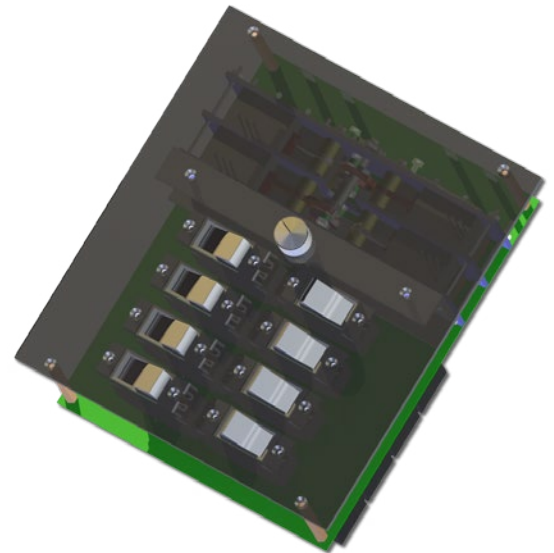


Energy Management System



Introduction

The E-Plex 442EMS series combines the benefit of automatically transferring between two power sources and intelligent energy management capabilities for AC loads. Load shedding can be implemented to prevent unnecessary resetting of circuit breakers.

The module can be used in single-phase 110 or 220 applications. Hydraulic magnetic circuit breakers provide traditional circuit protection for each channel. Optionally a selector switch can be provided allowing the user to choose between each power source, off or automatic state. 220 single phase can be supported through the addition of a isolation transformer or through the addition of an optional linked transfer switch.

Key Features

- Automatic and manual (optional) transfer between 2 power sources (Power transfer occurs in-phase).
- 75 amp max power source amps per bus:
Per channel: 20A normally open.
Per channel: 20A normally closed.
- 8 channels maximum.
- Optical and magnetic isolation from low voltage systems.
- Independent hydraulic magnetic single pole circuit breakers for each channel.
- Manual override capabilities include:
User defined default relay state with operation via traditional circuit breakers.
- Includes manual source selection switch / knob.

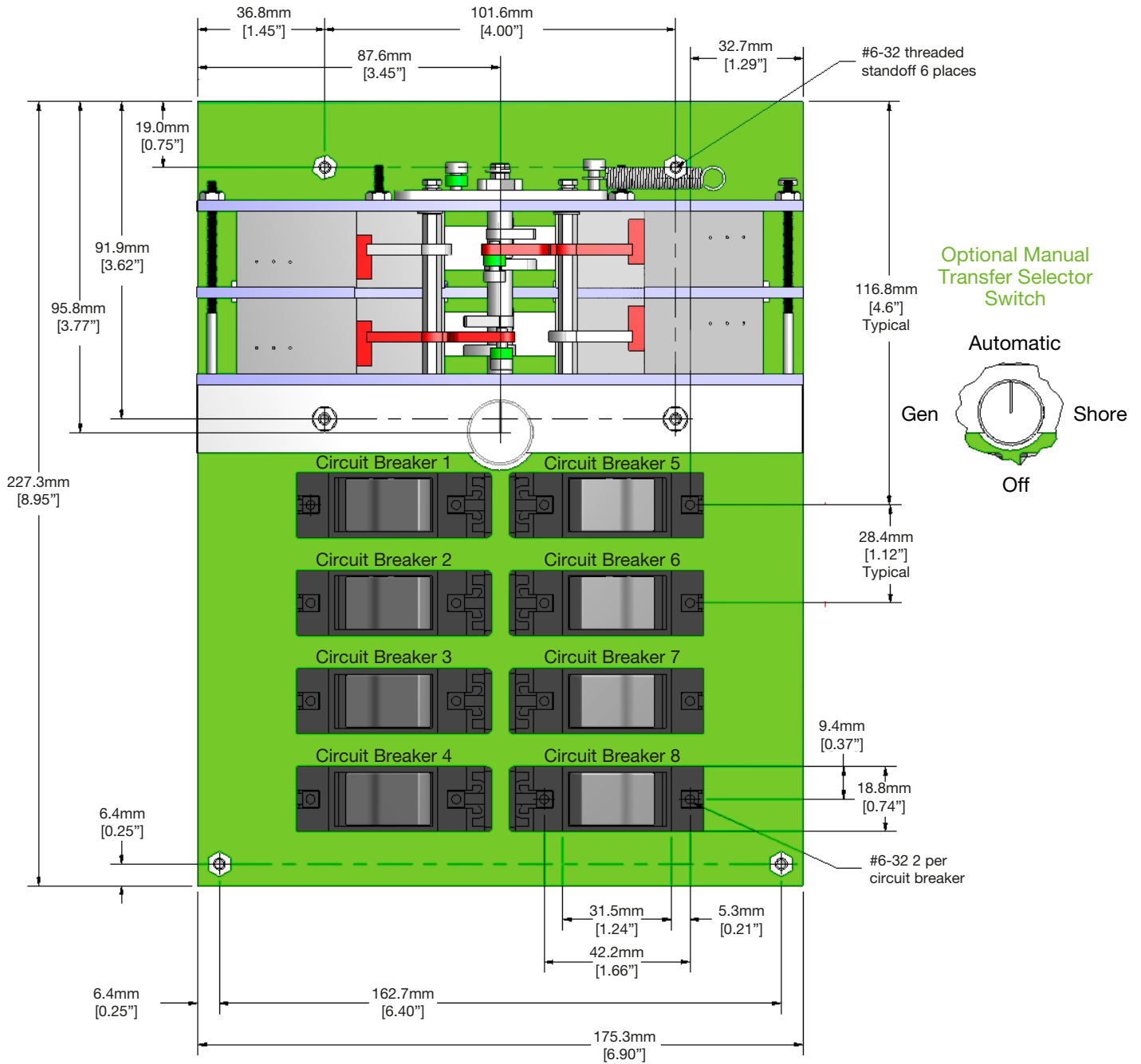
Monitoring capabilities

- Source availability.
- Current and voltage for L1 & L2.
- Frequency.
- 220 availability.
- Circuit breaker status.
- “Improper shore” wiring detection.

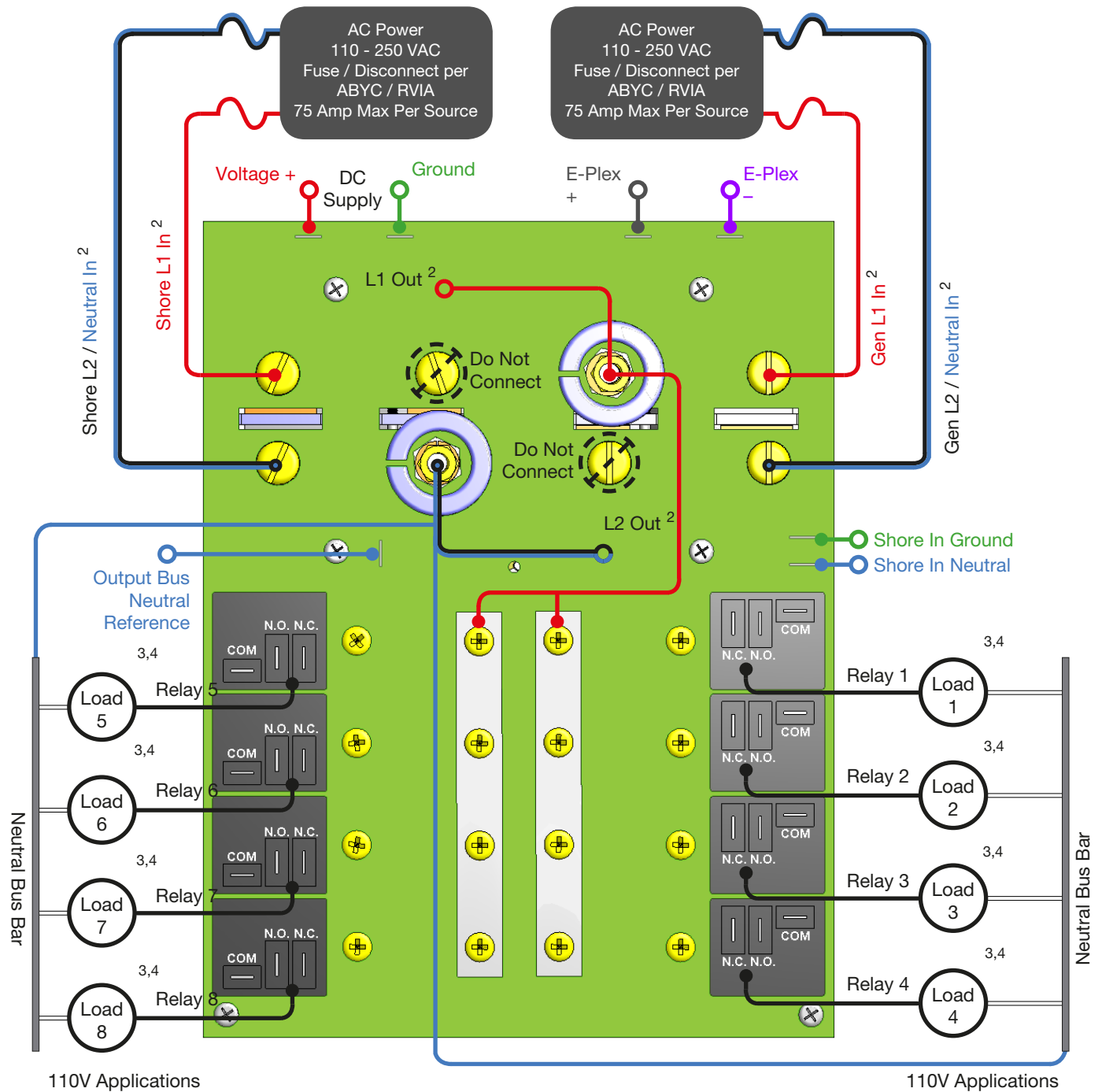
Design Specifications

- Vibration: Tested to Lloyds Registered approval vibration test 2.
- Transient voltage suppression: EN6100-6-1.
- PCB characteristics: UL94V-0.

Front View - Physical Dimensions, Bus, Breaker and Relay Configuration



Rear View - Wiring, Bus, Breaker and Relay Configuration



NOTE:

1. System will check for appropriate condition when performing transfer.
2. Do not overtighten, not to exceed 20 inch/lbs of torque.
3. L1 / L2 load bus can be tied together or operated independently.
4. Common relay output are circuit protected but not controlled by E-Plex.

Connection Specifications

| Description | Specifications |
|--------------------------------|---------------------|
| AC Operating Voltage | 120/240 VAC per bus |
| AC Operating Current (per bus) | 75A max |
| DC Operating Voltage | 10/32 VDC |
| DC Operating Current | 0.75A max |

Physical Specifications

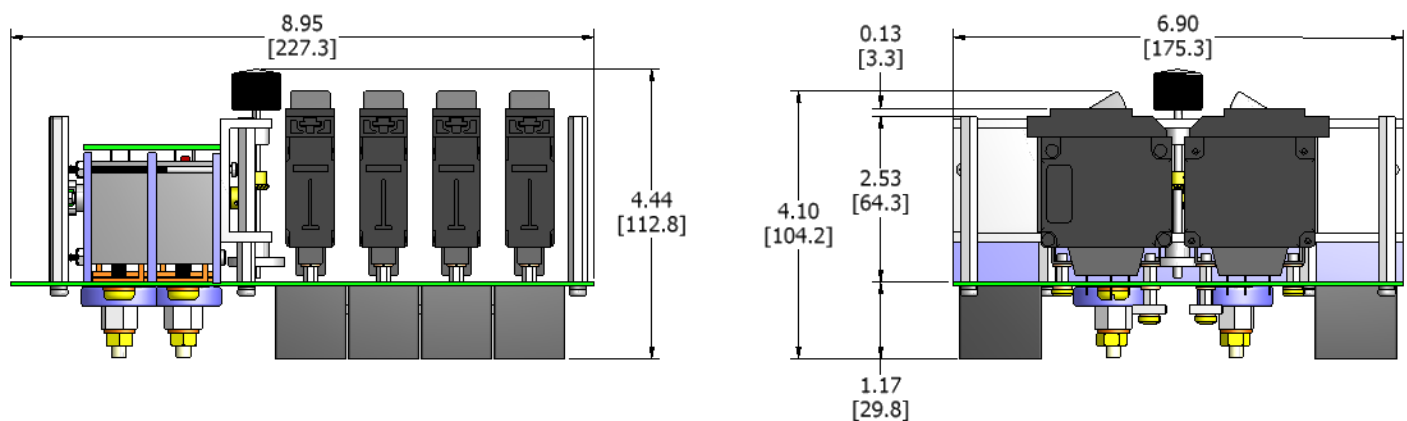
| Description | Specifications |
|-----------------------|----------------------------|
| Faceplate | Customer provided |
| Standoffs | Stainless steel |
| Operating Temperature | -20°C to 60°C |
| Storage Temperature | -40°C to 85°C |
| Operating Humidity | 5% to 75% (non-condensing) |

Circuit Breaker Ordering Specifications (circuit breakers ordered separately)

| Single Pole Circuit Breakers Part Number | Current Rating |
|--|----------------|
| MCB-AP-1P-S-05A-EM0154 | 5A |
| MCB-AP-1P-S-10A-EM0141 | 10A |
| MCB-AP-1P-S-15A-EM0142 | 15A |
| MCB-AP-1P-S-20A-EM0143 | 20A |

Module Outline Dimensions: (circuit breakers ordered separately).

EP-AC-KIT-442 442EMS with optional manual source selection switch.





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