



**Design, Development and  
Manufacture  
of Electronic Equipment**

## **PWC300 AMR (Automatic Meter Reading) Device**

### **PWC300**

The PWC300 is a pulse reading device, connecting to any water meter with pulse output capability. The device maintains its own internal totalizer of pulses received to date. The PWC300 is enabled to detect possible leaks on the property.

An 868 MHz secure encrypted bi-directional radio communications link, enables remote transfer of the totalizer and other recorded information to a Customer Interface Unit (CIU) or PWC400 Data Collector.

PWC400 Data Collector used in conjunction with the Field maintenance Terminal (FMT) software application allows you to interrogate the PWC300 remotely. Diagnostic and historical data can be retrieved, as well as various configuration settings can be done without any direct access to the device.

Drive-by AMR is also performed using the FMT software. Select the required data fields and the Data Collector communicates with the PWC300's as you drive past the meters. All data is stored in a CSV file that can be viewed with the FMT software, or as a spreadsheet in Microsoft Excel. See PWC300 AMR Field Selection for a list of possible fields available under AMR.

As an option, a wall-mounted wireless Consumer Interface Unit (CIU) installed for convenience inside the house of the consumer to display the totalizer and current month consumption information. The CIU refreshes itself automatically every hour or on demand. A range of Short Codes are available as a tool enabling the consumer to view and manage his water usage as well raise an awareness of how much water is being used and when.

### **Skyview Remote Monitoring**

Optionally the CIU may also be fitted with an additional Sigfox certified radio, connecting the PWC300 to the internet. The CIU use the Sigfox network to send a preset packet of data daily to the Skyview data server. The packet is send at random time during the day to lighten the load on the network. The connection is a one-way uplink sending meter readings and diagnostic data from the PWC300. 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](http://www.sigfox.com) for more information.

Skyview is a web-based remote monitoring application that allows utilities and management companies to register and track the performance of their meters remotely. Using the data received from the installed PWC300 devices, various reports are available to view meter totalizer readings, status and diagnostic data. It is now possible to track the performance of the meters without the need to physically visit the installation or the meters.

### **PWC300 Specifications**

- Optical Communications Port
- 868MHz bi-directional radio communications
- Radio range to CIU up to 500m Line of Sight
- Vertical or horizontal mounting
- IP68 (Tested for submersion 1 meter for 2 hours)
- Operating Temperature -10 °C to 55 °C
- Max Pulse Rate equals to 3600 Litres/hour
- Totalizer resolution 0.0005m<sup>3</sup>
- Measurement – Cubic Meters (m<sup>3</sup>) or Gallons (GAL)



PWC300

### **PWC 300 Features**

- **11 Digit Unique Serial Number**
- **Internal Antenna**
- **Group Coding**
- **Leak Detection**
- **90 Days Hourly Data Logger**
- **Secure Encrypted Communications**
- **Up to 5 Year Battery Life**



CIU (Customer Interface Unit)



## Water Management Tools available on CIU

- View unique Serial Number
- View electronic meter totalizer reading
- View consumption for the current day and month
- View average monthly consumption
- Monthly consumption history over the last 3 months
- Indicates possible water leaks on property
- Resettable User Totalizer for event specific consumption measurement
- View total consumption-to-date totals

## CIU Specifications

- Large 1.5" LCD with user friendly icons
- Dimensions: 78mm(w) X 142mm(h) x 21mm(d)
- Radio range up to 500m Line of Sight
- Mounting: 2 Wall plugs & screws or Double Sided Tape
- Dust / Water Resistant Rating: IP50
- Operating Temperature -10 °C to 55 °C
- User replaceable battery with up to 3 year life
- Battery Type: 2 x AA Size Alkaline (Penlight)
- Keypad: Tactile Pushbuttons, 0-9, # and backspace

## PWC CIU Features

- Sigfox Ready
- Icons indicating Water Leak & Battery Low
- Wall-mounted
- Secure Encrypted Communications
- Keypad Lockout
- User Replaceable Batteries
- Internal Antenna

**AMR PWC 300 Select Fields**

**Main**

- Current Day Consumption
- Current Month Consumption
- Current Date

**Consumption**

- Consumption
  - 3 Months
  - 6 Months
  - 12 Months

**Billing**

- Billing Reading
  - 3 Months
  - 6 Months
  - 11 Months

**Extras**

- Consumption to Date
- Start Date
- Date Last Read
- Leak Size
- Billing Date
- Totalizer Rollover
- Days since Last Consumption
- Supply Group Code
- Area Code
- GPS Co-ordinates
- Water Factor
- Days in Use
- Date of Manufacture
- Firmware

Packet Length: 67 (Max 68)

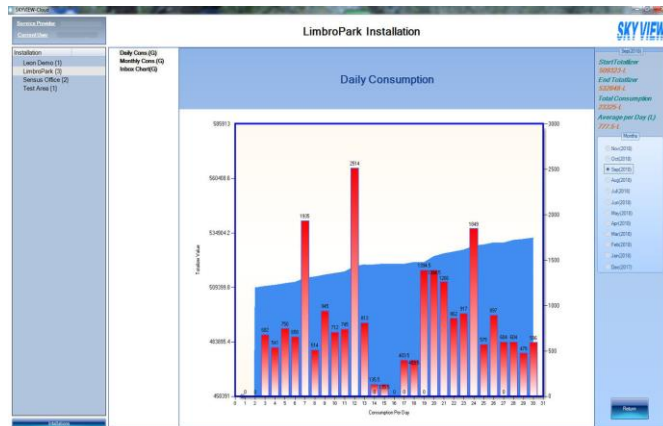
PWC300 Drive-by AMR Field Selection



PWC400 Data Collector for Drive-by AMR



Field Maintenance Terminal menu options



Skyview totalizer and daily consumption graph

## Skyview Remote Monitoring Data Packet

The CIU send the following data packet daily at a random time:

- Electronic Meter totalizer reading in m3
- Leak indication, with leak size in Litres/h
- PWC300 battery status
- Error code, if present
- CIU battery status
- Current month to date consumption
- Previous month consumption

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