



nyamezela

Metering

## COMPANY PROFILE



## ABOUT US

The Nyamezela Group of companies consists of the Financial Management, Engineering and Metering divisions and boasts over 16 years experience in these specialised industries. Nyamezela's complete services bouquet includes offering forward thinking customers 360-degree holistic business solutions... with expertise in Business Advisory, Assurance, Financial Modelling and Management, Corporate Governance, Due Diligence, Project Management and Consulting Engineering. Each of the seamless, multi-disciplinary solutions are tailor-made to customer specifications.

**Nyamezela is a 100% black woman-owned and black managed company founded by Matsotso Vuso who holds qualifications in Accounting and Finance. This formidable businesswoman leads a team of dynamic, qualified and highly professional industry experts.**

In addition to offering uncompromising service excellence, Nyamezela's overall unique strategy is to provide a one-stop service to all customers, access to the benefits of its partnerships with technology world leaders, affordable pricing models, as well as flexible lead times.



Technician at Nyamezela workshop



# SERVICE OFFERING

## NYAMEZELA METERING

Nyamezela Metering is a division of Nyamezela Group of Companies and is the companys core business. Nyamezela Metering provides meters and metering solutions to the Water and Power sectors, with main clients including Eskom, Municipalities and private sector customers in the Commercial, Industrial, Mining, Retail and Residential Markets.

## INNOVATIVE METERING SOLUTIONS

Nyamezela Metering is an industry innovation leader through use of the best technology and talent to provide world-class client service and products at highly competitive pricing.

## AUTOMATED METER READING SOLUTIONS

- AMR metering
- AMI solutions
- Smart metering

## VENDING SOLUTIONS

- Automated vending systems
- Meter management systems
- Third party vending

## METER INSTALLATIONS

- Qualified metering technicians
- Meter testing and support
- Meter maintenance
- Meter audits

## METER SERVICES

- Billing and handling of queries
- Cash collection and banking
- Link between service provider and customer



# Our Solutions



## DDZ1513 Single Phase Modular AMI Meter (Class 1)



Inhemeter's DDZ1513 is new generation single phase multi-functions AMI meter with modular design. The meter is used to measure electrical energy accurately for commercial, industries and residential customers. The meter provides broad range of functions and smart metering possibilities, with flexible communication module meter provides varieties communication media for remote management and reading. This meter can be utilized for prepayment (Comply with STS standard) and post payment applications (selectable by utility company). DDZ1513 has excellent anti-tamper feature like terminal cover detection sensor to help utility for revenue protection. DDZ1513 can utilizes different communication media to CIU or Data Concentrator (for Smart Metering application) like PLC, Cable or RF based on customer requirements.

DDZ1513 utilize M-BUS interface for collecting data and interacting with the 3rd party gas, heat and water meters.



## Make Metering More Smart

### Highlight



IP54



Multi  
Communication



DLMS/COSEM



M-BUS Interface  
Water, Heat & Gas



STS



Anti-Tamper

**TOU**

Time of Use

# DDZ1513 Single Phase Modular AMI Meter (Class 1)

## Specification

Accuracy	
Active energy	Class 1 (IEC62053-21)
Reactive energy	Class 2 (IEC62053-23)
Impulse	1000 imp/kWh, 1000imp/kvarh
Voltage	
Working voltage	Upper limit value:264.5V Lower limit value:184V
Maximum voltage	500V (48 hours)
Short-time withstand over-voltage (1 minute)	600V AC
Nominal voltage	220V; 230V; 240V
Frequency	50Hz±5Hz
Current	
Rated current	5A
Maximum current	100A
Over-current in short time	30I <sub>max</sub>
Limit current for accurate metering	1.2 × I <sub>max</sub>
Meter Operation	
Power consumption	Voltage circuit: <2.0W(or <7VA ) @220V Current circuit: <0.2VA@Base Reference Current (I <sub>b</sub> )
Limited voltage range	Upper limit value:264.5V, Lower limit value:184V
Internal Relay	
Current	Unipolar bi-stable latching relay 120A Load switch standard grade: UC3 (IEC62055-31) ON 3000A, 5000A to withstand short-circuit current Maximum switching power interrupting device: 25000VA Electrical durability of 100A (COS =1, 0.5) 5000
Input and Output	
Meter impulse output	LED, optoelectronic isolation
Environmental Condition	
Working temperature range	-25°C~+85°C
Storage temperature range	-40°C~+85°C
Humidity requirement	Relative humidity range is 0~95% at maximum temperature of 55°C During the night: 100 % relative humidity(max) During the day: 25 % relative humidity Used in region with altitude less than 3500m
Lightning protection	Built-in varistor protection can be applied to protect from lightning
Altitude	Less than 3500m
Real-time Clock	
Real-time clock frequency	Oscillator frequency 32.768kHz
Real-time clock accuracy	≤5ppm
Real-time clock back-up power supply	Columnar battery, 3.6V lithium-ion battery capacity ≥ 1200mAh After power failure, the battery can support clock working more than 10 years, two years shelf time

Real-time Clock	
Battery for no power reading	Columnar battery: 3.6V Lithium-ion battery capacity ≥ 1200mAh After power failure, the battery powered clock can work more than 10 years
Time of Use	
Rate	Multiple tariffs & Time-of-Use(TOU) billing (8 tariffs, 24 time intervals, 16 daily tariffs, 2 weekly tariffs, 12 seasonal tariffs, 50 holiday tariffs)
Special days	Up to 200 programmable special days
Communication	
Infrared communication	IEC62056-21 mode E
Communication module	Hot Swap Modules GPRS/3G cellular modem, PLC, RF
Versatile RS-232/485	universal serial communications port (up to 115,200 bps)
Communication protocols	DLMS/COSEM,62056-21
M-BUS interface to water, gas and heat meter	Wired M-Bus is based on the EN 13757-2 or wireless M-Bus is based on the EN 13757-4
Load Profile	
Number of channel and interval	8 programmable channel and Interval programmable from 1 minute to 60 minutes
Capacity	8 channel time interval 15 minutes is 80 days
Mechanical Specification	
Weight	About 1020g
Protection class	IP54, Comply with IEC60529-4
Dimension	210mm X 135mm X 65mm
Housing and terminal layout	BS5685/ DIN 43857
Housing protection grade	IP54 IEC60529-4
Housing material	Fire retardant, flame resistant, thermal deformation engineering plastic PC+GF Inflaming retardant test comply with 960°C glow wire test requirement (IEC60695-2-1). Fire resistant test:UL94-V0 rated @1.5mm. No toxic gases emitted: Green Material
Terminal and Sealing	
Terminals	Terminals layout complies with BS5685/ DIN 43857 Two screws on the pressure-plate main terminal. The material is rust -proof
Terminal material	Fire retardant, flame resistant, anti-thermal deformation engineering plastic PC+20%GF Flame retardant test: pass 960°C glow wire test(IEC60695-2-1) Fire resistant test:UL94-V0 rated @1.5mm No toxic gases emitted: Green Material
Sealing	Six seals on meter: 1)Two seals on the top of meter for communication module 2) Two seals for terminal cover 3) Two manufacturer seals for meter cover under terminal cover



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## DTZ1513 Three Phase Modular AMI Meter (Class 1)

Inhemeter's DTZ1513 is new generation Direct Connection multi-functions three phase AMI with modular design. The meter is used to measure electrical energy accurately for commercial, industries and residential customers. The meter provides broad range of functions and smart metering possibilities, with flexible communication module meter provides varieties communication media for remote management and reading.

This meter can be utilized for prepayment (Comply with STS standard) and post payment applications (selectable by utility company). DTZ1513 has excellent anti-tamper feature like terminal cover detection sensor to help utility for revenue protection. DTZ1513 can utilizes different communication media to CIU or Data Concentrator (for Smart Metering application) like PLC, Cable or RF based on customer requirements.

DTZ1513 Utilize M-BUS interface for collecting data and interacting with the 3rd party gas, heat and water meters.



Make Metering More Smart

### Highlight



IP54



Multi  
Communication



DLMS/COSEM



M-BUS Interface  
Water, Heat & Gas



STS



Anti-Tamper

**TOU**

Time of Use

# DTZ1513 Three Phase Modular AMI Meter (Class 1)

## Specification

Accuracy	
Active energy	Class 1 (IEC62053-21)
Reactive energy	Class 2 (IEC62053-23)
Impulse	1000 imp/kWh, 1000imp/kvarh
Voltage	
Working Voltage	Upper limit value:264.5V Lower limit value:184V for each phase
Maximum voltage	500V (48 hours)
Short-time Withstand Over-voltage (1 minute)	600V AC
Nominal Voltage	3*230/400V
Frequency	50Hz±5Hz
Current	
Rated Current	10A
Maximum Current	100A
Over-Current in short time	30Imax
Limit current for accurate metering	1.2 × Imax
Meter Operation	
Power Consumption	Voltage circuit of each phase: <1.5W(or<8VA)@230V Current circuit of each phase: <0.2VA@Base Reference Current (Ib)
limited Voltage range	Upper limit value:264.5V, Lower limit value: 184V for each phase
Internal Relay	
Current	Unipolar bi-stable latching relay 120A Load switch standard grade: UC3 (IEC62055-31) ON 3000A, 6000A to withstand short-circuit current Maximum switching power interrupting device: 27600VA Electrical durability of 100A (COS =1, 0.5) 5000
Input and Output	
Meter impulse output	LED, optoelectronic isolation
Environmental Condition	
Working temperature range	-25°C~+85°C
Storage temperature range	-40°C~+85°C
Humidity requirement	Relative humidity range is 0~95% at maximum temperature of 55°C During the night: 100 % relative humidity(max) During the day: 25 % relative humidity Used in region with altitude less than 3500m
Lightning Protection	Built-in varistor protection can be applied to protect from lightning
Altitude	Less than 3500m
Real-time Clock	
Real-time clock frequency	Oscillator frequency 32.768kHz
Real-time clock accuracy	≤ 5ppm
Real-time clock back-up power supply	Columnar battery, 3.6V lithium-ion battery capacity ≥1200mAh After power failure, the battery can support clock working more than 10 years, two years shelf time

Real-time Clock	
Battery for no power reading	Columnar battery: 3.6V Lithium-ion battery capacity ≥1200mAh After power failure, the battery powered clock can work more than 10 years
Time of Use	
Rate	Multiple tariffs & Time-of-Use(TOU) billing (8 tariffs, 24 time intervals, 16 daily tariffs, 2 weekly tariffs, 12 seasonal tariffs, 50 holiday tariffs)
Special days	Up to 200 programmable special days
Communication	
Infrared communication	IEC62056-21 mode E
Communication module	Hot Swap Modules GPRS/3G cellular modem, PLC, RF
Versatile RS-232/485	universal serial communications port (up to 115,200 bps)
Communication Protocols	DLMS/COSEM,62056-21
M-BUS interface to Water, Gas and heat meter	Wired M-Bus is based on the EN 13757-2 or wireless M-Bus is based on the EN 13757-4
Load Profile	
Number of channel and interval	8 programmable channel and Interval programmable from 1 minute to 60 minutes
Capacity	8 channel time interval 15 minutes is 80 days
Mechanical Specification	
Weight	About 1200g
Protection class	IP54, Comply with IEC60529-4
Dimension	265mm X 170mm X 72mm
Housing and terminal layout	BS5685/ DIN 43857
Housing protection grade	IP54 IEC60529-4
Housing Material	Fire retardant, flame resistant, thermal deformation engineering plastic PC+GF Inflaming retardant test comply with 960°C glow wire test requirement (IEC60695-2-1). Fire resistant test:UL94-V0 rated @1.5mm. No toxic gases emitted: Green Material
Terminal and Sealing	
Terminals	Terminals layout complies with BS5685/ DIN 43857; Two screws on the pressure-plate main terminal. The material is rust -proof.
Terminal material	Fire retardant, flame resistant, anti-thermal deformation engineering plastic PC+20%GF Flame retardant test: pass 960°C glow wire test(IEC60695-2-1) Fire resistant test:UL94-V0 rated @1.5mm No toxic gases emitted: Green Material
Sealing	Six seals on meter: 1)Two seals on the top of meter for communication module 2) Two seals for terminal cover 3) Two manufacturer seals for meter cover under terminal cover



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## DTZ1513-BOX-TXXX-YYY

### Direct Connection high Current Smart Meter (Class 1)

Inhemeter's DTZ1513- BOX-TXXX-YYY (XXX is maximum current and can be 160A, 250A and 300A; YYY can be CIP means communication is based on PLC and CIU means communication to CIU is based on cable) is new generation Direct Connection multi-functions three phase smart meter with modular design. The meter is used to measure electrical energy accurately for commercial, industries, and Complex and agriculture customers. With flexible communication module meter provides varieties communication media for remote management and reading.

This meter can be utilized for prepayment (Comply with STS standard) and post payment applications (selectable by utility company) because of integrated design of this meter (no need CT and external beaker) has excellent anti-tamper feature to help utility for revenue protection. DTZ1513- BOX-TXXX-YYY can utilizes different communication media to CIU Data Concentrator or central system (for Smart Metering application) like GPRS PLC, Cable or RF based on customer requirements.



Make Metering More Smart

#### Highlight

**300A**

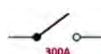
High Current  
Direct connection



IP54



DLMS/COSEM



Internal High  
Current Aker



STS



Anti-Tamper

**TOU**

Time of Use



# DTZ1513-BOX-TXXX-YYY

## Direct Connection high Current Smart Meter (Class 1)

### Specification

Accuracy	
Active energy	Class1 (IEC62053-21)
Reactive energy	Class2 (IEC62053-23)
Impulse	2000 imp/kWh, 2000imp/kvarh
Voltage	
Working Voltage	Upper limit value:299V, Lower limit value:184V for each phase
Maximum voltage	Note: Meter has abnormal voltage relay trip function. 500V ( 48 hours )
Short-time Withstand Over-voltage (1 minute)	600V AC
Nominal Voltage	3X230/400V; 3X220/380; 3X240/415V
Frequency	50Hz±5Hz; 60Hz±5Hz
Current	
Rated Current	5A
Maximum Current	160A; 250A; 300A
Over-Current in short time	9000A
Starting Current	20mA
Limit current for accurate metering	320A
LCD	
Backlight	Supported
Display Parameters	With large screen, wide angle(≥120°), wide temperature range of LCD display mode, Digital display is 8 digits, IEC62056 display code encoding, LCD outer shell dimension: 60.0×31.0mm
	LCD Visual window dimension: 55.4×22.0mm
	LCD Character dimension ( height*width ) : 12×4.5mm
Symbol	Display method includes default settings (auto scroll display) and manual operation display.
	Four-quadrant active and reactive power indication L1, L2, L3 indication support phase loss detection for three phase meter
	Relay status indication
Meter Operation	GPRS/3G communication indication
	Credit bar indication
Power Consumption	Voltage circuit power: < 1.5W ( or < 4VA ) @240V Current circuit power: < 0.2VA@ Base Reference Current (Ib)
Internal Relay	
Current	Tripolar bistable magnetic relay 3X1200A
	Load switch complies with ANSI C12.1 standard
	Contact withstanding 3000A peak value/100ms, 6000A virtual value/66ms Circuit breaker maximum switch power: 3X26600VA
Input and Output	
Meter impulse output	LED, optoelectronic isolation
Environmental Condition	
Working temperature range	-25℃~+75℃
Storage temperature range	-40℃~+85℃
Humidity requirement	Relative humidity range is 0~95%
Lightning Protection	Built-in arrestor protection is applicable in severe lightning storms.
Altitude	Less than 3500m

Real-time Clock	
Real-time clock frequency	Oscillator frequency 32.768kHz
Real-time clock accuracy	≤5ppm
Real-time clock back -up Power supply	Columnar battery, 3.6 V lithium -ion battery capacity ≥1200mAh
	After power failure, the battery can support clock working more than 10 years, two years shelf time
Battery for no power reading	Columnar battery: 3.6 V Lithium-ion battery capacity ≥1200mAh After power failure, the battery powered clock can work more than 10 years.
Time of Use	
Rate	Support TOU function, 4 tariff, 8 time period programmable;
	Default setting: Single tariff electricity amount settlement; TOU inactivated;
	TOU is activated through communication port, after TOU activation, settlement switches to currency credit mode.
Special days	Up to 200 programmable special days
Communication	
Infrared communication	According 62056-21 Cmode
Communication module	Hot Swap Modules GPRS/3G cellular modem , PLC
Versatile 485	Universal serial communications port (up to 115,200 bps)
Communication to CIU	CIU communication 1: PLC communication; CIU communication 2: Cable communication.
Communication Protocols	DLMS/COSEM, 62056-21
Load Profile	
Number of channel and interval	8 programmable channel and Interval programmable from 1 minute to 60 minutes
Capacity	1 channel time interval 15 minutes is 80 days
Mechanical specification	
Weight	Without meter box, Around 6kg and
	Net weight: around 26kg
Protection class	Gross weight: around 40 kg (with packing materials and accessories) with meter box
	IP54, Comply with IEC60529-4
Dimension	Without meter box 360mm×420mm×100mm ( L×W×H )
	With meter box 600mm×530mm×131mm (L×W×H) not including hook/hanger and lock on the surface of door
Housing protection grade	IP54 IEC60529-4
Terminal and Sealing	
Terminals	Terminal layout: Comply with BS5685
	Maximum cable cross session: 120mm <sup>2</sup> aluminum/copper cable
Sealing	Double protection seals:
Electrical seals	Electrical seal to prevent meter box cover open tampering;
	Event record and power disconnect while meter box cover opens.



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## DDZ1513 DIN-Rail V Single phase Split Smart Prepayment Meter (Class 1) based on PLC, RF or Cable

Inhemeter's DDZ1513 DIN-Rail V is new generation of advanced single-phase two wires, multi-function, Split type, Antitheft, bottom wiring (LNNL), smart prepayment meter.

DDZ1513 DIN-Rail V fully complies with STS standard and is suitable for residential or commercial customers to accomplish prepayment business process. DDZ1513 DIN-Rail V has excellent anti-tamper feature like terminal cover open detection sensor to help utility for revenue protection.

DDZ1513 DIN-Rail V can utilize different communication media to CIU or data concentrator (for Smart Metering application) like PLC, RF or Cable based on customer requirements.



## Make Metering More Smart

### Highlight



IP54



Multi  
Communication



STS



Anti-Tamper



Cost Effective

# DDZ1513 DIN-Rail V Single phase Split Smart Prepayment Meter (Class1) based on PLC, RF or Cable

## Specification

### Accuracy

Active energy	Class 1 (IEC62053-21)
Impulse	1000 imp/kWh

### Voltage

Working voltage	70%Un ~ 120% Un
Maximum voltage	450V (48 hours)
Nominal voltage	230V
Frequency	50Hz±5Hz

### Current

Rated current	5A
Maximum current	20A, 40A, 60A, 80A
Over-current in short time	30I <sub>max</sub>
Starting current	20mA
Limit current for accurate metering	1.2I <sub>max</sub>

### Meter Operation

Power Consumption	Voltage circuit of each phase: < 1.5W(or<8VA)@230v Current circuit of each phase: < 0.2VA@ Base Reference Current (I <sub>b</sub> )
limited voltage range	-40%Un~+30%
Short -term resistance to over -voltage (1 min)	600V AC

### Internal Relay

Current	Load switch standard grade: UC2 (IEC62055-31) on 1800A, 6000A to withstand short-circuit current Maximum switching power interrupting device: 22500VA
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### Input and Output

Meter impulse output	LED
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### Environmental Condition

Working temperature range	-25°C ~+85 °C
Storage temperature range	-40°C ~+85 °C
Humidity requirement	Relative humidity range is 0~95% at maximum temperature of 55 °C During the night: 100 % relative humidity(max) During the day: 25 % relative humidity Used in region with altitude less than 3500m
Installation type	Comply with DIN rail mounting
Lightning protection	Built-in varistor protection can be applied to protect from lightning
Altitude	Less than 3500m

### Real-time Clock

Real-time clock frequency	Oscillator frequency 32.768kHz
Real-time clock accuracy	≤ 5ppm
Real-time clock back-up Power supply	Columnar battery, 3.6 V lithium-ion battery capacity ≥ 1200mAh After power failure, the battery can support clock working more than 10 years, two years shelf time

### Communication

Infrared communication	IEC62056-21 mode C
VTC communication	Micro USB Type B-Receptacle
Communication to CIU	PLC/RF/Cable
PLC communication mode	PLC modulation: OFDM PLC frequency: CENELEC-A band
RF communication mode	RF modulation: FSK Mesh, Multi-channel RF frequency: 432.301~445.575MHz
CIU communication distance	PLC/RF/Cable communication distance: 150m
CIU power supply mode	AC power supply/Battery power supply (Supply power in case of AC power off )
Protection class	MCU: IP54 CIU: IP52 Comply with IEC60529-4
Weight	About 435g
Dimension	140mm×109.5mm×65mm
Cover material	Fire, flame, heat distortion plastic PC + GF Flame test: meet the 960°C glow wire test requirements (IEC60695-2-1) Fire Test: UL94-V0 rated @ 1.5mm No toxic gases emitted: "Green Material"
Housing and terminal layout	BS5685 LNLL
Terminal cover material	Terminal cover Fire retardant, heat distortion, anti-UV 3 plastic PC Flame test: meet the 960°C glow wire test requirements (IEC60695-2-1) Fire Test: UL94-V0 rated @ 1.5mm No toxic gases emitted: "Green Material"

### Terminal and Sealing

Terminals	The Live & Neutral terminals are screw clamp type terminals with flat clamping areas inside the terminal clamp
Sealing	There is one seal for terminal cover. Body ultrasonic welding



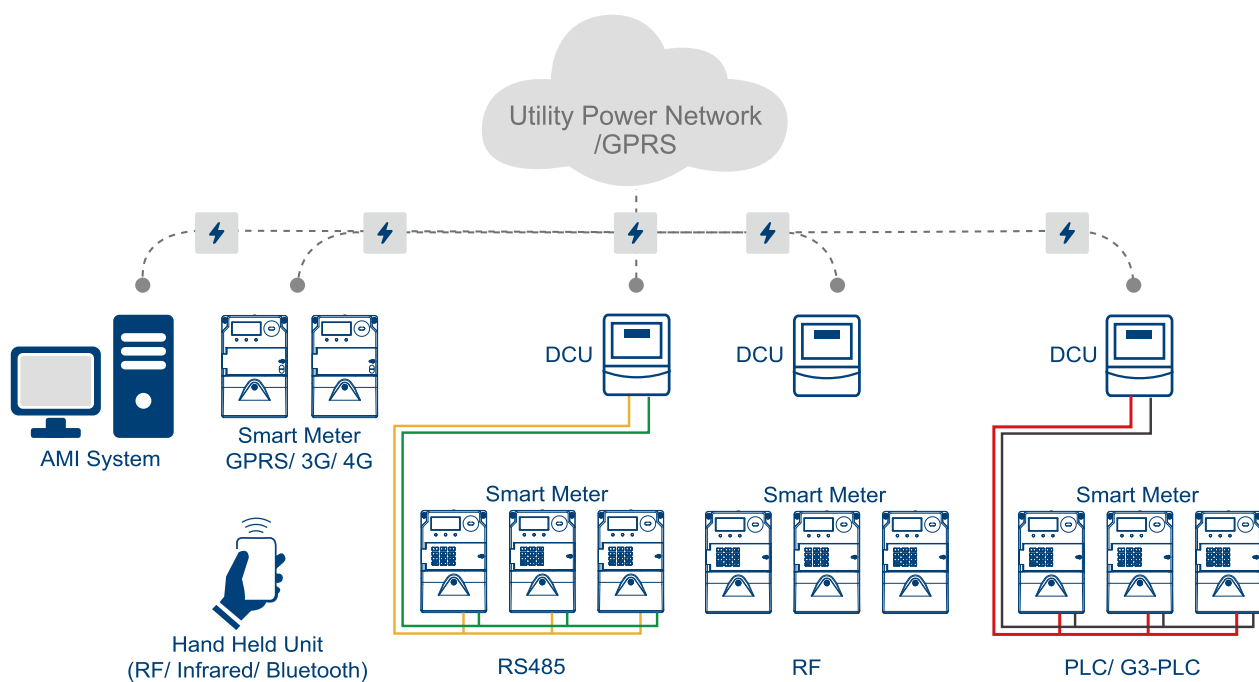
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# SmartAMI Solution (Smart Advanced Metering Infrastructure)

## • AMI Solution



AMI is an integrated system of energy data acquisition HES (Head-End System) and energy data management MDM (Metering Data Management) system; when combined with smart metering device, they can form a comprehensive network and system of energy data. HES can realize automatic measurement and acquisition of energy data; and MDM can realize data verification, storage, analysis and application. Based on GIS map information, it provides archives of grid devices and electricity users, forming integrated data model covering from substations, feeder lines, transformers and electricity users, achieving data collection from metering devices in supply side, distribution side and vending side. It is a powerful information backup for load control, prepayment, power outage management, power quality management, line loss management and customer service.

AMI Solution helps to measure and visualize energy data information, which will greatly accelerate utility's operation mechanism and management workflow. Through AMI Solution, utility can establish a universal communication infrastructure and information integration system for more advanced application in the future, which will lead the electricity industry and grid network into a more smart direction. In the meantime, AMI Solution can work collectively with other fields in utility to improve the reliability of energy supply, closely connecting energy users with utility, continuously making progress regarding customer service.



# SmartAMI Solution (Smart Advanced Metering Infrastructure)

## • AMI Workflow



**Establish:** Establish user file in AMI system

**Standardized User File Structure :** According to the "Substation - Feeder Line -Transformer - Energy User" structure to establish complete power topology and energy user files, supporting one user with multiple meters. It establishes a basic model for line loss calculation and data analysis.

**Metering:** Include task-based automatic data collection and automatic re-collection

**Task-based Automatic Data Collection Mechanism:** Support collection by DCU or GPRS or multiple modes, stipulate correspondent reading tasks as per reading standards of various meters to realize automatic data collection.

**Automatic missing data recollection Mechanism:** Support automatic missing data recollection or manual recollection through hand held unit.

**VEE:** Validation, Estimation, Edit

**Validation:** Check collected data from meters to see if they are correct or not. "Validity check" is also called "plausibility check". Validity check is usually done on energy data (Watt-hour and VAR-hour) but seldom on instantaneous data such as current, voltage, frequency, power and so on. It can be done in real-time (checking data immediately after reading and before storing in data base); and validity check can be done on existing data (data collected from meters) also.

**Estimation :** When reading a meter, sometimes some data might not be able to be read due to communication problem. We call such situation "missing values". In this case, VEE module can estimate missing values and store these estimated values in data base.

**Edit :** Edit data in data base that are read from meters. VEE gives operator accessibility to edit and change values of data in data base. User can change values of parameters one by one or in bulk.

**Storage:** Save the validation results and the original data into the database

**The original data :** The data collected from meters or concentrator by AMI System.

**The validation results :** The data results from VEE, including the validation results, the estimated data and the edited data

**Analysis:** Analysis and statistics of the collected data

**Outage events:** A comprehensive blackout event report will be generated based on actual outage events, power restoration events. The report includes details such as outage time, restoration time, outage hours. Furthermore, energy users will be notified by receiving messages sending out automatically from SMS.

**Power quality:** Including voltage qualification rate, three phase unbalance rate, harmonic analysis, etc.

**Meticulous management of Line Loss:** Including both daily and monthly information of partial pressure line loss, partial line loss, sub-line line loss and sub-transformer line loss.

**Load rate statistics:** Can calculate the load rate of the transformer according to the established formula. Can detect overloaded transformers.

**Others:**

**Distributed Processing Mechanism :** Head-End Server uses distributed processing mechanism, Real-time processing batch data, the efficiency of processing is well guaranteed.

**IEC61968 standard interface:** Using IEC61968 international standard interface makes AMI system can be integrated with other manufacturers' MDM or HES systems.



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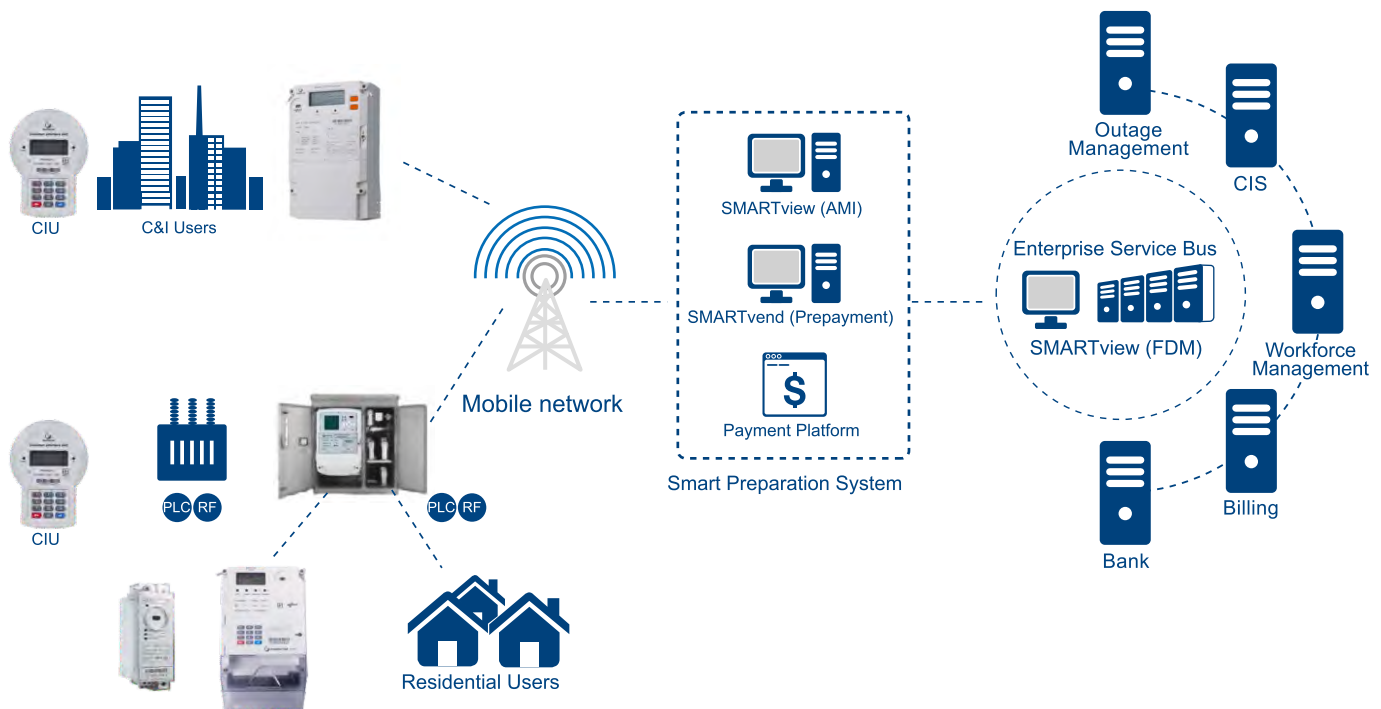
# Smart Prepayment System

## Future Proof Solution

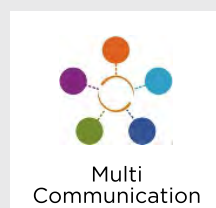
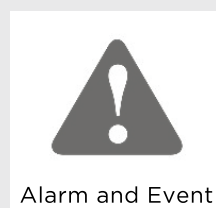
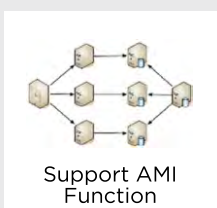
Inhemeter's Smart Prepayment System is the latest generation of prepayment system (vending system). Success of Smart Prepayment System is seamlessly integration prepayment system with AMI system, this solution provides powerful tool for utility to improve revenue.

This solution is applicable to different kind of customers (residential, commercial, industrials and agriculture) and helps utilities to protect their revenue and enable them to provide better services to their customers.

### *Increasing Cash Flow, Lowering Running Costs of Utility by Using Modern Systems*



### Highlight

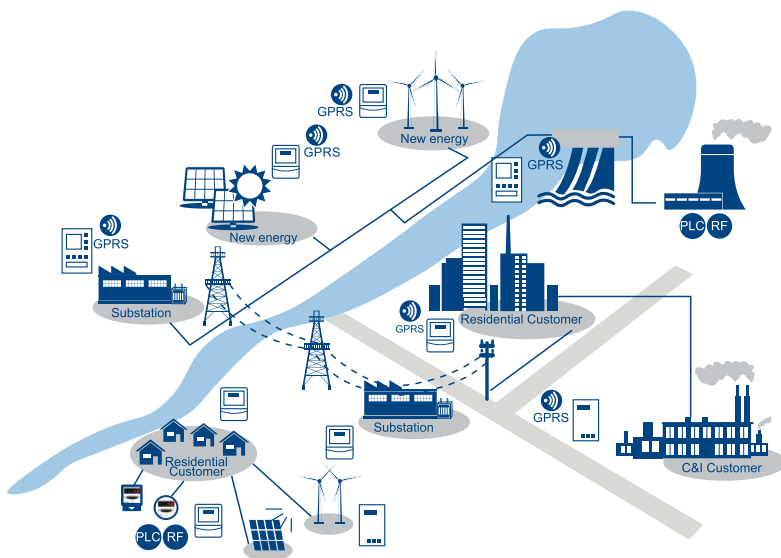


# Smart Prepayment System

## Future Proof Solution

### System Component

Smart Prepayment System can be integrated to AMI system . Prepayment System and Payment Platform can be integrated into one system based on utility requirement.



#### AMI system

AMI or advanced metering system as core part of Smart Grid solution provides measuring platform and two-ways communication from master station to smart meters to accomplish utility business process remotely. AMI system has been widely used by Utilities for Energy efficiency as standalone system to achieve functionalities like demand response, operational efficiency, integrated multi-energy, customer satisfaction and revenue protection.

#### Prepayment system

To overcome utility revenue collection problem, one globally acceptable solution is prepayment system.

Inhemeter, with rich experience and close application with different utilities all over the world, has been providing Prepayment System to utility companies for small-scale, mid-scale and large-scale operation.

Prepayment System supports STS and can generate token for any STS compatible meter regardless which brand it is. This vending system can also work with Non-STS Meters as long as the specification of the prepaid algorithm is sent to Inhemeter for developing drivers.

#### Payment system

After the development and application of Prepayment Solution, utilities all over the world face another challenge, that is to let customer purchase electricity through highly available and easy-to-use vending medium. New players like third parties and retailer companies emerged in this business to simplify and secure utility revenue collection. Inhemeter Payment System provides a secure, fast and easy-touse vending medium by which utilities and third party vendors are able to provide consumers with convenient access to prepaid electricity, water and gas STS tokens. The Payment System of Inhemeter is the perfect technology for utilities, retailers and third parties to manage their vending business, thereby improving the utility's revenue collection.



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