

DIGITAL ENERGY METERS



ACCURATE (PVT.) LTD.

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“

Fast is fine, but accuracy is everything.

Wyatt Earp

”



Accurate Pvt. Limited is a manufacturer of Digital Energy Meters. Incorporated in March 2011 as Private Limited Company, Accurate is a sister firm of IZHAR Constructions Pvt Ltd (ICPL) under the brand umbrella of IZHAR Group of Companies.

FACILITY

Accurate production facility is situated at Sundar Industrial State, Lahore. The total land area of the factory in Sundar Industrial State is Two-Acres, two stories building comprises of 10 halls and 5 rooms.

IZHAR GROUP

IZHAR is one of the leading construction groups of Pakistan having rich history of more than 50 years. With its broad experience and high standards of performance in numerous major construction projects of various types. Established in 1960 by the Chairman Mr. Izhar Ahmad Qureshi, a reputed name in Engineers' community of Pakistan, IZHAR has become one of the leading construction GROUPS. With its broad and rich experience, high standards of technical performance in the numerous major construction projects of various types, ranging from Civil Works, Housing and Urban Development, Heavy Industrial Construction, Defense Oriented Projects and Sophisticated Engineering Construction, IZHAR has earned an outstanding recognition from the nation.

"To become one of the leading global brand that provide critical knowledge about advanced metering solutions and shaping the way world manages energy resources. Recognize the personal worth of our customers by providing a framework that allows personal satisfaction, security and advancement opportunity"

"We are committed to develop advanced electrical metering products, systems and solutions at competitive prices which will ultimately empower our customers to manage energy resources effectively"

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STRIVING FOR QUALITY... OUR TOP PRIORITY

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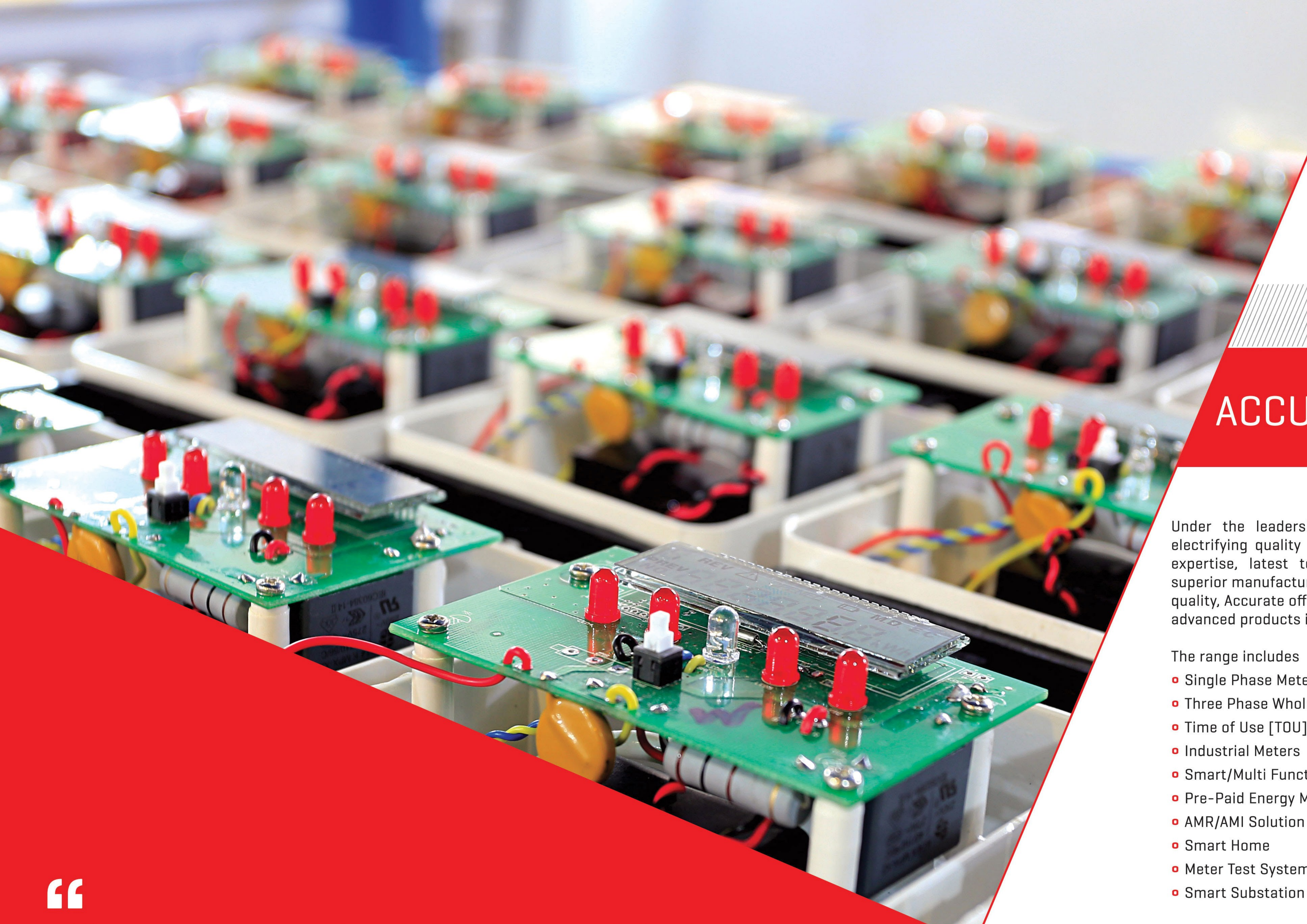
ACCURATE QUALITY POLICY

“We stand committed to maintain long term relations with our customers through progressive measures in manufacturing of all kind of Energy Meters with commitment to comply with the requirements of prevalent ISO international standards [9001: 2008]”.

- Responding effectively to the client requirements by ensuring perfect execution with cost effective products and timely deliveries.
- Fulfilling all internal & external commitments on time and at all times.
- Continuously training ourselves and upgrading our professional skills realizing that quality is everyone's direct responsibility.
- Abiding by governmental safety regulations and providing for improved health and safety conditions to all the people working in the organization.
- Continually improve upon the quality management system.
- Abiding by all applicable laws and regulations and contractual obligations.

CORE VALUES

- Keep our commitments
- Keep integrity and safety in our work
- Continually learn, grow and improve
- Highly motivated, Valued and Skilled Workforce
- Creative and Innovative solutions



ACCURATE PRODUCTS

Under the leadership of experienced management with an electrifying quality driven attitude, a fusion of experience and expertise, latest technology, dedicated & skilled workforce, superior manufacturing infrastructure and exacting standards of quality, Accurate offer advanced products in Energy Metering.

The range includes

- Single Phase Meter
- Three Phase Whole Current Meter
- Time of Use [TOU] /Time of Demand [TOD] Meter
- Industrial Meters
- Smart/Multi Functional Meters
- Pre-Paid Energy Meters
- AMR/AMI Solution
- Smart Home
- Meter Test System
- Smart Substation System

“

All our meters are equipped with highly specialized metering chips to provide accurate results with reliable performance over years. The meters do not require frequent calibration.

”

SINGLE PHASE METERS

- Standards According to WAPDA Specs. DDS-65:2007 [amended to date], IEC 62052-11 & IEC 62053-21
- Current Range: 10A basic to 40 Amps Maximum
- Voltage Range: 115V to 456V AC
- Temperature Range: -25 Co to +80 Co
- Humidity: 0 to 98% relative humidity non condensing
- UV Exposure: Casing and LCD designed for outdoor installation even in direct sunlight
- Protection against penetration of Dust & Water in outdoor installation
- Accuracy Class: 1
- Voltage Ranges:
 - Specified Operating Range: 216 to 264 Volts
 - Standard Operating Range: 144 to 276 Volts
- Power consumption & VA burden:
 - Power Consumption < 1 watt
 - VA Burden < 1 VA
- Initial Start up : Within 3 seconds after applying reference voltage
- Electromagnetic Compatibility

THREE PHASE METERS

- Standards According to WAPDA Specs. DDS-65:2007 [amended to date], IEC 62052-11 & IEC 62053-21
- Current Range: 10A basic to 100 Amps Maximum
- Voltage Range: 120V to 265V AC
- Temperature Range: -25 Co to +80 Co
- Humidity: 0 to 98% relative humidity non condensing
- UV Exposure: Casing and LCD designed for outdoor installation even in direct sunlight
- Protection against penetration of Dust & Water in outdoor installation
- Accuracy Class KWh: 1.0
- Accuracy Class KVarh: 2.0
- Voltage Ranges:
 - Specified Operating Range : 207 to 253 Volts
- Power consumption & VA burden:
 - Power Consumption < 2 watt
 - VA Burden < 10 VA
- Initial Start up : Within 5 seconds after applying reference voltage
 - Programming and meter reading on site can be done by using the infrared hand held units (HHU); RS 485 and infrared interface.
- Electromagnetic Compatibility



Our meters are known for reliability & stability. They have a wide range of operating voltage; strong ability to withstand the disturbance and overloading.



SMART METERS

----- Electricity the Smart Way -----

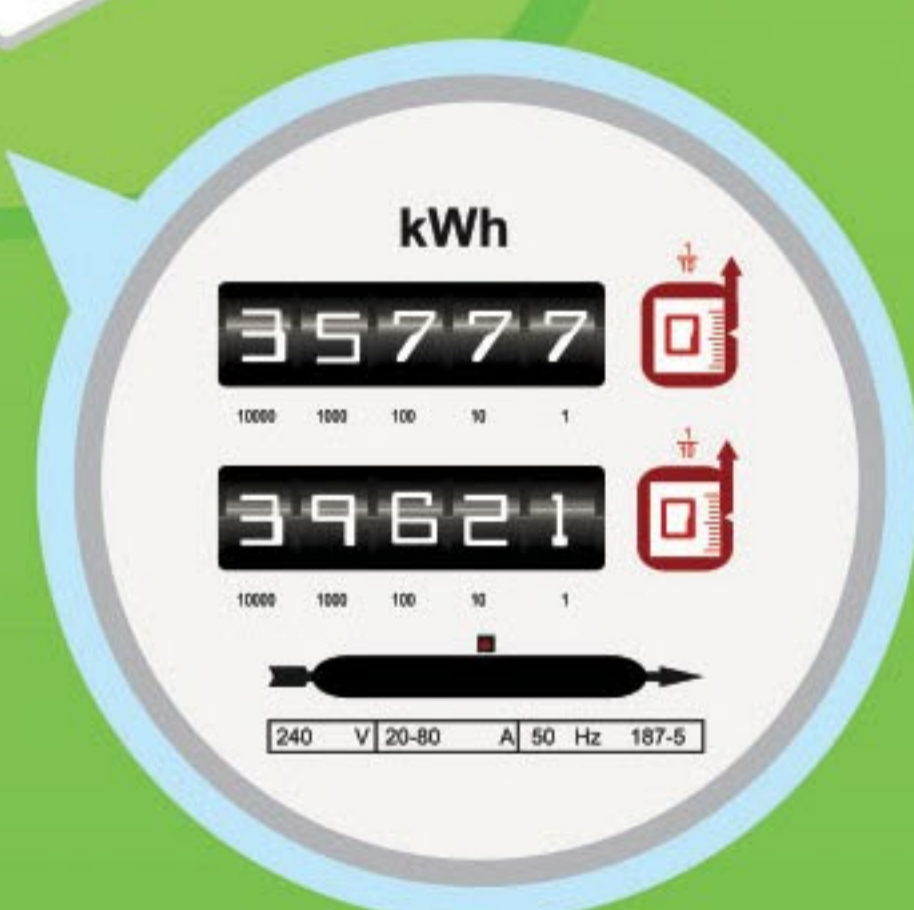
Smart meters **promise to change** the way we use electricity, and the way the government controls it. Smart meters are not in every home, but utility companies across the country are quickly adopting this “**smart**” and **accurate** technology.

Over the next few years every house will have a **SMART METER**

Traditional Meters vs Smart Meters

The traditional meter is probably what most people have in their homes. Although they have been around for decades, the smart meter technology is a modern take on recording energy consumption.

Traditional Meter



Analog



A meter reader collects data from your home and takes it to the utility company



Consumers don't see their energy use until they receive monthly bill



Smart Meter



Digital



Data is transmitted through collectors to utility companies



Consumers can view their energy use daily, by the hour



What is Smart Metering?

01. Smart meters **record energy use** and relay the information to utility companies.



03. When your home has a smart meter, the utility company will bill you based on **time-of-use billing**.

02. Electric energy use is recorded **every 30 minutes** at your home.

30 mins

04. Consumers can monitor their energy use **online** daily instead of evaluating their use at the end of the month when energy has already been consumed.

Smart meters are part of a **smart grid** that will turn the current electrical grid into a modern network that **efficiently communicates** with customers and all other aspects of the industry.

Smart Metering Savings



In order to **benefit** from the smart meter you must be willing to monitor your **energy use** and adjust your habits.



Operating your **large appliances** during **off-peak hours** will lead to savings.



After monitoring and adjusting your energy use, home owners can have **significant savings**.

SMART METERS

Smart meters provide data that enable customers to make choices about how much energy they use by allowing them to access accurate real-time information about their electricity consumption.

Unlike the old meters they replace, smart meters are up to date digital storage mechanism that record electricity usage every 30 minutes and automatically sends this data to a customer's electricity distributor over digital communication system, virtually bringing an end to estimated bills and manual meter readings.

The added advantage of smart meters is the availability of periodic consumption data at utility office as well as the consumer of electricity. This mutual information sharing helps the customer keep an eye on their consumption and conserve electricity.

HOW SMART METERS WORK

Smart meters measure and record how much electricity a household or business is using at 30 minute intervals. There are different smart meter models, but the basic functions are the same.

Smart meters communicate meter readings directly to electricity distributors, eliminating the need for someone to come out and read meters – whether that is required for each bill, to change electricity retailers or to reconnect power when customers move house. Not only does this reduce fees, but electricity bills will also be more accurate – virtually eliminating estimated bills.

The ever increasing demand of energy for industry, homes and commercial sites has forced its generation on fossil fuels [oil, gas and coal] in addition to hydro resources. This in return has affected our eco-system and our natural resources are running out. Therefore the cost of electricity is increasing and it is becoming a major challenge for developing economies to meet the gap between energy supply and demand. This gap is further widened by poor transmission infrastructure, high technical losses, obsolete grid equipment and in-sufficient recoveries from electricity consumers.

Smart metering is the solution to alleviate the malice of distribution losses and tampering. Smart meters have anti-tampering features, demand side management, load controls and effective bi-directional communication with the central control server. M/s Accurate (Pvt) Ltd offers a one-stop solution for smart meters. Our product range includes all sorts of communication technologies including GSM/GPRS, PLC and RF. The details of our products can be found in the links below.

- Single Phase RF Energy Meter
- Poly Phase RF Energy Meter
- Single Phase GSM/GPRS Energy Meter
- Poly Phase GSM/GPRS Energy Meter

CERTIFICATIONS

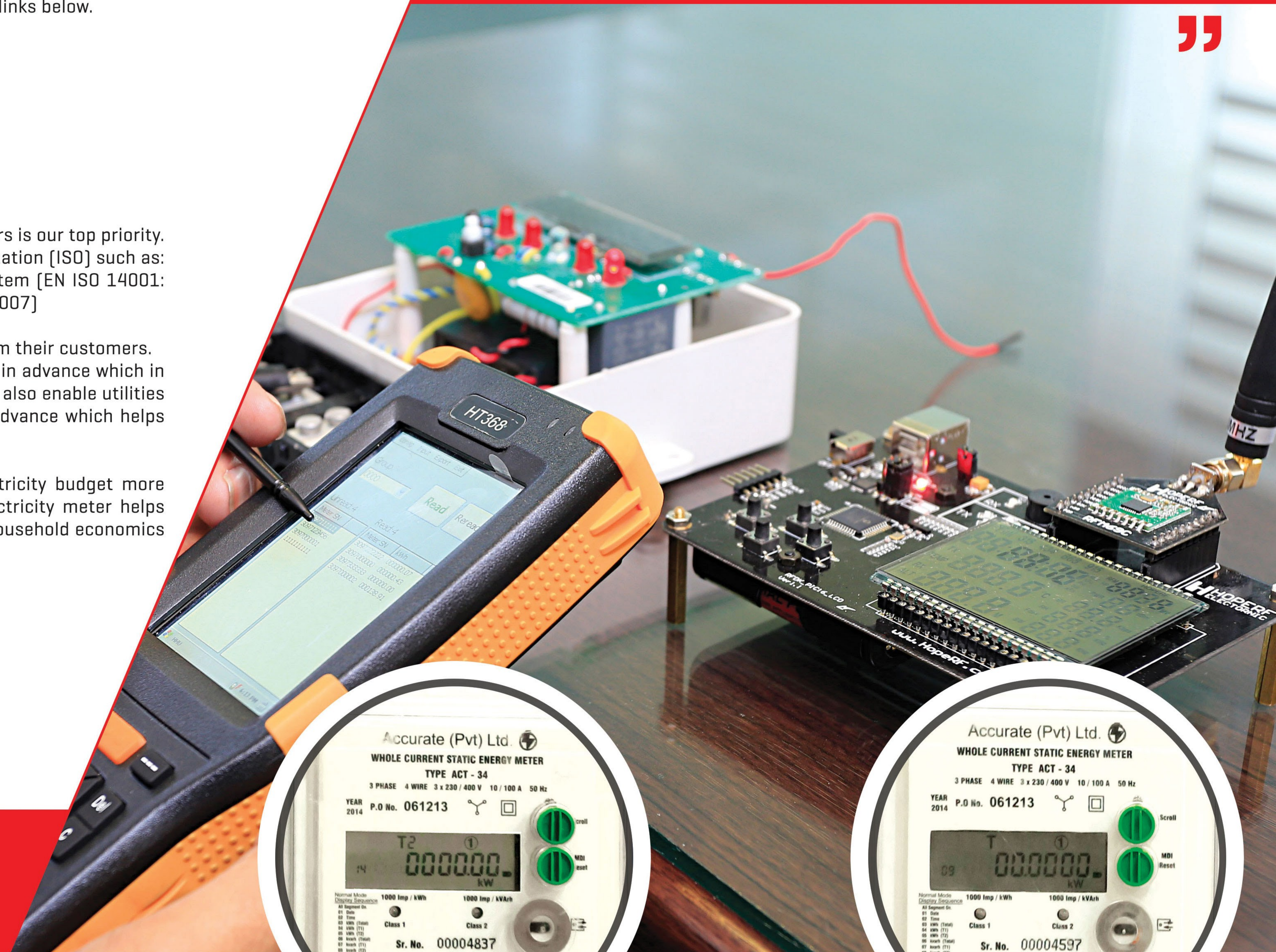
We are an environmentally friendly company and the health & safety of our workers is our top priority. We are accredited in three disciplines by International Organization of Standardization [ISO] such as: Quality Management System [ISO 9001: 2008], Environmental Management System [EN ISO 14001: 2004], and Occupational Health & Safety Management Systems [OHSAS 18001: 2007]

Prepayment meters have revolutionized the way utilities collect bill payments from their customers. A prepaid electric meter enables the utilities to collect money from its customer in advance which in turn improves cash flow and eliminates chances of bad debt. Prepayment meters also enable utilities to forecast the electricity demand on the basis of the number of units sold in advance which helps them plan generation accordingly.

Furthermore, prepaid electricity meters help consumers to manage their electricity budget more effectively without necessarily landing into adversity. In short, the prepaid electricity meter helps reduce utilities financial burden while also ensures customers to manage their household economics pleasantly.



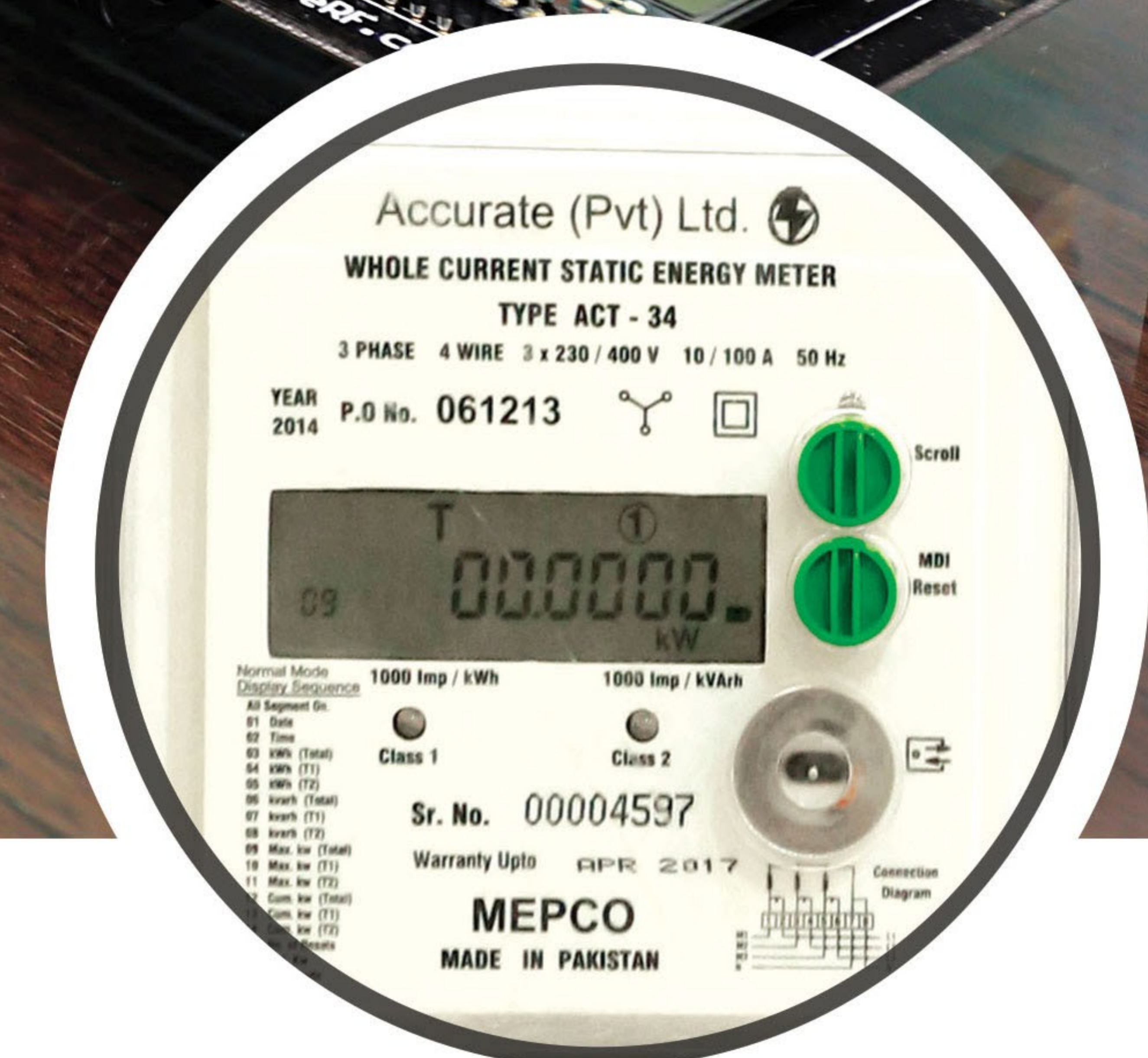
Smart meters are part of a smart grid that will turn the current electrical grid into a modern network that efficiently communicates with customers and all other aspects of the industry.



AMI SOLUTION



SMART METER 01
SOME CODE AND TEXT HERE



SMART METER 03
SOME CODE AND TEXT HERE

01.

HIGH ACCURACY

All meters are equipped with highly specialized metering chip to provide accurate results with reliable errors. Meters do not require calibration frequently.

02.

RELIABILITY & STABILITY

Wide range of operating voltage; strong ability to withstand the disturbance and overloading.

03.

REVERSE CURRENT INDICATION

The meter detects, indicates & performs accurate metering if the current flowing through it is reversed.

04.

SINGLE WIRE METERING

The meter detects, indicates & performs metering on Actual Current, Assumed Voltage and Assumed Power Factor as long as Phase wire is connected & the Neutral wire is missing from the meter.

05.

EARTH DETECTION

The meter detects, indicates & performs accurate metering if main neutral is disconnected & internal earth is used for reference.

06.

DIMMER DETECTION

The meter is protected from energy theft through dimmer.

07.

INTERCHANGING OF CONNECTIONS

Meter performs accurate metering if phase & neutral wires are interchanged.

08.

DISPLAY METHOD

"Large LCD display" which is sufficient.

09.

CONVENIENT INSTALLATION

Simple & Compact design; light weight; no need for paving the communication line additionally; convenient for the construction and maintenance.

10.

TAMPER & FRAUD PROTECTION

All Meters are equipped with the protection function of the shorted circuit, the reversal connection of phase wire and neutral wire, and the neutral wire connecting to the earth.

11.

LONG LIFE

Adopting the advanced manufacturing techniques; all meters are equipped with the high quality long life components.

12.

EVENT LOGS

Meter has sufficient memory to store more than 100 events with date and time stamped. Meter records events like Power outages, Disconnection of wires, Reverse Energy flow, Reverse Polarity, Under Voltage & over Voltage along with date and time of event occurrence and recovery of event.

13.

LOW POWER CONSUMPTION

Advanced manufacturing techniques enable the meters to consume less power.

14.

COMMUNICATION FUNCTION

Programming and meter reading on site can be done by using hand held unit having USB interface.

15.

REMOTE PROGRAMMING

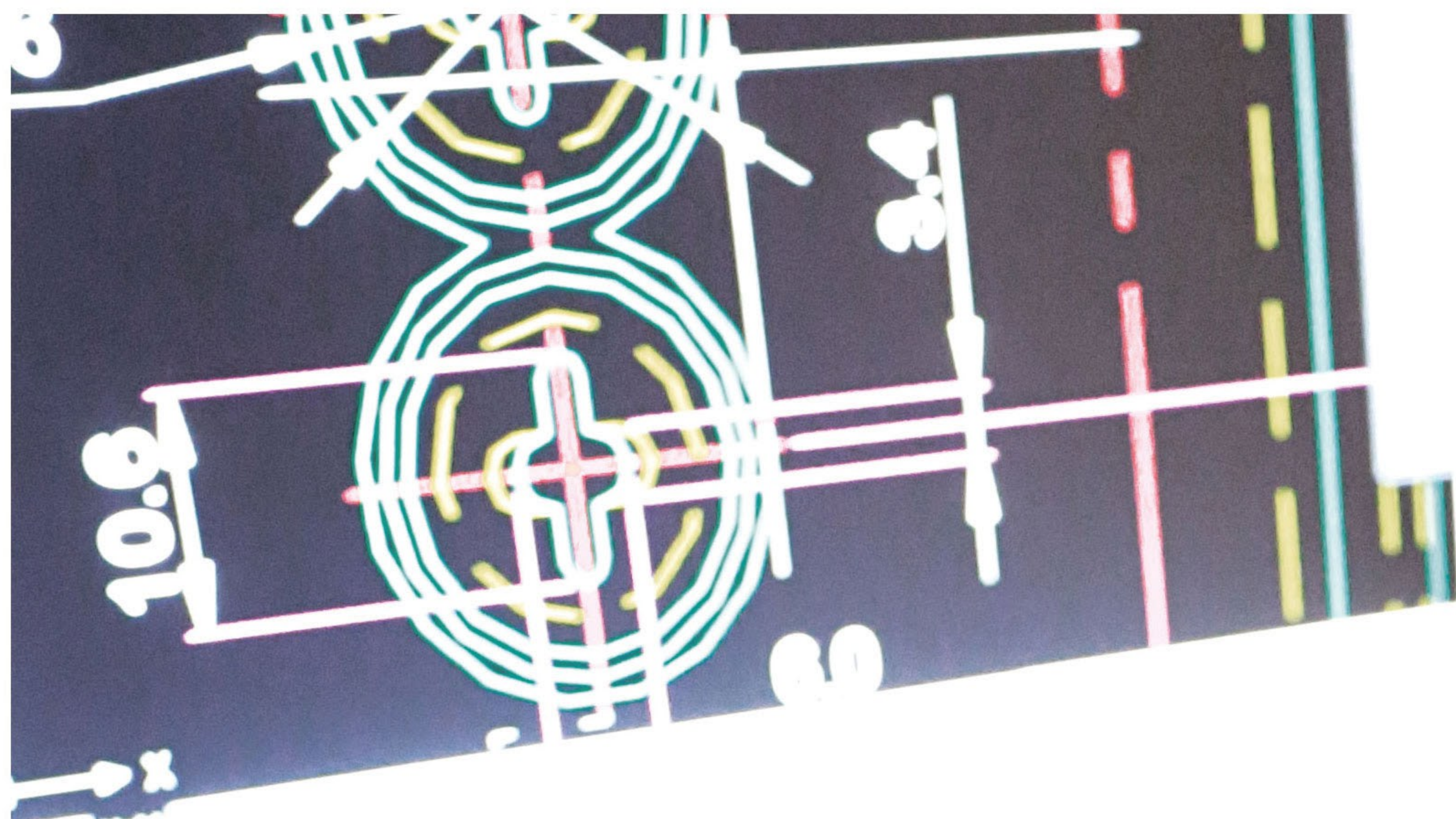
AMR enabled meters can be remotely programmed.

16.

PASSWORD PROTECTION

The meter programming is password protected having two levels of access codes i.e. one can only read the data and other can read and write to meter.

REASONS WHY WE ARE ACCURATE



MANUFACTURING & TESTING

Accurate has a modern environmental friendly Manufacturing & Assembling facility, equipped with latest computerized test benches, high-tech testing equipments, airconditioned & dust proof work atmosphere, experienced and dedicated staff fully supported by strong R&D and Quality Assurance. We take privilege to ensure that our entire product range, from start to finish passes through number of Insulation, Electromagnetic, Accuracy and Environmental Tests to ensure that product is excellent in use & Performance.

RESEARCH AND DEVELOPMENT

Being a Technology Driven company our basic motive is to strive in search of untapped market segments where a difference can be made with innovative high tech solutions. Keeping this in view, highly qualified and experienced personnel are aligned in R&D and Marketing Department. A close eye is kept on the changes in Network Technology (especially in the Energy Meter Sector) and tiring efforts are made to develop the accurate product to meet the requirements of our clients.

Accurate is an R & D oriented company and allocates a substantial percentage of its total budget for Research & Development. The management strongly believes that a vibrant R&D will lead us, without doubt, to hold a prominent and distinct position among the leading international technological solution providers. Realizing the rapid changes in software technology, Accurate is constantly equipping its Production Facilities with latest sophisticated Software Automation Technologies. In foreseeable future, bar code system regarding individual meters and boxes will be introduced. Some other changes are also being worked upon in our R & D department and will be introduced shortly so that our products outshine those of our competitors. The company is also planning to introduce Remote configurations over GSM/GPRS in the meters for Smart Metering.

“Being a Technology Driven company our basic motive is to strive in search of untapped market segments where a difference can be made with innovative high-tech solutions.”



Accurate Pvt. Limited has hired and retained competent, committed and diverse workforce to provide high quality and cost-effective services. Company has inducted professional staff in Production, Administration & Commercial, Information Technology and Accounts & Finance departments. Besides that number of Technicians, Test inspectors, Foreman quality control and skilled work force, etc. are also working. Strength of staff is mentioned below:

TECHNICAL STAFF

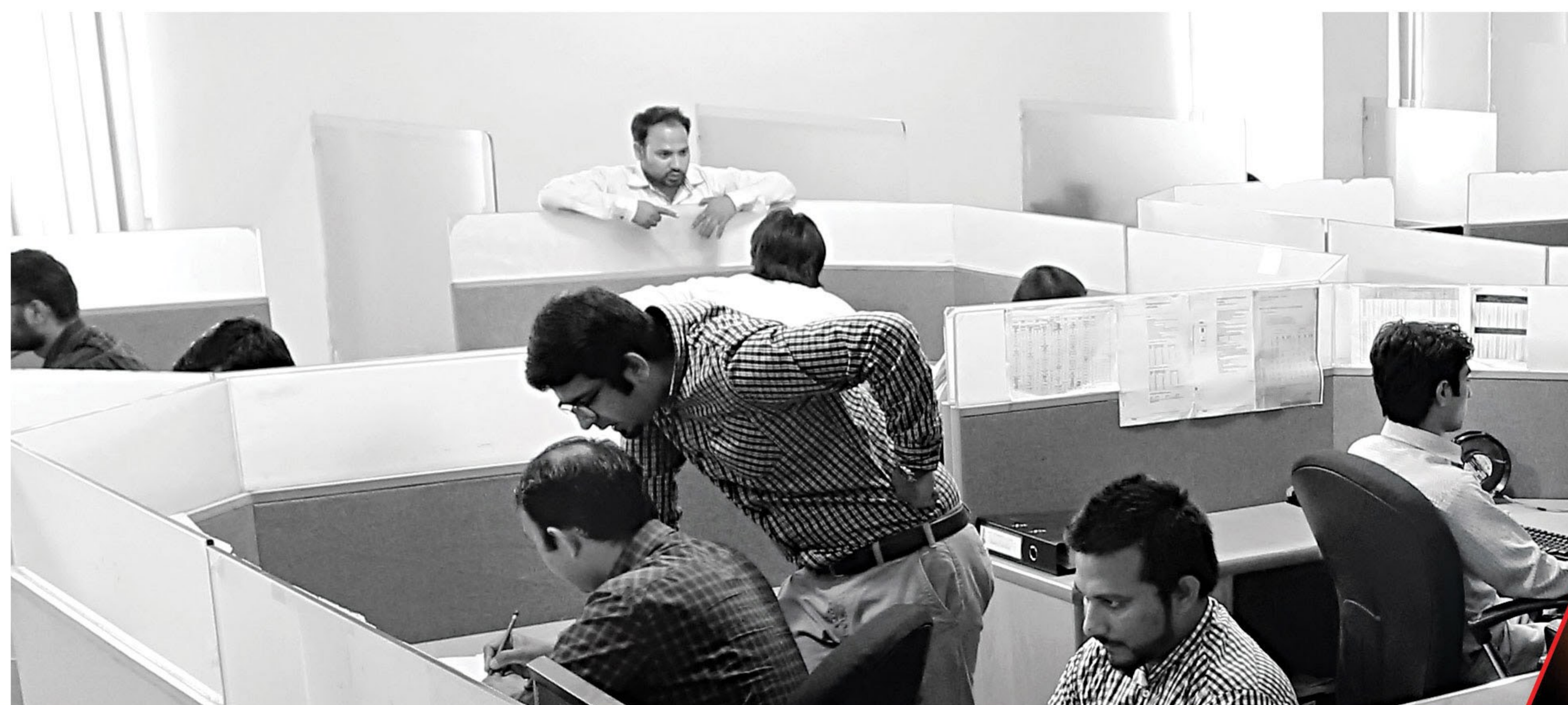
• Engineers	10
• Supervisors	4
• Foreman	3
• Test Inspectors	5
• Technicians	20

MISCELLANEOUS STAFF

• Skilled workers	10
• Security Personnel	5
• Misc.	5
• Workers	65

FUTURE PLANS

Accurate Pvt. Limited is committed to introduce new technology oriented Energy Meters in Pakistan. The company is looking forward to introduce remote metering solution in Pakistan. We are focusing on different dimensions which will improve our chances of developing and producing Energy Meters which can provide accurate and timely results. Our team of Engineers and R&D is constantly investigating in the development of advanced Energy Meters and finding better ways to make it more protected against Illegal / Tempering activities.



ACCURATE HUMAN RESOURCE



Daily production capacity: 2600 Single Phase & 600 Three Phase meters per day per shift. Total production can be tripled by working in three shifts per day. Prevailing industry trend is of 6 working days per week.





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*There is no substitute for accurate knowledge.
Know yourself, know your business, know your men.*

Lee Iacocca

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