Bharatech Smart Industrial Pvt. Ltd.

SHAPING INDIA'S SMART ENERGY FUTURE

COMPANY & PRODUCT PROFILE

Smart Energy & Low-Voltage Distribution

Metering, control, protection and field intelligence for modern utilities — designed and manufactured in India.

SMART METERING | DISTRIBUTION IOT | MAKE IN INDIA | BIS CERTIFIED

Plot No. 164, Sector-6, IMT Manesar, Gurgaon, Haryana 122051

www.bharatechgroup.com

Integrated smart metering and distribution intelligence

BSI develops utility-grade products for precise measurement, secure communication, field control, protection and reliable power-network operations — combining intelligent energy metering terminals with low-voltage distribution switching on a single, manufacturable platform.

20,000
sq. ft. modern manufacturing floor

1M/yr
smart-meter production capacity

ISO 9001
:2015 quality management system

Core businesses

Smart energy meters, data concentrators (DCUs), smart MCBs, measuring switches, PV breakers and distribution-monitoring products.

Technology base

DLMS, RF Mesh, GPRS, 4G, NB-IoT, LoRa and HPLC communications with RS-485 and BLE integration across the portfolio.

UTILITY OUTCOMES

Built around measurable utility priorities

Every product line maps to the operational metrics distribution utilities and AMISPs are accountable for — revenue, losses, reliability and customer experience.

Improved revenue

Remote metering, event data and stronger revenue assurance with prepaid / postpaid workflows.

AT&C loss control

Line-loss analytics, tamper alarms, suspected-theft alerts and meter-accuracy warnings.

Reliability

Outage / restoration reporting, terminal-temperature monitoring and fault diagnosis.

Network topology

Automatic transformer-to-consumer mapping and low-voltage network visualization.

Tariff deployment

TOD tariffs, net metering and energy import / export monitoring.

Operations

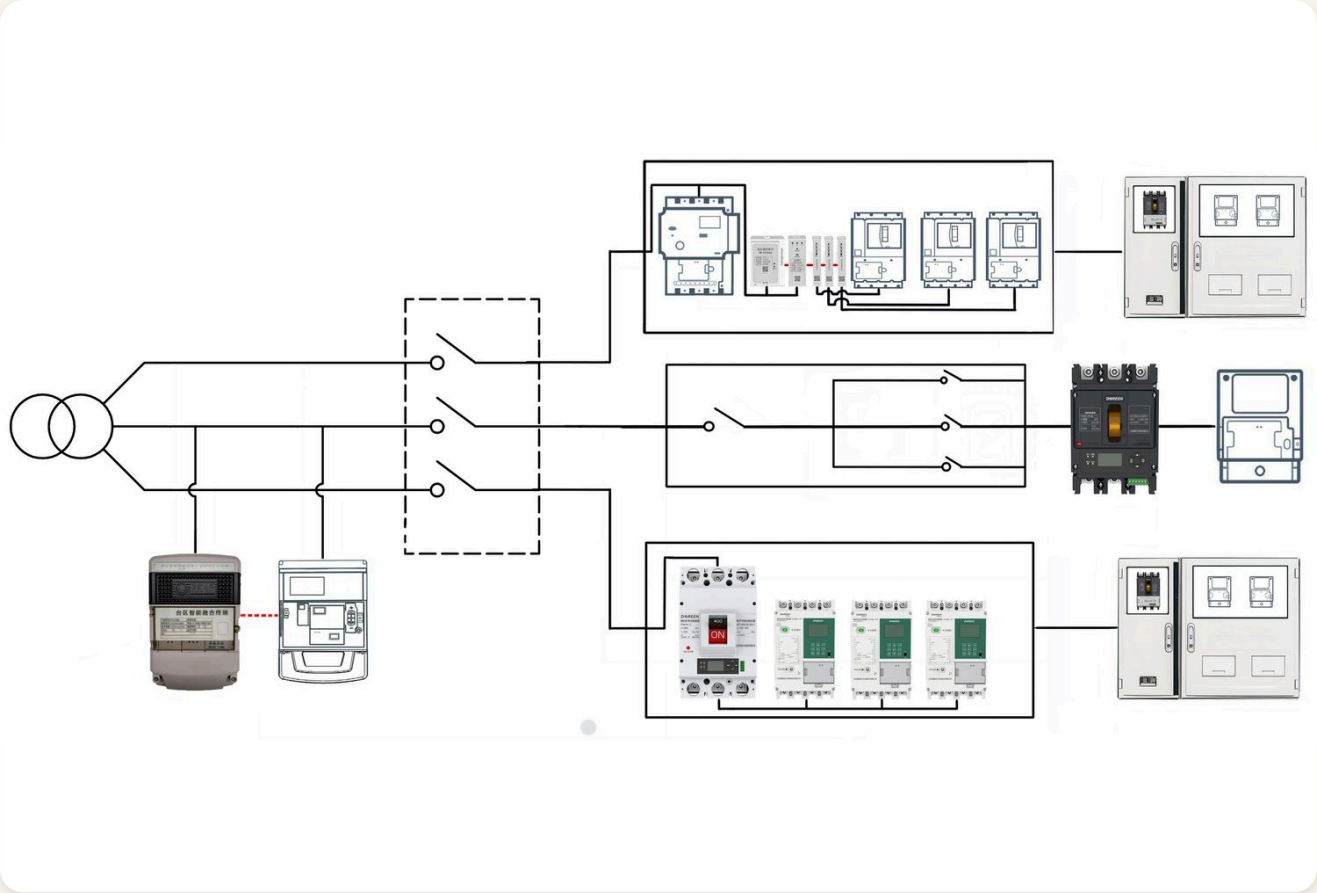
Power-quality monitoring, remote connect / disconnect, IoT lock control and edge analytics.

WHERE IT DEPLOYS

- ✓ Residential, commercial and industrial premises
- ✓ Renewable-energy and net-metering programs
- ✓ Smart-grid and utility energy management
- ✓ Distribution-network modernization and field automation

From meters to a visible feeder network

BSI's low-voltage IoT solution integrates sensing chips, acquisition devices and intelligent switches over broadband power-line communication — giving utilities a lower-cost route to full visibility without redesigning cabinets, branch boxes or meter enclosures.



HPLC broadband PLC | Sensing chips | Acquisition devices | Intelligent switches | Topology mapping | No cabinet redesign

Controlled production with traceable quality

A purpose-built, ESD-protected facility at IMT Manesar with an in-house BIS- and NABL-approved laboratory — engineered for repeatable quality and full production traceability.

- ✓ BIS- and NABL-approved in-house laboratory
- ✓ 20,000 sq. ft. manufacturing floor
- ✓ ESD-protected production and lab areas
- ✓ 150 KVA grid power with 125 KVA DG backup
- ✓ Motorized conveyors across the production line
- ✓ State-of-the-art precision tools and assembly equipment
- ✓ High-precision automated validation and testing benches
- ✓ MES-linked production data backup and traceability

Automated lines, inspection and calibration

From bare-board handling to final meter verification, each stage runs on dedicated, instrumented equipment with inline inspection.

Three-proof coating line

Selective wave soldering

Single-phase meter verification

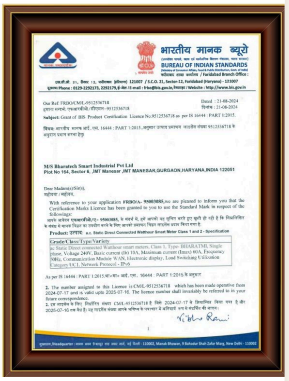
PCB inspection and line setup

Standards-led manufacturing for regulated procurement

Products and processes are aligned to the certifications and test references that Indian utility procurement requires.

- ✓ BIS certification for applicable smart-meter products
- ✓ ISO 9001:2015 quality-management-system registration
- ✓ NABL-approved in-house laboratory capability
- ✓ Smart meters designed to relevant BIS, IEC, DLMS and CBIP references
- ✓ Testing across accuracy, temperature, ingress protection, power consumption and communications

IS 16444 | IS 13779 | IS 15959 (DLMS) | CBIP 325 | IEC 62052 / 62053 / 62056



BIS Product Certification

ISO 9001:2015 Registration

A partner for utility-scale modernization

BSI supports customers from presales solutioning through field deployment and lifecycle service across Indian and international markets.

Global footprint

Business presence across Asia, Africa, the Middle East and other international markets.

Lifecycle support

Presales solutioning, delivery support, field diagnostics, remote troubleshooting and spares.

INDIA REFERENCE DEPLOYMENTS

APEPDCL

Andhra Pradesh Eastern Power Distribution Company Limited

APSPDCL

Andhra Pradesh Southern Power Distribution Company Limited

TGNPDCL

Telangana Northern Power Distribution Company Limited

A complete metering and edge portfolio

Single-phase and three-phase smart meters with matched data concentrators — a coherent stack from the consumer terminal to the transformer area.

Single-Phase Smart Energy Meter

10–60A / 5–30A · DLMS · RF / GPRS / 4G / NB-IoT · IS 16444

Three-Phase Smart Energy Meter

10–60A / 20–100A · DLMS · up to IP54 · IS 16444

Concentrator / DCU

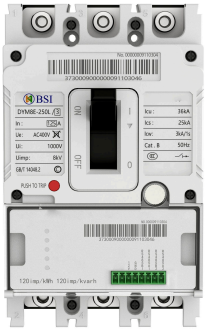
HPLC · RS-485 · edge collection · topology support

Energy & Net Meter

5–30A · IRDA · IS 13779 (2020) · net metering

Smart MCBs

Metering + switching + communication in existing panels



Intelligent Switchgear

Measuring switches · PV breakers · AC400V · up to 250A

Single-Phase 10–60A / 5–30A Smart Energy Meter

4G / 2G | RF | NB-IOT | BIS CERTIFIED

Reference standards	IS 16444, IS 13779, IS 15959, IS 15884, CBIP 325, IEC 62052 / 62053 / 62056
Voltage	110V–240V operating range
Current Ib (Imax)	5(30)A, 5(40)A, 5(60)A, 10(60)A
Starting current	0.2% Ib
Frequency	50 Hz, 60 Hz
Accuracy	Active Class 1, optional reactive Class 2
Ingress protection	Up to IP54
Temperature	Operating −25°C to +70°C · storage −40°C to +80°C
Relative humidity	≤ 95%
Local interfaces	Optical port; optional RS485 / RS232 / BLE
Remote interfaces	RF Mesh, GPRS, 3G, 4G, NB-IoT
Dimensions	199 × 144 × 74 mm

KEY FEATURES

- IS 16444 Part 1
- DLMS (IS 15959)
- Bi-directional comms
- Prepaid & postpaid
- Net metering
- FOTA
- Remote connect / disconnect
- Load-switching relay
- Tamper events
- Power-fail alerts
- On-demand reading
- TOD tariff

Three-Phase 10–60A / 20–100A Smart Energy Meter

4G / 2G | RF | NB-IOT

Reference standards	IS 16444, IS 13779, IS 15959, IS 15848, CBIP 325, IEC 62052 / 62053 / 62056
Voltage	3×220/380V, 3×240/415V
Current Ib (Imax)	10(60)A, 20(100)A
Starting current	0.2% Ib
Frequency	50 Hz, 60 Hz
Accuracy	Active Class 1, optional reactive Class 2
Ingress protection	Up to IP54
Temperature	Operating −25°C to +70°C · storage −40°C to +80°C
Relative humidity	≤ 95%
Local interfaces	Optical port; optional RS485 / RS232 / BLE
Remote interfaces	RF Mesh, GPRS, 3G, 4G, NB-IoT
Dimensions	232 × 164 × 73.5 mm

KEY FEATURES

- IS 16444 Part 1
- DLMS (IS 15959)
- Bi-directional comms
- Prepaid & postpaid
- Net metering
- FOTA
- Remote connect / disconnect
- Load-switching relay
- Tamper events
- Power-fail alerts
- On-demand reading
- TOD tariff

Single-Phase 5–30A Energy & Net Meter

IRDA | NET METERING | BIS CERTIFIED

Reference standards	IS 13779 (2020)
Voltage	110V–240V operating range
Current Ib (Imax)	5(30)A
Starting current	0.2% Ib
Frequency	50 Hz, 60 Hz
Accuracy	Active Class 1
Ingress protection	Up to IP54
Operating temperature	−25°C to +70°C
Relative humidity	≤ 95%
Remote interface	IRDA
Dimensions	148 × 112 × 61 mm

KEY FEATURES

- IS 13779 (2020)
- IRDA communication
- Monthly billing
- Ultrasonic welding
- Magnet / AC-DC chopping detection
- Immune to 35 kV
- Utility-specific protocol
- Tamper protection

Local data collection for transformer-area operations

The DCU aggregates meter and switch data at the transformer area, applies edge analytics, and forwards clean, structured data to the head-end — reducing transmission load and cloud-storage pressure.

- ✓ Transformer-area network topology visualization and phase identification
- ✓ Line-loss analysis, power-quality monitoring and fault-event reporting
- ✓ Seamless access to measuring switches, DIN-rail meters and IoT meter boxes
- ✓ Edge computing reduces transmission delay, bandwidth load and cloud-storage pressure

HPLC | RS-485 | Edge analytics | Topology

High-integration control, communication and protection

Metering, switching and communication combined in a compact device that drops into existing panels — no cabinet redesign required.

Single-Phase Smart MCB

Compact metering, switching and communication in a 2-pole format

Three-Phase Smart MCB

Multi-pole metering and remote control for three-phase circuits

- ✓ Integrates PV breaker, protocol converter, interface converter and HPLC communication concepts
- ✓ Supports distributed-energy flexible / firm control, high-precision metering and full data collection
- ✓ Built for power-quality monitoring, protection and compact deployment inside existing panels

Measuring switches and PV protection devices

Smart Measuring Switch

AC400V · 125A class · RS-485

250A Measuring Switch

IEC 60947-2 · metering + control

PV Residual-Current Breaker

50–125A · AC400V · protection logic

- ✓ Real-time monitoring of voltage, current and terminal temperature
- ✓ Fault analysis and remote control for operational response
- ✓ Advanced arc-extinguishing and intelligent-trip design for fast protection

BUILT FOR UTILITIES THAT NEED MEASUREMENT, CONTROL AND TRUST

Smart metering and intelligent switching, made in India.

Smart metering, intelligent switching, automated manufacturing and lifecycle support for dependable field deployment.

Bharatech Smart Industrial Pvt. Ltd.

SHAPING INDIA'S SMART ENERGY FUTURE

Plot No. 164, Sector-6, IMT Manesar, Gurgaon, Haryana 122051

info@bharatechgroup.com · +91 99103 77576

www.bharatechgroup.com

Scan to visit