INSTALLATION & OPERATIONS MANUAL

WVM 10 series Coin / Token Flow Meter
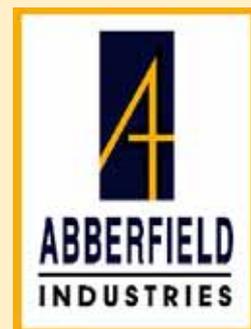
ABBERFIELD INDUSTRIES

DESCRIPTION

A self contained coin or token operated device to dispense water in large volumes. The equipment is housed in a high security stainless steel stand with two separately locked compartments. Protected by a 14 point locking system, the top section contains the coin controller and the bottom section the flow meter and solenoid valve.

The standard Abberfield 10 series coin/ token controllers are used, either single denomination or multi-denomination.

This system operates on 12 Volts D.C. This can be obtained from an in-built battery or from a 240V mains operated 12V power supply. A mains 12V supply can be external or fitted in a waterproof housing in the battery compartment. Totally 240V systems are available on request. Battery operated units are solar charged by a remote panel.

A key bypass switch is included for Fire Department or other authorised use.

Solenoid

Token entry

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Model   WVM10   2000M x 80
Model   WVM10MF   2000M x 80

WATER DISPENSER INSTRUCTIONS
model WVM 10 series coin / token Flow Meter

This system operates on 12 Volts D.C. This can be obtained from an in-built battery or from a 240V mains operated 12V power supply. A mains 12V supply can be external or fitted in a water proof housing in the battery compartment. Totally 240V systems are available on request. Battery operated units are solar charged by a remote panel.

The battery should be a sealed lead acid or gel cell to minimise hydrogen gas generation during charging. Any battery with a capacity greater than 10 A/H (ampere / hours) will suffice but 50 A/H is recommended.

To access battery remove screws on the panel below the coin / token controller. Ensure that the terminations are coated with a corrosion inhibitor.

Calibration

The setting procedure is detailed on a label inside the cover of the coin / token controller and is slightly different between the model CE10MF (single denomination) and CE10MD (multi-denomination).

In each case there are two parameters to set.
1/ The minimum charge before water will flow.
2/ The amount of water to equal the minimum charge.

If the the minimum charge is one coin / token, then the first two "thumb switches" are set to 01.

Then the next three switches are set to count the pulses from the flow meter. For an 80mm pipe size 1,000 litres equals a setting of 242, i.e. one coin or token for 1,000 litre, settings are 01 - 242. The accuracy depends on manufacturing variations and a commissioning test should confirm the calibration. If the figure of 242 pulses per 1,000 litres is not accurate enough, then reset the switches to the actual figure determined by the test.

Service

The equipment is largely maintenance free and technical assistance is available from Abberfield Industries.

Removal of Flow Meter

First firmly turn off the water supply.

Pull the metal pin in the top of the flow meter.

Lift out the sensor mechanism.

Note:-
1/ There will be some resistance due to the O'rings pressure seal.
2/ When refitting sensor ensure it is aligned correctly, (the right way around).
3/ Coat the O'ring with vaseline.

Removal of Coin / Token Controller

Remove the coin/ token controller interface circuit board by undoing two nuts and then disconnecting the wires to the terminal block. Note that the flow meter terminations are to a screw connect plug, i.e. unplug don't unwire.

Flow Meter Connections

Electric Connections

Switch to operate solenoid

From CT10MF or CT10MD

+12V
SENSOR + SUPPLY   — (Red)
SENSOR SWITCH I/P   — Count in (Green)
GND
GND   — Shield

+   −
12V D.C. IN
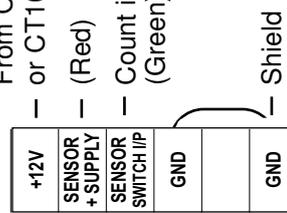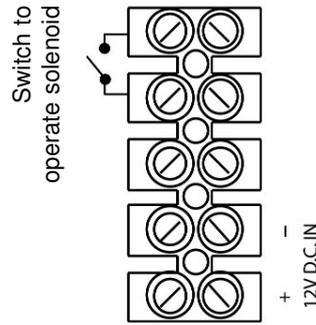
Coin / Token Bypass

For Fire Department and other authorised use, a key bypass switch is fitted to the side of the coin / token controller. To operate, insert key into the lower lock position, (top one opens cover), depress key and turn.

COIN / TOKEN CONTROLLERS

Two types are used, single or multi-denominational, model CE10MF or CE10MD. These are general purpose controllers applied to the application of water dispensing. Labels are attached inside of the cover of the controller.

COIN OPERATED EVENT SWITCHES
SERIES: CE10-MF

INSTALLATION
This equipment should be secured firmly to reduce risk of unauthorised entry. Do not install equipment so that key side is closer than 150 mm to any adjoining unit or to other obstruction. Also allow 50 mm between hinge side of cover and any obstruction. This allows room for removal of cover. Do not over-tighten interior mounting screws as this may   distort the coin track.

COIN CLEARANCE
When opening equipment for clearance, depress the lock side of cover to release tension on lock mechanism. Avoid over filling of coin tray, this may cause the equipment to "shut down".

KEY NUMBER
The key number imprinted on the key should be recorded. Replacement keys may be available on request.

ELECTRICAL
Standard coin event units CE10MF (25 Amp switching) are wired to switch a dry contact. After installation, check that active and neutral wires have not been reversed. Double insulation leads should be used and firmly secured with the cable clamp. If installed as a low voltage coin timer, use a large conductor size to minimise voltage drops. The count input is normally factory configured for a dry contact but can be configured for 5V - 30V A.C. or D.C. input.
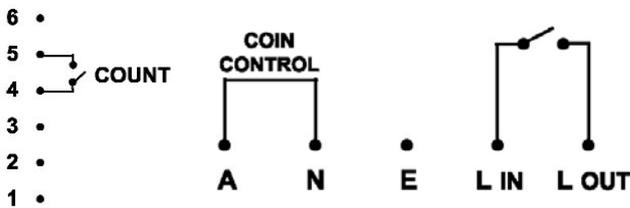
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OPERATING INSTRUCTIONS
Thumb wheel switches are provided in the lower right hand corner of the mechanism. These set the number of coins to start an operation (1 to 99) and the pulses to equal the number of coin settings (0.1 to 999 pulses). To adjust thumb wheels, first remove cover with label.

The number of coins is usually set at 1 and the number of pulses is that required for one coin. Additional coins can be inserted at any time.

If required, a minimum charge is obtained by dialling more than one coin (1 to 99). The load circuit will then not energise until that number of coins are inserted.
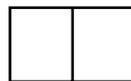
COINS TO START	PULSES TO EQUAL COINS TO START SETTING

I.e. 1 coin and 100 pulses gives the same charge as 3 coins and 300 pulses, except that 3 coins are required to turn the load on.

INSTALLATION

The equipment must be securely mounted to a concrete slab. This can be by bolting onto the concrete or incorporating an anchor plate into the concrete itself.

All bolts and nuts, (whether stainless steel or plated steel), should be liberally greased at time of installation. This minimises threads "freezing" up, which may prevent disassembly at a later stage.

Coin / token and electrics cabinet

Water works cabinet

Height adjusting plinth

Ground level

Optional anchor plate (in concrete)