Telbit

Design, Development and Manufacture of Electronic Equipment

CUSTOMER INTERFACE UNIT (CIU) TO PWC100 & PWC200 PREPAID WATER CONTROLLER
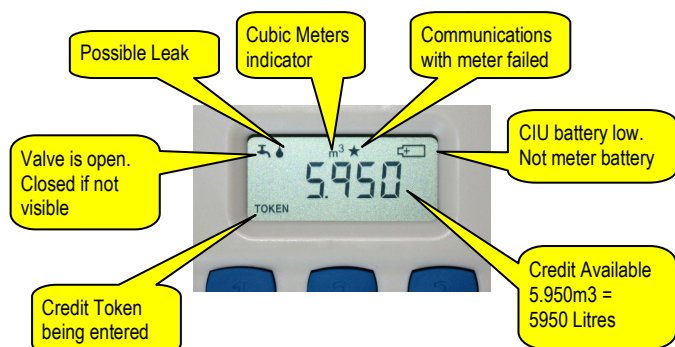
The PWC Customer Interface Unit (CIU) brings convenience to prepaid water metering, where the consumer can now load his credit tokens from inside his house. Never again does the consumer need to go to his prepaid water meter outside to load credit tokens or check what his credit balance is.

The CIU is wall-mounted inside the consumer house, linking up with the PWC100 (Prepaid Water Controller) or PWC200 via secure bi-directional encrypted radio communications link. The CIU indicates the credit remaining on the PWC and facilitates the entering 20 digit prepaid credit tokens. The CIU refreshes itself automatically every hour or on demand. A series of Short Codes are available that assist the consumer to be more aware of his water usage and credit management.

The LCD display rotates every ten seconds between two screens, with a conditional 3rd screen. The first screen indicates the type of credit that is being consumed, i.e. paid credit, Free Basic Water, Life Line, etc. The second screen indicates the volume of water available in cubic meters (m³). See image on the right. The third screen is only active if any additional message needs to be displayed, such as an error code, possible leak, battery low or meter locked.

PWC CUSTOMER INTERFACE UNIT

ICONS AVAILABLE ON THE CIU

Water Management Tools using Short Codes on the CIU:

- **Credit type being delivered Paid Credit, Free, Lifeline, etc.**
- **Loading of prepaid water tokens**
- **View unique Prepaid Number to purchase more credit**
- **View electronic meter totalizer reading**
- **History of last 10 tokens, with credit value and date stamp**
- **View consumption for the current day and month**
- **View average monthly consumption**
- **Monthly consumption history over the last 3 months**
- **Warns of possible water leaks on property**
- **Lock and unlock the meter, stopping water delivery when not at home**
- **Resettable User Totalizer for event specific measurement**
- **View total credit-to-date and consumption-to-date totals**
- **Activate Emergency Credit**

CIU Features:

- **Sigfox Ready**
- **Icons indicating Valve Status, Water Leak & Battery Low**
- **STS Prepaid Water Credit Tokens**
- **Credit Low indication**
- **Wall mounted**
- **Secure Encrypted Communications**
- **Keypad Lockout**
- **Up to 5 year Battery Life**
- **User Replaceable Batteries**

Models:

- PWC150 for PWC100
- PWC250 for PWC200
- PWC160 for PWC100 with Sigfox
- PWC260 for PWC200 with Sigfox

Fixed Network IOT solution, powered by Sigfox

Optionally the CIU may also be fitted with an additional Sigfox certified radio, connecting the PWC to the internet. The CIU use the Sigfox network to send a preset packet of data daily to a data server. The connection is a one-way uplink to send meter readings and diagnostic data from the PWC. The Sigfox network is available in 45 countries, and covers 87% of the South African population. There is no need for expensive data concentrators and gateways to be installed onsite and maintained. Visit www.sigfox.com for more information.
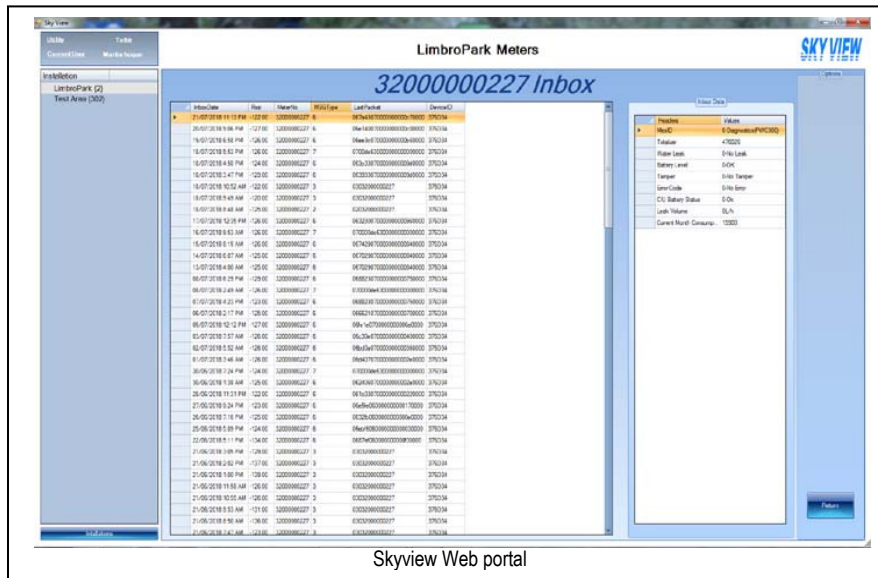
The *Skyview* web interface is an online portal that allows utilities and management companies to register and track the performance of their prepaid meters remotely. Using the data received from the installed PWC's, various reports are available to view meter readings, status and diagnostic data. It is now possible to track the performance of the prepaid meters without the need to physically visit the installation or the meters.

Daily uplink packet from the PWC:

- Meter totalizer reading in m^3
- Credit Status – Credit, low credit, no or negative credit
- Credit type consumed – Paid, FBW, Special, Lifeline, Emergency
- Meter Mode – Prepaid, Post-paid, Conventional or FWD
- Valve position - Open or Close
- Tamper status, with date/time stamp of last tamper
- Leak indication, with leak size in Litres/h
- PWC and CIU battery status
- Lock status – Utility or Consumer lock
- Error code, if present
- Current month to date consumption
- Previous month consumption

CIU Specifications:

- Large 1.5" LCD with user friendly icons
- Dimensions: 78mm(w) X 142mm(h) x 21mm(d)
- Radio Frequency: 868mHz, GFSK modulation
- Radio range up to 500m line of sight
- Antenna Type: Internal Antenna
- Wall mounted
- Mounting: Provision for wall plugs/screws or double sided adhesive tape
- Dust / Water Resistant Rating: IP52
- Operating Temperature -10 °C to 55 °C
- User replaceable battery with up to 5 year life
- Battery Type: 2 x AA Size Alkaline
- Silicon pushbuttons with tactile feedback

Skyview Web portal

REV1

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