GEM Link™

WIRELESS ENERGY MANAGEMENT

FEATURES & BENEFITS

GEM Link™ WIRELESS

From Lodging Technology comes GEM Link™ Wireless, the next generation of the proven GEM System® series of energy management systems. Lodging Technology, the originator in 1980 of infrared occupancy sensor-based hotel energy conservation, has provided innovative energy solutions that have reduced room energy by 35% - 45% for many years.

GEM Link™ is completely wireless, consisting of wireless passive infrared (PIR) occupancy sensors, wireless entry and balcony door switches, and a transceiver connectable to any HVAC unit. GEM Link™ utilizes a wireless hand-held Programmer Maintenance Module for easy programming of System features, in plain English, without the need for a computer.

Features

- **COMPLETELY WIRELESS** – easy to install without running wires
- **RELIABLE, TROUBLE-FREE OPERATION** – uses IEEE 802.15.4 ZigBee* wireless protocol
- Works with any HVAC System, of any voltage, with any type of thermostat or control
- **SUPERIOR BATTERY LIFE**, compared to other energy management systems, utilizing inexpensive AAA alkaline batteries
- Up to four (4) levels of programmable Temperature Setback, adjustable in 1°F increments, with programmable time delays between levels
- **GEM Link™** monitors multiple PIR Sensors, Entry Doors, Patio/Balcony Doors to properly control and conserve energy in any hotel, office, college dorm or military lodging application
- **CLONING FEATURE** makes programming quick and simple from room to room
- Programmer Maintenance Module can monitor room occupancy and other status features and change programming parameters from outside the room
- 24 hour bypass feature disables System to accommodate carpet cleaning and other housekeeping or engineering needs
- Easily installed, programmed and maintained by non-technical personnel
- System maintains programmed features in the event of power loss or when changing batteries
- Programmable Open Door feature can prohibit or allow HVAC operation if entry or balcony door is left open
- Programmable short cycle protection
- Designed and manufactured in the United States

Benefits

- Reduces guestroom energy costs 35% to 45%
- Rapid payback in two years or less with ROI in the 50% - 60% range
- Demonstrates environmental responsibility and helps qualify for

"green lodging" status and for rebates in certain areas

- Increases useful life of HVAC equipment
- Reduces HVAC maintenance expenses
- Transparent to guests; operates automatically
- Helps prohibit the growth of mold and mildew in hot/humid climates

SPECIFICATIONS

• Power:

PIR Occupancy Sensors & Door Switches powered by two AAA Alkaline batteries

Extended Battery Life: Near shelf life for Door Switch

Transceiver Operating Voltage: 12 – 30 Volts AC or DC, derived from HVAC unit or separate low-voltage transformer

Programmer Maintenance Module powered by 4 – AA Alkaline batteries

• RF Transmission:

Reliable RF Transmission between components via IEEE 802.15.4 ZigBee* protocol

Unique 16 Bit random number address code for each guestroom to prevent cross-talk between rooms

Unique address code for each component, PIR Sensors, Entry or Balcony Door Modules, within each room

• PIR Occupancy Sensor:

Transmits Room Occupancy Status based on infrared body heat detection

Occupancy detection via Dual Element Pyro-electric detector

Wide angle, 20 element Fresnel lens with 94° field of view for reliable, accurate occupancy detection up to 3600 sq. ft. when mounted at 7 feet high

Transmits current Room Temperature to Transceiver Module

Mounting Options: corner, flat wall or single gang J-box

• Door Switch Module:

Programmable as Entry or Balcony Door Switch

Transmits Door OPEN / CLOSE status to Transceiver

Internal switch operated by external magnet for concrete-filled door frames

Terminal strip for connection of two different recess mounted switches

Small size (3.5" x 1.625" x .75")

• GEM Link™ Transceiver:

Transceiver connects to any HVAC: PTAC, Heat Pump, Split System or Fan Coil unit

Small size (3.5" x 1.625" x .75") allows module to be hidden from view

Programmable Output: 24 Volts AC, 24 Volts DC, or Dry Contact (Form C, NO/NC, 3 Amp Max.) for proper connection to any HVAC unit

Four programmable Heat and Cool Temperature Setback levels with independently programmable time delays for each level

Test Mode for easy 30 second test during installation or maintenance

Programmable Temperature Offset

Programmable HVAC OFF time delay

Fail-sate secondary room temperature sensor

Optional GEM Light™ output for independently programmable lighting control in meeting rooms, other common areas

• Programmer Maintenance Module:

Hand-held module for quick, easy programming of GEM Link™ features and parameters

Straightforward keypad entry of programmable features with actions displayed on two-line 16 character alpha-numeric LCD display

Monitors room RF radio traffic and displays System operation on display

Displays detailed "status flags" for more in-depth troubleshooting

Lodging Technology
LTC ENTERPRISES, LLC

** ZigBee is a registered trademark of ZigBee Alliance Incorporated*

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