

WeatherTRAK FlowLink™ Installation Instructions

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Revision 2

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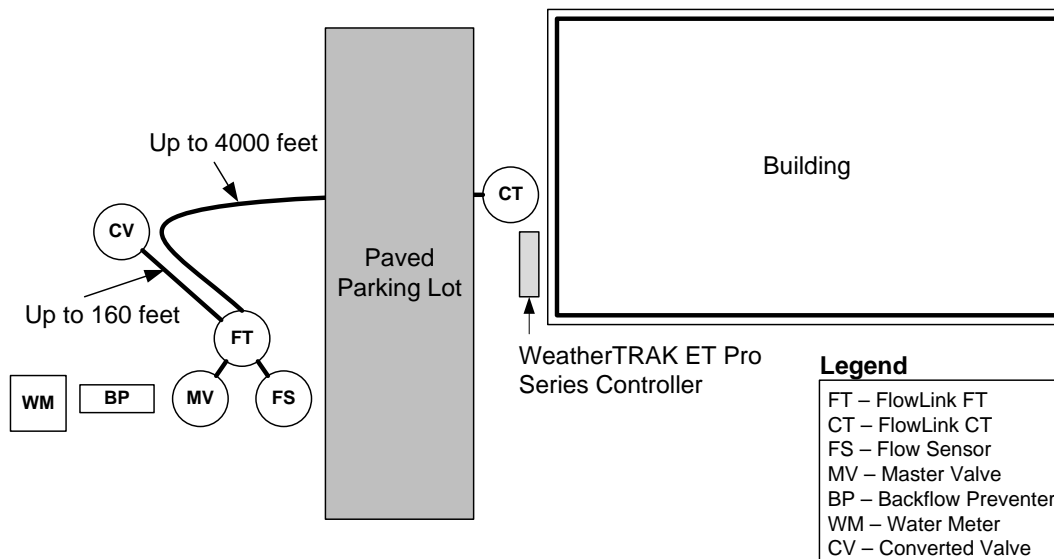
Introduction

WeatherTRAK FlowLink™ provides the easiest, least expensive way to enable flow management and control to an existing site where obstructions, such as hardscape, making it impractical and costly to trench new field wires from the point of connection to the irrigation controller. WeatherTRAK Flow Management provides the ability for proactive water budget tracking, potentially greater water savings and insurance against site damage due to mainline breaks, lateral breaks, and leaks. It also enables a higher water management service level through finer site control, proactive water budget tracking, and real-time site water usage visibility and reporting.

WeatherTRAK FlowLink allows an installer to connect a flow sensor and master valve to a WeatherTRAK ET Pro Series controller by utilizing existing field wires that are close to the point of connection. FlowLink works by enabling two-way communication from the flow sensor and master valve to a WeatherTRAK ET Pro Series controller. FlowLink converts an existing valve wire close to a site's irrigation point of connection from just a power line connection into both a power and communication line.

FlowLink has two parts, the Controller Transceiver installed at the controller and the Field Transceiver installed near the irrigation point of connection. The Controller and Field Transceivers are installed in pairs and Figure 1 below represents a typical installation where the Controller Transceiver (CT) is installed adjacent to a WeatherTRAK ET Pro Series controller and a Field Transceiver (FT) is installed in the field anywhere up to 4000 feet away adjacent to a flow sensor and/or master valve.

WeatherTRAK FlowLink Typical Installation



A typical installation procedure includes:

- 1) Connect the installed flow sensor and master valve to the FlowLink FT
- 2) Connect the converted valve (CV) wires to the FlowLink FT
- 3) Connect the original station wires to FlowLink FT
- 4) Connect the FlowLink CT to the WeatherTRAK ET Pro Series Controller



Installation Materials

This section describes the installation materials needed to perform a typical installation.

WeatherTRAK FlowLink materials included

No.	Qty	Description
1	1	WeatherTRAK FlowLink CT assembly
2	3	Mounting Screws and plastic anchors
3	1	FlowLink CT Strain Relief
4	12	DBY waterproof wire connectors (8 for FT connections, 4 at converted valve)
5	1	WeatherTRAK FlowLink FT assembly

Suggested Tools

The following is a list of suggested tools that are needed to complete this installation.

No.	Description
1	Philips-head screwdriver
2	Hammer drill w/ assorted masonry bits
3	Lineman pliers / diagonal pliers
4	Wire strippers
5	Shovel, digging bar and/or other tools need for trenching field wire

Contractor Supplied Materials

The following is a list of suggested materials that are needed to complete this installation.

No.	Qty	Description
1	1	Unspecified length of solid-core, color-coded direct burial 14 AWG wire used between the converted station valve box and the WeatherTRAK FlowLink FT

Installation Procedure

Site Qualification

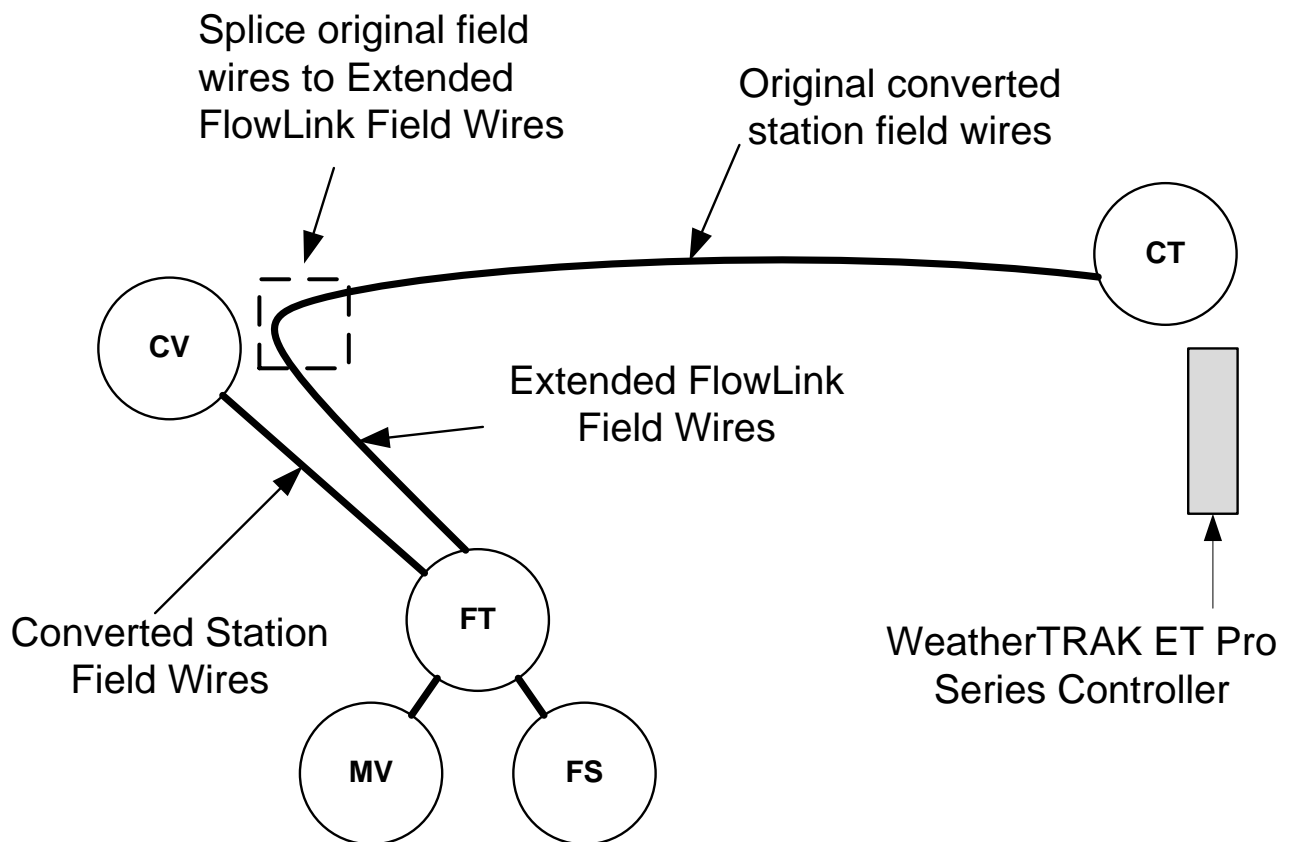
Site should be qualified before installing FlowLink. Ensure that the included Site Qualification worksheet has been completed before installing FlowLink.

WeatherTRAK FlowLink Installation Preparation

This WeatherTRAK FlowLink installation procedure assumes the following has already been complete.

1. Converted Station identified
2. Compatible Flow Sensor and Master Valve installed
3. Two pair of field wires (Qty 4 wires) pulled between converted station valve box and Flow Sensor valve box

Installing WeatherTRAK FlowLink Field Transceiver (FT)



Step 1 – Splice Original Station Field Wires to FlowLink field wires

1. Disconnect Converted Station Solenoid Leads from Field Wires
2. Connect original Common and Converted Station Hot field wires to the Extended FlowLink field wires back to the Flow Sensor Valve Box

Step 2 – Connect Converted Station to FlowLink FT

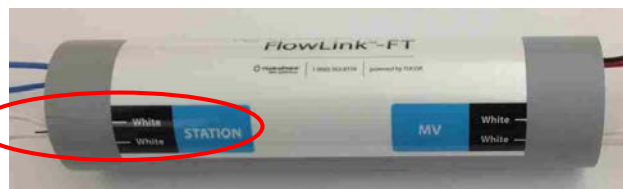
1. Connect Converted Station Solenoid Leads to the converted station field wires back to the Flow Sensor Valve Box

Step 3 – Connect Converted Station and Extended FlowLink field wires to FlowLink FT (FlowLink FT should be installed in flow sensor valve box)

1. Connect FlowLink FT blue LINE wires to extended FlowLink field wires in the flow sensor valve box



2. Connect the FlowLink FT white STATION wires to the converted station field wires in the flow sensor valve box

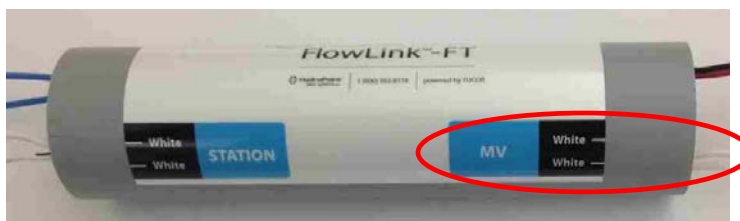


Step 4 – Connect Flow Sensor and Master Valve to FlowLink FT

1. Connect FlowLink FT Red and Black Flow wires to the flow sensor in the flow sensor valve box.



2. Connect FlowLink FT two white MV wires to the Master Valve solenoid wires.



Installing WeatherTRAK FlowLink Controller Transceiver (CT)

Step 1 - Mount the FlowLink CT

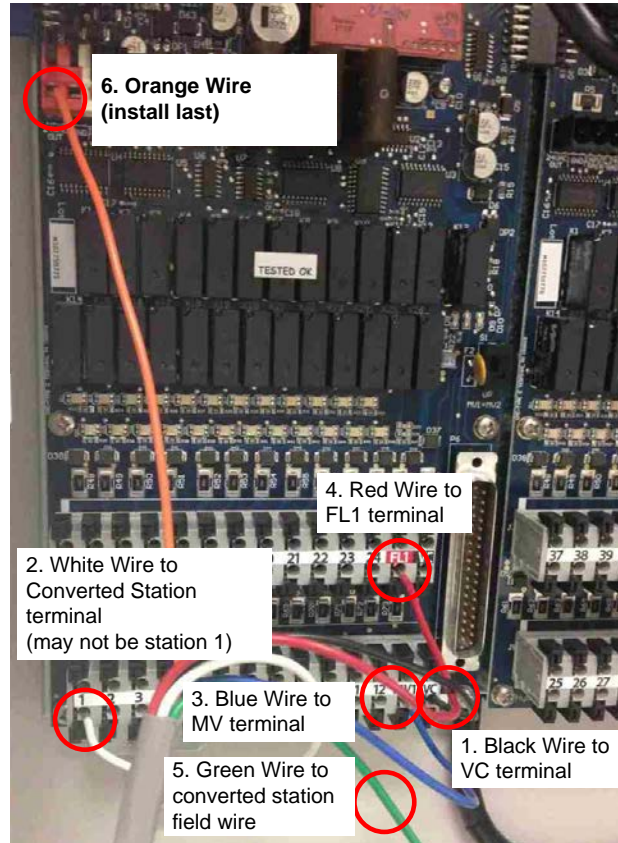
1. Mount the wall mount Controller Transceiver (CT) enclosure using the mounting supplied screws adjacent to the existing WeatherTRAK ET Pro2 controller.
 - a. Wall Mount Enclosure Configurations - The FlowLink CT wiring harness length was designed to have the bottom of the FlowLink CT installed at the same level as the bottom of the Pro2 Wall Mount Controller.
 - i. Install the FlowLink CT wire harness through the supplied strain relief through the available knock out into the controller forming a drip loop to avoid water intrusion. Leave the strain relief loose until you have completed wiring.
 - b. Small Pedestal Configurations – Mount the FlowLink CT inside the small pedestal.
 - i. Install the FlowLink CT wire harness through the supplied strain relief through the available knock out into the controller. Leave the strain relief loose until you have completed wiring.
 - c. Pedestal or Chassis Configurations – Mount the FlowLink CT inside the pedestal and attach to chassis.



Step 2 – Wire the FlowLink CT to the Controller

Note: Do not connect the CT wires unless all FlowLink FT connections have been completed; otherwise this may damage the FlowLink CT.

- 1) Connect CT Black Wire to controller Valve Common terminal
- 2) Connect CT White Wire to Converted Station terminal
- 3) Connect CT Blue Wire to Master Valve terminal
- 4) Connect CT Red Wire to Flow Input (FL1) terminal
- 5) Connect CT Green Wire to Converted Station Field Wire
- 6) **Last Step:** Connect CT Orange wire to 24 VAC (be sure that this wire is installed last)



FlowLink Installation Verification

1. Verify that Power/Activity LED is ON FlowLink CT and wait until LED becomes steady
2. Set the MV mode on the controller to NC or NO depending on MV type
3. Use the controller MANUAL mode to Turn ON Converted Station for at least 5 minutes
4. Wait 90 seconds; Read Flow Value on the Controller (on line 3 of display)
5. Observe flow for 2-3 minutes. Verify that the reported value is steady within +/- 0.1 GPM range

Compatible Flow Sensors

Compatible Flow Sensors – K and Offset Values

Manufacturer	Flow Sensor or Hydrometer Size	K Factor	Offset
Data Industrial PVC models			
735 series	½"	+00.07800	+00.90
735 series	¾"	+00.1563	+00.90
735 series	1"	+00.261119	+01.200
228 series	1-1/2"	+01.697	-00.316
Netafim Hydrometer models with Reed Switch Register			