

MATERIAL SPECIFICATION

VOCAB NUMBER	ITEM DESCRIPTION
151031	GEM METER - CASHPOWER 2000, BI-STABLE LATCH PREPAYMENT, 20 DIGIT, 240 VOLTS DIRECT CONNECTED, SINGLE PHASE, 4 TERMINAL CLASS 2.0, 0.1 TO 80 AMPS WHOLE CURRENT

SPECIFICATION DETAILS

1. STANDARDS:

The meter shall comply with the relevant requirements of the Australian Standards Specification for "General Purpose Watt-hour Meters" AS1284 Part 1, 1991 as amended. Or the equivalent PNG Standards as adopted specifically covering Prepayment Meters.

2. ELECTRICAL PROPERTIES:

2.1. Current:

The rated basic current shall be 1 amperes and the maximum continuous current shall be 80 amperes.

2.2. Accuracy:

It shall be class 2.0 or 2% accuracy. The meter accuracy can be determined also By the rate of consumption as indicated by the Light Emitting Diode (LED) Indicator on the front panel which must flash at a rate of 800 flashes per Kilowatt hour.

2.3. Voltage:

The voltage shall be rated at 240 volts at 50Hz frequency and permitted to regulate 80% to 120% of nominal voltage per phase.

- **Unit of Measure:** Each

- **Rejection:** PNG Power Ltd reserves all rights to reject whole or part of the order not complying with this specification and is not liable for any cost or loss with the return of rejects to the Supplier. Facilitation of Invoice Credit must commence between the supplier and PNG Power Ltd through the process of PNG Power Ltd Discrepancy Report provisions.

Drawing References:

Manufacturer's Product Code:

STANDARDS COMMITTEE APPROVAL

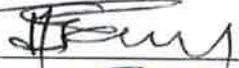


Approval by George Win:

Chairman

Signature: 

Date: 8 / 3 / 2018

DATA REVIEW ENDORSEMENT

NAME	TITLE	SIGNATURE	DATE
Grevasias Peni	Team Leader - Standards and Materials		8/3/18
	✓		07/03/21

SPECIFICATION DETAILS FOR VOCAB: 151031

3. **OPERATION:**

The meter shall operate exactly the same manner as the standard prepayment electricity meter. However instead of using a miniature breaker/isolator with manual, external lever to connect power, it utilizes a bi-stable latch which is located within the meter and is not accessible from the outside.

Power is automatically connected to the load side of the meter when there is credit in the meter and automatically disconnects the power if no credit is left. Power will also be terminated if any attempt is made to tamper with the meter.

In the case of trip due to overload, the meter will try to reconnect power five times at 30 seconds intervals. If after five attempts the current is still above the limit, the unit will wait 30 minutes before repeating the procedure.

4. **FITTINGS:**

The meter shall be fitted with Credit Status Display (CSD), 3 Level Credit Display – (LCD), Keypad for Credit Transfer Number Entry, Low Credit Warning Level, Credit Transfer Number Accept/Reject Indication, Tamper Indication, Lightning protection and a bi-stable latch located within the meter and is not accessible from outside to prevent tempering of the meter circuit breaker. Anti-tamper switch is mounted inside the meter box.

5. **CONNECTION:**

The connection to the meter shall be of symmetrical type and the terminals be marked as active, neutral, neutral and active (ANNA).

6. **ENCLOSURE:**

The IP Rating of the meter should be IP54 in accordance with IEC 60529 for indoor metres and material of should be of polycarbonate, flame retardant, resistance to spread of fire and able to withstand severe heat, and resistance to insect attack.

7. **REMOTE COMMUNICATION:**

The meter should be accessed remotely utilising PLC technology and should also have options to access remotely using wireless mobile technology such as GSM, 3G and 4G. The remote communication option will enable remote monitoring, fraud detection, meter tempering and two-way communication with ability to audit meters remotely.

8. **GENERAL OPERATING CONDITIONS:**

Equipment should be designed to generally operate in these conditions:

1. Annual Average Ambient Temperature	30°C
2. Maximum Ambient Temperature	40°C
3. Installation	Indoor or Outdoor (in weatherproof meter box)
4. Maximum Relative Humidity	90%
5. Environmental Conditions	Humid Tropical Climate with heavily polluted atmosphere
6. Operation Altitude	Up to 1600m above sea level

9. MARKING:

It shall have a printed name as "Property of PNG Power Ltd.," and engraved or stamped with and "PPL" Number supplied by the Manufacturer on the Official Order.

10. DIMENSIONS:

The meter shall have the dimensions of height, length and width as 197mm x 137mm x 72mm respectively.

11. REJECTION:

PNG Power reserves the right to reject the whole consignment should 5% or more of any one consignment of found defective.

12. SAMPLE:

Samples of the meter shall be made available to the organization for inspection prior to the Tender closing date.