HEF CWST Backwash Interlock Panel

Kit for Standard HEF CWST Product

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1 CONTACT DETAILS

For all service enquiries contact:

AmeriWater
3345 Stop 8 Rd
Dayton, Ohio 45414
Tel No. 800-535-5585

(Or your local authorized **AmeriWater** dealer)

Useful Telephone Nos.

Tel No…… Contact Name:…….

Tel No…… Contact Name:…….

2 THEORY OF OPERATION

The HEF CWST Backwash Interlock Panel, 0153-0224, is used with the standard HEF CWST product to prevent multiple HEF CWST systems from entering into a Backwash cycle if one unit is already backwashing. If multiple HEF CWST systems are tied to a common drain line and the line is sized for the flow from 1 unit, then multiple units will cause flooding if any 2 or more units are active at the same time. The Interlock Panel will be wired to each main control panel to utilize the existing Backwash operation output and send a signal back to each control panel to inhibit the start of any other Backwash cycles. When the Backwash cycle is complete from the active unit, the inhibit signal will be deactivated for the other panels, allowing them to enter a Backwash cycle, if needed.

3 INSTALLATION

(4) Stainless steel brackets attached to the HEF CWST Backwash Interlock Panel are provided for mounting the panel to a wall.

The panel should be located in a central location to all the HEF CWST systems for ease of wiring all the interlock signals to their respective control panels. The individual HEF CWST control panels provide the power required to activate the relays inside the interlock panel. Each HEF CWST control panel provides a 24VDC signal, so multiple power sources are present inside the interlock panel. Care needs to be taken when accessing the interlock panel.

There are 8 strain reliefs in the bottom of the Interlock panel to provide wiring access from each HEF CWST control panel. The strain reliefs are marked for Tank 1, Tank 2, Tank 3, and Tank 4. One strain relief is meant to be used for the incoming signal wiring for the HEF CWST control panel to identify when the unit is in a Backwash cycle. The other strain relief is for the return wire to the HEF CWST control panel which signals the Backwash inhibit.

WARNING: WHEN MAKING ELECTRICAL CONNECTIONS MAKE SURE THAT THE DEVICES ARE IN A SAFE ELECTRICAL CONDITION. SERIOUS INJURY OR DEATH COULD OCCUR!

Refer to Section 0, Drawings, for proper connection of wires to the terminal block (TB1), inside the HEF CWST Backwash Interlock Panel.

Refer to Section 0, Drawings, for proper connection of wires to the terminal block, inside the HEF CWST control panel.

The mounting location of the Interlock Panel and the individual HEF CWST control panels will be site dependent. Therefore, the distances between all panels will be subject to change. The interlock wiring between panels is not provided with this kit. The electrical contractor will need to provide the interlock wiring and install it between the panels as part of the unit installation on site. A separate conduit is required for each HEF CWST that will be connected to the Interlock Panel.

1. Tank 1 Connection
   The physical connection between Tank 1 and the Backwash Interlock Panel is made thru hard wiring. Wire runs need to be completed after the Backwash Interlock Panel has been centrally located to all HEF CWST units and the HEF CWST main control panels have been set. Follow the HEF CWST 1 Wiring Layout for proper connections.
2. Tank 2 Connection
   The physical connection between Tank 2 and the Backwash Interlock Panel is made thru hard wiring. Wire runs need to be completed after the Backwash Interlock Panel has been centrally located to all HEF CWST units and the HEF CWST main control panels have been set. Follow the HEF CWST 2 Wiring Layout for proper connections.

3. Tank 3 Connection
   The physical connection between Tank 3 and the Backwash Interlock Panel is made thru hard wiring. Wire runs need to be completed after the Backwash Interlock Panel has been centrally located to all HEF CWST units and the HEF CWST main control panels have been set. Follow the HEF CWST 3 Wiring Layout for proper connections.

4. Tank 4 Connection
   The physical connection between Tank 4 and the Backwash Interlock Panel is made thru hard wiring. Wire runs need to be completed after the Backwash Interlock Panel has been centrally located to all HEF units and the HEF main control panels have been set. Follow the HEF CWST 4 Wiring Layout for proper connections.

4 START-UP

After all mounting, wiring, and plumbing have been completed for the HEF CWST and Backwash Interlock panels, the unit is ready to be started up. Complete the system checks and startup procedure for the individual HEF CWST units according to their respective Operation Manual(s). When those systems are determined to be functioning properly, the interlock panel should be tested. Begin by initiating a manual backwash on any of the 4 HEF CWST units. The associated relay should turn ON in the interlock panel. With that system in a Backwash mode, attempt to put any of the remaining 3 units into a manual backwash. If all wiring connections are correct, the remaining units will have their Backwash modes inhibited so they will be unable to start a Backwash cycle. The units will remain in Service mode or have Service mode initiated. After the initial backwash is finished or aborted, the other units will be free to start a Backwash cycle. Continue to test all 4 units for successful interlocks.

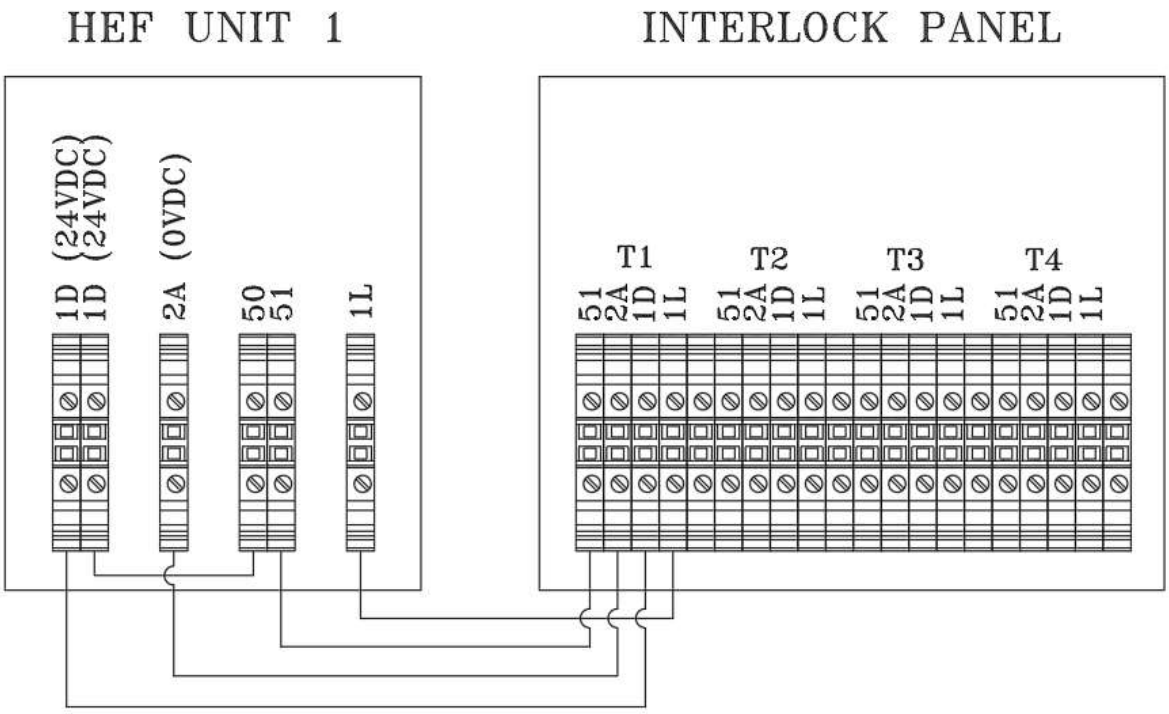
5 DRAWINGS

HEF CWST UNIT 1

Wire No. From	Wire No. To	Description
1D (HEF CWST)	50 (HEF CWST)	24VDC Jumper Wire
51 (HEF CWST)	T1-51 (INTERLOCK)	24VDC on CR1 Coil Control
2A (HEF CWST)	T1-2A (INTERLOCK)	0VDC on CR1 Coil Control
1D (HEF CWST)	T1-1D (INTERLOCK)	CR2, CR3, and CR4 N.O. Output to 24VDC
1L (HEF CWST)	T1-1L (INTERLOCK)	CR2, CR3, and CR4 N.O. Output to PLC

* Inputs are 24VDC / Outputs are Relay type

HEF CWST 1 Wiring Layout

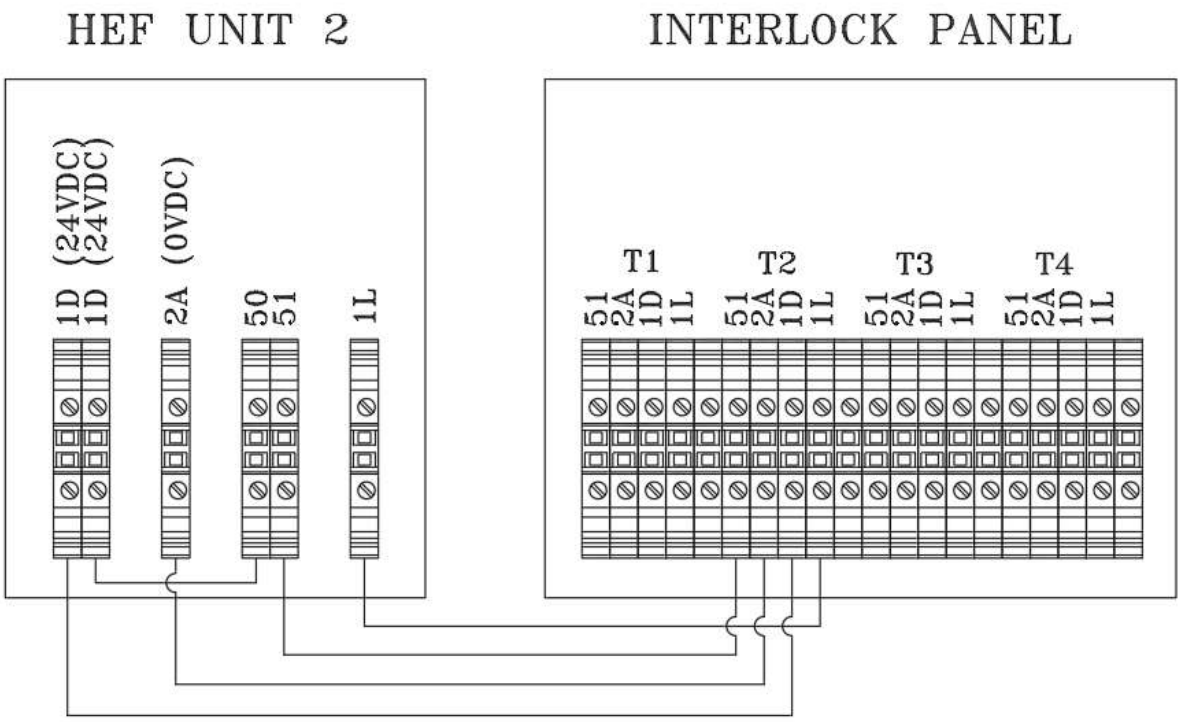


HEF CWST UNIT 2

Wire No. From	Wire No. To	Description
1D (HEF CWST)	50 (HEF CWST)	24VDC Jumper Wire
51 (HEF CWST)	T2-51 (INTERLOCK)	24VDC on CR2 Coil Control
2A (HEF CWST)	T2-2A (INTERLOCK)	0VDC on CR2 Coil Control
1D (HEF CWST)	T2-1D (INTERLOCK)	CR1, CR3, and CR4 N.O. Output to 24VDC
1L (HEF CWST)	T2-1L (INTERLOCK)	CR1, CR3, and CR4 N.O. Output to PLC

* Inputs are 24VDC / Outputs are Relay type

HEF CWST 2 Wiring Layout

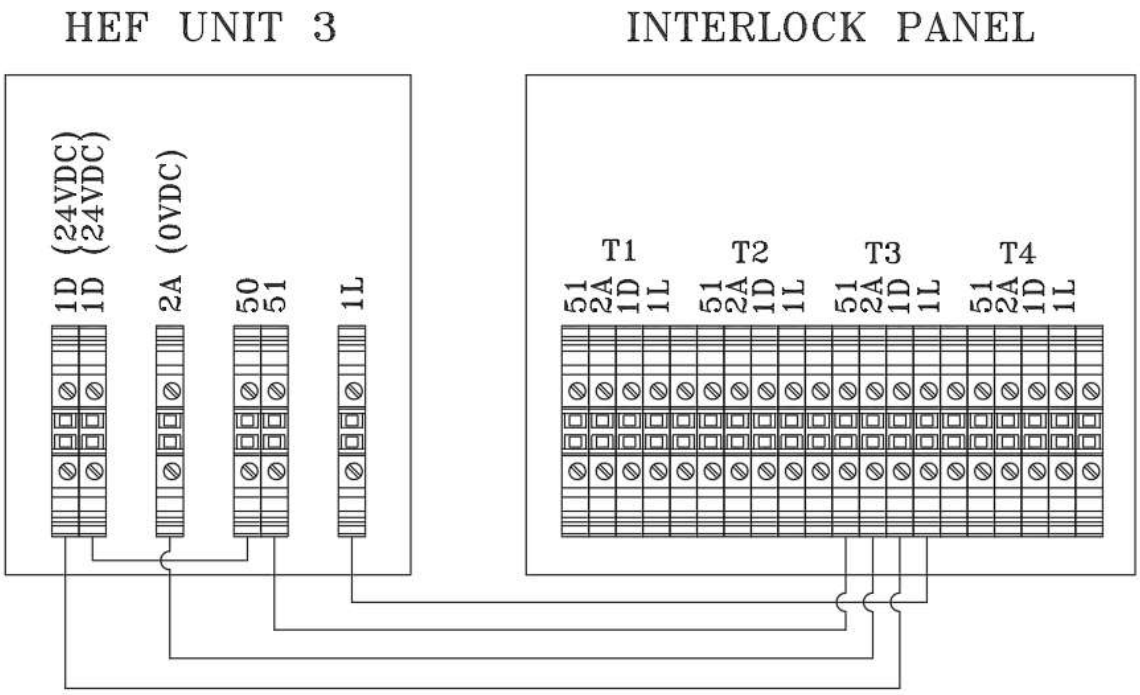


HEF CWST UNIT 3

Wire No. From	Wire No. To	Description
1D (HEF CWST)	50 (HEF CWST)	24VDC Jumper Wire
51 (HEF CWST)	T3-51 (INTERLOCK)	24VDC on CR3 Coil Control
2A (HEF CWST)	T3-2A (INTERLOCK)	0VDC on CR3 Coil Control
1D (HEF CWST)	T3-1D (INTERLOCK)	CR1, CR2, and CR4 N.O. Output to 24VDC
1L (HEF CWST)	T3-1L (INTERLOCK)	CR1, CR2, and CR4 N.O. Output to PLC

* Inputs are 24VDC / Outputs are Relay type

HEF CWST 3 Wiring Layout

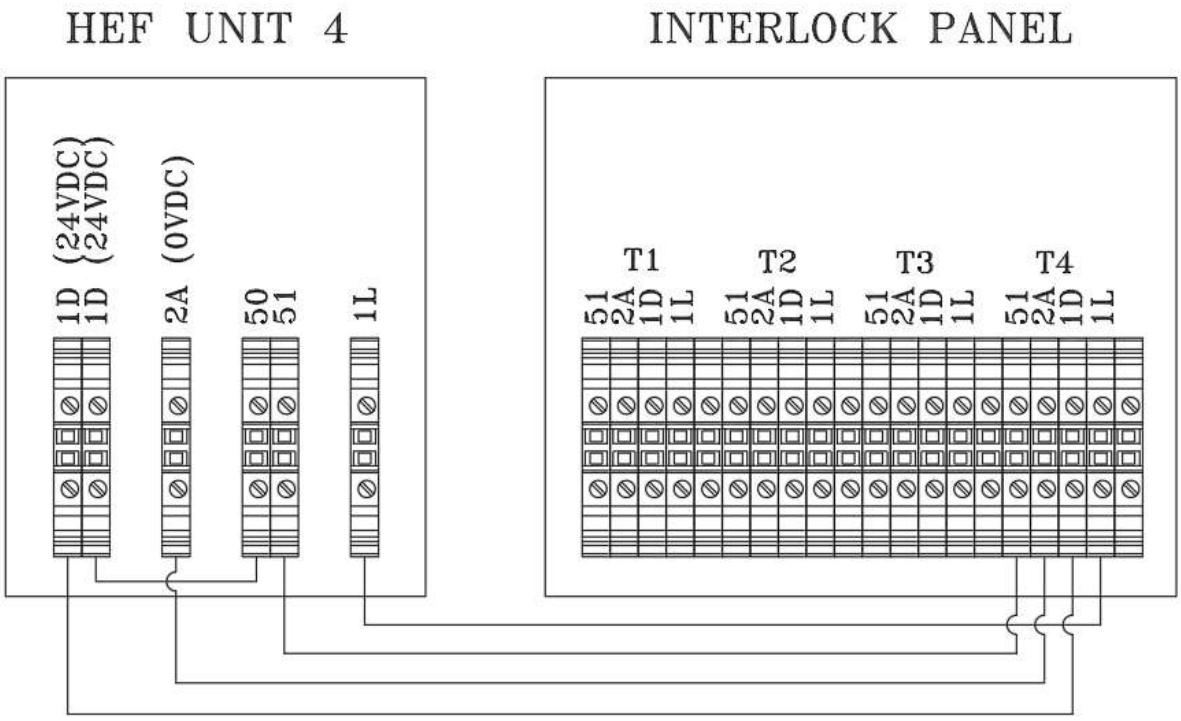


HEF CWST UNIT 4

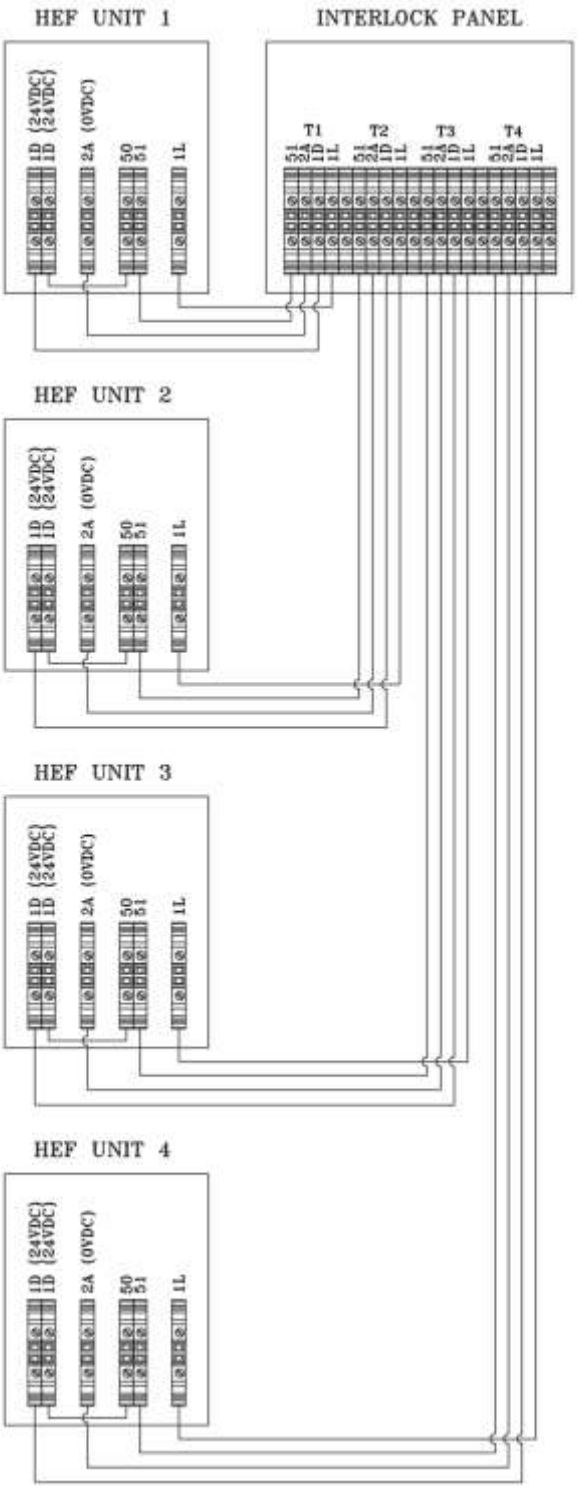
Wire No. From	Wire No. To	Description
1D (HEF CWST)	50 (HEF CWST)	24VDC Jumper Wire
51 (HEF CWST)	T4-51 (INTERLOCK)	24VDC on CR4 Coil Control
2A (HEF CWST)	T4-2A (INTERLOCK)	0VDC on CR4 Coil Control
1D (HEF CWST)	T4-1D (INTERLOCK)	CR1, CR2, and CR3 N.O. Output to 24VDC
1L (HEF CWST)	T4-1L (INTERLOCK)	CR1, CR2, and CR3 N.O. Output to PLC

* Inputs are 24VDC / Outputs are Relay type

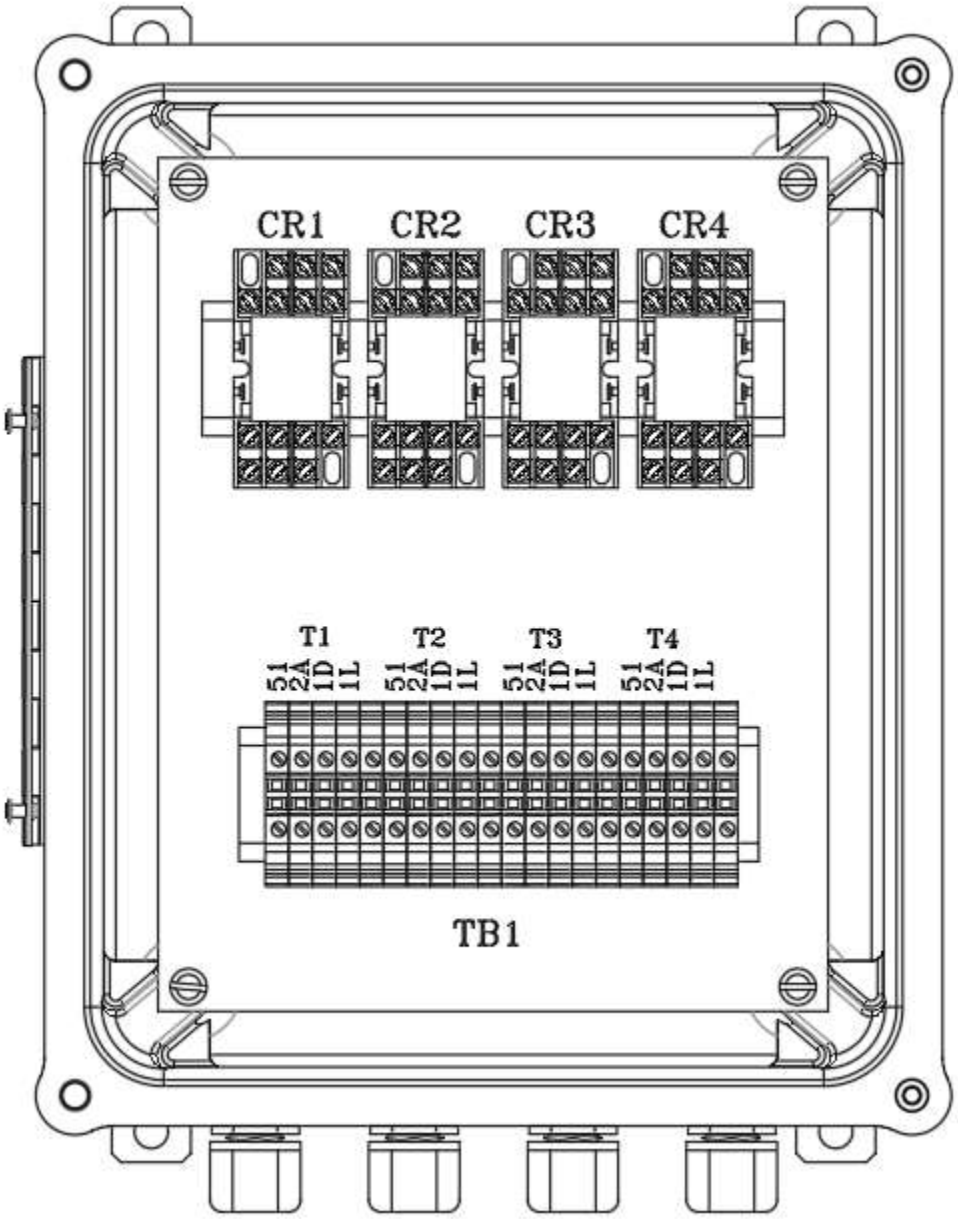
HEF CWST 4 Wiring Layout



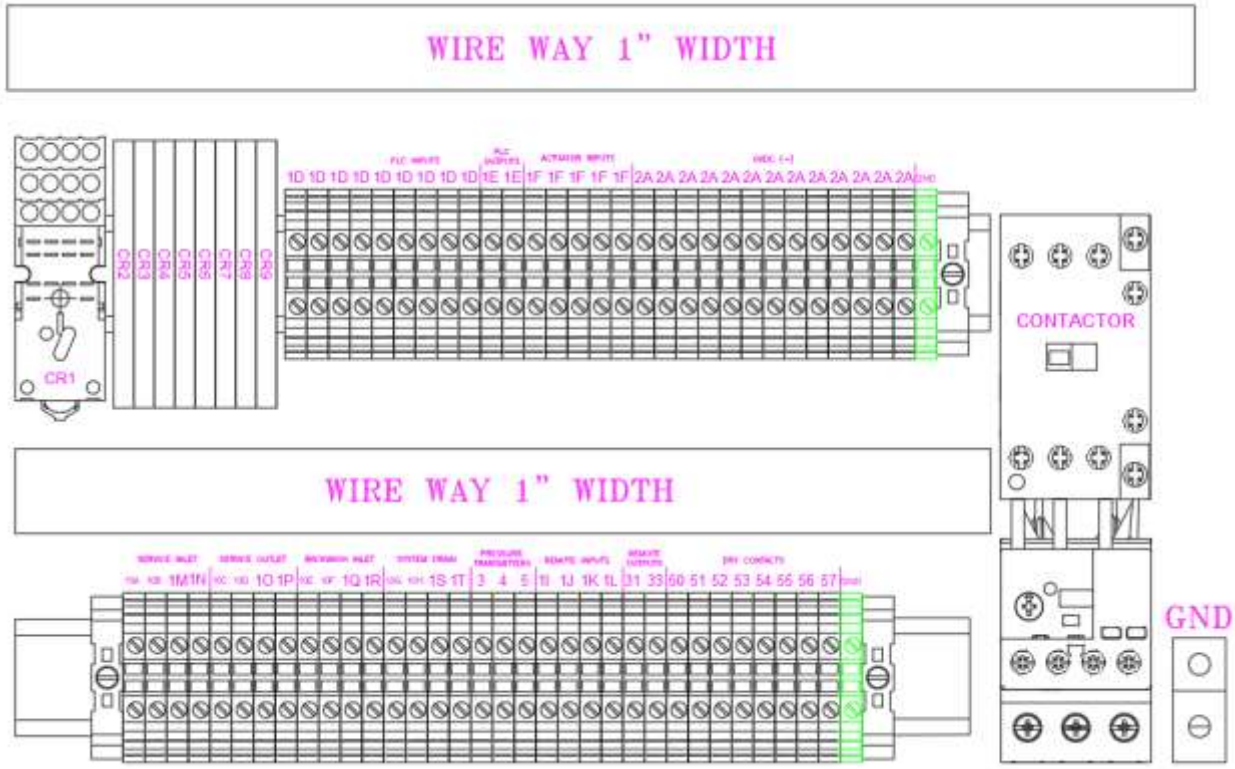
HEF CWST Overall Wiring Layout



Interlock Panel Layout



HEF CWST Single Tank Terminal Layout



HEF CWST Multi Tank Terminal Layout

⚠ WARNING

This product can expose you to chemicals such as vinyl chloride (used in the production of PVC) or Nickel (used in the production of stainless steel), that are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Dear Valued Customer,

California Proposition 65 (Prop 65) is the Safe Water and Toxic Enforcement Act of 1986. The State of California began enforcing amendments to California Prop 65 at the end of August 2018. Prop 65 requires manufacturers to provide a clear and reasonable warning to residents of California about chemicals used in products that they purchase that are included on the Prop 65 Chemical List. The chemicals included on the list are chemicals that are known to the State of California to cause cancer, birth defects, or other reproductive harm. One such chemical is Vinyl Chloride, a compound used to produce Polyvinyl Chloride (PVC). The AmeriWater system you have purchased may contain PVC or stainless steel parts.

While warnings are only required in the State of California, AmeriWater has initiated the use of Prop 65 labeling for all products to ensure compliance with California regulations. Please note that the above warning does not necessarily mean that the product that you have purchased is unsafe. Products that have been cleared for market by FDA have been determined to be safe and effective by the United States Food and Drug Administration. The warning is simply a requirement by the State of California. If you wish to obtain additional information, please visit: p65warnings.ca.gov. You may also contact your AmeriWater representative if you have any questions.

Thank you for your understanding and we look forward to continuing to serve you.