



## Load Control Switch

**Enable precise, remote control in the network.** Temporarily turn off connected devices at specific residences or groups of residences with the Tendril Load Control Switch™ (LCS).

This general-purpose load control device enables energy service providers to shed electrical load during times of critical peak demand. It can also be used as part of a price responsive Demand Response program. The LCS can be connected to 120V, 240V and 24V device/circuit domestic electric hot water heaters, pool pumps or exterior AC systems. Unlike some switches with only one-way communication capabilities, the Tendril LCS is ZigBee® Smart Energy enabled, allowing for two-way communication between the device and the energy service provider. This two-way communication enables utilities to measure and verify load shed in near real time.

**Involve your customers in saving energy.** The Tendril LCS gives energy service providers the option to involve customers in reliability load shed and Demand Response events for those consumers who can't or don't want to upgrade to a smart thermostat. For instance, Tendril provides related tools including the Tendril Energize™ energy application suite, which allows energy consumers to see when their electrical devices have been subject to events. Tendril Energize also provides remote control for consumers, enabling them to turn LCS-connected electrical devices off and on.

The Tendril Load Control Switch can contribute to increased customer satisfaction while enabling energy service providers to better manage their network, improve reliability, and drive profits. For example, utilities can entice consumers with incentives for participating in Load Control events, including rebates on their electric bill. After the Load Control event has completed, the LCS restores power to the connected device. Additionally, consumers in variable pricing areas can choose to use appliances, like pool pumps, only when electricity is least expensive. The Tendril LCS can “sub-meter” a connected appliance, allowing consumers to see how much energy their pool pump, water heater, or other device consumes and costs at an individual level.

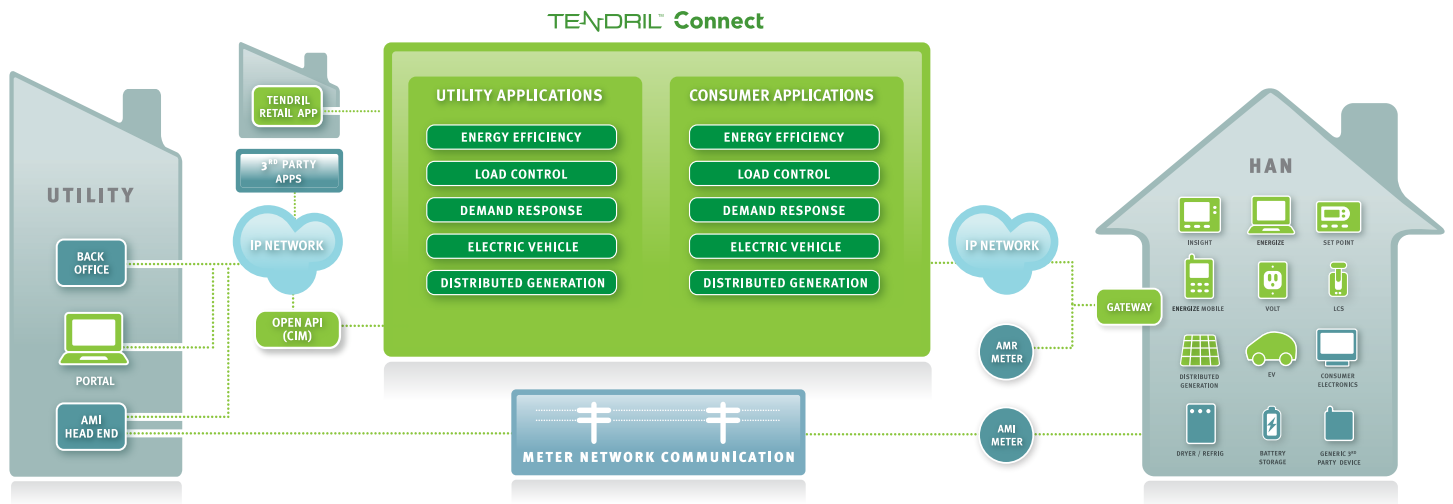
### Overview

- Works in conjunction with an energy service provider's Smart Energy programs to help balance the grid, increase reliability, and help consumers save money
- Measures energy consumption of the device connected to the LCS 30 AMP relay, with the data shown in Energize portal
- Provides control over electrical devices such as domestic hot water heaters, pool pumps and 24 VAC external AC systems, to turn off the devices during times of critical peak demand. Resumption of power is controlled by the energy service provider, as set by the duration of the Load Control event
- Consumer override is configurable
- Installation is performed by qualified technicians only. Homeowners should never install, open, service, or remove the LCS
- View charts in Energize application suite that show the consumption of the device connected to the LCS 30 AMP relay

### Key Features

- Created with rugged housing
- Designed to safely switch (turn on/off) connected load
- Outdoor use supported when device installed in vertical plane, as noted in the Tendril Load Control Switch Installation Guide
- Outdoor applications include pool pumps or exterior AC units
- Indoor use supported for load control switching of devices such as domestic water heaters and utility-room HVAC systems
- Consumer-accessible settings in Tendril Energize to perform remote control of the LCS-connected device





Tendril Connect™ is the proven energy management platform that enables unprecedented insight, choice, and control. This open standards-based, end-to-end technology enables energy service providers and their customers the ability to deploy and take advantage of tomorrow's Smart Energy solutions, today. Energy service providers and their consumers are empowered with data and analytics about energy consumption, helping to drive down costs, lower environmental impact and realize operational efficiencies.

**Integrate now and in the future.** Like all Tendril solutions, the Tendril Load Control Switch is open, standards-based and able to integrate with today's AMI and AMR meters, any Home Area Network (HAN) configuration, and a variety of products, now and in the future.

This flexible, standards-based approach also enables Tendril solutions to comply with and adapt to changing regulatory, consumer and technological needs, as well as future Smart Energy certified hardware, such as WiFi™ and HomePlug® products. With ZigBee-certified Tendril solutions, providers can implement energy management and efficiency programs more easily and securely, and consumers can reduce energy costs and their impact on the environment.

**The big advantage.** Now energy service providers can meet consumer demand and prepare for regulatory mandates by offering customers a truly integrated experience. The Tendril Connect™ platform, along with Tendril in-home products, makes it easy. No matter the network architecture or metering infrastructure, Tendril offers a solution that gives energy service providers the security and control they need, while delivering the interaction customers expect.

**About Tendril.** Tendril provides the cloud platform for the energy industry, delivering end-to-end consumer engagement products, applications and services powered by Tendril Connect™—an open, secure and scalable platform that takes the complexity out of the Energy Internet and creates a dialogue between energy service providers and their customers. Delivering consumer engagement software, in-home products and applications as well as easy to integrate utility solutions such as Demand Response and Energy Efficiency, Tendril offers unparalleled insight into energy decisions, making the Energy Marketplace a reality.

### LCS Technical Specifications

- Wide range power supply capable of operating from 85 to 276 VAC 50 or 60 Hz
- ZigBee®/802.15.4 Digi XBEEPRO-ZB Radio with additional Tendril functionality
- 2.400 - 2.483 GH, unlicensed ISM band
- 100mW radio output
- -94dBm receiver sensitivity
- 30 ampere 120/240 volt relay for line voltage devices
- 1 AMP (Max) and 24 VOLT relay for HVAC or other control circuits
- Elliptic Curve Cryptography (ECC) enabled, or Pre-configured Key enabled, for AMI and AMR configurations
- ANSI C37.90a surge withstand capability

### Requirements

- Tendril Connect™ platform

### Standards

- Complies with Part 15 of FCC rules
- Designed for ZigBee
- ETL Certified

### Availability

The Tendril LCS is available today