

SAVING ENERGY



Preface

POWERTRAC has been launched with an vision aim to meet the National Objective of Clean & Green Energy, Efficient working of Power Distribution Utilities, Electrification of all the villages, Energy Monitoring and Audit and Reduction in T&D losses by enhanced use of IT in metering infrastructure.

Powetrac is dedicated to develop powerful solutions which enable full control and management of the metering infrastructure, and help Utilities to create a reliable platform for the cooperation with its customers and suppliers.

At POWERTRAC, we have a history of design innovations that have consistently improved the accuracy and services of meters.

We from Powertrac delighted to Introduce ourself as quality manufacture & solution provider in the field of electric power. We give solutions in energy metering of commercial & residential building. Data communication on modbas through RS485, AMR (Automatic Meter Reading) through GSM technology web based systems and a continues development so on.

We basically categories over product range as following:

- **Meters**

- Basic Meter

- VAF Meter

- Multifunction Meter

- 1 Phase & 3 Phase Prepaid Meter

- LT / HT, TVM Meter

- **Controllers**

- Pump Controller

- Street Light Controller

- Demand Controller

- Servo Controller

- **CTs**

- Tape Wound

- Resin Cast

Over aim is to provide the solutions

“Powertrac- The indicating panel meters” provides a wide range of digital panel meters for accurate & reliable measurement of almost all electrical quantities with class 1.0 & 0.5 accuracy. The series contains various models of AC/DC versions for industrial/Commercial applications with high resolution display feature. Powertrac Series models are compact digital meters incorporated with the unique feature of onsite CT & PT ratio programmability.

Powertrac Series Offer

- True RMS Measurement
- Accuracy class 0.5 and 1.0 for 5% to 120% of Input rang
- Available in AC/DC Variants
- Onsite CT/PT ratio programmability.
- Onsite connection configuration from 3 phases 3wire to 4wire and vice versa in three phase meters.
- High resolution LED
- Provides range of Auxiliary supply from 80V-300V AC (Not Required in Voltmeters)
- Continuous Overload of 1.2 times the nominal value display 9999 count.
- 4KV insulation withstand capability.
- Comply with international safety standards

Applications Summary

- Laboratory test benches.
- Industrial automation
- Power control panels
- Generator control panels
- Sub station panels
- Co-generation
- Switch board instruments
- Power distribution panels
- Process instruments
- Pump, Motors, Machine control



Three Phase Volt Meter PG-3V



Three Phase Ammeter PG-3A



Dual Source Energy Meter PG-DS3

Single Phase Variants

1. Volt Meters
2. Ammeters
3. Power factor meters
4. Active power meters
5. Frequency meters

Three Phase Variants

1. Volt Meters
2. Ammeters
3. Power factor meters
4. Active power meters
5. Energy meter (kWh)

DC Variants

1. Volt Meters
2. Ammeters

Multifunction Range - MF

Powertrac meter and metering system comes from a state of the art metering company following ergonomics, our philosophy is to offer high quality, innovative products at reasonable price. MF Range is a 96*96 panel mounted polyphase digital energy meter. It provides multi-functional metering and online monitoring solution through MODBUS RS485. These meters are suitable for various applications like high voltage and low voltage switchgear panels, control and relay panels and online energy monitoring systems (SCADA/EMS/DAS)



Benefits

- Compact and easy installation
- CT/PT Ratio Programmable
- Precise Metering
- Easy to read display
- Better accuracy & reliability than analogue meter
- Color - coded terminal board label helps ensure accurate wiring.
- Safeguard access to setup parameters with unique password protection.

Features

- Accuracy class: 0.5 and 1.0
- True RMS & four quadrant metering
- Metrology LED output configurable for active, reactive and apparent energy
- Accurate readings even at very low current
- Favorite page can be selected
- Reverse polarity indication
- Support of MODBUS RTU on RS485

Selection guide

	PG-VIF	PG-MF1	PG-MFR1	PG-MF2	PG-MFR2	PG-MF3	PG-MFR3
Use on LV and HV systems	—	✓	✓	✓	✓	✓	✓
Accuracy of the meter class 1.0/0.5	—	□	□	□	□	□	□
Number of samples per cycle & 50Hz	—	50	50	50	50	50	50
Instantaneous & rms values							
Current, Total, Per phase & Neutral	✓	✓	✓	✓	✓	✓	✓
Voltage, Average, Phase to Neutral & Phase to Phase	✓	✓	✓	✓	✓	✓	✓
Frequency,	✓	✓	✓	✓	✓	✓	✓
Active power (W) Total & per phase	—	✓	✓	✓	✓	✓	✓
Reactive power (VAR) Total & per phase	—	—	—	—	—	✓	✓
Apparent power (VA) Total & per phase	—	—	—	—	—	✓	✓
Power factor, Average & per phase	—	✓	✓	✓	✓	✓	✓
Unbalance, Current, voltage	—	✓	✓	✓	✓	✓	✓
Phase angle, Between V & I, Ph1, Ph2, Ph3	—	—	—	—	—	✓	✓
RPM, For generator only, speed calculated on generator voltage output and number of machine poles.	✓	✓	✓	✓	—	✓	✓
Energy values							
Active (Wh)	—	✓	✓	✓	✓	✓	✓
Reactive VARh)	—	—	—	—	—	✓	✓
Apparent energy (VAh)	—	—	—	—	—	✓	✓
Export / Import	—	—	—	—	—	✓	✓
Power quality measurements							
Total harmonic distortion % Current, voltage, per phase	—	—	—	✓	✓	✓	✓
Other measurements							
Run hours Operating time for load in hours	✓	—	—	✓	✓	✓	✓
ON hours Operating time for meter in hours	—	—	—	—	—	✓	✓
INTR Number of interrupts	—	—	—	—	—	✓	✓
Communication							
RS-485 port	□	—	✓	—	✓	—	✓
Modbus protocol	—	—	✓	—	✓	—	✓
Calibration							
LED Pulse Output	—	✓	✓	✓	✓	✓	✓

✓ By Default

□ Optional Features

— Not Available

Multifunction Range - MF



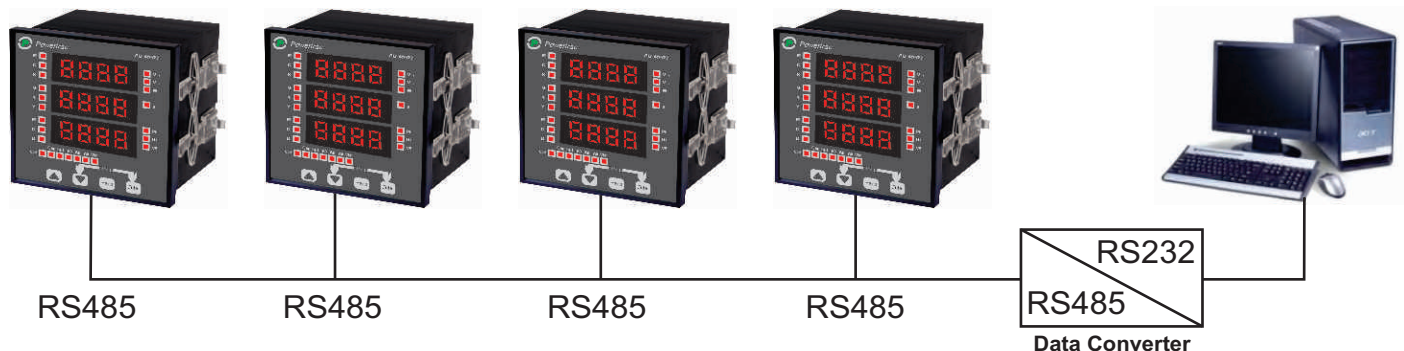
Technical specifications

Electrical	LT/HT
Connection type	CT/PT operated
CT/PT Programming	Primary / Secondary (1/5A)
Wiring configuration	3 phase 3/4 wire
Voltage range	240 V (L-N), 110 V (L-L), 63.5 V (L-N)
Aux. Power Supply	80 - 240V (Not Required in Voltmeter)
Current range	1-1.2 A, 5-6 A
Accuracy	Class 0.5, 1.0
Main frequency	50 Hz \pm 5%
Burden	As per standards
Standards	IS13779, IS14697
Ingress protection	IP 50
Impulse withstand	6 kV
Temperature	-10 °C to +60 °C (operating)
Humidity	95% non-condensing
Favourite page	Configurable through keypad
CT/VT primary	Configurable in field through keypad
Communication	RS485
Baud rate	1200-9600 bps (selectable)
(MODBUS port)	Configurable in field through keypad

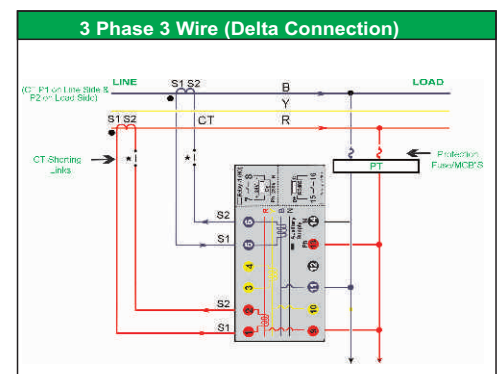
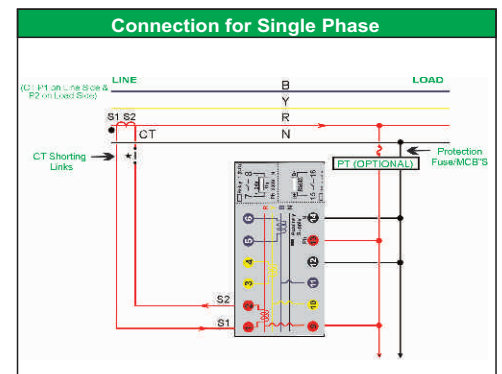
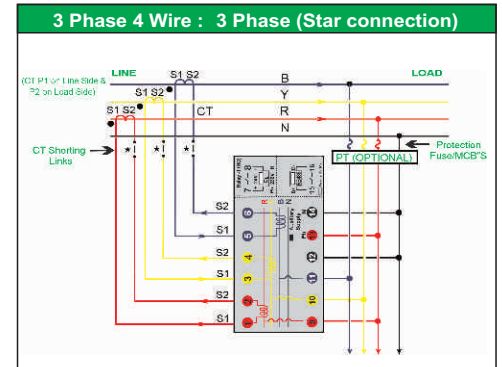
Mechanical	
Dimensions (WXHxD)	96 x 96 x 65 mm
Cut out size	92 x 92 mm
Weight	0.45 \pm 0.1 kg
Terminals	Combicon connector
Max conductor size	2.5 mm

Measuring Ranges	
AC Volt Meter (1&3 Phase)	0-63.5 V, 0-110V, 0-240 V, 0-415V
AC Ammeter (1&3 Phase)	1A / 5A
Frequency Meter	40 - 70 Hz
DC Voltmeter	0-100V
DC Ammeter	0-75mV (Shunt Programmable)
Digit Range	9999 (999999 for energy meter)
Power Factor (1&3 Phase)	0-360°

EMS System Through RS485 MODBUS Communication



Wiring Connections



Pump Controller

Pump Controller

Universal Pump Controller specially designed for the water saving in Public Works Department (PWD). The instruments are based on 100pin Micro controller devices with 24 Bit Sigma Delta front end, ensuring a high degree of precision in Controlling action of water supply system under Works Department (PWD).

It has advanced Micro Controller Based Automatic water pump controller with attractive LCD display.



Salient features

Totalizer

The Meter counts the pulse input and with on site programmable function the value of total liters will be displayed on the LCD.

Relay O/p

Potential free relay output is provided against a pressed value of Pump pressure .

Power measurement

Meter measure the electrical data including power data for Energy Management purpose.

Active Power Measurement (kw)

Apparent power measurement (kva)

Technical Specification

Enclosure	Engineering Plastic
Dimension	96X96X120mm
Connection	3P 4W
Display	Alphanumeric LCD
Type	Universal Pump Controller
Measurements	V(Ph-N) / V(L-L)/I /Kw/Kva/pf
Class of Accuracy	Class 1.0
Current input	Current input
Voltage input	80 to 600 V(L-L)
Aux. Supply	240v AC +/- 20%

4-20mA conversion to pressure

The meter is equipped with conversion of transducer input to the pressure value.

Ampere	4.0 mA	8.0 mA	12.0 mA	16.0 mA	20.0 mA
Pressure	0 bar	40.0 bar	80.0 bar	120.0 bar	160.0 bar

MODBUS & GSM Communication

Meters for RS-485 capability and provided with GSM mode for Remote data transfer and measurement .

Control Functions

Switches OFF the Pump when over head tank is full Switches OFF the Pump when over head tank is Empty

Protection

Low voltage & high voltage protection. Advance micro control based Digital single phase preventer , Protects pump from. :- Single Phase , Phase imbalance, Phase reversal.

Prepaid Metering Range

Powertrac - Smart Revenue Management System

This is a Single / Three Phase tokenless smart meter for pay-as-you-go and managed credit applications. Maintains its own energy account, which supports multi-rate tariffs with features such as public holidays and 'friendly credit' periods.

The meter interfaces with software, which provides real-time and historical information on consumption and accounting. Consumers can readily see how much energy they are using, how much it is costing (per hour), how much credit is left and how long it will last, based on the current rate of consumption. Dual source smart revenue Management systems.

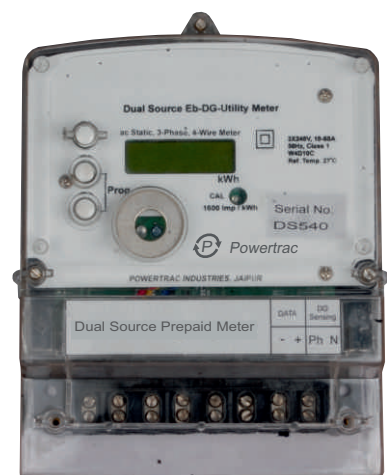
Single & Three Phase Prepaid Meter

(No Money No Power)

- Dual & Single source prepaid available in single & three phase variant
- Perfect solution for commercial & residential building
- Load limiting possible on both sources
- CAM charges can be recovered from meter
- Inbuilt disconnection facility on no money & excess load
- Low balance intimation to user through emails / SMS
- Intimation of meter recharging through emails / SMS
- Tariff can be defined on both sources
- Range 5-30Amp, 10-60, 240 volt -40% to +30%, 50 Hz $\pm 5\%$
- Accuracy Class 1.0 with CBIP88 / IS13779
- Optical & RS485 Communication Port
- Tamper Proof
- Operating Temp. -10°C to $+60^{\circ}\text{C}$
- Humidity Upto 95% non Condensing
- Burden Less than 5VA



1Phase Prepaid Meter



3 Phase Prepaid Meter

Applications

- Domestic Prepayment
- Prepayment for small and medium enterprises (SME)
- Commercial Malls
- Residential Colonies

Street Light Time Controller

Powertrac - Smart Street Light Management System

This is Excellent Street Lighting Management System which offer user a friendly controlling of street lighting / glowsign boards / ATM. This system replaces conventional system which includes timer, contractor and a big enclosure. Product offer a compact unit inbuilt with digital astronomical annual timer, contractor and energy meter for energy management. It saves energy also.



1Phase Street Light Time Controller

This Product Offers:-

- Time zones are programmable through front keys.
- LCD display (backlit as an option)
- Optical communication port / RS 485 port / Wi-fi communication
- Forward energy registration in case of current reversal
- Phase to Phase protection
- Under / Over Voltage Protection
- Over Load Protection
- Real time clock
- Yearly / Monthly / Daily (six zone per day) on site settings available
- 60 Amp. inbuilt latching relays for disconnection
- Astronomical Calender Based time setting optionally available
- Compact System



3Phase Street Light Time Controller

Applications

- Street Lights
- ATM (Air Condition Management)
- Glowsign Board
- Machine Automization

Users

- Banks
- City Development Authority
- MES
- Railways
- UITs
- Municipal corporation
- Agriculture Marketing Board

Energy Metering Range

Single & Three Phase Energy Meter

- Range 5-30Amp, 10-60Amp, 240 volt-40% to +30%, 50 Hz \pm 5%
- Accuracy Class 1.0 with CBIP88 / IS:13779
- Optical Communication Port with LCD display
- Tamper Proof
- Operating Temp. -10^o C to +60^oC
- Humidity upto 95% non Condensing
- Burden Less then 5VA



1&3 Phase Energy Meter

LT & HT CT Operated Trivector Meter

- Accuracy Class 0.2, 0.5s
Basic current 5Amp. And 1Amp
- Voltage 240 V (L-N), 110 V (L-L), 63.5 V (L-N)
- Frequency 50 \pm 5% Hz
- Phase to neutral, 3 element, 3phase 4wire
- Standards IS:14697 / CBIP88
- LCD Display
- Load Survey, TOD, Tamper proof, true RMS



LT & HT CT Operated Trivector Meter

Current Limiting Device

- Can be set on kW, kVA or Current Through Optical Port
- Inbuilt Disconnection Facility
- Available in Single & Three Phase
- Additional Energy & Multifunction Meter
- Upto 60Amp., 50 Hz \pm 5%, Accuracy Class 1.0
- Operating Temp. -10^o C to +60^oC, Burden Less then 5VA
- Humidity upto 95% non Condensing
- Load Survey & TOD
- Inbuilt Real Time Clock (RTC)

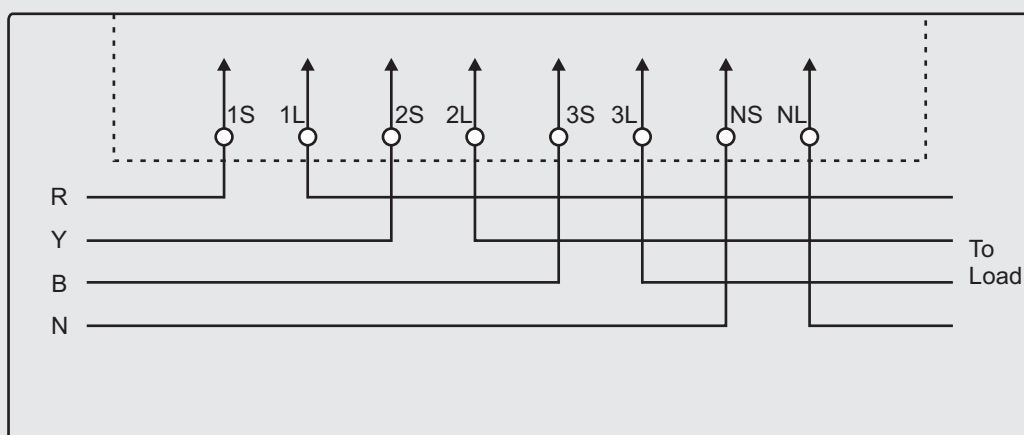


Current Limiting Device

Technical specification For Prepaid, Street Light, Surge Controllers & Energy Meter

CONNECTION	1 Phase 2 Wire, 3 Phase 4 Wire	MECHANICAL 1 PHASE	
COMPLIANCE	Is13779	Dimensions (mm)	115X95X50mm (approx)
ACCURACY	Class 1.0	Enclosure Material	Engineering Plastic
POWER SUPPLY		Degree of Protection	IP51(IP53 option)
Rated Voltage*	240V -40% to +30%	Weight	600 gms (approx)
Rated Frequency	50/60 Hz ± 5%	MECHANICAL 3 PHASE	
CURRENT RANGE 10-60A, 10-80A		Dimensions (mm)	210X170X80mm (approx)
ENVIRONMENTAL		Enclosure Material	Engineering Plastic
Operating Temp.	-10° C to +60° C	Degree of Protection	IP51(IP53 option)
Limit Temp. Range of Operaton	-20°C to +70° C	Weight	900 gms (approx)
Limit Temp. Range of Storage &Transport	-20°C to +80° C	COMMUNICATION	Galvanically Isolated Optical Port for local/remote communication
Relative Humidity	Up to 95% non-condensing	TIME CLOCK &CALENDAR	
DISPLAY	LCD display (Backlit option)	Normal power source	Main supply
		RTC Backup source	Lithium Battery
		Battery Life (Typical)	10 years
		Min. Shelf Life (Typical)	5 years

Wiring Diagram



Current Transformer

Powertrac offer a comprehensive range of current transformers (CTs) with reliable and accurate measurement functionality suitable for low voltage applications. Our CTs are ideally suited for use with energy meters, panel instruments and transducers, ensuring optimum metrological performance under all conditions.

Applications

- Distribution Systems
- Generator Sets Control Panels
- Single-phase LV circuits
- Three-phase LV circuits
- Billing metering
- Sub-metering
- Substation monitoring



Features

- Applicable Standard : IEC/EM 600 44-1, Bs3938, IS2705-1
- Primary current range : 50 to 4000 A
- Secondary output 5A standard (1Amp on request)
- Accuracy class: 0.5 & 1
- Compact design
- Rugged Construction
- Built in terminal cover with sealing provision for secondary connections (Optional)



Type : Wound primary, busbar type, tape wound and connection

Available on Request.

- Secondary output 1Amp
- CTs of other ratio/dimension
- CTs of accuracy class 0.2s & 0.5s
- Protection Class Cts
- CTs for LT - Electrical Connection



Current Transformer - PG - Series

Sr.No.	Ratio	ID / ID (Axial)	Burden	Accuracy Class	Accuracy Class	Accuracy Class
				1	1	1
LV Metering Cts Tape wound & Resin Cast				MRP (INR)	MRP (INR)	MRP (INR)
				Standard Range	Premium Range	Resin Cast
1	50/5A	30	5	220/-	450/-	585/-
2	60/5A	30	5	220/-	450/-	585/-
3	75/5A	30	5	220/-	450/-	585/-
4	100/5A	30	5	220/-	450/-	585/-
5	100/5A	30	10	250/-	530/-	689/-
6	100/5A	30	15	265/-	560/-	730/-
7	125/5A	30	5	220/-	450/-	585/-
8	125/5A	30	10	250/-	530/-	689/-
9	125/5A	30	15	245/-	560/-	730/-
10	150/5A	30	5	220/-	450/-	583/-
11	150/5A	30	10	250/-	530/-	689/-
12	150/5A	30	15	265/-	560/-	730/-
13	200/5A	35	5	220/-	450/-	585/-
14	200/5A	35	10	250/-	530/-	689/-
15	200/5A	35	15	265/-	560/-	730/-
16	250/5A	50	5	250/-	480/-	624/-
17	250/5A	50	10	290/-	530/-	689/-
18	250/5A	50	15	315/-	560/-	730/-
19	300/5A	50	5	250/-	520/-	676/-
20	300/5A	50	10	290	560/-	730/-
21	300/5A	50	15	315/-	590/-	768/-
22	400/5A	50	5	315/-	-	-
23	400/5A	50	15	395/-	620/-	806/-
24	500/5A	50	15	345/-	650/-	845/-
25	600/5A	60	15	425/-	680/-	884/-
26	800/5A	65	15	-	720/-	936/-
27	1000/5A	65	15	-	800/-	1040/-
28	1200/5A	80	15	-	1000/-	1300/-
29	1600/5A	80	15	-	1250/-	1625/-
30	2000/5A	100	15	-	1500/-	1950/-
31	2500/5A	120	15	-	1800/-	2340/-
32	3000/5A	120	15	-	2100/-	2730/-

Note : 50, 60 & 75 Amp CT are in class 5 & Wound Primary.

For Secondary 1Amp add Rs. 60

Prices of other sizes on request

Prices are Ex - Works.

Digital Metering Price List



Price List

Sr. No.	Product Name	Model No.	Accuracy Class-1
			MRP (INR)
1	Single Phase Ammeter	PG-1A	795/-
2	Single Phase Voltmeter	PG-1V	795/-
3	Three Phase Ammeter	PG-3A	1100/-
4	Three Phase Voltmeter	PG-3V	1100/-
5	DC Ammeter	PG-DCA	795/-
6	DC Voltmeter	PG-DCV	795/-
7	Single Phase PF Meter	PG-1PF	1800/-
8	Three Phase PF Meter	PG-3PF	2600/-
9	Single Phase Kw Meter	PG-1Kw	1800/-
10	Three Phase Kw Meter	PG-3Kw	2600/-
11	Frequency Meter	PG-F	1100/-
12	Single Source Energy Meter	PG-EM	2700/-
13	Dual Source Energy Meter	PG-EMDS	5500/-
14	Three Phase VIF Meter	PG-VIF	1900/-
15	Multifunction Meter	PG-MF1	3350/-
16	Multifunction Meter	PG-MF2	4650/-
17	Multifunction Meter	PG-MF3	7550/-

Prepaid Energy Meter

18	Single Phase Prepaid Meter	Sky - 1	12600/-
19	Three Phase Prepaid Meter	Sky - 3	13900/-
20	Single Phase Dual Source Prepaid Meter	Sky - 11	17700/-
21	Three Phase Dual Source Prepaid Meter	Sky - 33	19300/-
22	Three Phase LT/CT Prepaid Meter	Sky - 05	23500/-
23	Software for Prepaid Meter	Sky Pilot	100000/-

Postpaid Dual Source Energy Meter

24	Single Phase Dual Source (Inbuilt disconnection)		7800/-
25	Three Phase Dual Source (Inbuilt disconnection)		12600/-

Controllers

26	Single Phase Street Light Controller	Timelight 1	12600/-
27	Three Phase Street Light Controller	Timelight 3	17700/-
28	Single Phase Surge Controller	Volcon 1	12600/-
29	Three Phase Surge Controller	Volcon 3	17700/-
30	Current Limiting Device Controller	CLD-1	13600/-
31	Current Limiting Device Controller	CLD-3	17600/-
32	Demand Controller	PG-DC	12700/-
33	Pump Controller	PPC-1005	32000/-
34	Energy Management System Software	Measure	50000/-
35	RS 232 / 485 Convertor	Convertor	12000/-
36	GSM Modem	Modem	14000/-

Note : ● Price of product not covered in list price on request. ● Price of 0.5 class meter on request.
● Taxes extra as applicable. ● All price in Indian rupees.

truly metering



truly metering

Auth. Distributor

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