



IOM ULTRAF 31L

N.C. Electric & Manual Remote
Ultrasonic Hydrometer
2" - 8" (16 bar)



DESCRIPTION

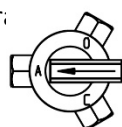
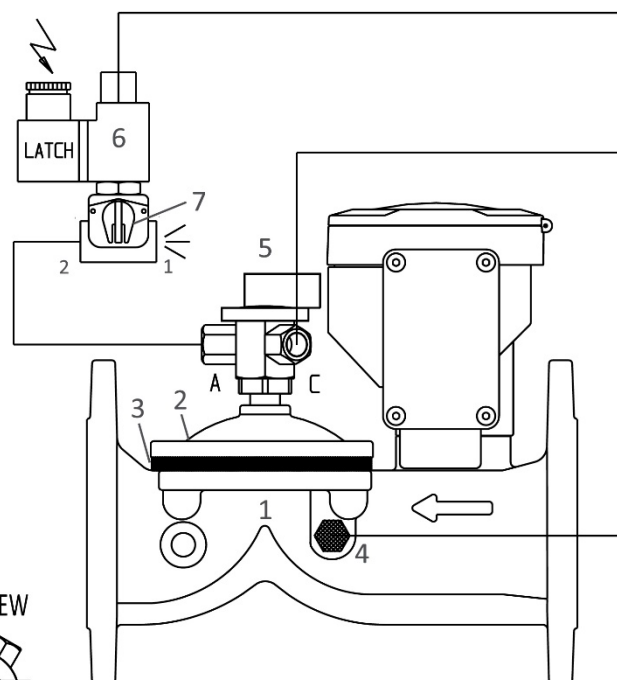
This programmable water meter and electric valve is a NC (Normally Closed) electric controlled valve designed to open autonomously and perform irrigation schedule as programmed in advance. “Normally” means the state of the Ultraf when the solenoid is under “close” command. Ultraf contains a volume-based irrigation controller that may be programmed using the Raphael Application via mobile phone and Bluetooth® communication.

INSTALLATION

- Before installing the Ultraf, flush the pipeline to remove scale, dirt and other particles that might affect the valve’s performance.
- Install the valve as indicated by the arrow on the valve’s body, showing flow direction.
- Make sure that the solenoid has the right specifications and connected to the Ultraf solenoid activation output (consult Ultraf “Installation and Operation Guide”).
- It is recommended to install isolation valves upstream and downstream the Ultraf.
- Turn the 3-way selector 5 to the “Close” position and turn on the water supply to the valve.
- Check for leaks; tighten bolts & fittings if necessary.

PARTS LIST

1. Body
2. Cover
3. Diaphragm
4. Self-flushing “Finger” filter
5. 3-Way selector
6. 3-way Latching solenoid 12VDC
7. Solenoid’s manual override



OPERATING INSTRUCTIONS

1. Make sure that there is a downstream flow demand.
2. Turn the 3-way selector 5 to the “Auto” position.
3. Energize solenoid 6 by initiating “manual volume” irrigation (consult Raphael “Irrigation Controller App User Guide”). Ultraf will open to deliver the set water amount then automatically close shut.

To manually open the Ultraf completely, turn the 3-way selector 5 to the “Open” position.

To manually close the Ultraf, turn the 3-way selector 5 to the “Close” position.

To operate the Ultraf by an electric command, turn 3-way selector 5 to the “Auto” position. Turn override 7 counterclockwise then back to “Auto” (vertical) position. .

To irrigate - initiate solenoid valve 6 to “Open” using the App. programming schedule or turn override 9 clockwise (open position).

To stop irrigation - initiate solenoid valve 8 to “Close” using the App. programming schedule or turn override 9 counterclockwise (close position)

MAINTENANCE

- No maintenance is required. However, from time to time it is recommended to rotate the 3-way selector 360° to prevent sticking by sediments.
- It is recommended that the valve will be easily accessible as well as clearly marked to prevent damage.
- In freezing climates, the valve should be dismantled, and water drained during the winter months.

TROUBLESHOOTING ULTRAF 31L

PROBLEM	CAUSE	CHECK	SOLUTION
The Ultraf does not open.	<ol style="list-style-type: none"> The 3-Way selector 5 is in the Close position. The solenoid 6 does not get electrical command. The solenoid 8 gets electrical command (valve icon on display shows "on") but the Ultraf does not open. Blocked or stuck solenoid 6. Manual override 7 is in the close position (counterclockwise). No watering program is "on". The Ultraf app shows "system off" mode. 	<ol style="list-style-type: none"> Check state of the selector. Check for loose batteries contacts or low voltage. Check electric coil by carefully listening to the shifting "click" sound. No water from solenoid's drain (1). No water from solenoid's drain (1). Valve icon on display shows "off". Check app's system mode. 	<ol style="list-style-type: none"> Turn selector to the Open or Auto position. Make sure contact surface is good/replace batteries if low. Replace damaged coil with a new one. Reassemble and activate. Turn off water supply to the valve. Dismantle and clean solenoid's drain. Reassemble and activate. Turn override 7 to "Auto" (vertical) position. . Initiate a watering program. Use app to turn "system on".
The Ultraf does not close.	<ol style="list-style-type: none"> The 3-Way selector 5 is in the "Open" position. The solenoid 6 gets electrical command (valve icon on display shows "Off") but the Ultraf does not close. Or- manual override 7 is in the open position (clockwise). Blocked or stuck solenoid 6. Foreign object on seal seat 3. 	<ol style="list-style-type: none"> Check state of selector. Check for loose batteries contacts or low voltage. And position of override 7. Check manual closing option using selector 5. Poor water flow downstream. 	<ol style="list-style-type: none"> Turn selector to the "Auto" or "Close" position. Make sure contact surface is good/replace batteries if low. Or- turn manual override 7 to the automatic (vertical) position. Turn off water supply to the valve. Dismantle and clean drain connections of the solenoid. Reassemble and activate. Turn off water supply to the valve. Remove cover and remove foreign object. Check that diaphragm, body and cover are not damaged. Reassemble and activate.

	<p>5. Blocked self-flushing filter 4.</p> <p>6. Watering program is still "on".</p>	<p>6. Valve display icon shows "on".</p>	<p>5. Turn off water supply to the valve. Remove filter to clean or change it. Reassemble and activate</p> <p>6. Terminate/clear the watering program.</p>
<p>The Ultraf does not open.</p>	<p>1. The 3-Way selector 5 is in the Close position.</p> <p>2. The solenoid 6 does not get electrical command.</p> <p>3. The solenoid 8 gets electrical command (valve icon on display shows "on") but the Ultraf does not open.</p> <p>4. Blocked or stuck solenoid 6.</p> <p>5. Manual override 7 is in the close position (counterclockwise).</p> <p>6. No watering program is "on".</p> <p>7. The Ultraf app shows "system off" mode.</p>	<p>1. Check state of the selector.</p> <p>2. Check for loose batteries contacts or low voltage.</p> <p>3. Check electric coil by carefully listening to the shifting "click" sound.</p> <p>4. No water from solenoid's drain (1).</p> <p>5. No water from solenoid's drain (1).</p> <p>6. Valve icon on display shows "off".</p> <p>7. Check app's system mode.</p>	<p>1. Turn selector to the Open or Auto position.</p> <p>2. Make sure contact surface is good/replace batteries if low.</p> <p>3. Replace damaged coil with a new one. Reassemble and activate.</p> <p>4. Turn off water supply to the valve. Dismantle and clean solenoid's drain. Reassemble and activate.</p> <p>5. Turn override 7 to "Auto" (vertical) position. .</p> <p>6. Initiate a watering program.</p> <p>7. Use app to turn "system on".</p>