



Compliant to NRCAN 2019  
Efficiency Standards

## HPS Express™ Energy Efficient Commercial Low Voltage Distribution Transformers

power to perform



# HPS Express™

## Energy Efficient Commercial Distribution Transformer



The new HPS Express™ G series of energy efficient low voltage distribution transformers offer an ideal combination of features, quality, reliability and performance to provide the most cost effective solution for your commercial applications.

### Typical Applications

The new HPS Express G is best suited to satisfy the needs of typical electrical power distribution applications including:



Lighting



Small Power Distribution



HVAC



Shopping Plazas



Office Towers



Residential High-Rise



Commercial Buildings



Big Box Stores

### Energy Efficiency

This product line meets or exceeds the latest energy efficiency requirements prescribed by the Natural Resources Canada (NRCan), and the Ontario Green Energy Act.

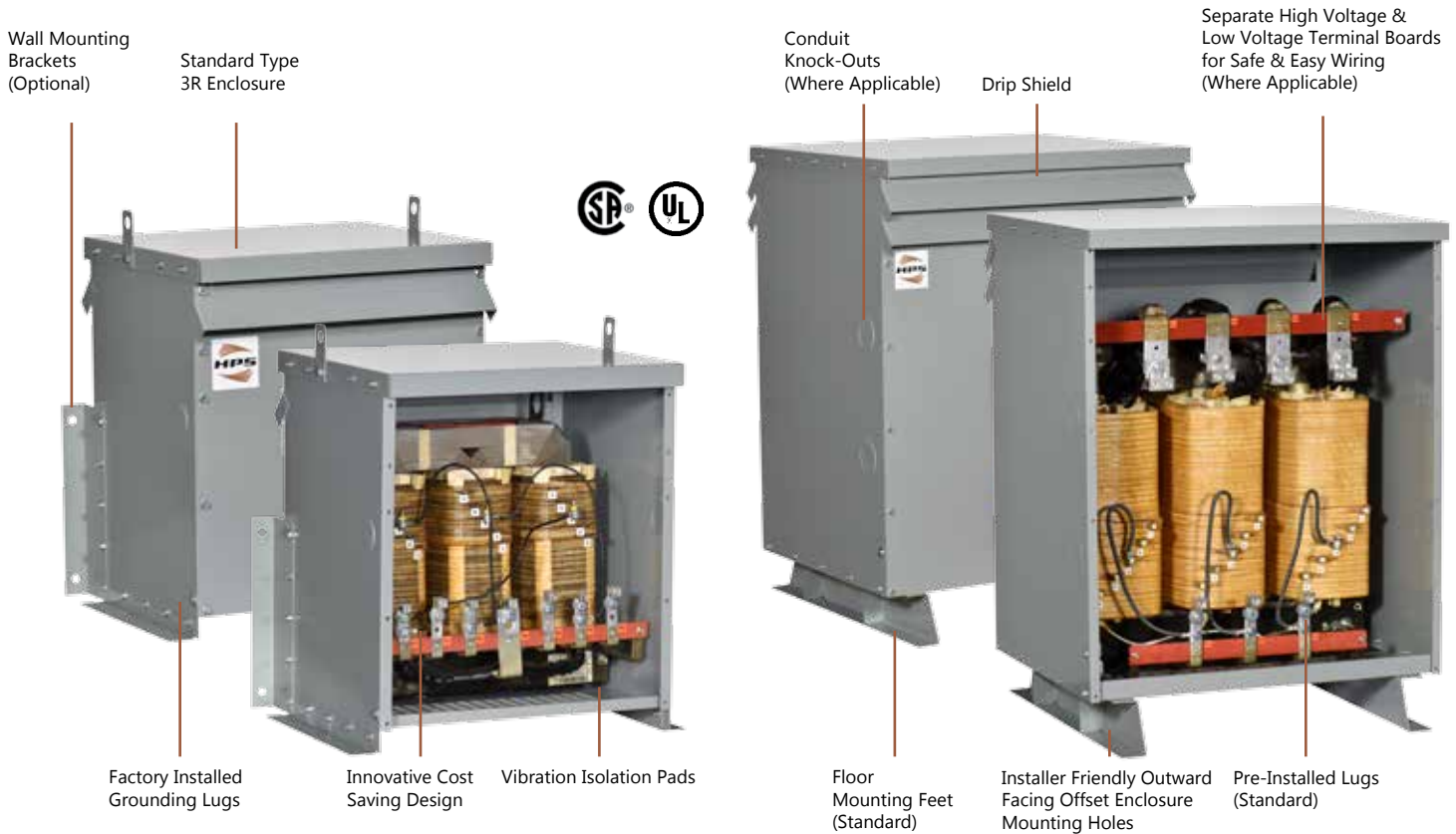
| Single Phase |                | Three Phase |                |
|--------------|----------------|-------------|----------------|
| kVA          | Efficiency (%) | kVA         | Efficiency (%) |
| 15           | 97.70          | 15          | 97.89          |
| 25           | 98.00          | 30          | 98.23          |
| 37.5         | 98.20          | 45          | 98.40          |
| 50           | 98.30          | 75          | 98.60          |
| 75           | 98.50          | 112.5       | 98.74          |
| 100          | 98.60          | 150         | 98.83          |
| 167          | 98.70          | 225         | 98.94          |
| 250          | 98.80          | 300         | 99.02          |
| 333          | 98.90          | 500         | 99.14          |
|              |                | 750         | 99.23          |
|              |                | 1000        | 99.28          |

Note: All efficiency values are at 35% of nominal load.

### Benefits

- Significant energy savings combined with positive environmental impact
- Higher efficiency = \$ savings:
  - Increased profitability due to low operating costs
  - Decreased cost of ownership over the lifetime of the transformer
  - Less air conditioning cost due to lower heat emissions
- Product available from stock in standard voltage and kVA sizes including 250kVA in single phase and 450kVA in three phase
- Standard type 3R enclosures
- Dual CSA and UL certification
- Industry leading design and technology solutions
- Unmatched HPS quality and reliability

## Installation made fast and easy!



## Specifications - Copper or Aluminum

|                               |                                                             |
|-------------------------------|-------------------------------------------------------------|
| <b>kVA:</b>                   | 15-250kVA single phase;<br>15-450kVA three phase            |
| <b>UL Listed:</b>             | File: E112313                                               |
| <b>CSA Certified:</b>         | File: LR3902                                                |
| <b>Frequency:</b>             | 60 Hz                                                       |
| <b>Insulation System:</b>     | 220°C (150°C rise)                                          |
| <b>Enclosure Type:</b>        | Heavy duty ventilated Type 3R standard                      |
| <b>Enclosure Finish:</b>      | ANSI 61 Grey, UL50                                          |
| <b>Neutral:</b>               | Neutral terminal for field connection (on applicable units) |
| <b>Standard Primary Taps:</b> | Refer to wiring diagrams for details                        |

|                       |                                                                                                                                                                |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Termination:</b>   | Front accessible high and low voltage terminals; lugs provided standard; connectors suitable for aluminum and copper are provided for easy cable installation. |
| <b>Conduit Entry:</b> | Side knock-outs provided where applicable                                                                                                                      |
| <b>Impedance:</b>     | Typically 3% to 6.5%                                                                                                                                           |
| <b>Mounting:</b>      | Floor mounting standard/wall mounting optional. Refer to selection tables for details.                                                                         |
| <b>Sound Level:</b>   | Meets NEMA ST-20 standards                                                                                                                                     |
| <b>Warranty:</b>      | 1 year                                                                                                                                                         |

# Selection Tables

HPS Express G  
Single Phase

## ALUMINUM WOUND, SINGLE PHASE



480 Primary Volts

120/240 Secondary Volts

60 Hz

| kVA  | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|      |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15   | EG3L0015KE     | CN2        | 22.10                       | 18.20 | 23.60  | 160                   | F or W*                           | SCD 1E         |
| 25   | EG3L0025KE     | CN3        | 24.90                       | 19.40 | 25.60  | 225                   | F or W*                           | SCD 1E         |
| 37.5 | EG3L0037KE     | CN4        | 26.30                       | 23.30 | 31.10  | 310                   | F                                 | SCD 1E         |
| 50   | EG3L0050KE     | CN4        | 26.30                       | 23.30 | 31.10  | 370                   | F                                 | SCD 1E         |
| 75   | EG3L0075KE     | CN5        | 29.00                       | 26.50 | 39.10  | 450                   | F                                 | SCD 1E         |
| 100  | EG3L0100KE     | CN5        | 29.00                       | 26.50 | 39.10  | 560                   | F                                 | SCD 1E         |
| 150  | EG3L0150KE     | CN6        | 37.80                       | 30.00 | 48.40  | 820                   | F                                 | SCD 2E         |
| 200  | EG3L0200KE     | CN6        | 37.80                       | 30.00 | 48.40  | 1000                  | F                                 | SCD 2E         |

600 Primary Volts

120/240 Secondary Volts

60 Hz

| kVA  | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|      |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15   | EG3L0015PE     | CN2        | 22.10                       | 18.20 | 23.60  | 160                   | F or W*                           | SCD 1E         |
| 25   | EG3L0025PE     | CN3        | 24.90                       | 19.40 | 25.60  | 225                   | F or W*                           | SCD 1E         |
| 37.5 | EG3L0037PE     | CN4        | 26.30                       | 23.30 | 31.10  | 310                   | F                                 | SCD 1E         |
| 50   | EG3L0050PE     | CN4        | 26.30                       | 23.30 | 31.10  | 370                   | F                                 | SCD 1E         |
| 75   | EG3L0075PE     | CN5        | 29.00                       | 26.50 | 39.10  | 450                   | F                                 | SCD 1E         |
| 100  | EG3L0100PE     | CN5        | 29.00                       | 26.50 | 39.10  | 560                   | F                                 | SCD 1E         |
| 150  | EG3L0150PE     | CN6        | 37.80                       | 30.00 | 48.40  | 820                   | F                                 | SCD 2E         |
| 200  | EG3L0200PE     | CN6        | 37.80                       | 30.00 | 48.40  | 1000                  | F                                 | SCD 2E         |
| 250  | EG3L0250PE     | CN7        | 41.80                       | 36.00 | 56.10  | 1300                  | F                                 | SCD 2E         |

## COPPER WOUND, SINGLE PHASE



480 Primary Volts

120/240 Secondary Volts

60 Hz

| kVA  | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|      |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15   | EG3L0015KEC    | CN2        | 22.10                       | 18.20 | 23.60  | 165                   | F or W*                           | SCD 1E         |
| 25   | EG3L0025KEC    | CN3        | 24.90                       | 19.40 | 25.60  | 240                   | F or W*                           | SCD 1E         |
| 37.5 | EG3L0037KEC    | CN4        | 26.30                       | 23.30 | 31.10  | 340                   | F                                 | SCD 1E         |
| 50   | EG3L0050KEC    | CN4        | 26.30                       | 23.30 | 31.10  | 390                   | F                                 | SCD 1E         |
| 75   | EG3L0075KEC    | CN5        | 29.00                       | 26.50 | 39.10  | 540                   | F                                 | SCD 1E         |
| 100  | EG3L0100KEC    | CN5        | 29.00                       | 26.50 | 39.10  | 650                   | F                                 | SCD 1E         |
| 150  | EG3L0150KEC    | CN6        | 37.80                       | 30.00 | 48.40  | 960                   | F                                 | SCD 2E         |
| 200  | EG3L0200KEC    | CN6        | 37.80                       | 30.00 | 48.40  | 1080                  | F                                 | SCD 2E         |

600 Primary Volts

120/240 Secondary Volts

60 Hz

| kVA  | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|      |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15   | EG3L0015PEC    | CN2        | 22.10                       | 18.20 | 23.60  | 165                   | F or W*                           | SCD 1E         |
| 25   | EG3L0025PEC    | CN3        | 24.90                       | 19.40 | 25.60  | 240                   | F or W*                           | SCD 1E         |
| 37.5 | EG3L0037PEC    | CN4        | 26.30                       | 23.30 | 31.10  | 340                   | F                                 | SCD 1E         |
| 50   | EG3L0050PEC    | CN4        | 26.30                       | 23.30 | 31.10  | 390                   | F                                 | SCD 1E         |
| 75   | EG3L0075PEC    | CN5        | 29.00                       | 26.50 | 39.10  | 540                   | F                                 | SCD 1E         |
| 100  | EG3L0100PEC    | CN5        | 29.00                       | 26.50 | 39.10  | 650                   | F                                 | SCD 1E         |
| 150  | EG3L0150PEC    | CN6        | 37.80                       | 30.00 | 48.40  | 960                   | F                                 | SCD 2E         |
| 200  | EG3L0200PEC    | CN6        | 37.80                       | 30.00 | 48.40  | 1080                  | F                                 | SCD 2E         |
| 250  | EG3L0250PEC    | CN7        | 41.80                       | 36.00 | 56.10  | 1440                  | F                                 | SCD 2E         |

# Selection Tables

HPS Express G  
Three Phase



## ALUMINUM WOUND, THREE PHASE



480D Primary Volts

208Y/120 Secondary Volts

60 Hz

| kVA   | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|-------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|       |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15    | EG3A0015KB     | CN1        | 20.10                       | 17.50 | 17.60  | 165                   | F or W*                           | SCD 3E         |
| 30    | EG3A0030KB     | CN2        | 22.10                       | 18.20 | 23.60  | 285                   | F or W*                           | SCD 3E         |
| 45    | EG3A0045KB     | CN3        | 24.90                       | 19.40 | 25.60  | 345                   | F or W*                           | SCD 3E         |
| 75    | EG3A0075KB     | CN4        | 26.30                       | 23.30 | 31.10  | 540                   | F                                 | SCD 3E         |
| 112.5 | EG3A0112KB     | CN5        | 29.00                       | 26.50 | 39.10  | 750                   | F                                 | SCD 3E         |
| 150   | EG3A0150KB     | CN5        | 29.00                       | 26.50 | 39.10  | 885                   | F                                 | SCD 3E         |
| 225   | EG3A0225KB     | CN6        | 37.80                       | 30.00 | 48.40  | 1500                  | F                                 | SCD 3E         |
| 300   | EG3A0300KB     | CN6        | 37.80                       | 30.00 | 48.40  | 1750                  | F                                 | SCD 3E         |

600D Primary Volts

208Y/120 Secondary Volts

60 Hz

| kVA   | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|-------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|       |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15    | EG3A0015PB     | CN1        | 20.10                       | 17.50 | 17.60  | 165                   | F or W*                           | SCD 3E         |
| 30    | EG3A0030PB     | CN2        | 22.10                       | 18.20 | 23.60  | 285                   | F or W*                           | SCD 3E         |
| 45    | EG3A0045PB     | CN3        | 24.90                       | 19.40 | 25.60  | 345                   | F or W*                           | SCD 3E         |
| 75    | EG3A0075PB     | CN4        | 26.30                       | 23.30 | 31.10  | 540                   | F                                 | SCD 3E         |
| 112.5 | EG3A0112PB     | CN5        | 29.00                       | 26.50 | 39.10  | 750                   | F                                 | SCD 3E         |
| 150   | EG3A0150PB     | CN5        | 29.00                       | 26.50 | 39.10  | 885                   | F                                 | SCD 3E         |
| 225   | EG3A0225PB     | CN6        | 37.80                       | 30.00 | 48.40  | 1500                  | F                                 | SCD 3E         |
| 300   | EG3A0300PB     | CN6        | 37.80                       | 30.00 | 48.40  | 1750                  | F                                 | SCD 3E         |
| 450   | EG3A0450PB     | CN7        | 41.80                       | 36.00 | 56.10  | 2400                  | F                                 | SCD 4E         |

## COPPER WOUND, THREE PHASE



480D Primary Volts

208Y/120 Secondary Volts

60 Hz

| kVA   | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|-------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|       |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15    | EG3A0015KBC    | CN1        | 20.10                       | 17.50 | 17.60  | 185                   | F or W*                           | SCD 3E         |
| 30    | EG3A0030KBC    | CN2        | 22.10                       | 18.20 | 23.60  | 300                   | F or W*                           | SCD 3E         |
| 45    | EG3A0045KBC    | CN3        | 24.90                       | 19.40 | 25.60  | 390                   | F or W*                           | SCD 3E         |
| 75    | EG3A0075KBC    | CN4        | 26.30                       | 23.30 | 31.10  | 635                   | F                                 | SCD 3E         |
| 112.5 | EG3A0112KBC    | CN5        | 29.00                       | 26.50 | 39.10  | 815                   | F                                 | SCD 3E         |
| 150   | EG3A0150KBC    | CN5        | 29.00                       | 26.50 | 39.10  | 980                   | F                                 | SCD 3E         |
| 225   | EG3A0225KBC    | CN6        | 37.80                       | 30.00 | 48.40  | 1600                  | F                                 | SCD 3E         |
| 300   | EG3A0300KBC    | CN6        | 37.80                       | 30.00 | 48.40  | 1850                  | F                                 | SCD 3E         |

600D Primary Volts

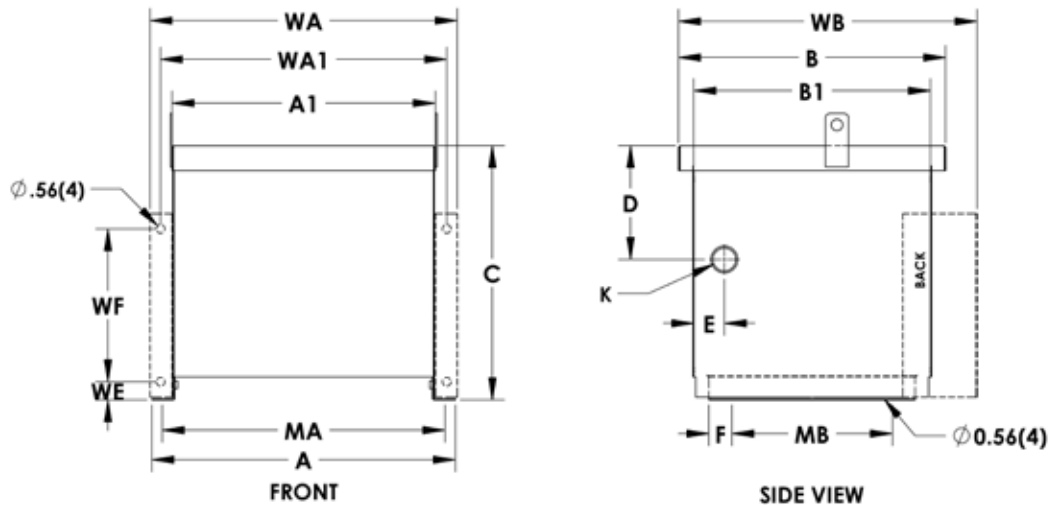
208Y/120 Secondary Volts

60 Hz

| kVA   | Catalog Number | Case Style | Approx. Dimensions (Inches) |       |        | Approx. Weight (Lbs.) | Mtg Type<br>W - Wall<br>F - Floor | Wiring Diagram |
|-------|----------------|------------|-----------------------------|-------|--------|-----------------------|-----------------------------------|----------------|
|       |                |            | Width                       | Depth | Height |                       |                                   |                |
| 15    | EG3A0015PBC    | CN1        | 20.10                       | 17.50 | 17.60  | 185                   | F or W*                           | SCD 3E         |
| 30    | EG3A0030PBC    | CN2        | 22.10                       | 18.20 | 23.60  | 300                   | F or W*                           | SCD 3E         |
| 45    | EG3A0045PBC    | CN3        | 24.90                       | 19.40 | 25.60  | 390                   | F or W*                           | SCD 3E         |
| 75    | EG3A0075PBC    | CN4        | 26.30                       | 23.30 | 31.10  | 635                   | F                                 | SCD 3E         |
| 112.5 | EG3A0112PBC    | CN5        | 29.00                       | 26.50 | 39.10  | 815                   | F                                 | SCD 3E         |
| 150   | EG3A0150PBC    | CN5        | 29.00                       | 26.50 | 39.10  | 980                   | F                                 | SCD 3E         |
| 225   | EG3A0225PBC    | CN6        | 37.80                       | 30.00 | 48.40  | 1600                  | F                                 | SCD 3E         |
| 300   | EG3A0300PBC    | CN6        | 37.80                       | 30.00 | 48.40  | 1850                  | F                                 | SCD 3E         |
| 450   | EG3A0450PBC    | CN7        | 41.80                       | 36.00 | 56.10  | 3000                  | F                                 | SCD 4E         |

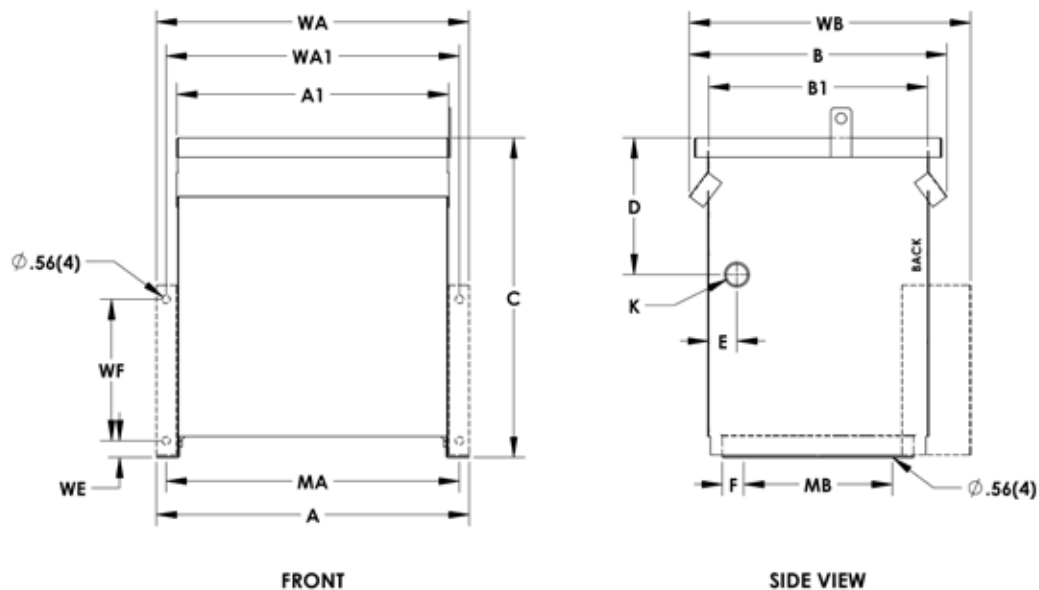
# Enclosure Drawings

## CN Series



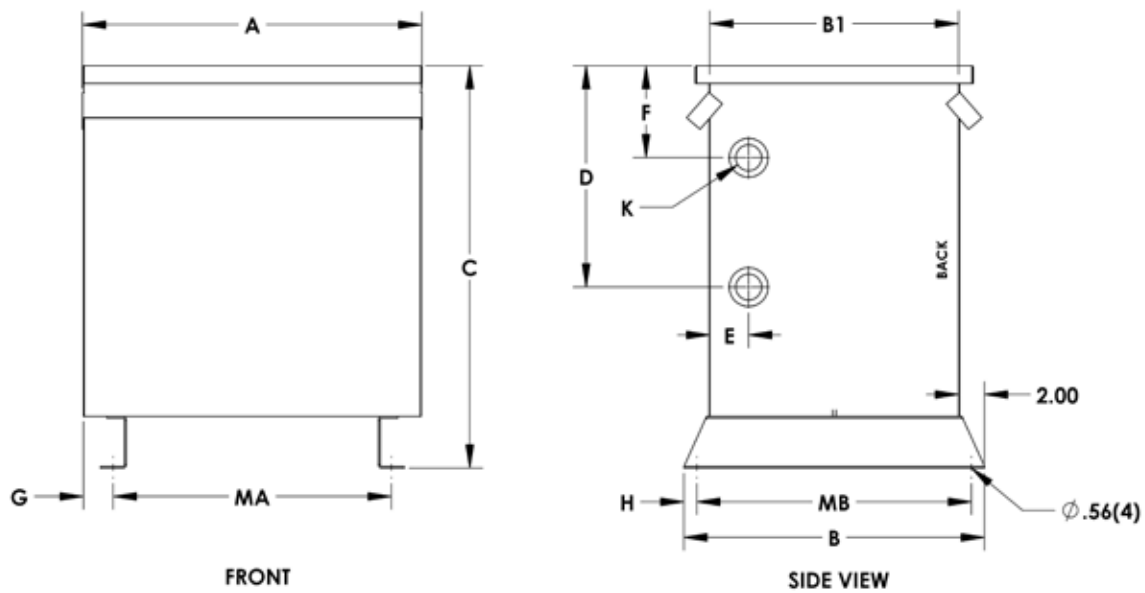
| Case Style | Dimensions in Inches |      |      |      |      |     |     |     |           |      |      |      |      |      |     |      |
|------------|----------------------|------|------|------|------|-----|-----|-----|-----------|------|------|------|------|------|-----|------|
|            | A                    | A1   | B    | B1   | C    | D   | E   | F   | K         | MA   | MB   | WA*  | WA1* | WB*  | WE* | WF*  |
| <b>CN1</b> | 19.9                 | 17.3 | 17.5 | 15.5 | 17.6 | 7.4 | 2.0 | 1.5 | 1.75 K.O. | 18.5 | 10.5 | 20.1 | 18.7 | 19.5 | 2.2 | 10.0 |

\* Dimensions of enclosure when wall-mounting bracket installed (optional accessory component).

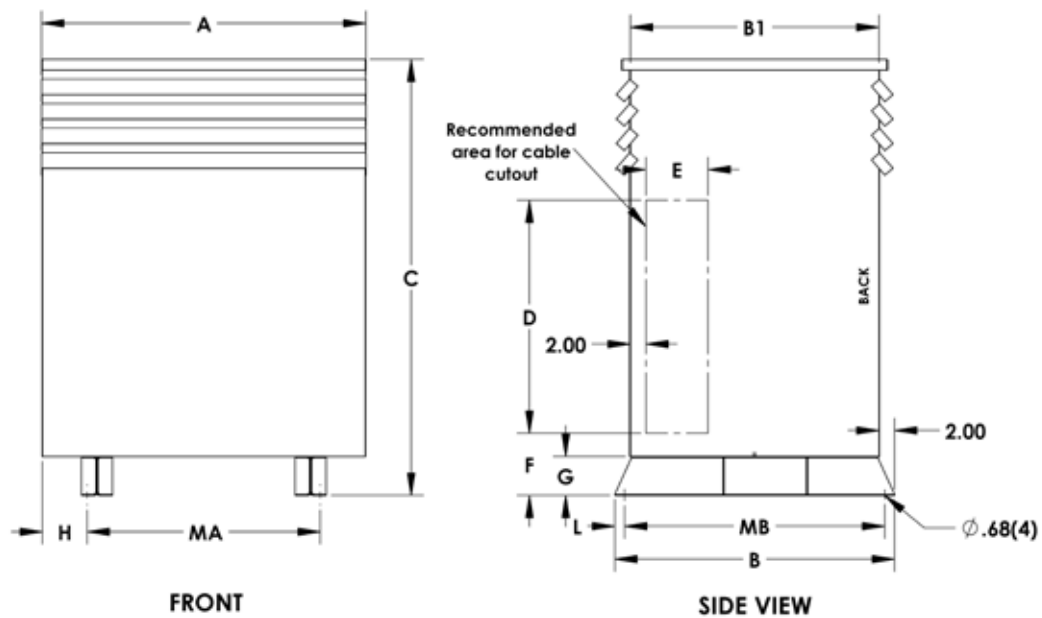


| Case Style | Dimensions in Inches |      |      |      |      |      |     |     |           |      |      |      |      |      |     |      |
|------------|----------------------|------|------|------|------|------|-----|-----|-----------|------|------|------|------|------|-----|------|
|            | A                    | A1   | B    | B1   | C    | D    | E   | F   | K         | MA   | MB   | WA*  | WA1* | WB*  | WE* | WF*  |
| <b>CN2</b> | 22.1                 | 19.2 | 18.2 | 15.5 | 23.6 | 9.7  | 2.0 | 1.5 | 1.75 K.O. | 20.8 | 10.5 | 22.1 | 20.8 | 19.9 | 2.2 | 10.0 |
| <b>CN3</b> | 24.9                 | 22.0 | 19.4 | 16.5 | 25.6 | 12.0 | 2.0 | 2.0 | 1.75 K.O. | 23.5 | 10.5 | 24.9 | 23.5 | 21.0 | 2.2 | 10.0 |

\* Dimensions of enclosure when wall-mounting bracket installed (optional accessory component).



| Case Style | Dimensions in Inches |      |      |      |      |     |      |     |     |                |      |      |
|------------|----------------------|------|------|------|------|-----|------|-----|-----|----------------|------|------|
|            | A                    | B    | B1   | C    | D    | E   | F    | G   | H   | K              | MA   | MB   |
| <b>CN4</b> | 26.3                 | 23.3 | 19.3 | 31.1 | 17.1 | 3.0 | 7.1  | 2.3 | 1.0 | 2.0 x 3.0 K.O. | 21.5 | 21.3 |
| <b>CN5</b> | 29.0                 | 26.5 | 22.5 | 39.1 | 24.1 | 3.0 | 14.1 | 2.7 | 1.0 | 2.0 x 3.0 K.O. | 23.5 | 24.5 |
| <b>CN6</b> | 37.8                 | 30.0 | 26.0 | 48.4 | 33.4 | 3.0 | 23.4 | 6.8 | 1.0 | 2.0 x 3.0 K.O. | 24.0 | 28.0 |



| Case Style | Dimensions in Inches |      |      |      |      |     |     |     |     |     |      |
|------------|----------------------|------|------|------|------|-----|-----|-----|-----|-----|------|
|            | A                    | B    | B1   | C    | D    | E   | F   | G   | H   | L   | MA   |
| <b>CN7</b> | 41.8                 | 36.0 | 32.0 | 56.1 | 30.0 | 8.0 | 8.0 | 5.0 | 5.9 | 0.8 | 30.0 |

# Termination Details

Aluminum & Copper

## TERMINATION DETAILS - TYPE 3R

### SINGLE PHASE

| kVA | VOLTAGE |      |      |
|-----|---------|------|------|
|     | 120/240 | 480  | 600  |
| 15  | Lugs    | Lugs | Lugs |
| 25  | Lugs    | Lugs | Lugs |
| 37  | Lugs    | Lugs | Lugs |
| 50  | Lugs    | Lugs | Lugs |
| 75  | Lugs    | Lugs | Lugs |
| 100 | Lugs    | Lugs | Lugs |
| 150 | Lugs    | Lugs | Lugs |
| 200 | Lugs    | Lugs | Lugs |
| 250 | Lugs    | Lugs | Lugs |

### THREE PHASE

| kVA   | VOLTAGE |        |        |
|-------|---------|--------|--------|
|       | 208     | 480    | 600    |
| 15    | Lugs    | Lugs   | Lugs   |
| 30    | Lugs    | Lugs   | Lugs   |
| 45    | Lugs    | Lugs   | Lugs   |
| 75    | Lugs    | Lugs   | Lugs   |
| 112.5 | Lugs    | Lugs   | Lugs   |
| 150   | Lugs    | Lugs   | Lugs   |
| 225   | Lugs    | Lugs   | Lugs   |
| 300   | Dia 2   | Dia 1B | Dia 1B |
| 450   | Dia 3*  | Dia 2  | Dia 2  |

\*For copper windings use Diagram 2.

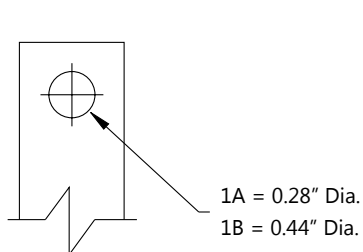


DIAGRAM 1

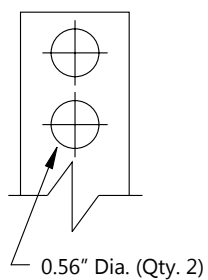


DIAGRAM 2

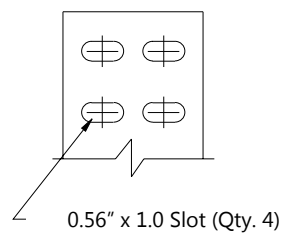
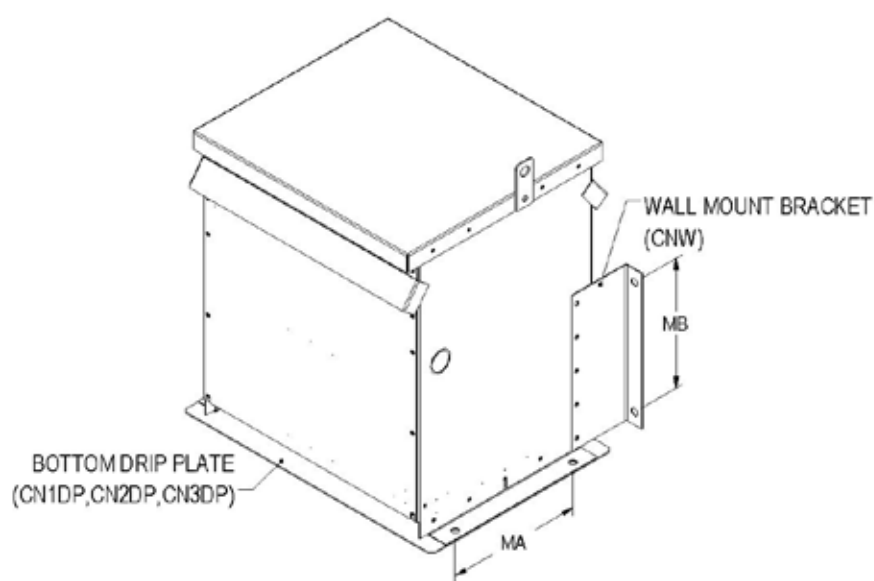


DIAGRAM 3

## WALL MOUNTING KITS

The CN1, CN2 and CN3 enclosures are designed with optional wall mounting capabilities. The “MB” dimensions listed in the table below indicate the location for the wall mounting hardware. The “MA” dimensions shown in the figure indicate the locations for the drip plate mounting hardware.

**Note:** When mounting the CN1, CN2, or CN3 type enclosures on the wall, a bottom drip plate must also be installed as shown in the attached drawing. Please refer to CSA 22.2 No. 47-2013 requirements. The installation of these transformers above floor level without a bottom drip plate is not permitted. All mounting hardware should be rated Grade 8 or higher.



| Mounting Kit P/N | Enclosure Style | MB Dimension (inches) |
|------------------|-----------------|-----------------------|
| CNW              | CN1, CN2, CN3   | 10.00                 |

| Drip Plate Kit P/N | Enclosure Style | MA Dimension (inches) |
|--------------------|-----------------|-----------------------|
| CN1DP              | CN1             | 10.50                 |
| CN2DP              | CN2             | 10.50                 |
| CN3DP              | CN3             | 10.50                 |

# Anti-Vibration Pad & Vibration Isolator Kits

## ANTI-VIBRATION PAD AND VIBRATION ISOLATOR KITS

All standard transformers come with installed internal vibration absorbing pads to minimize noise during operation. Optional external "anti-vibration" pad and "vibration isolator" (for higher noise dampening) kits can be used to reduce operating noise even further. All pads are resistant to industrial contaminants like oil, acids and alkalines.

### Anti-Vibration Pad Kits

| Part No. | Case Style | Description                                                                                    |
|----------|------------|------------------------------------------------------------------------------------------------|
| PD1      | CN1-CN6    | Set of four (4) rubber anti-vibration pads which replace the standard steel enclosure washers. |
| PD2      | CN7        |                                                                                                |



All anti-vibration pad kits and vibration isolator kits contain a set of four (4) pads or isolators. Therefore only one kit is required per transformer.

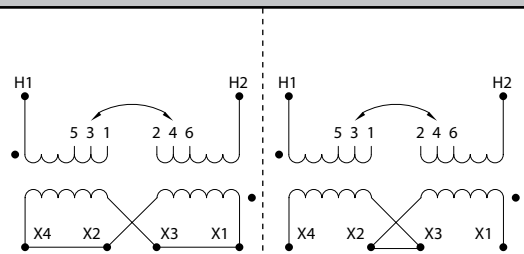
### Vibration Isolator Kits

| Part No. | Transformer Weight (Lb) | Description                                                                                                                                           |
|----------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMP1     | Up to 340 lbs           | Set of four (4) molded neoprene and steel plate assemblies that virtually eliminate vibration noise between the transformer and the mounting surface. |
| NMP2     | 341 to 680 lbs          |                                                                                                                                                       |
| NMP3     | 681 to 1040 lbs         |                                                                                                                                                       |
| NMP4     | 1041 to 1740 lbs        |                                                                                                                                                       |
| NMP5     | 1741 to 2330 lbs        |                                                                                                                                                       |
| NMP6     | 2331 to 3450 lbs        |                                                                                                                                                       |
| NMP7     | 3451 to 4690 lbs        |                                                                                                                                                       |

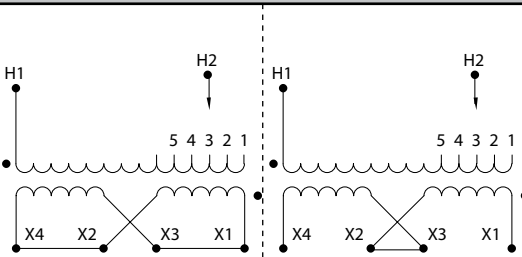


All anti-vibration pad kits and vibration isolator kits contain a set of four (4) pads or isolators. Therefore only one kit is required per transformer.

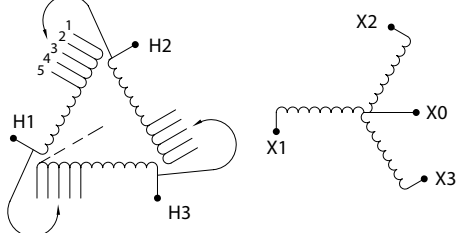
## SCD 1E

| SCHEMATIC                                                                         |  | CONNECTIONS     |               |                  |                  |               |
|-----------------------------------------------------------------------------------|--|-----------------|---------------|------------------|------------------|---------------|
|  |  | % Voltage       | Primary Volts |                  | Connect lines to | Inter-connect |
|                                                                                   |  | 105.0%          | 504           | 630              | H1, H2           | 1-2           |
|                                                                                   |  | 102.5%          | 492           | 615              | H1, H2           | 2-3           |
|                                                                                   |  | <b>100.0%</b>   | <b>480</b>    | <b>600</b>       | <b>H1, H2</b>    | <b>3-4</b>    |
|                                                                                   |  | 97.5%           | 468           | 585              | H1, H2           | 4-5           |
|                                                                                   |  | 95.0%           | 456           | 570              | H1, H2           | 5-6           |
|                                                                                   |  | Secondary Volts |               | Connect lines to |                  | Inter-connect |
|                                                                                   |  | 240             |               | X1, X4           |                  | X2-X3         |
|                                                                                   |  | 120             |               | X1 & X3, X2 & X4 |                  | X2-X4, X1-X3  |
|                                                                                   |  | 120/240         |               | X1, X2, X4       |                  | X2-X3         |

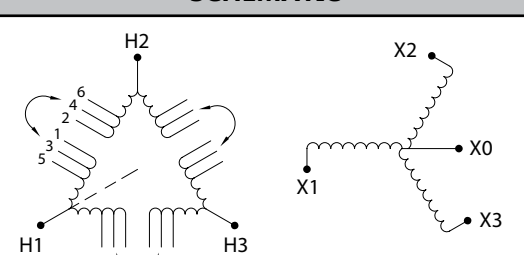
## SCD 2E

| SCHEMATIC                                                                          | CONNECTIONS     |                  |                  |                  |               |
|------------------------------------------------------------------------------------|-----------------|------------------|------------------|------------------|---------------|
|  | % Voltage       | Primary Volts    |                  | Connect lines to | Inter-connect |
|                                                                                    | 105.0%          | 504              | 630              | H1, H2           | 1             |
|                                                                                    | 102.5%          | 492              | 615              | H1, H2           | 2             |
|                                                                                    | <b>100.0%</b>   | <b>480</b>       | <b>600</b>       | <b>H1, H2</b>    | <b>3</b>      |
|                                                                                    | 97.5%           | 468              | 585              | H1, H2           | 4             |
|                                                                                    | 95.0%           | 456              | 570              | H1, H2           | 5             |
|                                                                                    | Secondary Volts |                  | Connect lines to | Inter-connect    |               |
|                                                                                    | 240             |                  | X1, X4           | X2-X3            |               |
| 120                                                                                |                 | X1 & X3, X2 & X4 | X2-X4, X1-X3     |                  |               |
| 120/240                                                                            |                 | X1, X2, X4       | X2-X3            |                  |               |

## SCD 3E

| SCHEMATIC                                                                           | CONNECTIONS     |                   |                   |               |
|-------------------------------------------------------------------------------------|-----------------|-------------------|-------------------|---------------|
|  | % Voltage       | Primary Volts     | Connect lines to  | Inter-connect |
|                                                                                     | 105.0%          | 504 630           | H1, H2, H3        | 1             |
|                                                                                     | 102.5%          | 492 615           | H1, H2, H3        | 2             |
|                                                                                     | <b>100.0%</b>   | <b>480 600</b>    | <b>H1, H2, H3</b> | <b>3</b>      |
|                                                                                     | 97.5%           | 468 585           | H1, H2, H3        | 4             |
|                                                                                     | 95.0%           | 456 570           | H1, H2, H3        | 5             |
|                                                                                     | Secondary Volts |                   | Connect lines to  |               |
| 208                                                                                 |                 | X1, X2, X3        |                   |               |
| 120                                                                                 |                 | X1,X0 X2,X0 X3,X0 |                   |               |

## SCD 4E

| SCHEMATIC                                                                           | CONNECTIONS     |                   |                   |               |
|-------------------------------------------------------------------------------------|-----------------|-------------------|-------------------|---------------|
|  | % Voltage       | Primary Volts     | Connect lines to  | Inter-connect |
|                                                                                     | 105.0%          | 630               | H1, H2, H3        | 1-2           |
|                                                                                     | 102.5%          | 516               | H1, H2, H3        | 2-3           |
|                                                                                     | <b>100.0%</b>   | <b>600</b>        | <b>H1, H2, H3</b> | <b>3-4</b>    |
|                                                                                     | 97.5%           | 585               | H1, H2, H3        | 4-5           |
|                                                                                     | 95.0%           | 570               | H1, H2, H3        | 5-6           |
|                                                                                     | Secondary Volts |                   | Connect lines to  |               |
|                                                                                     | 208             |                   | X1, X2, X3        |               |
| 120                                                                                 |                 | X1,X0 X2,X0 X3,X0 |                   |               |