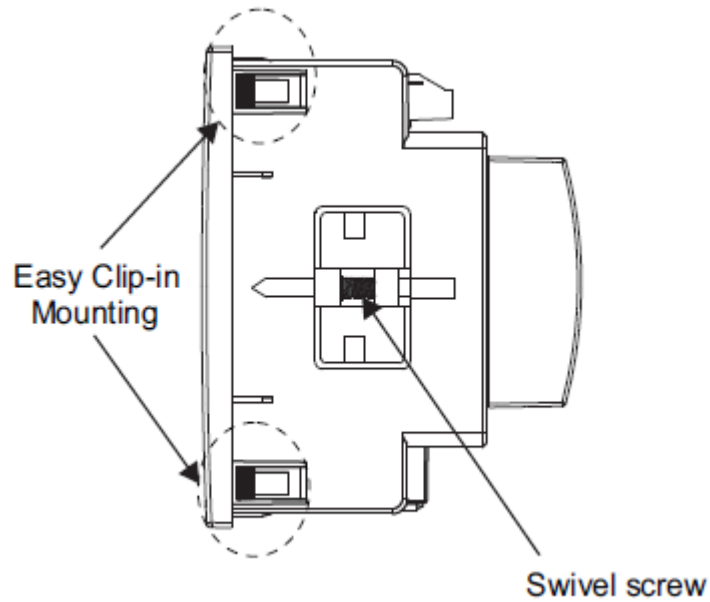
Overall Depth - 75 mm , with addon card / 57 mm , without addon card

Weight- 320 gm. approx.

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Installation



Ordering Information

(√)

Model – ZAM DC00

Input Voltage

10 - 60 V

61 - 200 V

201 - 1000 V

Power Supply

60 - 300 V AC / DC

12 - 60 V DC

Output (Optional)

RS485 - 2 Relay Outputs

RS485 - 2 Relay Outputs - USB – Data-logging

Not Required

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