ERM-DL

Installation Guide

Product Overview

The load controller provides a low cost method of wirelessly gaining control over fixtures or appliances. As a wireless solution, the controller receives telegrams from battery-free wireless switches or sensors and triggers an internal relay automating the activation of the electrical load. Assigning the switches and sensors to the controller is easy and eliminates the cost of wire and installation of a switch leg.

The controller should only be installed at indoor locations. It must be mounted in either a wall or ceiling mount electrical junction box with the provided hardware; behind a duplex receptacle, switch or fixture.

The controller includes Smart Click and Simple Tap embedded software that allows users to commission and adjust controller settings easily using the switch or sensors as commissioning tools.

The controller supports EnOcean Remote Management and can be configured via a laptop using controller Garibaldi software.

Model numbers with “C” are equipped with a EnOcean 315 MHz Dolphin radio and models with “Y” are equipped with an EnOcean 868MHz Dolphin radio. Refer to the electrical specifications for the differences between the high voltage and low voltage models.

The package includes the controller and installation guide.

Controller Operation

The controller can activate lighting or miscellaneous electrical loads (MEL) when a received input from a linked sensor or switch is changed.

As a lighting controller it can operate lights based on:

- ambient light levels monitored by an EnOcean light sensor
- occupancy state monitored by EnOcean motion sensors
- switch action from an EnOcean wall switch

As a miscellaneous electrical load controller, the controller will respond to key card switches, wall switches and door switches.

Remote Devices supported by the controller

Device	Model	Applications
Wall switch	PTM265	Lighting, Timed Switch or MEL control
Dual Switch	PTM265D	Lighting, Timed Switch or MEL control
Keycard Switch	PTM265KC	Hospitality Room Occupancy
Light Sensor	TAP-17	Daylight Harvesting Lighting
Motion Sensor	MOS-17	Auto off and/or Auto on Lighting, Dormitory and Hospitality Room Occupancy
Entry Door		Trigger for Dormitory and Hospitality Room Occupancy
Door/Window		Storage Room
Switch		Lighting, Patio Door

The Controller and Wall Switches

The controller works with the wireless PTM single and dual rocker wall switches. A switch ON action activates the relay closed (light's on) and the OFF action opens the relay (light's off).

When linking a wall switch to the controller, activate the switch three times ON in succession with the controller in LEARN mode.

The Controller and Timed Switches

The controller can be configured so the single and dual rocker PTM switches become timed switches. An ON action closes the relay (light's on) and a timer is set to count down. Once the timer expires, the relay opens (light's off).

The time period is configurable and has 5 settings:

no timer (default), 5 minutes, 15 minutes, 30 minutes and 1 hour. Additionally, if the user presses the wall switch ON multiple times (to a total of 5 presses), the timer interval is added for each ON press. If ON is pressed while the light's are on and the timer is counting down, an additional period of time is added to the timer total.

For example: if the timer setting is 1 hour and the user pressed the switch ON

twice, the total timer period is 2 hours. If there is 30 minutes left on the timer and ON is pressed again, the timer is extended to 1 hour 30 minutes before the light's will turn off.

The controller will toggle the relay (flick-warn) 1 minute before the timer is due to expire to warn users of the pending OFF event.

To configure, the time period, refer to the section on "Configuring the Controller".

The controller and key card switch

The key card switch is common in hospitality applications for indicating when the room is occupied by a guest. The key card used to unlock the door is inserted into the switch, the controller will enable lighting or other electrical appliance circuits. When the guest leaves and the card is removed from the switch, an egress timer will expire and the relay will open deactivating the circuits.

The egress timer default is a 0 second timer but this can be configured to 1 minute intervals up to 5 minutes. Please refer to section "Configuring the Controller" to edit this setting.

When used for this hospitality application, it is not advised having other devices linked permanently (other than a wall switch) to the controller as this may result in unintended results. When multiple key cards are used with one controller and any switch is active with a card inserted then the controller relay will remain closed (light's on). All linked switches must be inactive before the controller opens the relay (light's off).

When linking a keycard to the controller, activate the switch three times in succession with the controller in LEARN mode.

The Controller and Daylight Harvesting Applications

The controller will turn the lights on or off based on the ambient light level in the room. An EnOcean light sensor monitors light levels and must be linked to the controller to provide the light level in the room. The Light-ON-Set Point is the light level at which the light will turn on; the Light-OFF-Set Point is the at which the light will turn off. Setting these set points is covered later in this document under "Configuring the Controller".

The daylight harvesting application will operate with just the light sensor or with the addition of a wall switch or motion sensor. The day-lighting application will override the Auto-ON feature of occupancy sensors turning the light off if the light level is above the Light-OFF-Set Point.

For example: If the daylight application calls for the light to be off, the motion sensor will not turn the lights back on.

The day-lighting application can be overridden by a manual wall switch when the light is off by clicking on. If the light level remains above the Light-OFF-Set Point, the controller will turn the light off again after 250 seconds.

The day-lighting application does not affect the operation of the wall switch or motion sensor when the light is on. If the light is on, either the switch or motion sensor can override the light off.

The Controller and Occupancy Based Applications

The controller will turn the lights OFF when there is no motion detected in the room indicated by a linked EnOcean motion sensor. The controller can be configured to turn the lights ON immediately (Auto- ON) if the motion sensor detects motion, see the section titled “Configuring the controller”.

There is a configurable time period (occupancy timer) between the last detected motion and the point where the lights turn off. There are 6 settings for this time out period. The occupancy timer is 15 minutes by default but can be set to a value of 1 minute, 5 to 25 minutes in 5 minute increments, see the configuration section. The timer will reset if the sensor detects motion. If the timer expires, the light will turn off.

Multiple motion sensors can be ganged together so if only one sensor detects motion or the occupancy timer has not expired, the light will remain on.

The motion sensor application will work well by itself or with linked wall switches and light sensors. If the motion sensor is linked to a controller with no linked wall switch, then Auto-On is enabled by default.

Turning the lights on with a linked wall switch will reset the occupancy timer. Turning the light off with the wall switch will override Auto-ON (if enabled) for the duration of the occupancy timer period. Any motion detected by the sensor during this period will reset the timer. Once the occupancy timer has expired, the override will be released. If the wall switch is used to turn the light on during the timer period, the override will also be released.

The Controller with an Entry Door Occupancy Trigger

Wireless EnOcean window or door contact switches can be used on an entry door to trigger a door open-close event. Used together with the EnOcean motion sensor, the door event triggers a latch of the room occupancy. The controller will latch the room occupancy state with receipt of two motion sensor telegrams (4 to 5 minutes after the entry door open/close event). After the room has been latched as occupied, only another door event can clear the latched state. If the room is latched vacant and an occupied telegram is received from the sensor, the room state will latch occupied. This is an alternate solution to the keycard application for dormitory or hospitality projects for defining occupancy state.

NOTE: To learn the door switch as an entry door occupancy trigger, link the switch to the controller with the magnet in place next to the sensor.

The Controller with a contact switch as a Door Switch

Wireless EnOcean window or door contact switches when linked with the controller, can open or close the relay. The relay will close when the switch is open, opening the relay when the switch is closed after a timer expires.

NOTE: Using the door switch in this application, link the switch to the controller with the magnet apart from the switch.

This is useful for closet or storage room applications. The timer, relay logic and switch logic are all configurable using remote management applications. Refer to the configuration section to edit the timer setting.

Radio Range Planning

The controller is intended to be used with switches, sensors and actuators enabled with EnOcean PTM or STM transmitters. Locating the wireless transmitters to work with the installed controller requires planning. Careful consideration should be made for locating the controllers based on the construction materials in the space and possibility of tenant's furniture disrupting the transmissions. Fire doors, elevator shafts, stairwells, storage areas and any large metal products create radio shadows and will disrupt wireless transmissions.

On floor-plan drawings, draw 100 feet (30m) diameter circles to identify optimal transmitter and controller locations. Refer to the table for range considerations with other building materials.

Material	Attenuation	Material	Range-typical
Wood	0 - 10%	Line of site:	100' (30m) corridors
Plaster	0 - 10%	Line of site:	330' (100m)open halls
Glass	0 - 10%	Plasterboard:	100' (30m) through 5 walls
Brick	5 - 35%	Brick:	65' (20m) through 3 walls
MDF	5 - 35%	Concrete:	65' (20m) through 3 walls
Ferroconcrete	10 - 90%	FerroConcrete:	33' (10m)
Metal	90 - 100%	Ceiling:	1 ceiling
Aluminum	90 - 100%		

For more information about range planning, please refer to the range planning guide downloaded from www.echoflexsolutions.com

Layout Hints

- Avoid transmitting down a length of wall to reduce signal reflection.
- Avoid transmissions that must penetrate walls at acute angles. This increases the wall material the telegram must pass through, greatly reducing the signal power.
- Avoid large obstructions. Place receivers in alternate locations to avoid the radio shadow or use repeaters to go around the obstacle.
- Do not locate receivers close to other high frequency transmitters. Leave at least 2' between the receiver and any other source of interference including, computers, video equipment, Wi-Fi/LAN routers, GSM modems and monitors. Transmitters are not affected by these sources of interference.

Preparing to Install

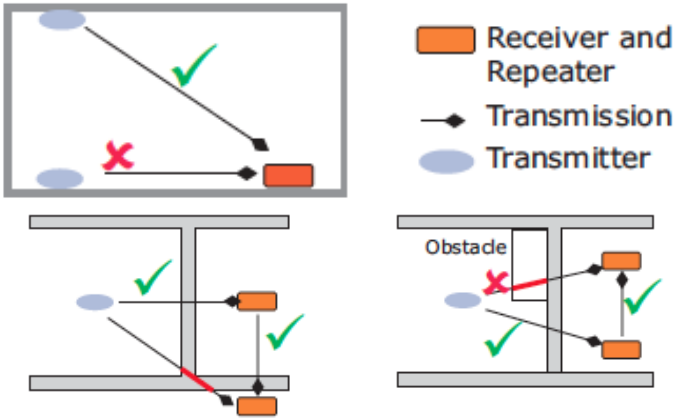
To install the controller, you will need access to an electrical junction box either directly at the electrical load or before the load in the circuit.

You will require hand tools to gain access to the junction box and remove any cover plates or other hardware. A pin or pen is needed for pressing the controller buttons when assigning the wireless switches or sensors.

Important Safety Instructions

Installing the controller

Review these instructions completely before installing the controller. For best results, the controller should be installed into a non-metal electrical junction box.



NOTE: The controller should only be installed in an indoor location. All high voltage models of the controller must be mounted in an electrical junction box, either wall or ceiling mount, behind a duplex receptacle, switch or fixture.

1. Locate the circuit breaker panel and turn off the power to the circuit
2. Remove all face plates, duplex receptacle or switch hardware from the junction box
3. Refer to the wiring diagram to connect the controller to the line power, neutral and load wires. Use wire nuts on all connections and cap any bare wires except the antenna wire. The orange antenna wire should be placed so it is near the front of the box. Use tape to hold the antenna in place if needed.
4. Push the controller into the junction box together with all the wires insuring that the antenna is not pushed to the back.
5. Replace the duplex receptacle and/or switch and faceplate .

WARNING:

ELECTRICAL SHOCK HAZARD

ALL MODELS OF THE ERM USE HIGH VOLTAGE AND SHOULD ONLY BE INSTALLED BY A QUALIFIED INSTALLER OR ELECTRICIAN. FOLLOW ALL APPLICABLE ELECTRICAL CODES IN THE COUNTRY OF INSTALLATION.

6. Restore power to the circuit In installations where the electrical box is metal, route the antenna towards the front and outside the box. Avoid running the antenna along any grounded metal plating.

Wiring Instructions

Power to the line voltage models is connected between the White (Neutral) and the Black (120 - 277 VAC) wires. The load wire is red and connects to the switched hot side of the load. The load neutral can be connected to the white neutral wire.

The low voltage 24V models have a red (24+) and black (ground) wires for power input. The low voltage models have a 3A dry contact output between the grey and yellow wires

Use only approved wire. Cap off all unused wires. Do not cut or cap the orange (315M radio) or blue (868M radio) antenna wire.

Connection	Color	Min.Size
DL-277 and DLC-277 volt models		
120-277VAC	Black	300V, 18AWG
DL and DLC volt models		
90-240VAC	Black	300V, 18AWG
All High Voltage Models		
Neutral	White	300V, 14AWG
Load	Red	300V, 14AWG
Load Neutral	White	300V, 14AWG
Antenna	Orange	No Connection

Connection	Color	Min.Size
Ground	Black	22AWG
24VAC/DC	Red	22AWG
Relay Output	Yellow	22AWG
Relay Output	Grey	22AWG

Using the controller with a wired wall switch:

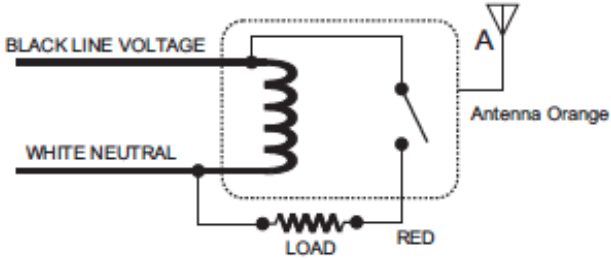
If the circuit will have an additional manual switch, wire the controller in series before the manual switch.

Using the controller with a duplex receptacle (appliances):

The duplex receptacle would be wired in as the load. For applications where one side of the receptacle will not be switched by the controller, disconnect the receptacle at the terminals and wire the un-switched side to line power

Using the controller with a light fixture:

The lighting load is connected to the controller as the load.



High Voltage Model

Supported EnOcean Equipment Profiles

EEP: F6-02-02 Light & Blinds - US/Canada

EEP: F6-04-01 Key Card Activated Switch

EEP: A5-06-xx Light Sensor [0 - 1024 lux]

EEP: A5-07-01 Occupancy Sensor

EEP: A5-30-02 Window Contact

EEP: A5-10-0A/0B Room Operating Panel

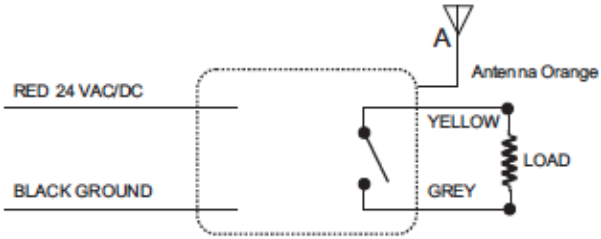
EEP: A5-38-08 Central Command, switching(0x01)

EEP:D5-00-01, 1BS Contact and Switches

Electrical Specifications

DL-277 and DLC-277 volt models

Power Supply: 120-277 VAC, 50/60Hz



Low Voltage Model

DL and DLC volt models

Power Supply: 90-240 VAC, 50/60Hz

All High Voltage Models

Power Consumption: max. 2.5 W full load

Outputs - high voltage models:

[1] N.O. Relay rating 15A @ 90 - 277 VAC

[2] LEDs - mode and learn

Maximum Load Ratings:

	DL©	DL(C)-277
Incandescent/Tungsten:	1300W@90V	1800W@120V
	3600W@240V	4000W@277V
General Purpose	15A@90-240V	15A@120 - 277VAC
Fluorescent Ballast	15A@90-240V	15A@120 - 277VAC

Low Voltage Models

Power Supply: 24VAC/DC

Power Consumption: 1.0 W full load

Outputs

[1] N.O. Relay rating 3A@30 VDC

[2] LEDs - clear and learn

All Models

Inputs: LEARN and CLEAR buttons

Communications:

315MHz EnOcean radio, 150mm antenna

868MHz EnOcean radio, 86mm antenna

approx. 10mm of antenna is inside the housing

NOTE: The radio is protected by a sealed screw. Breaking this seal will void the warranty.

Mechanical /Environmental Specifications

Operating Temperature for models ending with DLC &DL at 240V: 14°F to 104°F (-10°C to 40°C ambient)

Operating Temperature for models ending with DLC-277 & DL-277 at 277V:

14°F to 104°F (-10°C to 45°C)

Relative Humidity:5% - 95% RH (non-condensing)

Weight: 2.2 ounces (60 gms.)

Dimensions: 2.2” x 1.5” x 1.0”

(56 mm x38 mm x26 mm)

Diagnostic LED’s and buttons

The LEDs and LEARN and CLEAR buttons are only accessible at the controller. Accessing the controller directly when it is powered inside an electrical junction box is not advised. Use Smart Click to add additional switches or sensors or to clear the controller.

LEARN button - The LEARN button can be used to link a switch or sensor to the controller.

1. Insert a small pin or pen into the LEARN hole depressing the button for a half second. In LEARN mode the LEARN led will stay ON and the POWER led will toggle every second.
2. Using the switch or sensor that you want to link to the controller, press the wall switch ON 3 times or press the sensor's TEACH button. The POWER led will remain lit for 4 seconds while it links the new device. It will resume toggling allowing you to LEARN another device up to a total of 20 devices. Activating LEARN mode from a switch or sensor that is already learned to a controller, will remove or un-link it from the controller.
3. To exit learn mode, depress the LEARN button on the controller again for a half second. Learn mode will also time out after no activity in 30 seconds.

CLEAR button - The CLEAR button erases all switches and sensors learned to the controller and resets the controller to factory default settings.

Insert a small pin or pen into the CLEAR hole depressing the button for 5 seconds. The LEARN led will flash ON for 1 second and then OFF to complete the step. The table below describes the LED activity and associated mode of the controller.

LED Blink Patterns

Description	Power	LEARN
Learn mode	Toggle 2 sec.	ON
Storing ID	ON 4 sec.	ON
CLEAR mode	ON	Blinks Once

Normal operation - number of long blinks indicates the linked device type followed by short blinks counting the number of devices linked.

Default	No blinks
Wall Switch	1 Blink
Motion Sensor	2 Blinks
Light Sensor	3 Blinks
Keycard Switch	4 Blinks
Entry Door Trigger	5 Blinks
Door Switch	6 Blinks
Central Command	7 Blinks

Configuring the controller

There are two methods of configuring parameters in the controller. Simple TAP is a quick method of changing a parameters setting, one at a time. For accessing the complete set of configuration parameters, use the Smart Click process.

Simple TAP Instructions

Simple TAP uses the switches and sensors that are linked to the controller to set the associated configuration parameters. You must be able to access the sensors teach button or the switches to perform the simple tap process

Simple TAP allows you to:

- Enable or disable the motion sensor Auto-ON feature
- Set the motion sensor Auto-OFF occupancy timer
- Set the Light-ON-Set Point
- Set the door switch off timer

Disable/Enable the Auto-ON feature - With the light on, tap the occupancy sensor's teach button followed by three quick consecutive clicks of a linked wall switch ON. To enable Auto-ON, click once more ON (total 4 times), to disable click OFF. The light will blink once to confirm the change.

Point will become 115% of the Light-ON set point.

Example: If the ambient light in the room is at the desired level and the light sensor reading is 265 lux. The Light-OFF-Set Point will become 305 lux (28 FC) and the Light-ON-Set Point becomes 265 lux (25 FC).

Setting the Light ON Set-point to an Absolute Value

With the light on, tap the light sensors teach button 4 times to set the Light-ON-Set Point to 20%. Tapping the button additional presses increments the set point value in 20% steps. Five (5) taps would equal 40%, seven (7) would be 80%. The light will blink once at three taps and then continue blinking to confirm the change according to the table below. The Light-OFFSet Point will become 115% of the Light-ON-Set Point below.

Button Taps	Light-ON SP	Level
3	current value	1 Blink
4	20% of max value	2 Blinks
5	40% of max value	3 Blinks
6	60% of max value	4 Blinks
7	80% of max value	5 Blinks

Set the door switch timer: If a door/window switch is linked to the controller with the magnet apart from the switch, then the relay will close whenever the switch is open and will open after a timer expires. This switch function is intended to operate a light for door applications; storerooms, closets, etc. The time period when the relay remains closed is configurable.

Accessing the teach button on the face of the switch allows you to quickly change the time period. With the light on, tap the switches teach button according to the table below. The relay (light) will cycle counting the level selected.

Button Taps	Time Period	Level
3	0 seconds	1 Blink
4	1 Minute	2 Blinks
5	2 Minutes	3 Blinks
6	3 Minutes	4 Blinks
7	4 Minutes	5 Blinks
8	5 Minutes	6 Blinks

Default Settings

Repeater	Disabled
Status message	Disabled
Time-Out (timed switch)	0 Seconds
Time-Out(motion)	15 Minutes
Time-Out (door switch)	0 Seconds
Keycard Switch (egress timer)	0 Seconds
Auto-ON	Enabled with motion sensor only, disabled when a wall switch is linked.
Light-ON-Set Point	60% of sensor full scale range
Light-OFF-Set Point	115% of Light-ON-Set Point

Status Feedback Telegram

EEP:07-11-01

DB_3 Illumination

0 … 510lx, linear n=0…255

DB_2 Illumination Set Point

Min. … Max., linear n=0…255

DB_1: Dimming Output

Level Min. … Max., linear n=0…255

DB_0.BIT_7: Repeater

0b0 disabled, 0b1 enabled

DB_0.BIT_6: Power Relay Timer

0b0 disabled 0b1 enabled

DB_0.BIT_5: Daylight Harvesting

0b0 disabled 0b1 enabled

DB_0.BIT_4: Dimming

0b0 switching load 0b1 dimming load

DB_0.BIT_3: Learn button

0b0 Teach-in telegram 0b1 Data telegram

DB_0.BIT_2: Magnet Contact

0b0 open 0b1 closed

DB_0.BIT_1: Occupancy

0b0 unoccupied 0b1 occupied

DB_0.BIT_0: Power Relay

0b0 off 0b1 on

Smart Click Instructions

Configuring the controller requires that at least one wireless PTM wall switch is linked to the controller. Key Card Switches are similar to the PTM265 wall switches, remove the key cards face plate to access the on and off side of the rocker switch.

Linking the first switch

- With the controller in the factory default state, click the PTM switch ON three times, OFF three time and ON three times quickly. Using this method of linking a switch will only work on the first PTM switch. Use Smart Click to link additional switches or to configure the controller parameters.

Enter Smart Click Configuration Mode

- It is important to have feedback from the controller during configuration If the controller is controlling a duplex receptacle, plug a light into the controlled socket.
- Using a linked switch (see above), turn the light OFF.
- Press and hold the switch OFF for 10 seconds. The light will blink once and then turn on. If the switch is linked to more than 1 controller you will have to click the ON side of the switch until the controller you wish to configure is selected indicated by the light turning ON.
- Press ON and hold for 5 seconds. The light will begin blinking once.

Linking an additional switch or sensor

- With the light blinking once, press and hold ON for 3 seconds. The light will begin blinking ON/OFF every second.
- Add additional PTM switches by clicking ON 3 times quickly. Add sensors by pressing the TEACH button on the sensor. The light will stay lit for 4 seconds as the new device is added.
- To continue with configuration, press and hold the switch ON for 3 seconds, the light will resume blinking once. To exit Smart Click press and hold OFF for 5 seconds.

Clear switches or sensors (restore factory defaults)

- Enter Smart Click configuration mode.
- Click the switch ON or OFF until the light is blinking twice.
- Press and hold On for 3 seconds. Click the switch ON 5 times to clear just the switch. Skip the next step if that’s all you want to clear.
- Click ON 5 times (total 10) again to clear ALL switches and sensors and reset the controller to factory defaults.
- Press OFF for 5 seconds to complete clearing.

Repeater Function - repeats any telegram within range. The controller can repeat telegrams with either a single or dual hop. Dual hop means that a signal

can be repeated up to two times, not by the same repeater. The repeater function can be enabled/disabled by accessing the controller buttons. Press the Clear button and hold then quickly press the Learn button once to disable, twice to enable single hop, and three times to enable dual hop repeating. The learn led will blink once when disabling, twice(single hop)or three times (dual hop) when enabling the repeater function. Release the Clear button. If there is no access to the controllers buttons, follow the Smart Click steps below.

- Enter Smart Click configuration mode.
- Click the switch ON or OFF until the light is blinking three times.
- Press and hold On for 3 seconds. If the repeater function is enabled the light will turn ON, if disabled the light will be OFF. You can only enable single hop repeating with Smart click.
- Click ON to activate this function, OFF to deactivate.
- To continue with configuration, press ON for 3 seconds, the light will resume blinking three times. To exit Smart Click press OFF for 5 seconds.

Status Telegram - the controller can broadcast a status telegram per EEP: 07-11-01. The telegram will broadcast every 100 seconds. Refer to the table on page 7 for a detailed explanation of the telegram. The status telegram can be enabled/disabled by accessing the controller buttons. Press the Learn button and hold, press the Clear button once to disable, twice to enable. The learn led will blink once when disabling, twice when enabling this telegram. Release the Learn button. If there is no access to the controllers buttons, follow the Smart Click steps below.

- Enter Smart Click configuration mode
- Click the switch ON or OFF until the light is blinking four times
- Press and hold ON for 3 seconds. If the status telegram function is enabled the light will turn ON, if disabled the light will be OFF
- Click ON to activate this function, OFF to deactivate
- To continue with configuration, press and hold ON for 3 seconds, the light will resume blinking four times. To exit Smart Click press OFF for 5 seconds

Timeouts - the controller can be configured to wait a period of time after an ON event from a PTM switch (timed switch or key card switch) or occupancy sensor before turning the load OFF (auto-off).

- Enter Smart Click configuration mode and click the switch ON or OFF until the light is blinking five times.
- Press and hold ON for 3 seconds. The light will turn OFF and then blink per the table settings below.

Light	Timed Switch	Occupancy Timer	Keycard Switch
ON	Disabled	1 min.	No Delay
1 Blink	5 min.	5 min.	1 min.
2 Blinks	15 min.	10 min.	2 min.
3 Blinks	30 min.	15 min.	3 min.
4 Blinks	60 min.	20 min.	4 min.
5 Blinks	N/A	25 min.	5 min.

- Click ON move down the table, OFF to move up. Confirm the light is blinking according to the chosen level.
- To continue with configuration, press and hold ON for 3 seconds, the light will resume blinking five times. To exit Smart Click press OFF for 5 seconds.

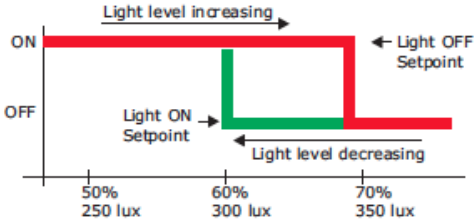
Auto-ON Function - use with an occupancy sensor to turn lights ON automatically when motion is detected.

- Enter Smart Click configuration mode
- Click the switch ON or OFF until the light is blinking six times.
- Press and hold ON for 3 seconds. If the auto-on function is enabled the light will turn ON, if disabled the light will be OFF
- Click ON to activate this function, OFF to deactivate
- To continue with configuration, press and hold ON for 3 seconds, the light will resume blinking six times. To exit Smart Click press OFF for 5 seconds.

Light Level Set points - use with a photo sensor (light sensor) to automatically turn lights on or off depending on ambient light levels.

- Enter Smart Click configuration mode
- Click the switch ON or OFF until the light is blinking eight times.
- Press and hold ON for 3 seconds. The default setting for the Light-ON-Set Point is 60% of the light sensors full range. Adjust the light level to the brightness level when the light should trigger ON, see diagram below. There are 5 steps from 20% to 100% - the light will blink the step count.

  In the diagram, the red line indicates the Light-OFF-Set Point event, the green line indicates the Light-ON-Set Point event. The light off event is 115% of the light on set point. For example: 115% of 60 = 69% of the light sensors full range.



- Click on to increase the set point, off to decrease the set point. The light will blink according to the level set, setting 3 = 3 blinks. Confirm the light is blinking according to the chosen level.
- To continue with configuration, press ON for 3 seconds, the light will resume blinking eight times. To exit Smart Click press OFF for 5 seconds.

This concludes the instructions for using Smart Click to commission the Load Controller.

FCC and IC Licensing

For 315MHZ devices only

Contains FCC ID: SZV-TCM320C

The enclosed device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(I.) this device may not cause harmful interference and

(ii.) this device must accept any interference received, including interference that may cause undesired operation.

Contains IC: 5713A-TCM320C

This guide covers high voltage model numbers ERM-DLC, ERM-DLY, ERM-DLC-277, ERM-DLY-277, and low voltage models ERM-DLC-LV, ERM-DLY-LV.

Specifications subject to change without notice.

Part # 8DC-5199 | Revision 2.1 | 8189M21-5199-1 Rev B

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