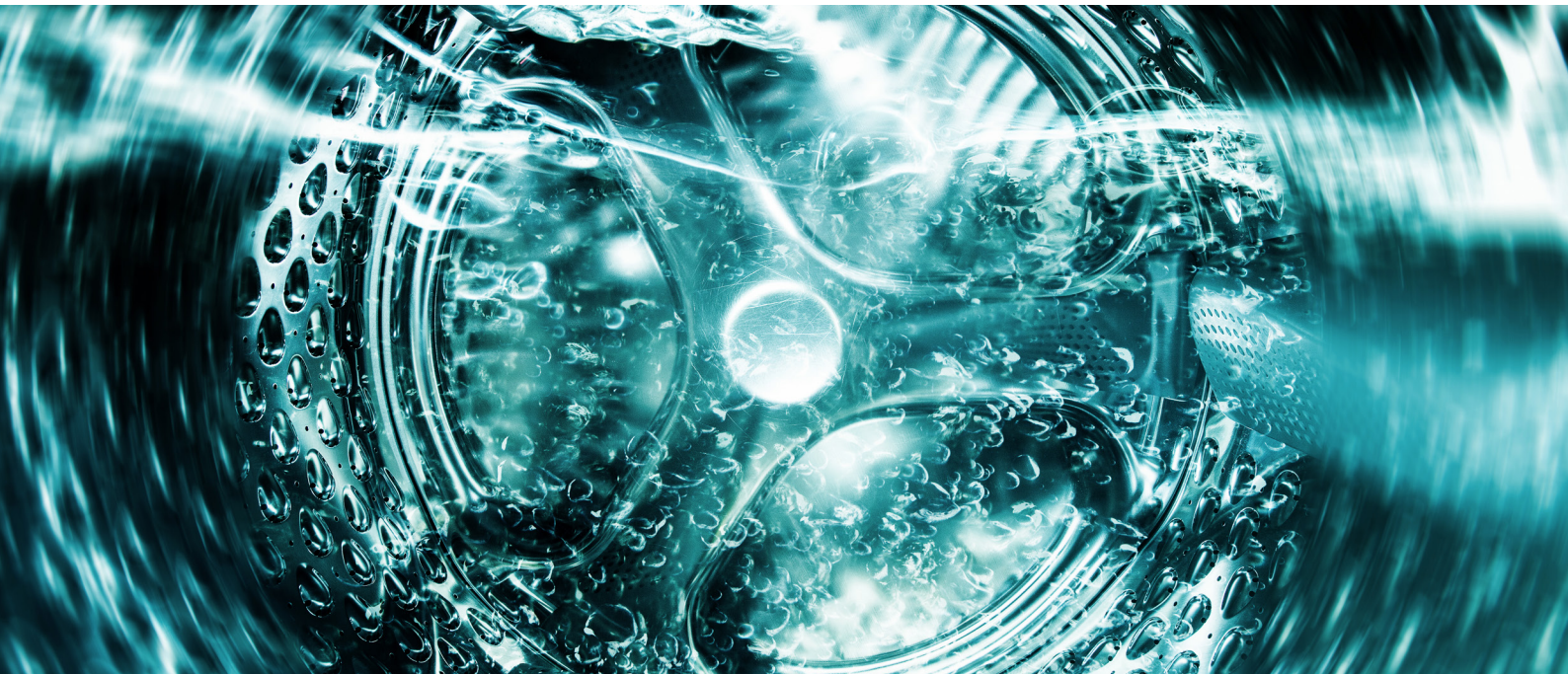# Connected Total Eclipse

## frequently asked questions



**HYDRO**

# frequently asked questions

### 1. What is the Connected Total Eclipse (TE) controller?

The Connected Total Eclipse Controller expands on Hydro's most popular laundry controller (the Total Eclipse Controller) to deliver an adaptive and easy-to-use laundry chemical management system. The Connected Total Eclipse Controller combines the classic Total Eclipse features with updated real-time reporting and remote configuration capability through Hydro Connect. The result is increased visibility into laundry performance with real-time reports on productivity, chemical usage, costs, and alarms and the ability to adjust settings remotely without making costly visits to site.

The system easily allows Hydro customers to upgrade their existing installations with connectivity at a fraction of the cost of purchasing new connected dispensers.

### 2. What is Hydro Connect?

Hydro Connect is a cloud-based Internet of Things (IoT) platform that gives chemical providers and end users increased visibility into their operations, optimizes production, reduces costs, and increases customer satisfaction. Hydro Connect was first introduced to the commercial laundry market in 2018 and now is more widely available to on-premise laundry clients through the use of the Connected Total Eclipse Controller.

### 3. Can I use the Connected TE on my existing installed base of Hydro laundry dispensers?

Yes, the Connected TE is compatible with any existing Hydro laundry dispenser including the EvoClean, LM-200, LM-100, LL-Series pump stands through the standard J1 interface cable. Simply swap out the controller and add a cellular gateway to get connected.

### 4. How does the Connected TE connect to the cloud?

There are two ways that the data from the Connected TE data can be transmitted to the cloud: Manual Upload and Real-time Streaming. The two options offer slightly different reporting and have different costs.

- **Manual Upload:** Only requires the Connected TE Controllers (no cellular gateway). The data can be written to the USB drive and then manually uploaded to create historical reports on alarms, productivity (loads and weight washed), chemical usage, and costs.

- **Real-time Streaming**: Requires both the Connected TE Controllers and a Cellular Gateway.  Files are not transferrred manually and users also get access to the real-time dashboard, daily washer reports, and alarm notifications via e-mail or SMS.



## 5. How many Connected TE controllers can I connect to the cellular gateway?

Each cellular gateway can connect to up to four Connected TE Controllers.

## 6. How does a gateway help to ensure security of my data?

The gateway uses proprietary software to securely communicate with each Connected TE Controller and to the Hydro Connect cloud.  Cellular data transmissions are inherently more secure and reliable than transmissions through the site's WiFi network.  Finally, because Hydro is built upon Microsoft Azure, it has access to all of the standard security offered through the platform, including database encryption in transit and at rest with controlled access.

## 7. Will I be able to add / take away / replace a Connected TE Controller myself?

Yes, the controllers are installed using the same J1/J2 cables that classic TE users have experience with. Additionally, the four controllers can be daisy-chained together with a single serial connection between them and the gateway.
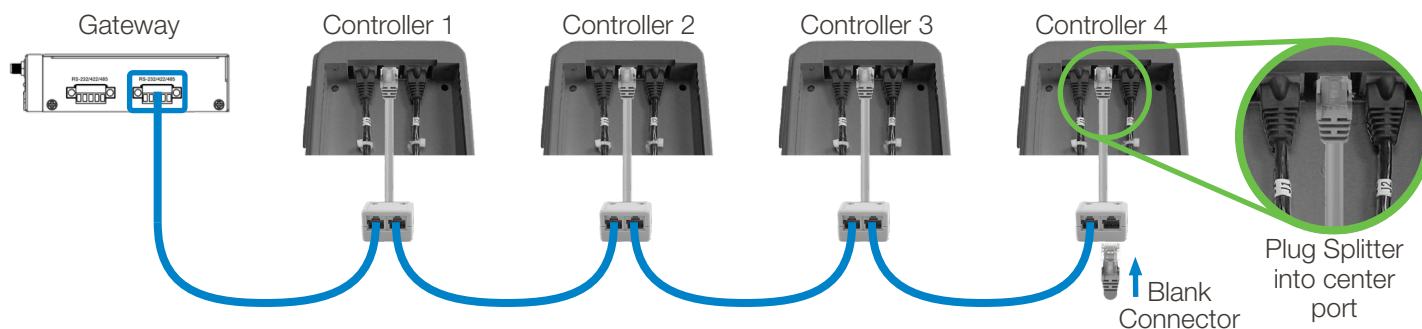


## 8. What information will be available to me in Hydro Connect that was not there before?

Below is a summary comparison of reports available in the Classic TE Controller vs the Connected TE Controller. While the data itself is similar in some ways, Hydro Connect automates the process of converting the information into useful reports that can be used to improve operations and reduce operating costs. Additionally, there are a number of reports that are unique to the Connected TE Controller due to the real-time data feed.

| Connected TE Controller | Data Type | Classic TE Controller Report |
| --- | --- | --- |
| Historical Reporting by Month | • Alarms<br>• Productivity (loads/weight)<br>• Chemical usage by formula<br>• Chemical costs by formula | • Productivity report<br>• Formula report |
| Event Data | Time stamped history of all dispenser events | Diagnostic report |
| Device Settings | All controller settings | Settings report |
| Real-time Dashboard | • Current formula<br>• Turn times<br>• Washer efficiency<br>• Real-time notifications by washer | Not applicable |
| Daily Washer Report | Detailed summary of each formula run each day with dispensed amounts | Not applicable |

## 9. Using the Connected TE, how is a dispenser with a flush manifold configured?

The Total Eclipse system offers flush manifold control when used with all Orion II, Eclipse, 8-Product Pump Interface (PI) or Eductor dispensers or upgrade kits. When programming for flush manifold installations, confirm that the "Configure PI" setting is appropriate for the PI being used and that the flush time is set to a non-zero number of seconds.

### a) Eclipse Dispensers with Flush (up to 6 products)
This is the factory default PI. This selection enables the flush control functions of our Eclipse dispensers if flush time is set to a non-zero number of seconds. If no flow is sensed, or water flow falls below .65 GPM, an optional flow switch on the flush manifold causes all products to shut down. This provides a safety interlock in the event of low water flow or other water flush system failures.

A flush jumper is present at the flush connector on the dispenser. Remove this jumper to connect the flush manifold interface cable. Products will not run without either the flush jumper installed or a functioning flush manifold connected.
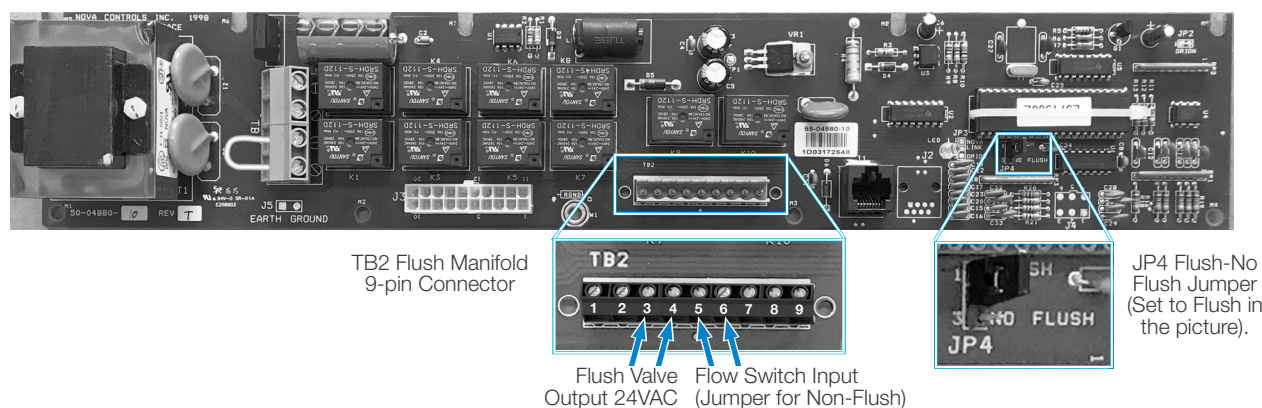
### b) Orion 2 Dispensers (up to 6 products) with Flush and an Orion 2 PI board
This selection enables the flush control functions of the LM-100, LL-6000 or LL-80000 6-product Orion systems that use an Orion II PI board. Flush time must be set to a non-zero number. If no flow is sensed, or water flow falls below .65 GPM, an optional flow switch on the flush manifold causes all products to shut down. This provides a safety interlock in the event of low water flow or other water flush system failures.

A flush jumper is present at the flush connector on the dispenser. Remove this jumper to connect the flush manifold interface cable. Products will not run without either the flush jumper or a functioning flush manifold connected.

### c) Orion Dispensers (up to 8 Products) with Flush and an 8-Product PI board
This selection enables the flush control functions of our LM-100 Orion series using an 8-Product-capable pump interface boards. These are typically used in LL-6000 units, LL-8000 units and 8-Product upgrade kits. In addition to setting the controller flush system configurations, confirm that all safety interlocks are set correctly on the PI board, i.e. solenoid connected, pressure or flow switch connected and contacts closed with flow, flush/non-flush jumper set to flush.



TB2 Flush Manifold 9-pin Connector

Flush Valve Output 24VAC

Flow Switch Input (Jumper for Non-Flush)

JP4 Flush-No Flush Jumper (Set to Flush in the picture).

**NOTE!** In flush configurations, multiple products triggered to run at the same time will run one at a time, in queue. It is imperative that the installer allow plenty of time between triggers to ensure that a product (or group of products) will run for each of its triggers. Failure to allow sufficient time between triggers could result in triggers for products being ignored.

## 10. How is a dispenser without a flush manifold configured?

Use this selection for non-flush operation. On an 8-Product PI, the flush/non-flush selection jumper must be in the non-flush position to enable non-flush operation.

## 11. What if Auto Formula Select doesn't work?

Auto Formula Select uses a programmable timed washer signal to pre-select the desired dispenser formula for "hands-free" operation and dedication of the dispensing system to microprocessor controlled washers. Ideally, use of an unused trigger input to the machine interface is advisable. In cases where this is not feasible, you may use a trigger signal input if the following guidelines are met:

- The washer must always be run "full cycle" so that the programmed count pump runs to count the load and reset the dispenser to an idle condition.

- The Auto Formula Select signal may not be the trigger signal that starts or ends a formula cycle (first product triggered starts the formula cycle and the Count Pump ends the formula cycle).

- Failure to follow these guidelines will result in erratic auto selection of formulas.