

# Battery Display Driver

The Battery Display Driver accompanies the EnergyFlow for Tesla driver. Together they enable Control4 to integrate with Tesla Powerwall.

## Configuration

### Prerequisites

- 1. Configure the EnergyFlow for Tesla driver.

### Initial configuration

- 1. Add this display driver to the project.
- 2. Go to **Connections** and find the EnergyFlow for Tesla driver.
- 3. Connect this driver to one of the `Battery State Out` bindings.
- 4. Set the `Low Battery Percent` value. This determines the battery level below which the driver will fire the `Battery is low` event.

When properly configured, you can view the current battery state in the readonly properties, including percent, charging and discharging state, and current power in watts.

## Properties

- `Cloud Status` Indicates if the license is activated, expired, or if updates are available.
- `Automatic Updates` If 'On', automatically install updates when they become available.
- `Driver Version` Numeric version of the driver.
- `Debug Mode` When 'On', print debug messages to the 'Lua' tab, and also log to the Control4 debug log.
- `Low Battery Percent` The battery level below which the driver will trigger a `Battery is low` event. Default is 19%.
- `Last Updated` The date and time when the battery state was last updated. This is the last time the EnergyFlow for Tesla driver sent an update. If this is not updating, ensure the Battery Display driver is properly bound to the EnergyFlow for Tesla Battery State Out connection.
- `Battery Percent` The current battery level percent.
- `Battery Charging` Whether the battery is currently charging.
- `Battery Discharging` Whether the battery is currently discharging.
- `Battery Power (Watts)` The current power output/input of the battery. Negative values mean the battery is charging while positive values mean the battery is discharging.

## Programming

### Events

`Battery is low` Fired when the battery level reaches the `Low Battery Percent` property value. `Battery is charging` Fired when the battery is charging. `Battery is discharging` Fired when the battery is discharging, either to the grid or to the house load.

### Conditionals

Conditionals allow you to create advanced programming logic based on battery state. Available conditionals include:

- `The Battery is Charging` - True when the battery is actively charging
- `The Battery is Discharging` - True when the battery is actively discharging
- `Battery Charge Percent is [LOGIC] [VALUE]` - Compare battery charge percentage using logical operators (equals, greater than, less than, etc.) with a numeric value from 0-100

Example uses: Trigger notifications when battery drops below a certain percentage, automate devices when battery is charging from solar, or create scenes based on battery discharge state.

### Variables

- `POWERWALL_IS_CHARGING`
- `POWERWALL_IS_DISCHARGING`
- `POWERWALL_LAST_UPDATED`
- `POWERWALL_PERCENT`
- `POWERWALL_POWER_WATTS`

## Support