

The Elster Kent/
Telbit Communal
Pre-Paid
Metering System



Communal Pre-Paid Metering for Communal Sites

A reliable effective income generating system and for water sales

The Communal Water Dispenser (CWD) is designed for communal sites, to control the dispensing or pre-paid quantities of water. The CWD is installed outside using the B910 system, powered by a Lithium battery. It consists of three main components, the Electronic Module, Latching Valve and Water Meter with pulse output.

A multi-tier step tariff system, monitors the monthly consumption of the consumer, and charges him using the appropriate tariff. A monthly Consumption Profile is generated, which in turn is stored on the Token. This profile is uploaded to the Management System the next time the Consumer purchases credit.

Programmable to accommodate:

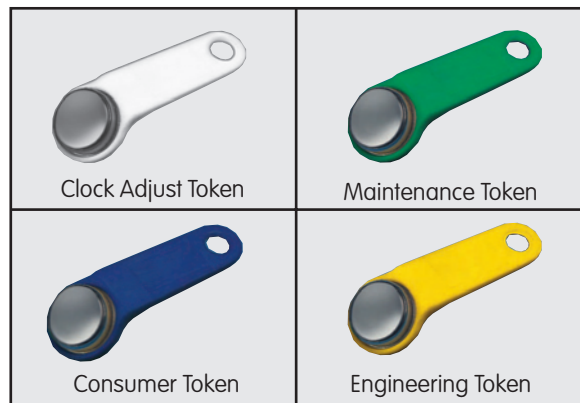
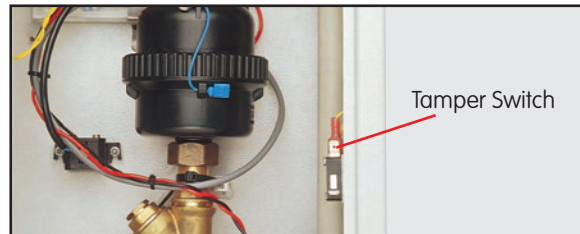
- Multi-tier programmable stepped tariff levels.
- Daily Limit to control the quantity of water dispensed per day.
- Free basic water.
- Arrears Payment facility to allow customers to pay off their arrears at the Vending Station. Arrear amount paid can be a fixed monthly charge or percentage per transaction.

Features:

- Zoning (People to buy at specific dispenser).
- Monthly Consumer consumption profile.
- Secure Encrypted Tokens.
- Electronic Totalizer with 0,5l resolution.
- LCD Display indicates credit remaining.
- Tamper Detection.
- Up to 3 year battery life, depending on number of users.
- Water resistant enclosure (IP 67).
- Low battery indication.

Security Token and Tamper Switches

- Tampering results in switch being activated and water being shut off.
- Token options for levels of authorization.
- Password protection.
- Full financial audit on all transactions.
- Tokens cannot be duplicated or reloaded.



Token Benefits

- Read/write token with non-volatile memory.
- Encrypted token with cycle counter eliminates fraud.
- Ensures transfer of up to date info of usage.
- Data retention over 10 years.
- Resistant to extreme environmental conditions shock and temperature (-20° to +70° C).

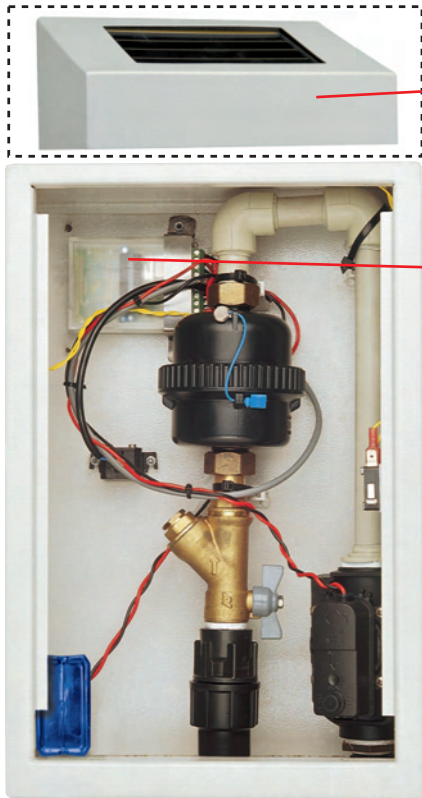
Please note:

Only Dallas DS1963 tokens are used as per recommendation from Dallas for monetary Credit transfers.

How the System Works

Consumer purchase of water credit.
Token transfers credit to DWD





Optional Solar Panel

A high quality solar panel, incorporating voltage regulator and battery pack, housed in powder coated metal housing, and is available for a retrofit to existing installed units, or as an integral component on OEM units.

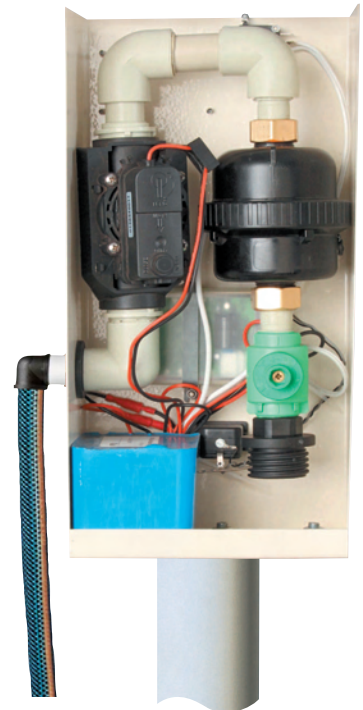
The Pre-paid Meter Display

The Elster Kent/
Telbit Stand Pipe

The Elster Kent/
Telbit Econo
Stand Pipe



Information transferred via token to management system



Hardware System Components



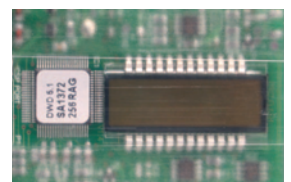
Tamper switch



Isolating latching valve



Pulse output water meter



Electronic module

Hardware Benefits

- Quality proven components.
- Ease of installation.
- Pulse output water meter approved to Class C Approval No. SA842.
- Electronics water resistant to IP 67.
- Electronic totaliser with 0.5l resolution.
- Battery life up to 3 years, depending on number of users.
- Stainless steel (3CR12).
- Econo box constructed from powder coated mild steel.

Specifications

Solar Panel

A high quality solar panel, incorporating voltage regulator and battery pack, housed in powder coated metal housing, and is available for a retrofit to existing installed units, or as an integral component on OEM units.

OB 020 Communal Standpipes

Communal water dispenser to control the dispensing of prepaid quantities of water to communal taps.

Meterbox: Consisting of a stainless steel (3CR12) above ground Meterbox allowing the LCD display to be positioned +/- 1200mm above the ground. Meter box to contain plastic bodied volumetric water meter complete with pulse output and non-return valve approved by SA Trade Metrology to SANS 1529-1:2006 (Class C). Meterbox to be fitted with a push fit inlet fitting for a 20mm/25mm HDPE pipe. All joints to be fusion welded. Meter box must have a Y strainer flush valve and strainer combination ball valve. All components (Meter and electronics combination, Y Strainer, Battery, Latching Valve must be interchangeable on site by maintenance personnel.

Electronics: Prepaid Electronic module must be water resistant to IP 67, with user replaceable waterproof moulded battery pack.

Security: Box lid must be secured with security screws, only removable with special security spanner. A tamper switch connected to lid ensures that no water is drawn when tamper mode is activated.

LCD Display: Display must be able to indicate monetary credit available on the token, not limited to any particular currency, making use of user friendly icons to indicate meter status. Additional information includes: volume dispensed in litres, meter totalizer in cubic meters or US Gallons, Error Codes, Battery low icon, Tamper mode, Valve status and no flow status.

Credit Token: Token to be specially designed for the secure transfer of monetary credit utilizing cycle counters to prevent fraudulent copying and re-use of credit data. Service life of token should be at least 10 years with unlimited read and write cycles. Token shall be IP68, and not prone to physical tampering, moisture, dust, and robust enough not to deteriorate in performance due to excessive handling. Token to store complete feedback and diagnostic data for the meter, including error codes, monthly consumption volumes and Totalizer.

Meter Management System

A versatile Meter Management System to manage and control consumer data base, reporting and daily sales with water balancing and meter fault logging and tracking capabilities. System performance must include but not be limited to features below.

- System to keep a full database of registered consumers with Meter Inventory.
- Multi user access to be controlled by username and password with the option to expire.
- Multiple villages on one central Management system.
- System should be fully networkable based on SQL database.
- Multiple Vending Stations with individual user control.
- System caters for arrear payments.
- Blocking of Lost or Stolen Tokens.
- Remote vending via hand held units to be preloaded with Bulk Credit.
- Daily Cash Up routine with reporting capabilities.
- Handheld Vending Terminals of Banking Standard for improved customer service by selling credit through agents with extended shopping hours close to customers.
- System to register, configure and download Handheld Vending Terminals.
- Receipts from credit sales to be printed using receipt (till slip) printers.
- All reports to be user configurable.
- Standard Reports to include Transactions, Sales Totals, Consumption Patterns, Water Balance, Meter Status, Purchase Profiles.
- System should include a Service Center Module for logging of service calls, generating of job cards, signing off of service calls, and full reporting capabilities.

Quality Control

The complete system is manufactured according to ISO 9002 quality control specifications assuring product quality.

Warranty

All goods are tested and inspected prior to despatch. In the event of defects resulting from faulty workmanship or materials, such goods will be replaced/repared at our discretion, free of charge at the factory, but no responsibility will be accepted for any direct or consequential damage. This warranty covers the malfunction of a correctly installed item due to a manufacturing fault, but does not cover wear and tear considered normal at the locality of installation. Meter warranty 3 years from date of manufacture. Electronics warranty 1 year from date of manufacture.

Approvals

Department of Trade Metrology SANS (1529-1:2006) SANS (1529-9:2008)

TRAINING

Intensive on-site training inclusive of installation, commissioning, operation and maintenance, incorporating hardware and software is conducted. Remote desktop software support forms an integral part of the training, thus ensuring smooth operation of the system as a whole.

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Vital Connections