



Type(s)
Project
Date
Notes

GENERAL INFORMATION

The Elaho Relay Panel Feedthrough is a control-oriented switching and power control built with today and tomorrow’s lighting loads in mind. Elaho Relay Panel adds Echoflex’s latest Elaho Control package with support for 0–10 V control to our trusted conventional switching system. With built-in station, sensor, DMX and TimeClock controls and Ethernet connectivity, plus optional 0–10 V dimming, DALI output and contact inputs, the Elaho Relay Panel Feedthrough integration opportunities are limitless.

APPLICATIONS

- Houses of worship
- Ballrooms and convention centers
- Multi-purpose rooms
- Arenas and stadiums
- Entertainment facilities with DMX control
- Retrofits for lighting systems with existing breaker panels

FEATURES

- 120–347 V single-pole and 120/208 V or 277/480 V double-pole switching
- Up to 48 relays per panel
- Switches all relays at once or with configurable delay
- Mechanically latching relays fully rated for 20 A
- Manual ON/OFF override with position indication
- Relays support field installation and replacement
- Elaho, sACN, DMX-512, TimeClock, or stand-alone control
- Built-in EchoConnect power supply for up to 6 Elaho stations/sensors and 5 output products
- Built-in network interface provides:
 - Advanced control of relays over streaming ACN (sACN)
 - Web UI for configuration
- Local control with Astronomical timeclock and manual override per circuit
- UL924 Listed emergency control bypass contact input
 - Voltage barrier for normal/emergency mixed use panels
- cULus Listed

ORDERING INFORMATION

Standard Model Numbers

MODEL	DESCRIPTION
ERP24-FT	Elaho Relay Panel Feedthrough 24-way panel without relays
ERP24-FT121P	Elaho Relay Panel Feedthrough 24-way panel with twelve 20 A single-pole relays
ERP24-FT241P	Elaho Relay Panel Feedthrough 24-way panel with twenty-four 20 A single-pole relays
ERP48-FT	Elaho Relay Panel Feedthrough 48-way panel without relays
ERP48-FT481P	Elaho Relay Panel Feedthrough 48-way panel with forty-eight 20 A single-pole relays
ERP48-FT482P	Elaho Relay Panel Feedthrough 48-way panel with forty-eight 20 A 208 V double-pole relays

Note: Optional voltage divider available for use of both normal and emergency circuits in a single panel; where allowed by local code.

Accessories

ERP-FT-1PRK	120–347 V Single-Pole, Single-Space Relay Kit
ERP-FT-2PRK	120/208 V Double-Pole, Single-Space Relay Kit
ERP-FT-2P480RK	277/480 V Double-Pole, Double-Space Relay Kit
ERP-FT-LVD	0–10 V Dimming Control Option
ERP-FT-DALI	DALI-Control Option (broadcast only)
ERP-FT-CI	Contact-Input Option
ERP-FT-RTO	Ride-Thru Option
ERP-FT-VB	Voltage-Barrier Kit
ERP-FT-RMW	19 inch Rackmount Kit (15U)
ERP-FT-TPH	Tamper-proof Hardware Kit with tool

Elaho 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:	Not Provided

*Note: Built in power supply can be disabled.

Elaho Presets

Supports 64 Elaho Presets per space; up to 16 Elaho spaces
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For more information, download the [Elaho Design Guide](#)

SPECIFICATIONS

REGULATORY AND COMPLIANCE

- Underwriters Laboratories tested and Listed to the following standards:
 - UL508 Listed (File: E92154)
 - UL924 Listed (File: E242514)
- Complies with ANSI E1.11 DMX512-A standard
- Complies with ANSI E1.31 streaming ACN standard

USER INTERFACE

- Graphical display with LED backlight
- Button interface with:
 - 0-9 number buttons
 - Up, down, back and enter navigation buttons
 - "Light bulb" test button for local activation of preset, sequence and set level overrides
- USB interface for upload of setup and software updates
- Onboard Web UI for simple configuration

MECHANICAL

- Panel consists of enclosure, covers with locking doors, and internal subpanels
- Enclosure constructed of 16-gauge steel finished in black, fine-textured, scratch-resistant powder coat paint
- Removable conduit panels on top, bottom and sides
- Full front access with no side clearance required
- Removable covers for access to Class 1 and Class 2 wiring
- Locking doors allow controlled access to manual override switch of each relay and Class 2 wiring only
- All low-voltage wiring is physically separated from AC by a mechanical barrier
- Removable subpanels containing the electronics and relays can ship separately – contact Echoflex

ELECTRICAL

- Discrete feed per circuit supports mixed voltage in a single panel
- Single panel for up to 48 relays, populated in any combination of single- or double-pole
- Separate wiring chambers for Class 1 and Class 2 terminations
- Optional voltage barriers install without tools between relays for separation of normal and emergency circuits

CONTROL ELECTRONICS

- Input: 120–277 V (+/-15%), 50/60 Hz, <16 A
- Multi-tap transformer terminals accept up to 12 AWG wire
- Control wiring terminations accessible via flip down door
 - Control terminals accept maximum of 12 AWG wire
 - Control wiring exiting the panel are Class 2
 - All control terminations utilize removable connectors
- Relay modes: Normal (priority/HTP), latch-lock or last-action
- Configurable DMX on/off threshold
- Built-in Elaho control supports:
 - Up to sixteen spaces with 64 presets per space configurable via local UI or Elaho Inspire control stations
 - Presets 1–16 can be configured remotely via Elaho Access or integrated Web UI
 - One 16-step sequence per space
 - UL924 Listed emergency control bypass
 - Time-of-day and astronomical timeclock with flick-warn and holiday overrides
- Configurable data-loss behavior supports:
 - Play preset; Hold last look; Wait and fade

SPECIFICATIONS

RELAY RATINGS

- 20 A 347 V General Purpose
- 20 A 347 V Ballast (HID)
- 20 A Tungsten
- Motor Loads:
 - 0.5 HP @ 120 V
 - 1.5 HP @ 240/277 V
- SCCR: 18,000 A @ 277 V (1P); 5,000 A @ 277 V (2P & 480)
- Inrush: 2000 A (1P only)
- Isolation: 2,500 VRMS
- State: Latching
- Relays are mechanically held
- Life: 60,000 operations at full load
- Terminal: Accepts 14-10AWG copper wire

ENVIRONMENTAL

- Thermal: 0–40°C (32–104°F) operating temperature
 - 20 A relay - 60 BTU/hr (estimated)
- Humidity 10–90% (non-condensing)

ACCESSORIES

0-10 Dimming Option

- 24 outputs of 0–10 V sink dimming control rated for 400 mA per output

Contact Input Option

- 24 dry contact inputs which can be used to:
 - Trigger presets and sequences, which will play at the priority configured for architectural sources, or;
 - Directly control one or more outputs. The priority of these outputs is configurable. If nothing is configured, the last action takes precedence

DALI Control Option

- 24 control loops of broadcast DALI control
- Each loop supports up to 64 ballasts
- External DALI power supply required

Ride Thru Option

- Short-term power backup of control electronics
- Automatically engages when power is lost
- Recharges during normal power operation

Tamper-proof Hardware Kit

- Special screw heads prevent access to panel interior

ELAHO FAMILY PRODUCTS

Bus Power Supplies

MODEL	DESCRIPTION
E-SPS	6 U Room Station Power Supply, Knockout Mount
E-SPS-DIN	16 U DIN rail Station Power Supply with 24V Aux
E-APS	24V Aux Power Supply, Knockout Mount

ElahoTouch

MODEL	DESCRIPTION
ETS	ElahoTouch Controller Mk2

Elaho 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	Preset Station - 5 Button
EPS10	Preset Station - 10 Button
EPSKS	Keyswitch Station
E-ATC	TimeClock

Elaho 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

Elaho Interfaces

MODEL	DESCRIPTION
EACC	ElahoAccess Interface
EEB	Expansion Bridge
EDMXC	DMX Scene Controller
EEl	Elaho-Echoflex Interface
ECII	Contact Input Interface
ECOI	Contact Output Interface
EDRI	Demand Response Interface
EBl	BACnet Interface
EII	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)

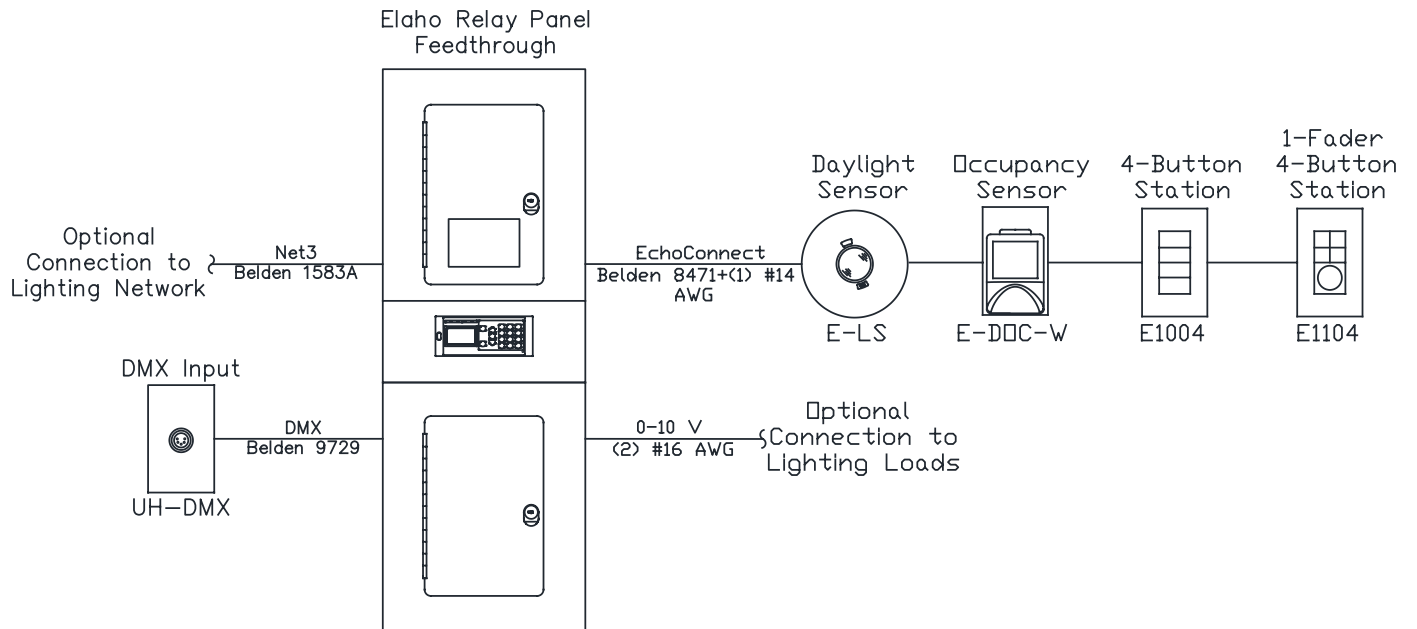
Room Controllers

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	Elaho Relay Panel Mains Feed
ERPA	Elaho Relay Panel Mains Feed 277V
ERP-FT	Elaho Relay Panel Feedthrough

SAMPLE RISER DIAGRAM



ORDERING INFORMATION

Non-Standard Model Numbering

	BASE MODEL	1-POLE 120-347 V	2-POLE 120/208 V	2-POLE 277/480 V	LOW VOLTAGE DIMMING	CONTACT INPUT	RIDE-THRU OPTION
MODEL #	ERP24-FT- or ERP48-FT-	#1P/	#2P/	#480	-LVD, -DALI	-CI	-RTO
MAX QTY	1	24 or 48	24 or 48	12 or 24	See chart below	See chart below	1

EXAMPLES:

ERP24-FT-191P-RTO

Twenty-four position panel with nineteen 20 A single-pole 120-347 V relays and a Ride-Thru Option

ERP48-FT-241P/242P

Forty-eight position panel with twenty-four 20 A single-pole 120-347 V relays and twenty-four 20 A double-pole 120/208 V relays

ERP48-FT-241P/122P/6480-LVD-CI-RTO

Forty-eight position panel with twenty-four 20 A single-pole 120-347 V relays, twelve 20 A double-pole 120/208 V relays, six 20 A double-pole 277/480 V relays, a 0–10 V Dimming Control Option, a Contact Input Option, and a Ride-Thru Option



Relays:

- 24 or 48 positions per panel
 - 120-347 V single-pole relays use one position
 - 120/208 V double-pole relays use one position
 - 277/480 V double-pole relays use two positions

Options Cards:

- Two slots for 0–10 V Dimming Control, DALI Control, and Contact Input Option Cards
 - Maximum two of the above Option Cards per panel
 - Each Option Card provides 24 control circuits
 - Each group of 24 control circuits may be assigned to a single low voltage dimming control option card (0–10 V or DALI) and/or to a Contact Input Option Card
- Ride-Thru Option mounts behind the control processor (one per panel)

ERP24-FT OPTION CARD COMBINATIONS

0–10 V CARD	-
0–10 V CARD	CONTACT CARD
DALI CARD	-
DALI CARD	CONTACT CARD
CONTACT CARD	-

ERP48-FT OPTION CARD COMBINATIONS

0–10 V CARD	-
0–10 V CARD	0–10 V CARD
0–10 V CARD	CONTACT CARD
0–10 V CARD	DALI CARD
DALI CARD	-
DALI CARD	DALI CARD
DALI CARD	CONTACT CARD
CONTACT CARD	-
CONTACT CARD	CONTACT CARD

PHYSICAL

ERP-FT Relay Panel Dimensions

MODEL	HEIGHT		WIDTH		DEPTH	
	in	mm	in	mm	in	mm
ERP24-FT	26.24	666	17.14	435	6.20	157
ERP48-FT	47.06	1,195	17.14	435	6.20	157

ERP-FT Relay Panel Weights

MODEL	WEIGHT		SHIPPING WEIGHT	
	lb	kg	lb	kg
ERP24-FT	45	20.49	46	20.87
ERP48-FT	81	36.8	90	40.8

