



GEOTEL AFRICA

Consider It Done

GEO311 Three Phase Prepaid Electricity Meter

GEO311 is suitable for residential, commercial and light industrial environment. It consists of two parts, MCU (Metering Control Unit) and a CIU (Customer Interface Unit).

A user simply purchases a token/credit from a selling platform – this could be from vendor paypoints or from the now common GSM based payment platforms and receives a 10 or 12 digit numeric token, which provides for the total units (kWh) purchased, this token is generated using the Standard Transfer Specification (STS) encryption protocol by the power company vendor management platform and sent or issued to the user.

The user then keys in the digits into a wall-mounted Customer Interface Unit (CIU) which communicates to the MCU (Metering Control Unit) using a non-polarized twin-core cable.

The GEO311 has an IP54 rating and can be installed and operated in harsh and humid environments. Standard Transfer Specification (STS) encryption techniques and protocol ensure that data transfer is secure.

FEATURES:

- STS compliant
- Keypad with audible and text feedback
Enlarged LCD
- Adjustable audio and visual low credit warning levels
- Adjustable power limit
- Adjustable emergency credit allowance
- Automatic diagnosis of various faults include contactor fault, memory device fault, etc.
- Improved sealing against ingress of insects
IP54 Rated
- Significant Reverse Energy(SRE) detection
- Provision for backup battery
- Advanced tamper detection
- Easy switch between prepayment and post-payment option



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VOLTAGE

- Nominal Voltage : 3 x 220/230/240V
- Operating Range: 70% to 130% of Un
- Frequency Range: 50/60Hz

CURRENT RATING

- Base Current (Ib): 10A
- Max Current (Imax): 80A/100A

STARTING CURRENT

- 4%·Ib

ACCURACY

- Class 1 (Class 2 optional)

MAX WITHSTAND VOLTAGE

- 450V (48hr)

INSULATION CLASS

- Insulation System
- Classification: Double insulation
- Insulation Level: 4kV rms for 1 minute

SUPPLY BURDEN

- Voltage Circuit: $\leq 2W/10VA@U_n$
- Current Circuit: $\leq 4.5VA@I_b$

PROTECTION

- Overload Protection
- Tamper Protection: magnetic interference, open cover and reverse power
- No-load Protection
- SRE Measurement

OPERATING ENVIRONMENT

- Operating Temperature: -30 ~ 60
- Storage Temperature: -40~ 70
- Relative Humidity: $\leq 95\%$; annual mean 75%
- IP Rating: IP54

COMMUNICATION (Between MCU&CIU)

- Wired: Non-polarized 2 wire low voltage
- PLC (power line carrier) communication
- Communication distance: >200m

STANDARD

- IEC 62056-21 IEC62055-31
- IEC 62055-41 IEC62055-51
- DISSCAA9 (MC171)

EMC

- Electrostatic Discharge: 16kV air discharge;
- 10kV contact discharge
- Immunity to fast Transient Burst: 4kV

- Surge Immunity: 4kV or 6kV alternative

LIQUID CRYSTAL DISPLAY (LCD)

- Size: 87mm x 34mm
- 8 digits + icons + 2 digits (index)
- Backlight reserved

DISPLAY

- Credit balance
- Estimated days left
- Last recharge credit amount
- Total active power

LED INDICATOR

- Pulse LED: 1000 imp/kWh
- Credit LED: low credit alarm
- Communication LED

BUZZER

- Feedback on key press
- Token accept or reject
- Low credit alarm

USER INTERFACE

- 12 keys, international outlay standard with
- 0-9 numeric key, backspace and enter key

EXTERNAL INTERFACE

- Optical port
- MC171 Type B

DISCONNECTION DEVICE

- Internal Contactor
- TERMINAL

- Type: fixed block
- Maximum cable size: $\Phi 9.5$ mm

INSTALLATION

- Indoor or outdoor
- wall-mounted
- CIU optional

PRODUCT LIFE

- 15 years
- Data retained over 20 years

WEIGHT & DIMENSION

- Weight: 1900g
- Dimension: 287mm x 170mm x 75mm