



Type(s)

Project

Date

Notes

GENERAL INFORMATION

The Echo Room Controller offers a full power and control solution for standalone and integrated room controls. With up to eight zones of relay switching with 0–10 V control fully rated at 20 A, the Echo Room Controller is the perfect solution for a single mid-sized room with stand-alone TimeClock and sensor control. The controller can also be used for full room integration utilizing an integral station power supply, contact input, Demand Response input and UL924 emergency bypass. The controller is available in flush-mount or surface-mount options and can be located in an air plenum to be easily tucked out of sight.

APPLICATIONS

- Arena and stadium suites
- Houses of worship
- Education
- Hospitality
- Healthcare facilities
- Office buildings
- Conference rooms
- Meeting rooms
- Retail

FEATURES

- Four- and eight-output options patchable to zones in multiple spaces
- 20 A fully rated relays for use with general purpose, tungsten, fluorescent, LED and plug loads
- Fully isolated 0–10 V dimming for direct connection to dimming ballasts and LED drivers
- 120 or 277 VAC power input per zone
- A/V integration via single contact input
- Demand Response load shedding
- Flush-mount and surface-mount options
- Supports Unison Echo control stations, responsive controls and interfaces
- EchoConnect topology free station bus with support for:
 - 6 Echo control products and 5 additional Echo output products (built-in station power supply)
 - Up to 16 Echo control products and 15 additional Echo output products (via external station power supply)
 - Up to 500 m (1,640 ft) of control wire per system

REGULATORY AND COMPLIANCE

- cULus and UL924 Listed
- Rated for plenum installation

ORDERING INFORMATION

Room Controller

MODEL	DESCRIPTION
ERM4-G2	Echo 4-zone Room Controller with four relays and four 0–10 V dimming outputs
ERMCT4-G2	Echo 4-zone Room Controller with four relays, four 0–10 V dimming outputs and TimeClock
ERM8-G2	Echo 8-zone Room Controller with eight relays and eight 0–10 V dimming outputs
ERMCT8-G2	Echo 8-zone Room Controller with eight relays, eight 0–10 V dimming outputs and TimeClock

Add (-F) to the end of any model number for the flush-mount version

Accessories

MODEL	DESCRIPTION
ERM VDK	Voltage divider kit for separating 120 V, 277 V, Emergency, and Plug loads

Echo Power Requirements

EchoConnect:	1 Unit of Output Power
Auxiliary Power:	Not Required

Built-in EchoConnect Power Supply

EchoConnect:	Provides 6U of control power and an additional 5U of Output Power*
Auxiliary Power:	Provides 40 mA for TimeClock power

*Note: Built in power supply can be disabled when used with external 16U EchoConnect Power Supply or when multiple room controllers are used in a single system

Echo Presets

Supports 16 Echo Presets



SPECIFICATIONS

FUNCTIONAL

- Control for up to eight zones of relay control for lighting and plug loads
- Control for up to eight zones of fully isolated 0–10 V dimming control for LED drivers and fluorescent ballasts
- Each pair of power and 0–10 V outputs can be patched to a space and zone via the EchoAccess mobile app
- Contact Input responds to closure to place the lighting into a configurable, presentation-friendly preset, playback a lighting control sequence, trigger room combine, or any other Echo contact input function
- UL924 emergency-lighting control via contact closure or integrated normal sense feed
- Demand Response input sent from a power company can enforce a maximum level per circuit while active
 - Demand Response commands can be transmitted to additional Echo devices via the EchoConnect bus
- Time-of-day, astronomical and calendar events for the installed room, and up to 15 additional rooms (TimeClock versions only)
- Plug and Play: ready to go out of the box, no software or external programming required
- Supports up to 6 Echo control products and 5 additional Echo output products with internal Echo Station Power Supply
- Supports up to 16 Echo control products and 15 additional Echo output products with external Echo Station Power Supply

MECHANICAL

- Constructed of 16-gauge cold-rolled steel, finished in fine-textured, black powder coat
- Supports wall-mount and plenum installation
- Rotary dials for selection of space and starting zone number
- Class one voltage barrier prevents access to line-voltage wiring with front panel removed
- Optional voltage divider allows for separation of normal and emergency circuits in a single controller where allowed by local codes
- Available in flush-mount and surface-mount options
- Discrete-feed mains power input: 100–277 V
 - Supports pass-through of input to multiple circuits up to the full circuit capacity of the controller

ELECTRICAL

- 100–277 VAC, 50/60 Hz single-phase power input per circuit with support for pass thru to multiple circuits
- 100–277 V single phase sense feed input
- Supports 120 V and 277 V circuits within the same controller
- 20 A, fully-rated bi-state latching relay per output
- 0–10 VDC control rated for 100 mA maximum sink per zone, fully isolated from ground
- Supports rising clamp screw terminal wiring connections for:
 - Line-voltage relay power input, output and pass-through with support for 14-8 AWG wire
 - Controller power input and UL924 Sense circuit with support for 20-12 AWG wire
 - Low-voltage 0–10 V dimming output with support for 22-16 AWG wire
 - Separate normal power sense feed input for UL924 emergency lighting bypass
 - UL924 emergency lighting contact input (NO/NC) with support for 22-16 AWG wire
 - Contact Input (NO/NC) terminals with support for 22-16 AWG wire
 - Demand Response contact input (NO) with support for 22-16 AWG wire
 - EchoConnect control connection for Belden 8471 wire (or approved equal)
 - 24 V auxiliary power for integral timeclock with support for 22-16 AWG wire
- Built-in EchoConnect station power supply with support for up to six control products and five external output products
- Onboard status indicators for station power, UL924 input, Contact Input, Demand Response, and Room Controller power
- Dip switch configuration for:
 - Onboard EchoConnect Power Supply (on/off)
 - Contact input type (NO/NC)
 - UL924 sense feed active (on/off)
- 20 A Magnetic Ballast (HID)
- 16 A Electronic Ballast
- 20 A Tungsten
- 20 A (120 A Locked-rotor) Motor @ 120 V
- 14 A (84 A Locked-rotor) Motor @ 277 V
- Relays are mechanically held
- Lifespan:
 - 100,000 cycles at full resistive load
 - 30,000 cycles motor, inductive or tungsten

SPECIFICATIONS

ECHOCONNECT STATION BUS

- Topology-free wiring using Belden 8471 or equivalent plus one #18 ESD drain wire
- Wiring may be bus, loop, homerun or any combination of these
- Up to 500 m (1,640 ft) of control wiring per system
- Optional Cat5/5e EchoConnect wiring supported using Belden 1583A or equivalent
 - Requires optional Cat5 termination accessories

THERMAL

- Ambient room temperature: 0°C to 45°C (32°F to 113°F)
- Ambient humidity: 5%–95% non-condensing

DEFAULT CONTACT INPUT FUNCTIONALITY

- **Basic Mode**
 - Inputs control Presets 1-4 (momentary)
 - Close / Open event: Toggle Preset
 - Contact held closed: Space Raise
 - Contact closed in rapid succession: Quick Toggle Preset
- **Custom Mode without EchoAccess Configuration**
 - Inputs control Presets 1-4 (maintained)
 - Close/ Open event: Toggle Preset

CUSTOM MODE FUNCTIONALITY

(Requires programing with EchoAccess Mobile App and additional Echo hardware)

- **Contact Input Interface (Momentary)**
 - Push: No Function, Preset Toggle, Preset Activate, Zone Toggle, Zone Lower, Zone Raise, Zone Set to Level, Space Off, Space Toggle, Space Lower, Space Raise, Space Set to Level, Space Combine Toggle, Space Combine, Space Uncombine, Space Lockout Toggle, Sequence Toggle, Zone Set to Color, Space Set to Color
 - Double Tap: No Function, Preset Toggle, Preset Activate, Zone Toggle, Zone Set to Level, Space Off, Space Toggle, Space Set to Level, Zone Set to Color, Space Set to Color
 - Hold: No Function, Zone Lower, Zone Raise, Space Lower, Space Raise
- **Contact Input Interface (Maintained)**
 - Maintained Open: No Function, Preset Activate, Zone Set to Level, Space Off, Space Set to Level, Space Combine, Space Uncombine, Sequence Toggle, Zone Set to Color, Space Set to Color
 - Maintained Closed: No Function, Preset Activate, Zone Set to Level, Space Off, Space Set to Level, Space Combine, Space Uncombine, Sequence Toggle, Zone Set to Color, Space Set to Color
- **Contact Input Interface (Occupancy) - One per interface**
 - Occupancy: No Function, Preset Activate, Zone Set to Level, Space Set to Level
 - Vacancy: No Function, Preset Activate, Zone Set to Level, Space Off, Space Set to Level

ECHO FAMILY OF PRODUCTS

EchoConnect Power Supplies

MODEL	DESCRIPTION
E-SPS	6 U Room Station Power Supply, Knockout Mount
E-SPS-DIN Mk2	16 U DIN rail Station Power Supply with 24 V Aux
E-SPM-A	16 U DRd Station Power Module with 24 V Aux
E-APS2	24 V Aux Power Supply, Knockout Mount

EchoTouch

MODEL	DESCRIPTION
ETS	EchoTouch Controller Mk2

Echo Stations

MODEL	DESCRIPTION
E1001	Inspire One Button Station
E1002	Inspire Two Button Station
E1004	Inspire Four Button Station
E1006	Inspire Six Button Station
E1008	Inspire Eight Button Station
E1104	Inspire Four Button with Fader Station
EPS05	Echo Preset Station - 5 Button
EPS10	Echo Preset Station - 10 Button
EPSKS	Echo Keyswitch Station
E-ATC	Echo TimeClock

Echo Responsive Controls

MODEL	DESCRIPTION
ELS	Light Sensor
EOCC	Ceiling-Mount PIR Occupancy Sensor
EVAC	Ceiling-Mount PIR Vacancy Sensor
E-DOC-C	Ceiling-Mount Dual Tech Occupancy Sensor
E-DVAC-C	Ceiling-Mount Dual Tech Vacancy Sensor
E-DOC-W	Wall-Mount Dual Tech Occupancy Sensor
E-DVAC-W	Wall-Mount Dual Tech Vacancy Sensor
E-DOC-SM1	Switch-Mount Dual Tech Sensor - One Button
E-DOC-SM2	Switch-Mount Dual Tech Sensor - Two Button

Echo Interfaces

MODEL	DESCRIPTION
EACC	EchoAccess Interface
EEB	Echo Expansion Bridge
EDMXC	Echo DMX Scene Controller
EEl	Echo-Echoflex Interface
ECII	Echo Contact Input Interface
ECOI	Echo Contact Output Interface
EDRI	Echo Demand Response Interface
EBI	Echo BACnet Interface
EII	Echo Integration Interface

Zone Controllers

MODEL	DESCRIPTION
ERC-G2	One Zone Relay Controller
EDRC-G2	Two Zone Relay Controller
ELD-G2	One Zone 0–10 V Controller
EDLD-G2	Two Zone 0–10 V Controller
ESSC-G2	One Zone SmartSpace Controller
EDSSC-G2	Two Zone SmartSpace Controller
ELVD-G2	600-Watt Phase Adaptive Dimmer (120 V)
ELVD-277-G2	600-Watt Phase Adaptive Dimmer (277 V)
ELVD-G2-MLV	600-Watt Forward Phase Dimmer (120 V)
ELVD-277-G2-MLV	600-Watt Forward Phase Dimmer (277 V)

Room Controllers

MODEL	DESCRIPTION
ERMCT4-G2	Four Zone Room Controller
ERMCT4-G2	Four Zone Room Controller with TimeClock
ERMCT8-G2	Eight Zone Room Controller
ERMCT8-G2	Eight Zone Room Controller with TimeClock

Panel Products

MODEL	DESCRIPTION
ERP	Echo Relay Panel Mains Feed
ERPA	Echo Relay Panel Mains Feed 277 V
ERP-FT	Echo Relay Panel Feedthrough
IQ	Sensor IQ Intelligent Breaker System
SR3	Sensor3 Power Control System
DRd	Unison DRd with Echo Control

PHYSICAL

Echo Room Controller Dimensions

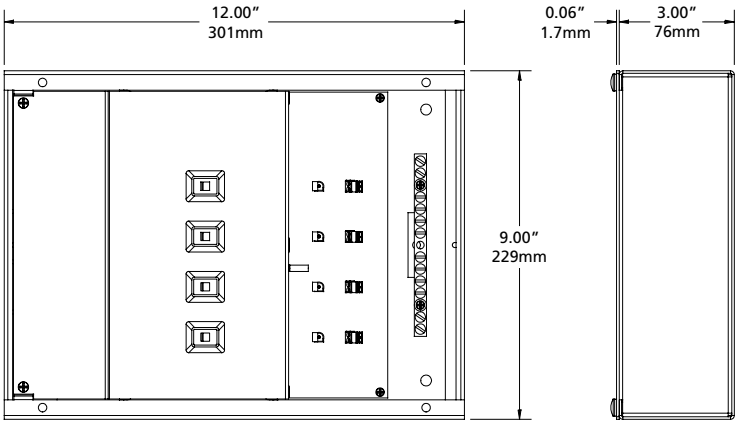
MODEL	HEIGHT		WIDTH		DEPTH	
	in	mm	in	mm	in	mm
ERMC4-G2/ ERMCT4-G2	9	229	12	301	3	76
ERMC8-G2/ ERMCT8-G2	14	356	12	301	3	76
ERMC4-G2-F*/ ERMCT4-G2-F*	11	279	14	356	3	76
ERMC8-G2-F*/ ERMCT8-G2-F*	16	406	14	356	3	76

*Dimensions of electronics housing on flush-mount room controllers are identical to dimensions of surface-mount room controllers

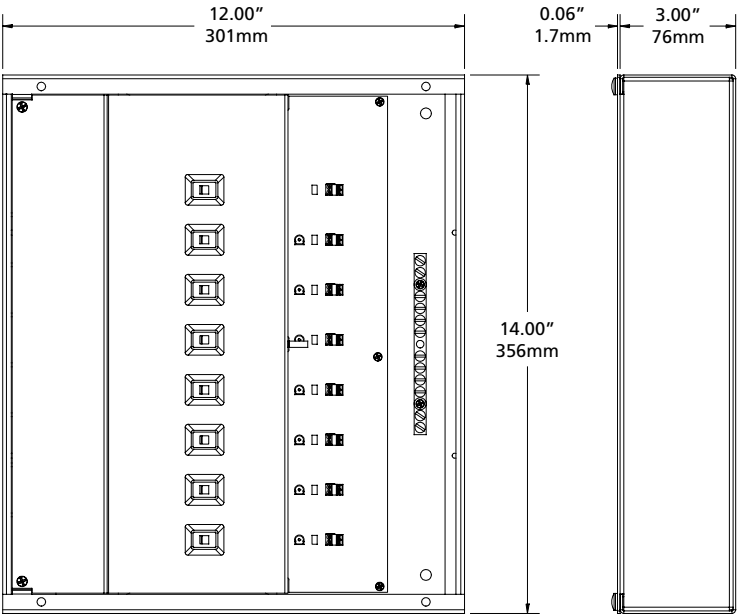
Echo Room Controller Weights

MODEL	WEIGHT	
	lb	kg
ERMC4-G2/ ERMCT4-G2	6.0	2.8
ERMC8-G2/ ERMCT8-G2	9.0	4.1
ERMC4-G2-F/ ERMCT4-G2-F	8.5	3.9
ERMC8-G2-F/ ERMCT8-G2-F	12.0	5.5

ERMC4-G2 AND ERMCT4-G2

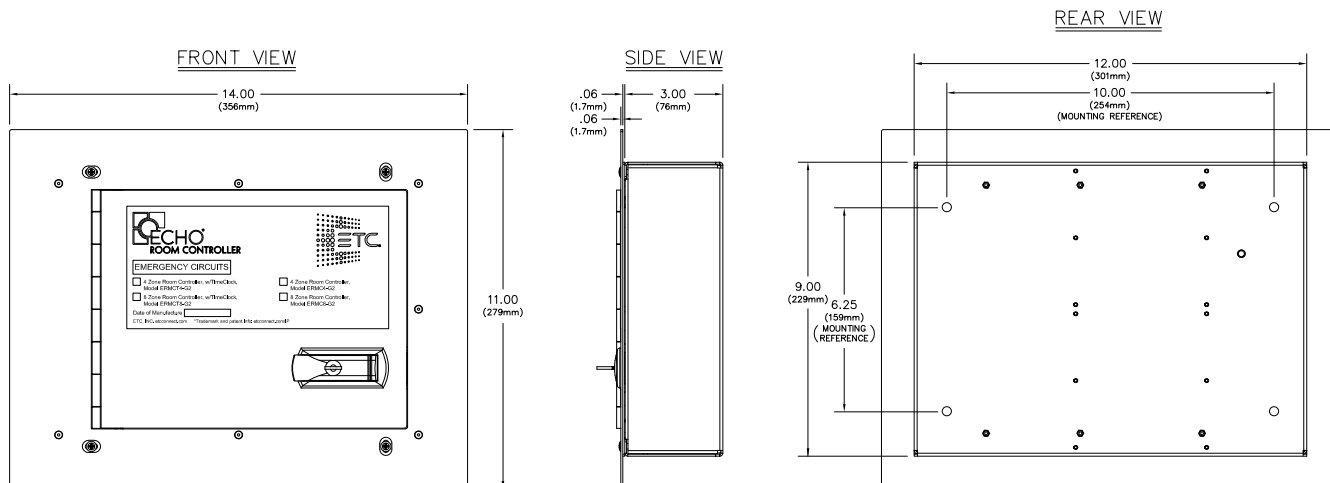


ERMC8-G2 AND ERMCT8-G2

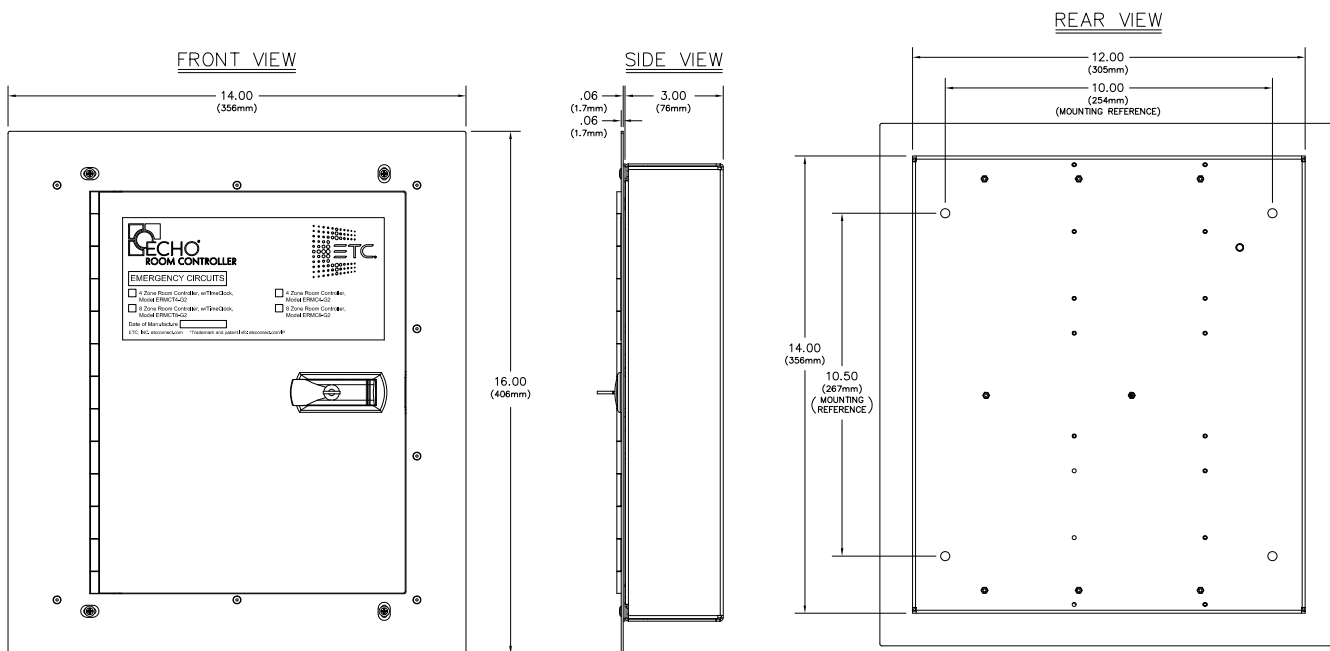


PHYSICAL

ERMCT4-G2-F AND ERMCT4-G2-F



ERMCT8-G2-F AND ERMCT8-G2-F



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