



ZPM-1 Data-sheet

Electricity Meter

Single Phase Power

Consumption & Generation monitoring sensor




Characteristics

- DIN Rail enclosure fits unobtrusively into standard Switchboards
- Size equivalent to a double circuit breaker
- Current clamp device to monitor input current without the need to disconnect the Live input
- Up to 53A RMS, accurate monitoring
- Precision class 2% ¹
- Measures both input power and returned power to the grid independently
- Output pulses at the rate of 100 pulses / kWh
- Two pulse outputs, one for consumed and returned power
- Pulse outputs optically isolated from mains (5kV)

The ZPM-1 is a novel low cost meter that allows users to monitor their power usage and power returned to the grid in an independent way. This allows users to verify their power usage continuously and calculate the cost of power.

Some electricity providers pay customers back for power returned to the grid if the users have renewable generators or solar panels installed. The ZPM-1 allows users to monitor delivered power and change their power usage patterns to minimise their overall power expenses.

Specifications:

Standards Approval:	AS61010-1
Mains Voltage:	220 – 240VAC 50Hz
Input current:	35mA RMS
Current monitoring:	0-53A RMS, 0-75A PEAK
Power monitoring:	0-13kW (1300 pulses per hour)
Output Isolation:	Optically Isolated 5KV
Output Type:	Open collector NPN transistor
Output pulse width:	70ms
Output Sink:	0.5mA max
Output Low voltage:	0.3V max
Measurement:	Each pulse = 10 watt-hours
Measurement Accuracy:	2%
Isolation:	CLASS II 

Inputs:

1 Line Mains Active (240VAC 50Hz)
6 Neutral

7 Current Transformer + (Black)
8 Current Transformer – (White)

Outputs:

9	No Connection	
10	Ground	
11	Power Consumed	(Red Led Flash)
12	Power Generated	(Green Led Flash)

INSTALLATION:

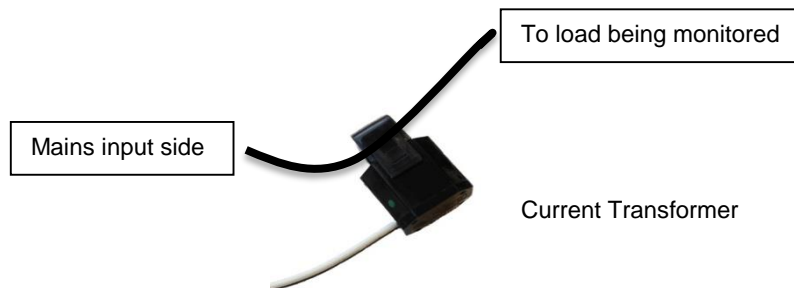
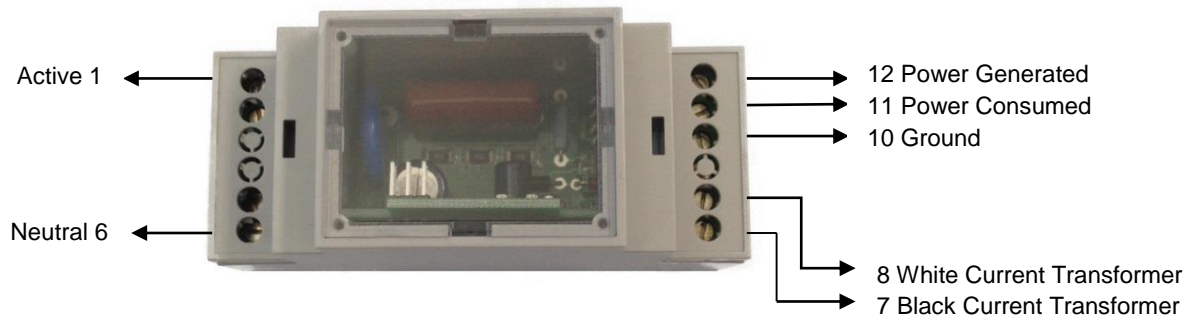
Installation of this product must only be carried out by qualified Electrical Contractors.

The product is for Indoor use only and is mounted on a standard DIN rail within the power meter box housing. The outputs may be connected to any approved logging device that will accept pulse inputs. One example is the Watersave SM-Batt-GSM module. Each output pulse corresponds to 10 Watt-Hours of either energy consumption or energy generation.

Wiring the Current Transformer:

The current transformer must be placed over the incoming 240V ACTIVE, with the **dot on the transformer toward the incoming power**. Connect the black lead of the transformer to terminal 7, and the white lead to terminal 8.

Connection Diagram:



Note: If you are measuring a load current then the LED should flash green. If it is red you need to reverse the black and white leads, or reverse the current transformer direction.