

Inhemeter Single Phase with Integrated Keypad

Product Specifications

Voltage

- 230V (Single Phase, 2 wire)

Frequency

- 50Hz $\pm$ 5Hz (Single Phase, 2 wire)

Operating Environment

Working Temp: -25°C to +75°C



Compliance & Standards

- IEC 62052-11 2016
- IEC 62053-21 2016
- IEC 62053-23 2016
- IEC 62055-31 2005
- IEC 62055-41 2014
- IEC 62055-51 2007
- IEC62056-21(IEC61107)
- SANS 1524-1 2005
- ESKOM SCSSCAA9
- BS5685-1997/DIN 43857



Product Overview

The Inhemeter Single Phase prepaid meter is a 2 wire, direct connect meter that is best installed inside the unit next to the DB board for easy access. The prepaid 20-digit tokens are typed into the meter by using the integrated keypad on the meter. The metering device has capabilities to communicate with plug-in communication modules that are interchangeable. (GPRS Modem or PLC) on a Smart Solution.

Prepaid Mode

Tokens must be typed in on the integrated keypad to load

Smart Mode

Tokens are automatically loaded onto the meter. Requires Data Concentrator to communicate with the system. (Separate Solution)

Dimensions

L 150mm
W 120mm
D 46mm

***Available as a Smart Meter and a Prepaid Meter**

Inhemeter Single Phase BS Footprint Meter

Product Specifications

Voltage

- Rated operating voltage (Un) 220V

Frequency

- 50 Hz

Current

- Basic Current (I) 5A
- Maximum working current - 60A; 100A

Operating Environment

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity –Day = 100%; Night = 25%



Standard Prepaid
Meter



Smart GPRS or
PLC Prepaid Meter

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Product Overview

Inhemeter Single Phase Keypad prepaid Meter is a 2 wire meter. 20-digit STS tokens are entered into the meter via the integrated keypad. This meter can be a standard prepaid meter or a Smart prepaid meter

Plug-in Communication Module options (SmartMeter Only)

GPRS/GSM Module
PLC Module
RF Module

Dimensions

Extended Cover

L 210mm
W 135mm
D 72mm

Short Cover

L 162.2mm
W 135mm
D 72mm

Weight

± 600g

Product Code: INHENON1PH

Meter Description: Non-SmartSingle Phase BS Footprint Meter

Inhemeter Single Phase Din Rail CIU Optional

Product Specifications

Voltage

- Rated operating voltage(Un) 230V

Frequency

- 50 Hz

Current

- Basic Current (I) 5A
- Maximum working current –100A

Operating Environment

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity –Day = 100%, Night = 25%



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Product Overview

The Inhemeter single phase din rail meter is a 2 wire, prepaid electricity meter compliant with STS. The Din Rail / Split Meter Split has PLC communication, which could comprise AMI/AMR system by additionally configuring proper concentrator to realize centralized reading, remote recharge, remote connection/disconnection etc.

Plug-in Communication Module options (SmartMeter Only)

GPRS/GSM Module

Dimensions

Extended Cover

L 160mm
W 60mm
D 99.5mm

Weight

± 700g

Product Code: INHE1PHDIN

Meter Description: Smart PLC Single Phase Din Rail

Inhemeter Single Phase Split Meter (Din-Rail)

Product Specifications

Voltage

- Rated operating voltage(Un) 230V

Frequency

- 50 Hz

Current

- Basic Current (I) 5A
- Maximum working current –100A

Operating Environment

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity –Day = 100%, Night = 25%



Compliance & Standards

IEC62053, IEC62055 and IEC62056 standard and ISO9001 in design and production.

Prepaid Mode:

Keypad is required for entering tokens

Smart Mode:

No Keypad is required for entering tokens, keypad can be kept for backup purposes. Requires Data Concentrator to communicate with the system. (Separate Solution)

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Product Overview

The Inhemeter single phase split meter is a 2 wire, direct connect prepaid meter that has a din-rail mounting and is suited to be installed in a kiosk or meter panel

Features: (Smart Solution)

- Access to the smart dashboard to view consumption
- The available credit on meter displayed in kWh - read remotely
- The amount of kWh consumed since meter was installed - read remotely
- Import and export kWh
- Can be in prepaid or postpaid mode
- Tamper detection
- 30 Minute Load Profiling
- When token is purchased, it is automatically loaded onto the meter

Features: (Prepaid Solution)

- The available credit on meter displayed in kWh
- Tamper detection
- CIU Separate or Integrated
- Token loaded onto meter via keypad

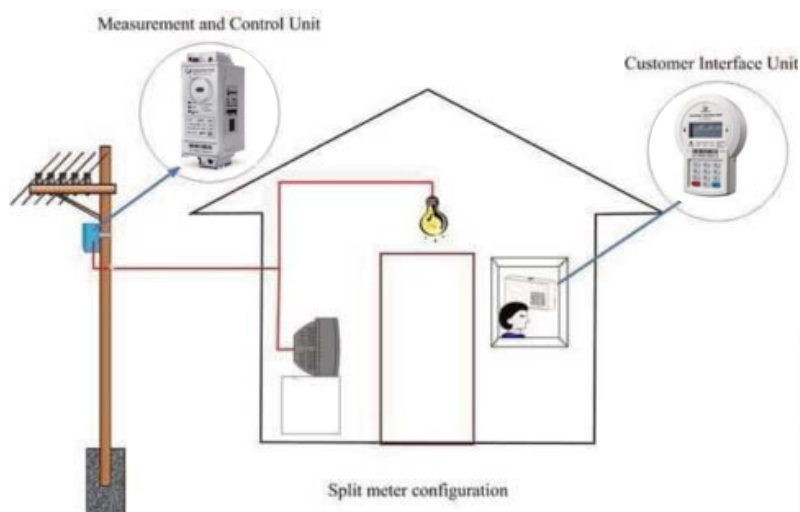
How does a split meter work?



i Find out how on the next page

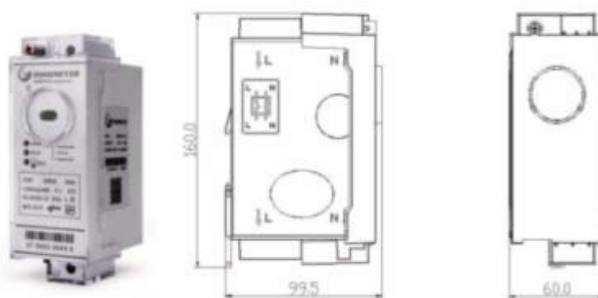
***Available as a Smart Meter and a Prepaid Meter**

How does a split meter work?



Product Code: INHE1PHDIN

Meter Description: Smart PLC Single Phase Din Rail



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Product Specifications

Voltage

- Rated operating voltage (Un) 230V

Frequency

- 50 Hz

Current

- Basic Current (I) 5A
- Maximum working current –100A

Operating Environment

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity –Day = 100%, Night = 25%

Plug-in Communication Module options

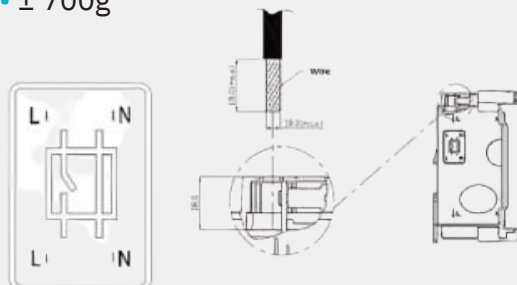
- GPRS/GSM Module

Dimensions

- L = 160mm
- W = 60mm
- D = 99.5mm

Weight

- ± 700g



Inhemeter - Three Phase

Product Specifications

Voltage

- Rated operating voltage (Un) 220V/380V

Frequency

- 50 Hz

Current

- Basic Current (I) 10A
- Maximum working current –100A

Operating Environment

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity –Day = 100%, Night = 25%

DimensionsWeight

- Extended Cover • ± 1200g
- L = 300mm
- W = 170mm
- D = 85mm



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Product Overview

Inhemeter Single Phase Keypad prepaid Meter is a 4 wire, directconnect meter with an optional plug-in Communication Module. 20-digit STS tokens are entered into the meter via the integrated keypad. This meter can be a Standard Meter or a Smart Meter.

Plug-in Communication Module options (SmartMeter Only)

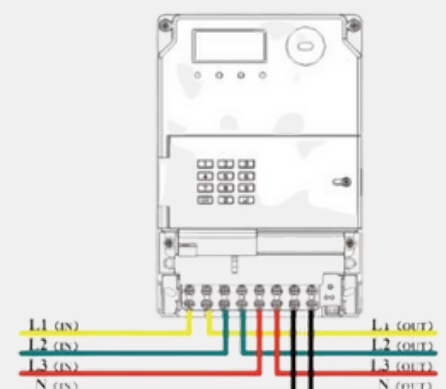
GPRS/GSM Module
PLC Module
RF Module

Dimensions

Extended Cover	Weight
L 300mm	± 1200g
W 170mm	
D 85mm	

Product Code: INHE3PH

Meter Description: Three Phase BS Footprint Meter



***Available as a Smart Meter and a Prepaid Meter**

Inhemeter SMART GPRS Three Phase

Product Specifications

Voltage

- Rated operating voltage (Un) 220V/380V

Frequency

- 50 Hz

Current

- Basic Current (I) 10A
- Maximum working current - 100A

Operating Environment

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity –Day = 100%, Night = 25%

Current Specification 10(100)A

- Tripolar biostable latching relay 120A
- Standard class of load switch: UC3(IEC62055-31)
- Maximum switching power of disconnection: 27600VAX3



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Product Overview

Inhemeter Single Phase Keypad prepaid Meter is a 4 wire, direct connect meter with an GPRS plugin Communication Module. 20-digit STS tokens are entered into the meter via the integrated keypad

Plug-in Communication Module options (SmartMeter Only)

GPRS/GSM Module

Terminals

Terminals layout complies with BS5685/DIN43857
Hole diameter: 9mm; hole depth: 30mm; hole distance: 20mm
Maximum Cable Cross Section: 35 mm²

Dimensions

Extended Cover

L 300mm
W 170mm
D 85mm

Weight

± 1200g

Inhemeter Three Phase Meter with Integrated Keypad

Product Specifications

Voltage

- Rated operating voltage(U_n) 230V

Frequency

- 50 Hz

Current

- Basic Current (I) 5A
- Maximum working current –100A

Operating Environment

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity –Day = 100%, Night = 25%



Compliance & Standards

- IEC 62052-11 2003, IEC 62053-21 2003
- IEC 62055-31 2005, IEC 62055-41 2007
- IEC 62055-51 2007, IEC 62056-21
- SANS 1524-1 2005, ESKOM SCSSCAA9

Prepaid Mode:

Keypad is required for entering tokens or meter's integrated keypad can be used to insert tokens

Smart Mode:

Tokens are automatically loaded onto the meter. Requires a communication module to communicate with the system. A keypad is optional for the meter for back-up purposes.

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Product Overview

The Inhemeter Three Phase meter is a 4 wire, direct connect meter that has capabilities to communicate with plug-in communication modules that are interchangeable. (GPRS Modem or PLC) on a Smart Solution.

Features: (Smart Solution)

- Access to the smart dashboard to view consumption
- The available credit on meter displayed in kWh - read remotely
- The amount of kWh consumed since meter was installed - read remotely
- Import and export kWh
- Can be in prepaid or postpaid mode
- Tamper detection
- 30 Minute Load Profiling
- When token is purchased, it is automatically loaded onto the meter

Features: (Prepaid Solution)

- The available credit on meter displayed in kWh
- Tamper detection
- CIU Separate or Integrated
- Token loaded onto meter via keypad

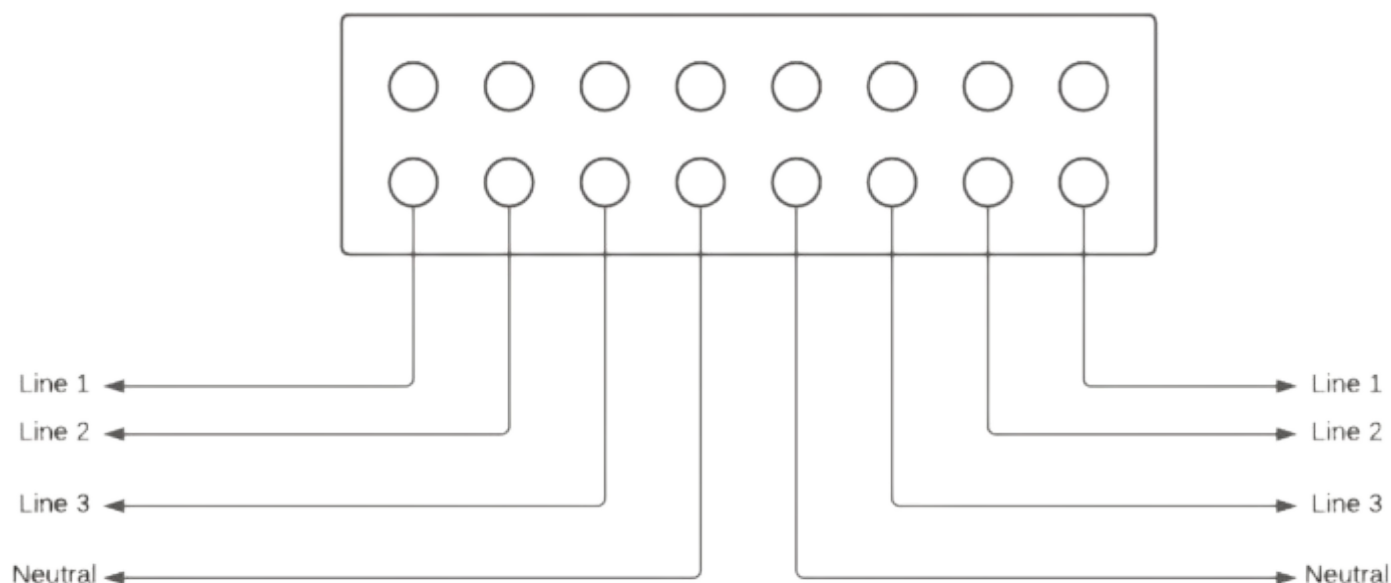
i Installation Instructions



***Available as a Smart Meter and a Prepaid Meter**

How to install?

NB: Please note that the installation on this meter does not follow standard wiring instructions



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Product Specifications

Voltage

- Upper limit value: 264.5V
- Lower limit value: 184V

Frequency

- 50Hz $\pm$ 5Hz

Current

- Basic Current (I) 5A
- Maximum working current –100A

Communication Port

- RS485 communication port

Dimensions

- L = 300mm
- W = 170mm
- H = 85mm

Working Temperature

- Working Temp: -25°C to +75°C
- Storage Temp: -40°C to +80°C
- Humidity: When the highest temperature is 55 °C, the relative humidity range: 0~95%
- During the night: 100% relative humidity (maximum)
- During the day: 25% relative humidity
- Altitude Less than 3500 meters
- Used in tropical conditions

Inhemeter –Three Phase Modular AMI Meter

Product Specifications

Accuracy

- Active Energy - Class 1
- Reactive energy - Class 2

Voltage

- Working voltage - 0.6 to 1.2 Un
- Nominal voltage - 3X220/380V/
3X240/415V
- Maximum voltage 500V (48 hours)

Frequency

- Frequency 50Hz $\pm$ 5Hz

Current

- Rated current 5A, 10A
- Maximum current 100A

Internal Relay

- Current - Unipolar bi-stable latching relay 120A
- Load switch standard grade: UC3 (IEC62055-31) ON 3000A, 5000A to withstand short-circuit current



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Product Overview

The Inhemeter Three Phase Modular AMI meter is a direct connection multi-functional three phase smart energy meter with modular design. The meter is used to measure energy accurately for commercial, industries and residential customers. The meter provides broad range of functions and smart metering capabilities, with flexible communication, the module meter provides varieties of communication medias for remote monitoring and management.

Dimensions

L 265mm
B 170 mm
H 72 mm

Weight
 $\pm$ 1200g

i Product specifications
Continued



Inhemeter –Three Phase Modular AMI Meter CONT

Product Specifications Continued

Communication

- Communication module - Hot Swap
- Modules GPRS/3G/NB-IoT cellular modem, PLC, RF, M-Bus
- Communication protocols - DLMS/COSEM

Mechanical Specification

- Weight $\pm 1200\text{g}$
- Protection class - IP54, comply with 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



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Terminals

- Terminals layout complies with BS5685/DIN 43857
- Two screws on the pressure-plate main terminal
- The material is rust-proof

Meter Features

- Load profile - 1 min to 60 min intervals
- Interchangeable communications modules
- Prepayment or Post-payment options
- Anti-Tamper features
- Optional CIU
- Smart Monitoring capabilities

Environmental Condition

- Working temperature range: -25°C to $+85^{\circ}\text{C}$
- Humidity requirement: Relative humidity range is 0 –95% at maximum temperature of 55°C
- Lightning protection - Built-in varistor protection can be applied to protect from lightning

***Available as a Smart Meter and a Prepaid Meter**

Inhemeter –Data Concentrator

Product Specifications

Voltage

- Working Voltage - 70%Un—130%
- Maximum Voltage - Un 450V
- Nominal Voltage 3*230V/400V

Frequency

- 45-60Hz

Current

- Rated Current - 1.5A, 5A
- Maximum Current 5A, 6A

Communication

- PLC Module

Operating Environment

- Working Temp: -30°C - +70°C
- Storage Temp: -30 to +70 °C
- Humidity requirement - 95%



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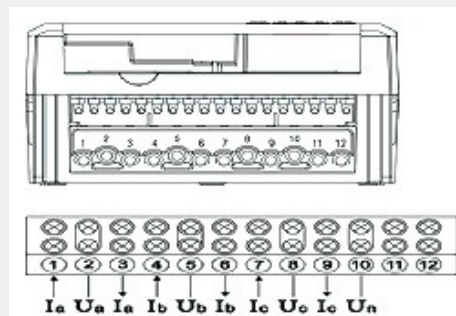
Product Overview

The Inhemeter Data Concentrator handles the communication between the head end system (HES) and the metering PLC device. It reads metering data automatically and can send data to the system or store data for later retrieval by HES

Dimensions

L 290mm
W 180mm
D 96mm

Weight
± 2000g



Product Code: INHEDATAC

Meter Description: Data concentrator

Landis & Gyr E460S Single Phase Split Smart Meter and CIU

Product Specifications

Voltage

- Nominal Voltage –220 - 240 volts

Frequency

- 50/60Hz

Operating Environment

- Working Temp: -10°C to +45°C
- Power Measurement Range: -25°C to +55°C
- Storage Temp: -25°C to +70°C

Measurement Accuracy

- Active energy, according to IEC62052-11/62053-21 Class 1

Degree of Protection (according to IEC60529)

- IP Rating IP54 - Product is for indoor use and must be installed in a suitable enclosure when used outdoors



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Product Overview

The E460 single phase DIN-Rail is part of the E460 range of smart prepayment meters and is an advanced single-phase, multi-function, keypad-based, smart prepayment meter in a DIN-Rail housing

Dimensions

Meter Dimensions	CIU Dimensions
L 135mm	L 144mm
W 50.3mm	W 120mm
D 72mm	D 40.8mm

Radio interference suppression (IEC/CISPR 22)

- Complies with requirements for CISPR 22 and CENELEC EN 50065-1

Terminal Details

- Material Mild steel, yellow passivated Type

Single (M8) moving-cage

- Terminal Diameter 8.5 mm
- Maximum conductor cross-section 4 25mm²
- Type of screw slotted (flat screw driver)

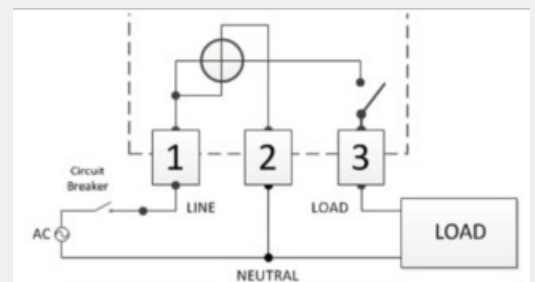


Figure 9: Meter connection with phase and neutral

Landis & Gyr Single Phase Split Meter

Product Specifications

Voltage

- Nominal Voltage - 230 Voltage
- Operating Voltage Range - 80% to 120% of Un (184V – 276V)

Frequency

- 50 Hz

Basic reference current (Ib)

- 10 A

Power threshold

- 6.5W for base 10A (approximately 28mA @ 230V and $\cos(\Phi) = 1$)

Terminals

- Live
- Single screw (M8)
- 25mm
- Neutral
- Single screw (M6)
- 16mm
- Customer Interface Connector
- Plug In, Single screw
- 1.5mm



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Product Overview

The Landis & Gyr single phase split meter in a 2-wire, direct connect prepaid meter with a DIN- Rail mounting. It has a compact meter design for high density stacking. The user interface unit is installed in the unit in a convenient location.

Dimensions

Meter Dimensions	CIU Dimensions	Weight
L 127mm	L 132mm	±100g
W 87.5mm	W 77.5mm	
D 47.7mm	D 29mm	

Operating Environment

Working Temp: -10°C to +55°C

Humidity –Maximum ≤ 95%; Annual mean 75%

Landis & Gyr Data Concentrator

Product Specifications

Voltage

- Operating voltage 1x230 V or 3x230/400 V
- Voltage range: 0.8 Un to 1.15 Un

Frequency

- 50 Hz

External Connection Options

- RS-485 (RJ45) SELV, max. 24 V
- Pluggable GSM/GPRS modem
- Power line communication on CENELEC A-band

2G modem characteristics

- Pluggable GSM/GPRS modem
- Quad-Band GSM 850/900/1800/1900 MHz
- GPRS multi-slot class 10
- Compliant to GSM phase 2/2+
- SIM-card holder
- SIM card interface 1.8 V and 3 V
- SMA connector for the antenna



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Product Overview

The Landis & Gyr Data Concentrator handles the communication between the head end system (HES) and the metering PLC device. DC450 reads metering data automatically and can send data to the system or store data for later retrieval by HES.

Dimensions

Meter Dimensions

L 184mm

W 175mm

D 72mm

Electromagnetic Compatibility

- Dielectric strength: 4 kV, 50 Hz, (IEC 610-0-4-5)
- Electrostatic discharge: 15 kV (IEC 610-0-4-2)

Operating Environment

- Working Temp: -25°C to +60°C
- Storage Temp: -40°C to +70°C
- Protection class to IEC 60529: IP 51

Landis & Gyr E460S Three Phase Split Smart Meter and CIU

Product Specifications

Voltage

- Nominal Voltage - 220 - 240 volts

Frequency

- 50/60Hz

Current

- Base Current - 5, 10, 15, 20A

Operating Environment

- Operation: -10°C to +45°C
- Power Measurement Range: -25°C to +55°C
- Storage: -25°C to +70°C



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Product Overview

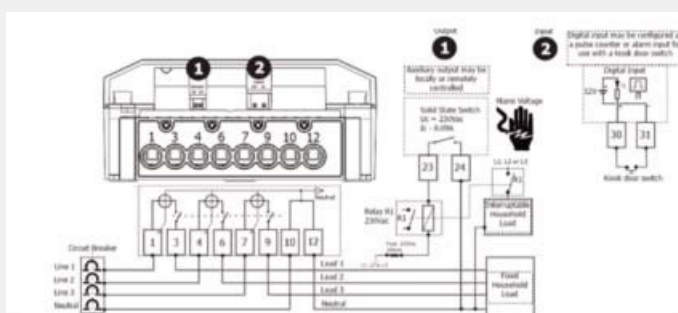
Three-phase, 4 wire smart prepayment PLC meter which works with a PLC Customer Interface Unit. The Landis & Gyr Three Phase meter has variations: standard prepaid meter or PLC smart meter.

Dimensions

Meter Dimensions

L 215.3mm

W 150mm



Landis & Gyr Three Phase Prepaid

Product Specifications

Voltage

- 230 volts

Basic ref current

- (Ib) 10A 4

Frequency

- 50 Hz

Accuracy class index

- Class 2 (Class 1 on request)

Mounting

- Two mounting screws bottom (spacing according to BS5685). Top mounting bracket available as an option

Relative humidity Maximum

- Maximum current of 100A per phase
- Compact meter design with British Standard layout
- Meter provides valuable information to help consumers effectively manage and budget their electricity consumption
- Tamper detection
- Significant Reverse Energy (SRE) detection
- STS compliant
- SANS 1524-1 and IEC 62055-31 compliant



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Product Overview

The Landis and Gyr Three Phase prepayment electricity meter is a four wire 100 Amp per phase, split prepayment meter in a compact BS housing. The meter is suitable for residential, commercial and light industrial environments.

Dimensions

Meter Dimensions

H 286.8 mm

W 173 mm

D 80 mm

with standard terminal cover

Operating Environment

- -10°C (+14°F) to +55°C (+131°F)

Relative humidity Maximum

- ≤95%; Annual mean 75%

Laison STS Prepaid Water Meter

Product Specifications

Diameter

- DN15
- 15mm

Temperature

- Working temperature 0.1oC –50oC

Max. working pressure

- MPa - 1.6

Battery

- Battery Life for Smart Water Meter: > 3 years (Theoretically)
- Battery Life for CIU: > 6 years (Theoretically)

Pulse equivalent

- m3- 0.1



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Product Overview

The Laison STS water meter consists of a water meter and a CIU (Customer Interface Unit). The Water Meter can communicate with CIU conveniently to receive remote meter recharge.

Standard Compliance

- IEC62055-41,51

Communication Distance

- >100m (CIU & Meter)

**No reducers provided. Must be purchased separately

Conlog BEC21

Product Specifications

Voltage

- 220VAC, 230VAC, 240VAC

Current Ratings

- Base Current - 5A
- Max Current - 60A

Accuracy

- Class 1 - (maintained throughout the lifecycle of the product)

Operating Environment

- Operating temperature: -10oC to +55oC
- Humidity: 95% non-condensing

Terminals

- Type - Cage Clamp
- Max Size - 16mm

Protection

- Power overload
- Thermal overload
- Current overload
- Over / Under Voltage
- Line / Load Reversal



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Product Overview

The Conlog BEC21 is a single phase prepayment meter. The meter can be used as a secure way of managing electricity consumption in residential properties. The meter has an integrated keypad with a large LCD display.

Dimensions

190mm x 66mm x 32mm

Installation

4 Terminal Wire, bottom entry