



**REX POWER MAGNETICS**

# MINI POWER CENTER

**Simple  
Elegant  
Smart**

Encapsulated transformer complete with primary circuit breaker protection and secondary main breaker distribution loadcenter

**Save Time:** Pre-wired, ready for hook up

**Save Space:** Compact wall mountable configuration

**Save Money:** Installing one component versus three



Publication Date: 2/2021

Distributed by Gross Automation +1(262)252-1600 or [sales@grossautomation.com](mailto:sales@grossautomation.com)

## Rex Power Magnetics Mini Power Center - Introduction



### Practical, time saving, and customizable!

Rex Power Magnetics' Mini Power Centers combine three individual components into a single pre-wired assembly: a primary main breaker, an encapsulated isolation transformer, and a main breaker load center. With all of the components installed and factory wired in a single rugged enclosure, field installation time is reduced and simplified extensively. Mini Power Centers are used on single-phase and three-phase low voltage distribution systems and loads requiring 208Y/120V three-phase or 120/240V single-phase. While the Load Center is normally shipped without the secondary branch breakers, Rex can supply and install them if a panel schedule is provided.

Shown on brackets for display only. Floor mounting is optionally available.

### Part Numbering System

MP3 C 45 H-M/ / ... /

Product  
Type

Conductor  
Material

kVA  
Rating

Primary  
Voltage

Secondary  
Voltage

Optional Special  
Features

#### Product Type

|     |                           |
|-----|---------------------------|
| MP1 | 1 phase Mini Power Center |
| MP3 | 3 phase Mini Power Center |

#### Transformer Conductor Material

|   |          |
|---|----------|
| C | Copper   |
| A | Aluminum |

#### kVA Rating

1 phase kVA levels:

|   |     |    |    |    |    |
|---|-----|----|----|----|----|
| 5 | 7.5 | 10 | 15 | 25 | 30 |
|---|-----|----|----|----|----|

3 phase kVA levels:

|   |    |      |    |    |
|---|----|------|----|----|
| 9 | 15 | 22.5 | 30 | 45 |
|---|----|------|----|----|

#### Primary Voltage

|    |     |    |     |    |     |    |     |
|----|-----|----|-----|----|-----|----|-----|
| A  | 120 | C1 | 230 | G  | 416 | J  | 600 |
| A1 | 115 | C2 | 220 | G1 | 400 | J1 | 575 |
| A2 | 110 | D  | 277 | H  | 480 | J2 | 550 |
| B  | 208 | E  | 347 | H1 | 460 |    |     |
| C  | 240 | F  | 380 | H2 | 440 |    |     |

For any other voltage use X (600 V max).

#### Secondary Voltage

|   |          |    |   |         |
|---|----------|----|---|---------|
| M | 208Y/120 | or | K | 120/240 |
|---|----------|----|---|---------|

#### Optional Special Features

|      |                                        |
|------|----------------------------------------|
| 50   | 50/60 Hz system frequency              |
| BB   | Branch breakers supplied (per request) |
| BO   | Bolt on breaker load center            |
| CLC  | Copper bus load center                 |
| E4   | Type 4 rating                          |
| E4X  | Type 4X enclosure (SS 304 or 316L)     |
| T80  | 80 °C rise                             |
| T115 | 115 °C rise                            |
| S1   | Single electrostatic shield            |

for all other custom requirements use X...

|   |                                    |
|---|------------------------------------|
| X | Special specification breaker(s)   |
|   | Specified breakers (Rex to supply) |
|   | Special paint color                |
|   | Special low loss (high efficiency) |
|   | Special tags and markings          |
|   | Thermostat(s)                      |
|   | Special dimensions                 |
|   | Floor mounting                     |

## Rex Power Magnetics Mini Power Center - Specifications

### Transformer

Standard Rex Power Magnetics copper wound encapsulated transformer

- ◆ 1Ø up to 30 kVA, 3Ø up to 45 kVA, 600 V max.
- ◆ Transformer is completely encapsulated in polyester resin and silica sand, with only terminals and taps protruding from block.
- ◆ 200 °C insulation class.
- ◆ 130 °C winding temperature rise (115 °C and 80 °C available)
- ◆ Terminals are labelled, taps are cleaned for connection.

### Primary Breaker

Molded Case Circuit Breaker (MCCB) for primary side protection

- ◆ Standard Eaton FDB and EHD primary breakers are used with 14 kA interrupting current capacity.
- ◆ Optional Eaton FD, HFD, and FDC breakers may be specified for 18 kA, 25 kA, and 35 kA interrupting current.
- ◆ Square D, GE, or other components may be specified.

### Secondary Main Breaker Load Center

Molded Case Circuit Breaker (MCCB) for secondary side protection

- ◆ Space for up to 30 secondary branch breakers (see table).
- ◆ Secondary branch circuit breakers may be supplied and installed per customer panel schedule (optional)
- ◆ Load center is suitable for Eaton Type BR Push-on breakers, or optionally suitable for Eaton Type BAB Bolt-on breakers
- ◆ Square D, GE, or other components may be specified.
- ◆ Neutral bar is grounded to enclosure

### Enclosure

- ◆ Wall-mounting
- ◆ Padlockable quarter-turn for panel
- ◆ Standard enclosure: Type 3R indoor/outdoor
- ◆ Optionally available:
  - ◆ Tamperproof hardware
  - ◆ Type 3R Stainless Steel,
  - ◆ Type 4 (totally enclosed)
  - ◆ Type 4X (totally enclosed, stainless steel, 304 or 316L)
  - ◆ Floor mounting brackets or provisions

### Applications

- ◆ Industrial Loads (factory, laboratory, etc)
- ◆ Commercial (EV charging, parking lots, etc.)
- ◆ Temporary Power (rental application, generator power)
- ◆ Tunnel Power (emergency power, tunnel lighting, mining)
- ◆ General Purpose (lighting, distribution, etc.)

### Approvals & Certifications



CSA Certified  
File No.: LR 34493



UL Listed  
File No.: E495724



ISO 9001:2015  
Rex is registered to  
ISO 9001: 2015



ABS, CE, and others  
available.



Typical appearance for larger sizes



Typical appearance for smaller sizes

## Tables & Diagrams

### Aluminum Bus & Push-On Breaker Load Center MPC (CSA & UL)

| Type                                            | Catalog # | kVA  | Diagram* | Pri. Breaker      | Sec. Breaker      | Breakers<br>[Max quantity] |        |        | Dimensions (Type 3R) |             |             |             |                   |
|-------------------------------------------------|-----------|------|----------|-------------------|-------------------|----------------------------|--------|--------|----------------------|-------------|-------------|-------------|-------------------|
|                                                 |           |      |          |                   |                   | 1-pole                     | 2-pole | 3-pole | W<br>[inch]          | D<br>[inch] | H<br>[inch] | wt<br>[lbs] | Enclosure<br>Name |
| Single<br>Phase<br>600 V<br>to<br>120/<br>240 V | MP1C5J-K  | 5    | 1        | 20A <sup>1</sup>  | 25A <sup>3</sup>  | 12                         | 6      | -      | 17.25                | 12.5        | 39.5        | 265         | E3R-1PMPC-1       |
|                                                 | MP1C7J-K  | 7.5  | 1        | 30A <sup>1</sup>  | 40A <sup>3</sup>  | 12                         | 6      | -      | 17.25                | 12.5        | 39.5        | 275         | E3R-1PMPC-1       |
|                                                 | MP1C10J-K | 10   | 2        | 40A <sup>1</sup>  | 50A <sup>3</sup>  | 20                         | 10     | -      | 17.25                | 14.5        | 50.5        | 345         | E3R-1PMPC-2       |
|                                                 | MP1C15J-K | 15   | 2        | 60A <sup>1</sup>  | 70A <sup>3</sup>  | 20                         | 10     | -      | 17.25                | 14.5        | 50.5        | 375         | E3R-1PMPC-2       |
|                                                 | MP1C25J-K | 25   | 2        | 100A <sup>1</sup> | 125A <sup>3</sup> | 30                         | 14     | -      | 18.00                | 14.5        | 59.5        | 570         | E3R-1PMPC-3       |
|                                                 | MP1C30J-K | 30   | 2        | 100A <sup>1</sup> | 150A <sup>5</sup> | 30                         | 14     | -      | 24.00                | 16.0        | 60.5        | 780         | E3R-1PMPC-4       |
| Single<br>Phase<br>480 V<br>to<br>120/<br>240 V | MP1C5H-K  | 5    | 1        | 20A <sup>2</sup>  | 25A <sup>3</sup>  | 12                         | 6      | -      | 17.25                | 12.5        | 39.5        | 265         | E3R-1PMPC-1       |
|                                                 | MP1C7H-K  | 7.5  | 1        | 30A <sup>2</sup>  | 40A <sup>3</sup>  | 12                         | 6      | -      | 17.25                | 12.5        | 39.5        | 275         | E3R-1PMPC-1       |
|                                                 | MP1C10H-K | 10   | 2        | 40A <sup>2</sup>  | 50A <sup>3</sup>  | 20                         | 10     | -      | 17.25                | 14.5        | 50.5        | 345         | E3R-1PMPC-2       |
|                                                 | MP1C15H-K | 15   | 2        | 60A <sup>2</sup>  | 70A <sup>3</sup>  | 20                         | 10     | -      | 17.25                | 14.5        | 50.5        | 375         | E3R-1PMPC-2       |
|                                                 | MP1C25H-K | 25   | 2        | 100A <sup>2</sup> | 125A <sup>3</sup> | 30                         | 14     | -      | 18.00                | 14.5        | 59.5        | 570         | E3R-1PMPC-3       |
|                                                 | MP1C30H-K | 30   | 2        | 125A <sup>2</sup> | 150A <sup>5</sup> | 30                         | 14     | -      | 24.00                | 16.0        | 60.5        | 780         | E3R-1PMPC-4       |
| Three<br>Phase<br>600 V<br>to<br>208Y/<br>120 V | MP3C9J-M  | 9    | 3        | 20A <sup>1</sup>  | 30A <sup>3</sup>  | 12                         | 6      | 4      | 18.00                | 12.5        | 43.5        | 315         | E3R-3PMPC-1       |
|                                                 | MP3C15J-M | 15   | 4        | 30A <sup>1</sup>  | 50A <sup>3</sup>  | 27                         | 13     | 9      | 23.25                | 14.0        | 52.5        | 475         | E3R-3PMPC-2       |
|                                                 | MP3C22J-M | 22.5 | 4        | 50A <sup>1</sup>  | 70A <sup>3</sup>  | 27                         | 13     | 9      | 23.25                | 18.0        | 55.0        | 630         | E3R-3PMPC-3       |
|                                                 | MP3C30J-M | 30   | 4        | 70A <sup>1</sup>  | 100A <sup>3</sup> | 27                         | 13     | 9      | 23.25                | 18.0        | 55.0        | 710         | E3R-3PMPC-3       |
|                                                 | MP3C45J-M | 45   | 4        | 90A <sup>1</sup>  | 150A <sup>4</sup> | 30                         | 14     | 10     | 25.50                | 18.0        | 65.5        | 960         | E3R-3PMPC-4       |
| Three<br>Phase<br>480V<br>to<br>208Y/<br>120 V  | MP3C9H-M  | 9    | 3        | 25A <sup>2</sup>  | 30A <sup>3</sup>  | 12                         | 6      | 4      | 18.00                | 12.5        | 43.5        | 315         | E3R-3PMPC-1       |
|                                                 | MP3C15H-M | 15   | 4        | 40A <sup>2</sup>  | 50A <sup>3</sup>  | 27                         | 13     | 9      | 23.25                | 14.0        | 52.5        | 475         | E3R-3PMPC-2       |
|                                                 | MP3C22H-M | 22.5 | 4        | 60A <sup>2</sup>  | 70A <sup>3</sup>  | 27                         | 13     | 9      | 23.25                | 18.0        | 55.0        | 630         | E3R-3PMPC-3       |
|                                                 | MP3C30H-M | 30   | 4        | 80A <sup>2</sup>  | 100A <sup>3</sup> | 27                         | 13     | 9      | 23.25                | 18.0        | 55.0        | 710         | E3R-3PMPC-3       |
|                                                 | MP3C45H-M | 45   | 4        | 125A <sup>1</sup> | 150A <sup>4</sup> | 30                         | 14     | 10     | 25.50                | 18.0        | 65.5        | 960         | E3R-3PMPC-4       |

\*See back page for Electrical Connection Diagrams

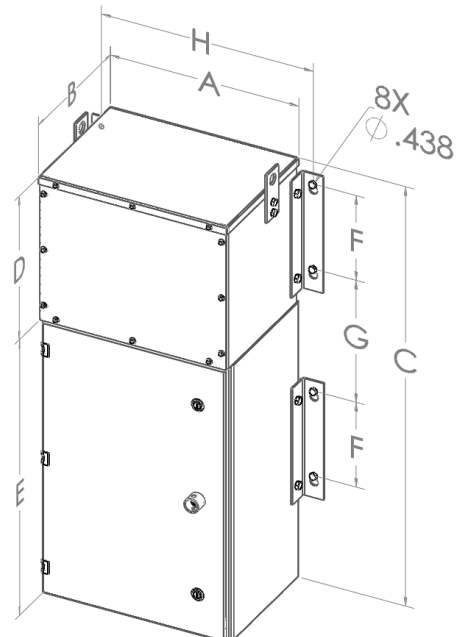
1. Eaton Type FDB Breaker
2. Eaton Type EHD Breaker
3. Eaton Type BR Breaker
4. Eaton Type CC Breaker
5. Eaton Type CSR Breaker

### Dimensions [inches]

| Enclosure<br>Name | A     | B     | C     | D     | E     | F    | G     | H     |
|-------------------|-------|-------|-------|-------|-------|------|-------|-------|
| E3R-1PMPC-1       | 17.25 | 12.50 | 39.50 | 13.56 | 29.94 | 8.00 | 11.50 | 19.38 |
| E3R-1PMPC-2       | 17.25 | 14.50 | 50.50 | 16.56 | 33.94 | 8.00 | 18.50 | 19.38 |
| E3R-1PMPC-3       | 18.00 | 14.50 | 59.50 | 23.56 | 35.94 | 8.00 | 26.50 | 20.13 |
| E3R-1PMPC-4       | 24.00 | 16.00 | 60.50 | 23.56 | 36.94 | 8.00 | 27.00 | 26.13 |
| E3R-3PMPC-1       | 18.00 | 12.50 | 43.50 | 15.56 | 27.94 | 8.00 | 14.50 | 20.13 |
| E3R-3PMPC-2       | 23.25 | 14.00 | 52.50 | 16.06 | 36.44 | 8.00 | 19.25 | 25.38 |
| E3R-3PMPC-3       | 23.25 | 18.00 | 55.00 | 18.56 | 36.44 | 8.00 | 21.75 | 25.38 |
| E3R-3PMPC-4       | 25.50 | 18.00 | 65.50 | 23.56 | 41.94 | 8.00 | 29.50 | 27.63 |

Get detail cut sheets (drawings) for each of our standard sizes:

[www.rexpowermagnetics.com](http://www.rexpowermagnetics.com)



## Tables & Diagrams

### Copper Bus & Bolt-On Breaker Load Center MPC (CSA only)

| Type                                            | Catalog #        | kVA  | Diagram* | Pri. Breaker      | Sec. Breaker      | Breakers<br>[Max quantity] |        |        | Dimensions (Type 3R) |             |             |             |                   |
|-------------------------------------------------|------------------|------|----------|-------------------|-------------------|----------------------------|--------|--------|----------------------|-------------|-------------|-------------|-------------------|
|                                                 |                  |      |          |                   |                   | 1-pole                     | 2-pole | 3-pole | W<br>[inch]          | D<br>[inch] | H<br>[inch] | wt<br>[lbs] | Enclosure<br>Name |
| Single<br>Phase<br>600 V<br>to<br>120/240<br>V  | MP1C5J-K/BO/CLC  | 5    | 1        | 20A <sup>1</sup>  | 25A <sup>6</sup>  | 18                         | 8      | -      | 23.25                | 12.5        | 43.5        | 335         | E3R-1PMPC-1B      |
|                                                 | MP1C7J-K/BO/CLC  | 7.5  | 1        | 30A <sup>1</sup>  | 40A <sup>6</sup>  | 18                         | 8      | -      | 23.25                | 12.5        | 43.5        | 345         | E3R-1PMPC-1B      |
|                                                 | MP1C10J-K/BO/CLC | 10   | 2        | 40A <sup>1</sup>  | 50A <sup>6</sup>  | 30                         | 14     | -      | 23.25                | 14.5        | 53.0        | 455         | E3R-1PMPC-2B      |
|                                                 | MP1C15J-K/BO/CLC | 15   | 2        | 60A <sup>1</sup>  | 70A <sup>6</sup>  | 30                         | 14     | -      | 23.25                | 14.5        | 53.0        | 485         | E3R-1PMPC-2B      |
|                                                 | MP1C25J-K/BO/CLC | 25   | 2        | 100A <sup>1</sup> | 125A <sup>6</sup> | 30                         | 14     | -      | 23.25                | 14.5        | 60.0        | 635         | E3R-1PMPC-3B      |
|                                                 | MP1C30J-K/BO/CLC | 30   | 2        | 100A <sup>1</sup> | 150A <sup>7</sup> | 30                         | 14     | -      | 23.25                | 16.0        | 65.0        | 750         | E3R-1PMPC-4B      |
| Single<br>Phase<br>480 V<br>to<br>120/<br>240 V | MP1C5H-K/BO/CLC  | 5    | 1        | 20A <sup>2</sup>  | 25A <sup>6</sup>  | 18                         | 8      | -      | 23.25                | 12.5        | 43.5        | 335         | E3R-1PMPC-1B      |
|                                                 | MP1C7H-K/BO/CLC  | 7.5  | 1        | 30A <sup>2</sup>  | 40A <sup>6</sup>  | 18                         | 8      | -      | 23.25                | 12.5        | 43.5        | 345         | E3R-1PMPC-1B      |
|                                                 | MP1C10H-K/BO/CLC | 10   | 2        | 40A <sup>2</sup>  | 50A <sup>6</sup>  | 30                         | 14     | -      | 23.25                | 14.5        | 53.0        | 455         | E3R-1PMPC-2B      |
|                                                 | MP1C15H-K/BO/CLC | 15   | 2        | 60A <sup>2</sup>  | 70A <sup>6</sup>  | 30                         | 14     | -      | 23.25                | 14.5        | 53.0        | 485         | E3R-1PMPC-2B      |
|                                                 | MP1C25H-K/BO/CLC | 25   | 2        | 100A <sup>2</sup> | 125A <sup>6</sup> | 30                         | 14     | -      | 23.25                | 14.5        | 60.0        | 635         | E3R-1PMPC-3B      |
|                                                 | MP1C30H-K/BO/CLC | 30   | 2        | 125A <sup>1</sup> | 150A <sup>7</sup> | 30                         | 14     | -      | 23.25                | 16.0        | 65.0        | 750         | E3R-1PMPC-4B      |
| Three<br>Phase<br>600 V<br>to<br>208Y/<br>120 V | MP3C9J-M/BO/CLC  | 9    | 3        | 20A <sup>1</sup>  | 30A <sup>6</sup>  | 18                         | 8      | 6      | 23.25                | 12.5        | 45.5        | 395         | E3R-3PMPC-1B      |
|                                                 | MP3C15J-M/BO/CLC | 15   | 4        | 30A <sup>1</sup>  | 50A <sup>6</sup>  | 30                         | 14     | 10     | 23.25                | 14.0        | 52.5        | 520         | E3R-3PMPC-2B      |
|                                                 | MP3C22J-M/BO/CLC | 22.5 | 4        | 50A <sup>1</sup>  | 70A <sup>6</sup>  | 30                         | 14     | 10     | 23.25                | 18.0        | 55.0        | 710         | E3R-3PMPC-3B      |
|                                                 | MP3C30J-M/BO/CLC | 30   | 4        | 70A <sup>1</sup>  | 100A <sup>6</sup> | 30                         | 14     | 10     | 23.25                | 18.0        | 55.0        | 780         | E3R-3PMPC-3B      |
|                                                 | MP3C45J-M/BO/CLC | 45   | 4        | 90A <sup>1</sup>  | 150A <sup>7</sup> | 30                         | 14     | 10     | 25.50                | 18.0        | 65.0        | 1000        | E3R-3PMPC-4B      |
| Three<br>Phase<br>480V<br>to<br>208Y/<br>120 V  | MP3C9H-M/BO/CLC  | 9    | 3        | 25A <sup>2</sup>  | 30A <sup>6</sup>  | 18                         | 8      | 6      | 23.25                | 12.5        | 45.5        | 395         | E3R-3PMPC-1B      |
|                                                 | MP3C15H-M/BO/CLC | 15   | 4        | 40A <sup>2</sup>  | 50A <sup>6</sup>  | 30                         | 14     | 10     | 23.25                | 14.0        | 52.5        | 520         | E3R-3PMPC-2B      |
|                                                 | MP3C22H-M/BO/CLC | 22.5 | 4        | 60A <sup>2</sup>  | 70A <sup>6</sup>  | 30                         | 14     | 10     | 23.25                | 18.0        | 55.0        | 710         | E3R-3PMPC-3B      |
|                                                 | MP3C30H-M/BO/CLC | 30   | 4        | 80A <sup>2</sup>  | 100A <sup>6</sup> | 30                         | 14     | 10     | 23.25                | 18.0        | 55.0        | 780         | E3R-3PMPC-3B      |
|                                                 | MP3C45H-M/BO/CLC | 45   | 4        | 125A <sup>1</sup> | 150A <sup>7</sup> | 30                         | 14     | 10     | 25.50                | 18.0        | 65.0        | 1000        | E3R-3PMPC-4B      |

\*See back page for Electrical Connection Diagrams

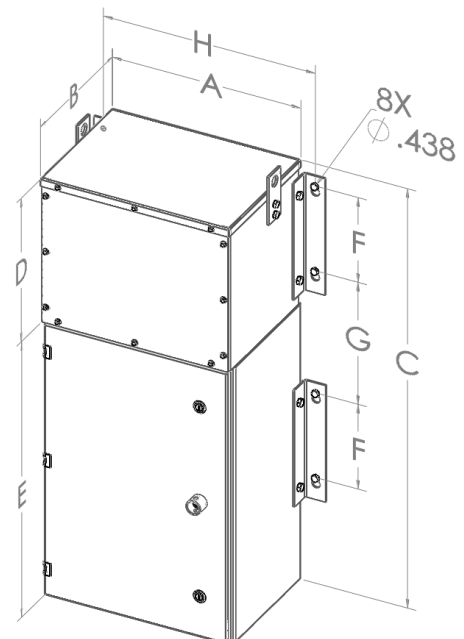
1. Eaton Type FDB Breaker
2. Eaton Type EHD Breaker
6. Eaton Type BAB Breaker
7. Eaton Type ED Breaker

### Dimensions [inches]

| Enclosure Name | A     | B     | C     | D     | E     | F    | G     | H     |
|----------------|-------|-------|-------|-------|-------|------|-------|-------|
| E3R-1PMPC-1B   | 23.25 | 12.50 | 43.50 | 13.56 | 29.94 | 8.00 | 11.50 | 25.38 |
| E3R-1PMPC-2B   | 23.25 | 14.50 | 53.00 | 16.56 | 36.44 | 8.00 | 18.50 | 25.38 |
| E3R-1PMPC-3B   | 23.25 | 14.50 | 60.00 | 23.56 | 36.44 | 8.00 | 26.50 | 25.38 |
| E3R-1PMPC-4B   | 23.25 | 16.00 | 65.00 | 23.56 | 41.44 | 8.00 | 27.00 | 25.38 |
| E3R-3PMPC-1B   | 23.25 | 12.50 | 45.50 | 15.56 | 29.94 | 8.00 | 14.50 | 25.38 |
| E3R-3PMPC-2B   | 23.25 | 14.00 | 52.50 | 16.06 | 36.44 | 8.00 | 19.25 | 25.38 |
| E3R-3PMPC-3B   | 23.25 | 18.00 | 55.00 | 18.56 | 36.44 | 8.00 | 21.75 | 25.38 |
| E3R-3PMPC-4B   | 25.50 | 18.00 | 65.00 | 23.56 | 41.44 | 8.00 | 29.50 | 27.63 |

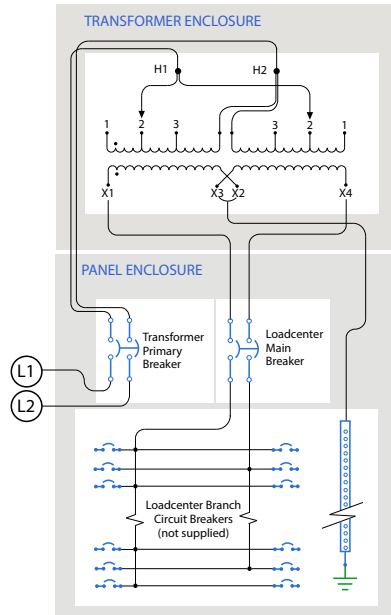
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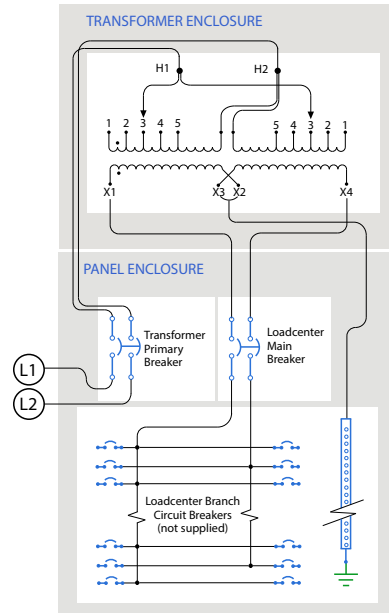


# Electrical Connection Diagrams

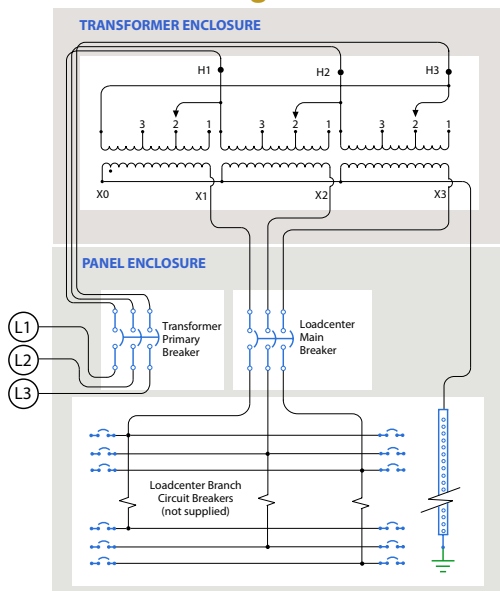
## Diagram 1



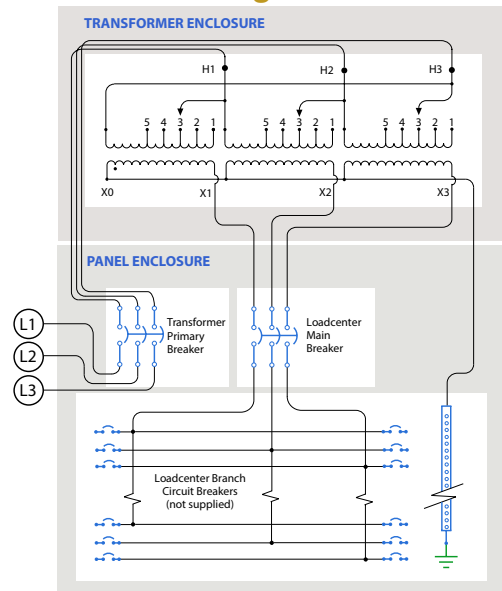
## Diagram 2



## Diagram 3



## Diagram 4



- Diagrams above are for illustrative purposes only and are not intended to serve as a reference electrical schematic for wiring.

## Contact our Sales Team

Use our website to find your local sales representative:

**[www.rexpowermagnetics.com](http://www.rexpowermagnetics.com)**

### Canadian Sales & Inquiries

1-800-387-2840

[sales@rexpowermagnetics.com](mailto:sales@rexpowermagnetics.com)

### USA Sales & Inquiries

774-571-9479

[bobcannon@rexpowermagnetics.com](mailto:bobcannon@rexpowermagnetics.com)

