



# Modernizing Commercial Water Softening

Elevating Your Business with  
**Connected Water Softening**



[EcoWater Commercial Universal Control]

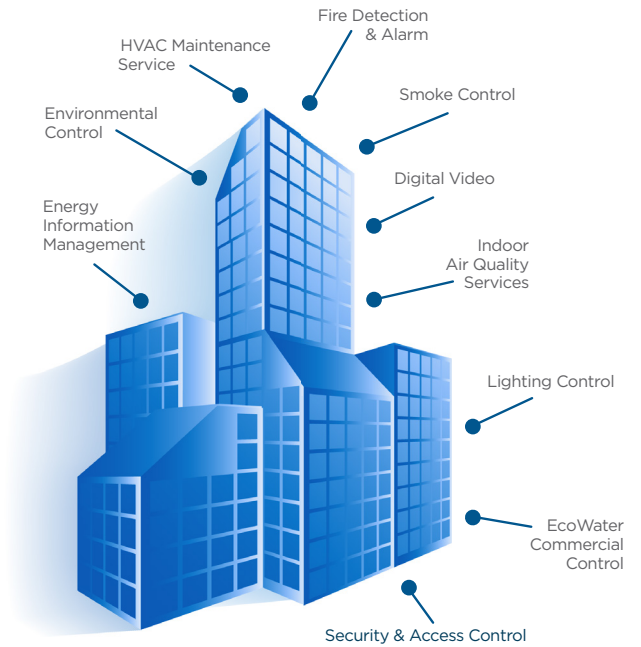
Smarter Water by **EcoWater**

# Smarter Softer Water

In a connected world, streamlined operations are paramount. Your business thrives on efficiency. So, why not extend this to your water treatment?

## How does it work?

BMS is notified of stat uses such as low salt, efficiencies, and operational issues



**EcoWater efficiently**  
provides soft water  
to a commercial building

**EcoWater Commercial Control**  
integrates with the top BMS providers.





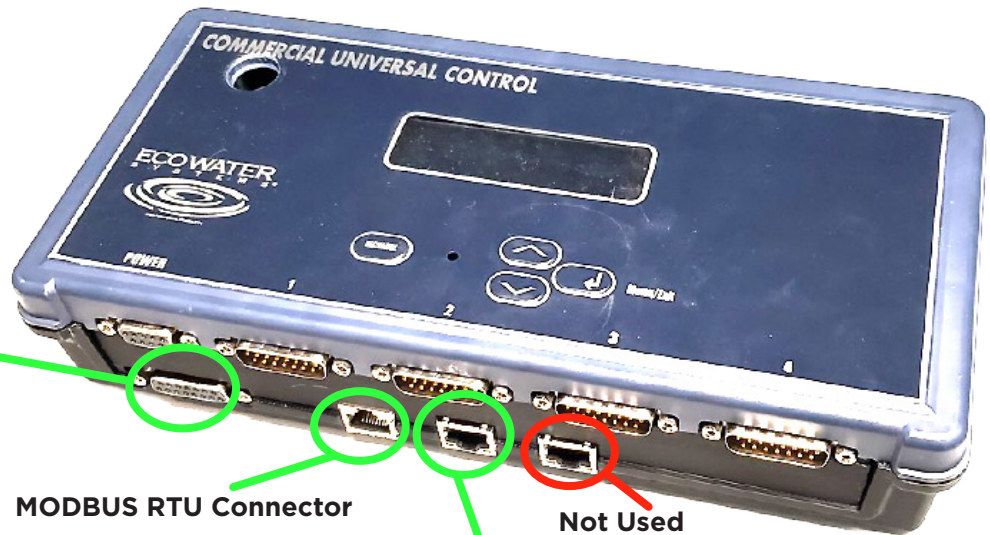
# Install Checklist

## EcoWater Commercial Universal Control Enhanced BMS Requirements

- ✓ Your facility already has a BMS system
- ✓ BMS Capable technician (Supplied by customer)
- ✓ MODBUS Requirements
  - ✓ Connections
  - ✓ MODBUS TCP/IP – Center RJ45 connector
  - ✓ IP Address
  - ✓ Static or Dynamic
  - ✓ Default 10.110.209.20
- ✓ MODBUS RTU – RJ45 Connector with no lights
  - ✓ RJ45 Connector with no lights is Modbus RTU connection.
  - ✓ Ethernet RJ45 Male Plug Terminal Block
  - ✓ Pinout
    - ✓ Pin 4 – Signal B
    - ✓ Pin 5 – Signal A
    - ✓ Pin 8 – Ground



### MODBUS RTU Connector



**BMS Control Power supply**  
(2 power supplies required)

**MODBUS RTU Connector**

**MODBUS TCP/IP Connector**

**Not Used**

Reg Addr	Description	Data Type	R/W State
<b>IDENTIFICATION</b>			
40001	Control Software Revision	U16	RO
40002	Control Bootloader Software Revision	U16	RO
40003	Daughter Software Revision	U16	RO
40004	Daughter Bootloader Software Revision	U16	RO
40005	Serial Number High (upper 16-bits)	U16	RO
40006	Serial Number Low (lower 32-bits)	U32H	RO
40007	Serial Number Low (lower 32-bits)	U32L	RO
<b>CURRENT DATA</b>			
41001	Current Cycle Time Remaining (in seconds)	U16	RO
41002	Current Position Time Remaining (in seconds)	U16	RO
41003	Current Time (in seconds since 1/1/1970)	U32H	RO
41004		U32L	RO
41005	Historical Average Daily Usage - Day 1	U32H	RO
41006		U32L	RO
41007	Historical Average Daily Usage - Day 2	U32H	RO
41008		U32L	RO
41009	Historical Average Daily Usage - Day 3	U32H	RO
41010		U32L	RO
41011	Historical Average Daily Usage - Day 4	U32H	RO
41012		U32L	RO
41013	Historical Average Daily Usage - Day 5	U32H	RO
41014		U32L	RO
41015	Historical Average Daily Usage - Day 6	U32H	RO
41016		U32L	RO
41017	Historical Average Daily Usage - Day 7	U32H	RO
41018		U32L	RO
41019	Historical Variance of Gallons Used - Day 1	U32H	RO
41020		U32L	RO
41021	Historical Variance of Gallons Used - Day 2	U32H	RO
41022		U32L	RO
41023	Historical Variance of Gallons Used - Day 3	U32H	RO
41024		U32L	RO
41025	Historical Variance of Gallons Used - Day 4	U32H	RO
41026		U32L	RO

Reg Addr	Description	Data Type	R/W State
<b>CURRENT DATA</b>			
41027	Historical Variance of Gallons Used - Day 5	U32L	RO
41028		U32H	RO
41029	Historical Variance of Gallons Used - Day 6	U32L	RO
41030		U32H	RO
41031	Historical Variance of Gallons Used - Day 7	U32L	RO
41032		U16	RO
41033	Lifetime Estimated Salt Efficiency	U16	RO
41034	Number Of Recharges	U16	RO
41035	Powered Up Days	U16	RO
41036	Salt Efficiency 30-Day	U32L	RO
41037	Historical Average Daily Usage - Day 4	Bit Field	RO
41038	<b>System Status Flags</b> b0: Immediate Switch State (0 = Open, 1 = Closed) b1: Low Salt Alert (0 = Non-Active, 1 = Active)	U16	RO
41039	Tank 1 Average Capacity Remaining at Regen	U16	RO
41040	Tank 2 Average Capacity Remaining at Regen	U16	RO
41041	Tank 3 Average Capacity Remaining at Regen	U16	RO
41042	Tank 4 Average Capacity Remaining at Regen	U16	RO
41043	Tank 1 Average Daily Gallons	U16	RO
41044	Tank 2 Average Daily Gallons	U16	RO
41045	Tank 3 Average Daily Gallons	U16	RO
41046	Tank 4 Average Daily Gallons	U16	RO
41047	Tank 1 Average Hours Between Recharges	U16	RO
41048	Tank 2 Average Hours Between Recharges	U16	RO
41049	Tank 3 Average Hours Between Recharges	U16	RO
41050	Tank 4 Average Hours Between Recharges	U16	RO
41051	Tank 1 Beginning Can Speed	U16	RO
41052	Tank 2 Beginning Can Speed	U16	RO
41053	Tank 3 Beginning Can Speed	U16	RO
41054	Tank 4 Beginning Can Speed	U16	RO
41055	Tank 1 Cam Position	U16	RO
41056	Tank 2 Cam Position	U16	RO
41057	Tank 3 Cam Position	U16	RO
41058	Tank 4 Cam Position	U16	RO
41059	Tank 1 Cam Requested Position	U16	RO

Reg Addr	Description	Data Type	R/W State
<b>CURRENT DATA</b>			
41094	<p><b>Tank 1 Status Flags</b></p> <p>b0: Cam Position Switch (0 = Closed, 1 = Open)  b1: Motor (0 = Off, 1 = On)  b2: Offline/Online (0 = Online, 1 = Offline)  b3: Recharge Status (0 = Not Recharging)  (1 = Recharging)  b4: Recharge Now Status (0 = Not Scheduled)  (1 = Scheduled)  b5: Recharge Tonight Status (0 = Not Scheduled)  (1 = Scheduled)</p>	Bit Field	RO
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Reg Addr	Description	Data Type	R/W State
<b>PROGRAMMABLE PARAMETERS</b>			
42001	Backwash Time	U16	R/W
42002	Brine Tank Diameter	U16	R/W
42003	Brine Time	U16	R/W
42004	<p style="text-align: center;"><b>Configuration Flags</b></p> <ul style="list-style-type: none"> <li>b: System Type (0 = Softener, 1 = Filter)</li> <li>b: Unit Configuration (0 = English, 1 = Metric)</li> <li>  b: Clock Format (0 = 12 Hr, 1 = 24 Hr)</li> <li>b: Rolling Display Enable (0 = Off, 1 = On)</li> <li>  b: Salt Monitor Enable (0 = Off, 1 = On)</li> <li>  b: Recharge 97% Enable (0 = Off, 1 = On)</li> <li>b: Second Backwash Enable (0 = Off, 1 = On)</li> <li>b: Filter Pressure Drop Enable (0 = Off, Gallon Mode) (1 = On, Pressure Mode)</li> </ul>	Bit Field	RO
42005	Fast Rinse Time	U16	R/W
42006	Filter Capacity (in gallons)	U16	R/W
42007	Fixed Reserve (in 1% increments)	U16	R/W
42008	Hardness Grains	U16	R/W
42009	Inlet Pressure Calibration Low Point	U16	R/W
42010	Inlet Pressure Calibration High Point	U16	R/W
42011	Language Setting	U16	R/W
42012	Low Salt Alert Level	U16	R/W
42013	Maximum Days Between Recharges	U16	R/W
42014	Minimum Tanks In Service	U16	R/W
42015	Number Of Valves	U16	R/W
42016	Outlet Pressure Calibration Low Point	U16	R/W
42017	Outlet Pressure Calibration High Point	U16	R/W

Reg Addr	Description	Data Type	R/W State
<b>PROGRAMMABLE PARAMETERS</b>			
42018	Peak Flow Trippoint	U16	R/W
42019	Pressure Drop Trippoint	U16	R/W
42020	Recharge Method	U16	R/W
42021	Recharge Tonight Time	U16	R/W
42022	Refill Rate (in 0.1 gpm)	U16	R/W
42023	Resin Quantity (in 0.5 ft3)	U16	R/W
42024	Salt Dose (in lbs/ft3)	U16	R/W
42025	Salt Efficiency Mode	U16	R/W
42026	Salt Level	U16	R/W
42027	Second Backwash Time	U16	R/W
42028	Turbine Type	U16	R/W
42029	Valves Per Brine Tank	U16	R/W
42030	Valve Type	U16	R/W
<b>MODBUS PARAMETERS</b>			
43001	Unit Address	U16	R/W
43002	Baud Rate	U16	R/W
43003	Message Reply Delay	U16	R/W
43004	IP Address (stored as hex code)	U32H	R/W
43005		U32L	R/W
43006	Sub Network (stored as hex code)	U32H	R/W
43007		U32L	R/W
43008	Gateway (stored as hex code)	U32H	R/W
43009		U32L	R/W

# The Business of Commercial Water

When you run a business that uses water, it's essential to have the hard facts: Hard water costs industries millions of dollars annually in additional maintenance and equipment replacement.



Reduce  
Plumbing Repairs



Reduce Hard Water  
Spots on Glassware  
and Flatware



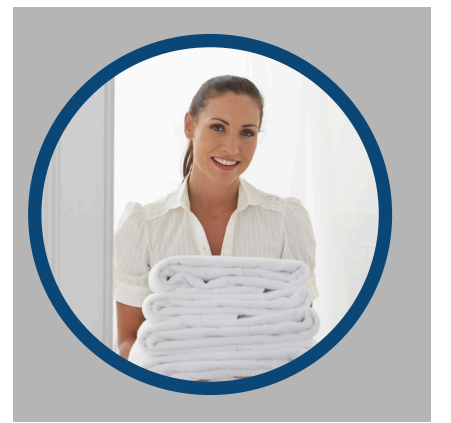
Reduce Fixture Wear



Save on Energy  
Expenses



Prolong  
Appliance Life



Prolong Linen  
and Textile Life



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