ZenNet Lighting Controls

Zero Wires, Zero Energy, Zero Cares!

Self-Powered Wireless
OEM Lighting Controls

Self-Powered Freedom

The **ZenNet** family of lighting controls is a self-powered, wireless system designed for stand-alone, indoor applications such as offices, conference rooms, break rooms, hotel rooms, classrooms and much more. Now lighting OEMs and retrofitters have a variety of options available to them. With no batteries and no wiring to worry about, these controls can be placed anywhere.

From retrofitting older structures to designing new construction, **ZenNet** offers a simple way to ensure flexibility, energy savings, and cost reductions to almost any space. When used to leverage the savings advantages of LED luminaires, **ZenNet** is perfect for use in Zero-Energy building design. These controls are optimal for Title 24 and ASHRAE 90 applications. Simple, from the authority on LED power, Thomas Research Products.

BATTERY-FREE

Utilizing the EnOcean Technology Platform, **ZenNet** control input devices are self-powered. They harvest energy from their surroundings– tiny changes in movement or light are all that is needed. Wall switches use the linear motion of the button push to create the power needed to send a signal to operate luminaires. Sensors with tiny solar cells convert even small amounts of indoor light into the power they need to do the same thing. These solar cells work off of any light source and the converted energy is stored for operation during times with no light.

Competing wireless systems are *all* battery-dependant, giving **ZenNet** type controls a unique advantage. Our controls are perfect for indoor rooms which receive some sunlight and/or a lot of use--it charges the small supercapacitors that the sensors use to store energy. It's the opposite for competitors, which doesn't want users to run their batteries down.

WIRELESS

ZenNet sensor and switch devices require no wires for power and no wires to operate. Ultra-low-power radio frequency communications allows these devices to be freely positioned, making for versatile layouts. Compared to a wired solution, buildings can be planned, constructed and operated with greater flexibility and lower cost. These devices use a longer wavelength which is not absorbed by building materials such as concrete or brick. An 80Ft radius radio range assumes going through two typical walls. For line of sight applications, such as warehouses, the signal can reach 1000Ft.

FREEDOM

With wireless technology, **ZenNet** installs easily into existing buildings without the need to completely rewire spaces. This makes **ZenNet** ideal for adding lighting controls to areas that have traditionally been difficult to retrofit, including historical buildings. When input devices such as switches and sensors are paired with control relays, they create a peer-to-peer network, perfect for Manual-on/Auto-off (vacancy sensor) applications. Users can set repeater levels. The system is maintenance-free, and can also be used to control HVAC electrical loads.

The system is *scalable*. Utilizing a standard technology platform means that **ZenNet** controls from TRP are also interoperable with other EnOcean-enabled controls. Plus, when used with gateway controllers, these controls can be utilized within larger building automation systems, such as BACnet. There is even a software commissioning tool available for large scale projects.

Maximize Your Freedom

Control Relay Modules

These in-line switch modules are the heart of the system, where the intelligence resides. When the modules receive a signal from any input device with which they're paired, they can react individually or as part of a scene. Standard model provides on/off switching. As the only wired devices in the system, they can be installed in or on a junction box or in a luminaire. A dimming model is available specifically for controlling LED luminaires with 0-10V dimming capabilities.

Wall Rocker Switches

Battery-free wireless rocker switches control lighting and other loads. With no wires, the wall switch can be surface mounted almost anywhere, or installed in a standard wall box. The simple act of pressing the rocker generates the energy needed. The design utilizes standard Decorator face places and is UL approved for use as a 3rd party switch. Perfectly suited for use in new construction projects or when updating an existing space. Available in single or dual models, for on/off or dimming control. Switches are position-sensitive.

Occupancy Sensors

Ceiling-mount and Wall-mount occupancy sensors can send a signal to turn light on when someone enters a room, or turn off lights when a room is not in use. Perfect for any space where traffic patterns or occupancy determine the need for light or power. Install the occupancy sensors in guest rooms, living spaces, common areas or hallways and link them with the in-line switch module to ensure that lights, HVAC and other electronic loads are only on when they are needed. They use an ultra-efficient PIR (passive infra-red) design. They will operate in the dark for 100 hours when fully charged. Powered by solar cells.

Ceiling-mount Sensor:
Detection range of 34ft diameter. 360° coverage. For ceiling heights up to 10Ft, such as offices.

Wall-mount Sensor:
Standard detection range of 80ft. 180° coverage. Includes two lenses, for wide or far visibility. This model can also be turned horizontally for use in high-bay applications such as warehouses.

Daylight Sensor

Can be used to control lighting by measuring natural daylight available. Designed to work with 0-10V Module.

Commissioning Software

Navigan™ Software and USB stick antenna allows you to easily program control relays sensors and switches for an entire room at one time.

Plug-in Control Module

Corded plug-in switch module provides control of lamps and plug-in electronics such as computer monitors, printers, coffee makers, etc. Control Modules provides on/off switching based on signals received from the input devices paired to them. This device is ideal for battling the energy costs associated with "Phantom Loads." The module plugs into a standard outlet via standard male plug. UL approved for general purposes, resistive and motor loads.

FROM THE AUTHORITY ON LED POWER

Advantages

TRP's **ZenNet** system provides OEMs the ability offer specific benefits to a variety of customers and users, along with limitless supplies of energy.

Advantages:

• Easy to use
• Energy-saving
• Cost-effective
• Environmentally-friendly
• Flexible and convenient
• Simple to install
• Interoperable

For These Customers:

• Architects
• System Integrators and Planners
• Builders
• Installers
• Facility Managers
• *End Users!*

Applications

ZenNet system provides unrivaled flexibility in a wide variety of indoor applications.

Lighting Control For:

• Office buildings
• Hospitality
• Residential
• Healthcare facilities
• Retail
• Schools
• Industrial Buildings
• Historical Buildings

Control For More:

• HVAC functions
• Other electrical loads