

**SIEMENS**

*Ingenuity for life*



## Commercial NRCAN-Series Distribution Transformers

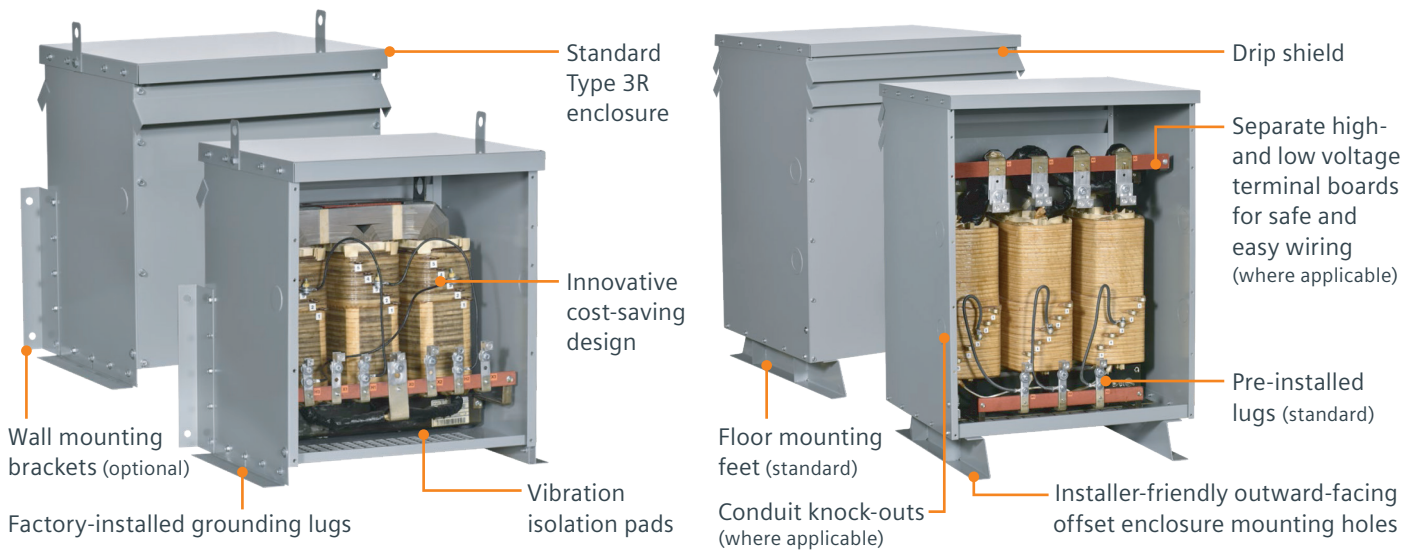
Building on years of experience in engineering and design of transformers comes a product that is guaranteed to provide high-efficiency in an economical package.

## These units are designed to the latest Industry Standards, and are CSA and UL certified.

Transformers must qualify to high-efficiency values for dry-type transformers as the most recent NRCAN.

- The available transformer sizes are:
  - Single-phase: 15, 25, 37.5, 50, 75, 100, 150, 200, 250 kVA
  - Three-phase: 15, 30, 45, 75, 112.5, 150, 225, 300, 450 kVA
- Primary tension 480 and 600 volts three phase, 480 and 600 volts, single phase
- Secondary tension 208Y/120 volts, three phase, 120/240 volts, single phase
- All winding conductors are in aluminum
- 150°C temperature rise
- Standard impedance at 60 Hz.
- Standard audible sound level
- Lugs up to 225 kVA
- Wall mounting brackets up to 75 kVA for three phase

## Installation made fast and easy!



## Specifications – Copper or Aluminum

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

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

## Single-phase – Aluminum winding

### Aluminum winding, Type 3R single-phase, primary 600 V, secondary 120/240 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T1G10015A5RXXM	24	600	22	561	18	457	160	73	Fig 2	WD1
25	W*/F	T1G10025A5RXXM	26	650	25	632	19	483	225	102	Fig 3	WD1
37.5	F	T1G10037A5RXXM	31	790	26	668	23	584	310	141	Fig 4	WD1
50	F	T1G10050A5RXXM	31	790	26	668	23	584	370	168	Fig 4	WD1
75	F	T1G10075A5RXXM	39	993	29	737	27	686	450	205	Fig 5	WD1
100	F	T1G10100A5RXXM	39	993	29	737	27	686	560	255	Fig 5	WD1
150	F	T1G10150A5RXXM	48	1219	38	960	30	762	820	373	Fig 6	WD2
200	F	T1G10200A5RXXM	48	1219	38	960	30	762	1000	455	Fig 6	WD2
250	F	T1G10250A5RXXM	56	1425	42	1062	36	914	1300	591	Fig 7	WD2

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – SINGLE-PHASE: 15–200 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

<sup>3</sup> The dimensions are applicable for Type 3 enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

### Aluminum winding, Type 3R single-phase, primary 480 V, secondary 120/240 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T1F10015A5RXXM	24	600	22	561	18	457	160	73	Fig 2	WD1
25	W*/F	T1F10025A5RXXM	26	650	25	632	19	483	225	102	Fig 3	WD1
37.5	F	T1F10037A5RXXM	31	790	26	668	23	584	310	141	Fig 4	WD1
50	F	T1F10050A5RXXM	31	790	26	668	23	584	370	168	Fig 4	WD1
75	F	T1F10075A5RXXM	39	993	29	737	27	686	450	205	Fig 5	WD1
100	F	T1F10100A5RXXM	39	993	29	737	27	686	560	255	Fig 6	WD1
150	F	T1F10150A5RXXM	48	1219	38	960	30	762	820	373	Fig 6	WD2
200	F	T1F10200A5RXXM	48	1219	38	960	30	762	1000	455	Fig 6	WD2

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – SINGLE-PHASE: 15–200 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

<sup>3</sup> The dimensions are applicable for Type 3 enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

## Three-phase – Aluminum winding

Aluminum winding, Type 3R three-phase, primary 600 V, secondary 208Y/120 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T3G30015A5RXXM	18	447	20	511	18	457	165	75	Fig 1	WD3
30	W*/F	T3G30030A5RXXM	24	600	22	561	18	457	285	130	Fig 2	WD3
45	W*/F	T3G30045A8RXXM	26	650	25	635	19	483	345	157	Fig 3	WD3
75	F	T3G30075A5RXXM	31	993	26	668	23	584	540	245	Fig 4	WD3
112.5	F	T3G30112A5RXXM	39	993	29	737	27	686	750	341	Fig 5	WD3
150	F	T3G30150A5RXXM	39	993	29	737	27	686	885	403	Fig 5	WD3
225	F	T3G30225A5RXXM	49	1229	38	960	30	762	1500	682	Fig 6	WD3
300	F	T3G30300A5RXXM	49	1229	38	960	30	762	1750	795	Fig 6	WD3
450	F	T3G30450A5RXXM	56	1422	42	1067	36	914	2400	1091	Fig 7	WD4

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – THREE-PHASE: 15–450 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

<sup>3</sup> The dimensions are applicable for Type 3R enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

Aluminum winding, three-phase, primary 480 V, secondary 208Y/120 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T3F30015A5RXXM	18	447	20	511	18	457	165	75	Fig 1	WD3
30	W*/F	T3F30030A5RXXM	24	600	22	561	18	457	285	130	Fig 2	WD3
45	W*/F	T3F30045A5RXXM	26	650	25	635	19	483	345	157	Fig 3	WD3
75	F	T3F30075A5RXXM	31	790	26	668	23	584	540	245	Fig 4	WD3
112.5	F	T3F30112A5RXXM	39	993	29	737	27	686	750	341	Fig 5	WD3
150	F	T3F30150A5RXXM	39	993	29	737	27	686	885	403	Fig 5	WD3
225	F	T3F30225A5RXXM	49	1229	38	960	30	762	1500	682	Fig 6	WD3
300	F	T3F30300A5RXXM	49	1229	38	960	30	762	1750	795	Fig 6	WD3

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – THREE-PHASE: 15–300 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

<sup>3</sup> The dimensions are applicable for Type 3R enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

## Single-phase – Copper winding

### Copper winding, Type 3R single-phase, primary 600 V, secondary 120/240 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T1G10015C5RXXM	24	600	22	561	18	457	165	75	Fig 2	WD1
25	W*/F	T1G10025C5RXXM	26	650	25	632	19	483	240	109	Fig 3	WD1
37.5	F	T1G10037C5RXXM	31	790	26	668	23	584	340	155	Fig 4	WD1
50	F	T1G10050C5RXXM	31	790	26	668	23	584	390	177	Fig 4	WD1
75	F	T1G10075C5RXXM	39	993	29	737	27	686	540	245	Fig 5	WD1
100	F	T1G10100C5RXXM	39	993	29	737	27	686	650	295	Fig 5	WD1
150	F	T1G10150C5RXXM	48	1219	38	960	30	762	960	436	Fig 6	WD2
200	F	T1G10200C5RXXM	48	1219	38	960	30	762	1080	491	Fig 6	WD2
250	F	T1G10250C5RXXM	56	1425	42	1062	36	914	1440	655	Fig 7	WD2

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – SINGLE-PHASE: 15–250 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

<sup>3</sup> The dimensions are applicable for Type 3 enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

### Copper winding, Type 3R single-phase, primary 480 V, secondary 120/240 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T1F10015C5RXXM	24	600	22	561	18	457	165	75	Fig 2	WD1
25	W*/F	T1F10025C5RXXM	26	650	25	632	19	483	240	109	Fig 3	WD1
37.5	F	T1F10037C5RXXM	31	790	26	668	23	584	340	155	Fig 4	WD1
50	F	T1F10050C5RXXM	31	790	26	668	23	584	390	177	Fig 4	WD1
75	F	T1F10075C5RXXM	39	993	29	737	27	686	540	245	Fig 5	WD1
100	F	T1F10100C5RXXM	39	993	29	737	27	686	650	295	Fig 5	WD1
150	F	T1F10150C5RXXM	48	1219	38	960	30	762	960	436	Fig 6	WD2
200	F	T1F10200C5RXXM	48	1219	38	960	30	762	1080	491	Fig 6	WD2

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – SINGLE-PHASE: 15–200 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

<sup>3</sup> The dimensions are applicable for Type 3 enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

## Three-phase – Copper winding

### Copper winding, Type 3R three-phase, primary 600 V, secondary 208Y/120 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T3G30015C5RXXM	18	447	20	508	18	457	185	84	Fig 1	WD3
30	W*/F	T3G30030C5RXXM	24	600	22	559	18	457	300	136	Fig 2	WD3
45	W*/F	T3G30045C5RXXM	26	650	25	635	19	483	390	177	Fig 3	WD3
75	W*/F	T3G30075C5RXXM	31	787	26	660	23	584	635	289	Fig 4	WD3
112.5	F	T3G30112C5RXXM	39	991	29	737	27	686	815	370	Fig 5	WD3
150	F	T3G30150C5RXXM	39	991	29	737	27	686	980	445	Fig 5	WD3
225	F	T3G30225C5RXXM	48	1219	38	952	30	762	1600	727	Fig 6	WD3
300	F	T3G30300C5RXXM	48	1219	38	952	30	762	1850	841	Fig 6	WD3

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – THREE-PHASE: 15–300 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

<sup>3</sup> The dimensions are applicable for Type 3R enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

### Copper winding, three-phase, primary 480 V, secondary 208Y/120 V, 150°C

kVA	Mounting <sup>1</sup>	Catalogue No. <sup>2</sup>	Dimensions <sup>3</sup>		Width		Depth		Weight <sup>4</sup>		Enclosure	Wiring diagram
			Height		In	mm	In	mm	In	mm		
15	W*/F	T3F30015C5RXXM	18	447	20	508	18	457	185	84	Fig 1	WD3
30	W*/F	T3F30030C5RXXM	24	600	22	559	18	457	300	136	Fig 2	WD3
45	W*/F	T3F30045C5RXXM	26	650	25	635	19	483	390	177	Fig 3	WD3
75	W*/F	T3F30075C5RXXM	31	787	26	660	23	584	635	289	Fig 4	WD3
112.5	F	T3F30112C5RXXM	39	991	29	737	27	686	815	370	Fig 5	WD3
150	F	T3F30150C5RXXM	39	991	29	737	27	686	980	445	Fig 5	WD3
225	F	T3F30225C5RXXM	48	1219	38	952	30	762	1600	727	Fig 6	WD3
300	F	T3F30300C5RXXM	48	1219	38	952	30	762	1850	841	Fig 6	WD3

<sup>1</sup> W = Wall mount; F = Floor mount

<sup>2</sup> Catalogue number – THREE-PHASE: 15–300 kVA; 2 × FCAN, 2 × FCBN; 4 × 2.5%

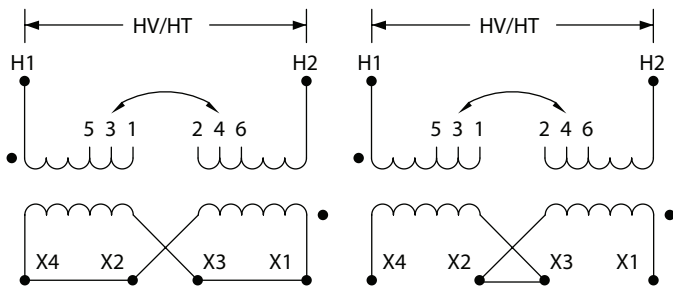
<sup>3</sup> The dimensions are applicable for Type 3R enclosure only

<sup>4</sup> All weights and dimensions are approximate and subject to change without notice.

\*Wall mount brackets are optional

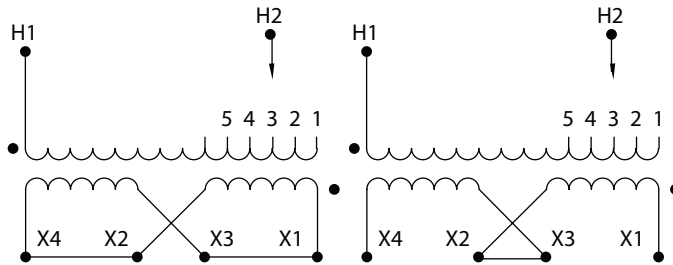
# Wiring diagrams

## WD1 wiring diagram



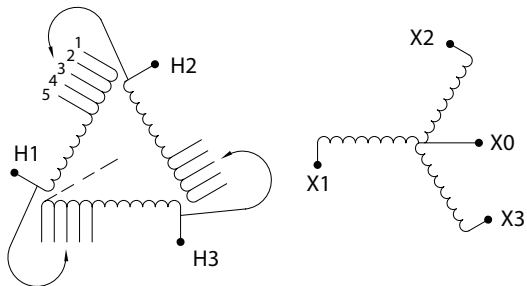
% Voltage	Primary Volts	Connect lines to	Inter-connect
105.0%	504 630	H1, H2	1-2
102.5%	492 615	H1, H2	2-3
100.0%	480 600	H1, H2	3-4
97.5%	468 585	H1, H2	4-5
95.0%	456 570	H1, H2	5-6
Secondary Volts		Connect lines to	Inter-connect
240		X1, X4	X2-X3
120		X1 & X3, X2 & X4	X2-X4, X1-X3
120/240		X1, X2,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

## WD2 wiring diagram



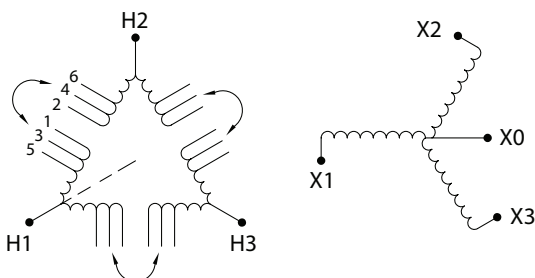
% Voltage	Primary Volts	Connect lines to	Inter-connect
105.0%	504 630	H1, H2	1
102.5%	492 615	H1, H2	2
100.0%	480 600	H1, H2	3
97.5%	468 585	H1, H2	4
95.0%	456 570	H1, H2	5
Secondary Volts		Connect lines to	Inter-connect
240		X1, X4	X2-X3
120		X1 & X3, X2 & X4	X2-X4, X1-X3
120/240		X1, X2, X4	X2-X3

## WD3 wiring diagram



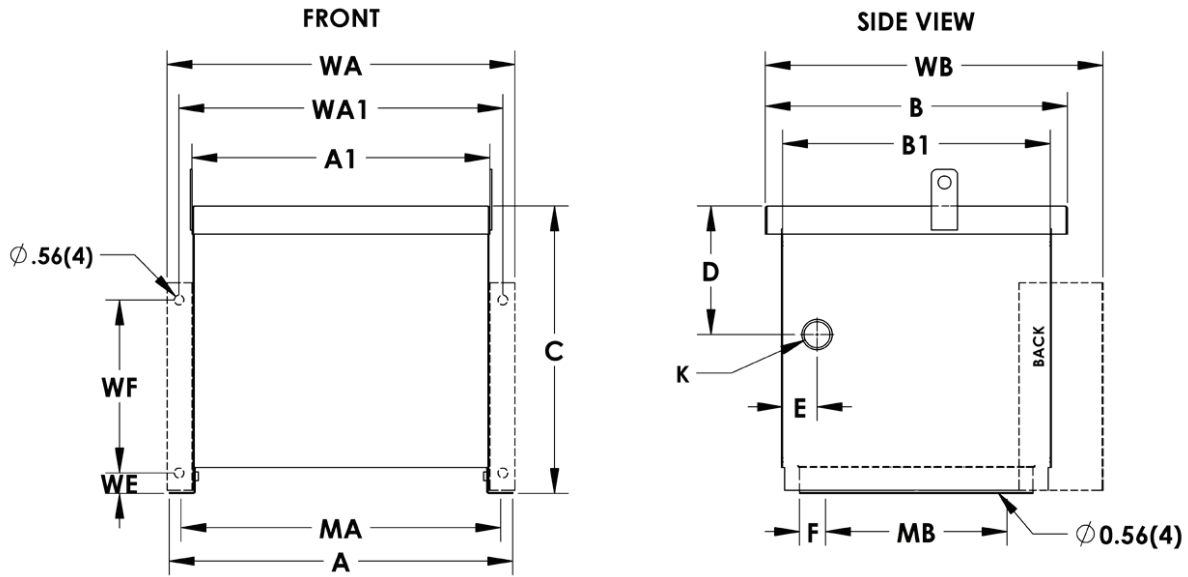
% Voltage	Primary Volts	Connect lines to	Inter-connect
105.0%	504 630	H1, H2, H3	1
102.5%	492 615	H1, H2, H3	2
100.0%	480 600	H1, H2, H3	3
97.5%	468 585	H1, H2, H3	4
95.0%	456 570	H1, H2, H3	5
Secondary Volts		Connect lines to	Inter-connect
208		X1, X2, X3	
120		X1,X0 X2,X0 X3, X0	

## WD4 wiring diagram



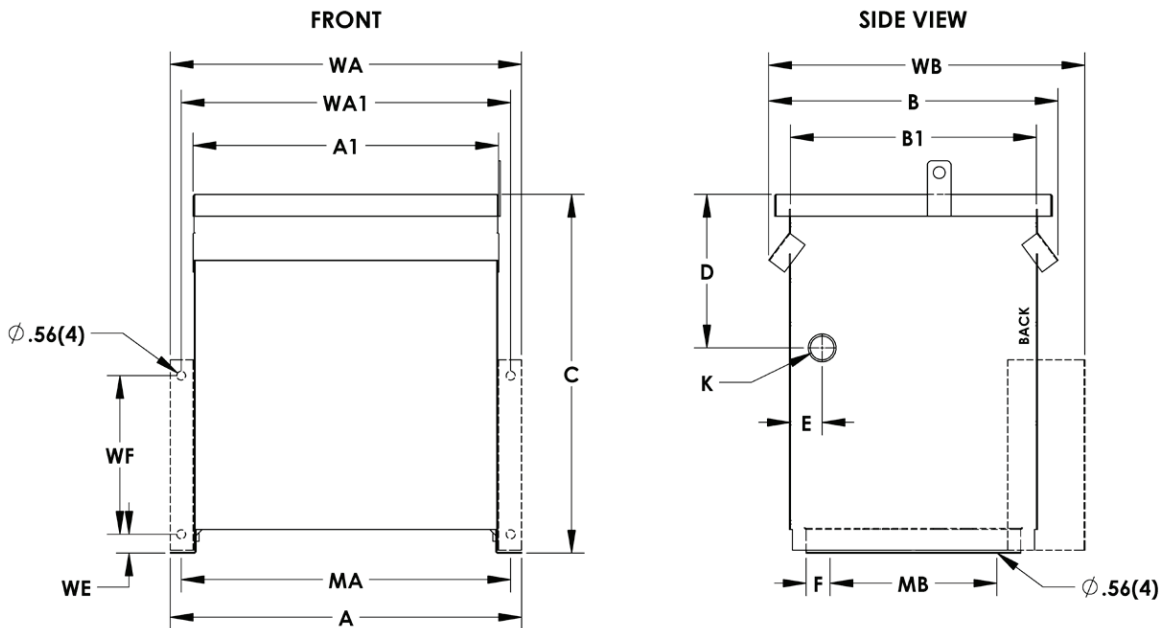
% Voltage	Primary Volts	Connect lines to	Inter-connect
105.0%	630	H1, H2, H3	1-2
102.5%	615	H1, H2, H3	2-3
100.0%	600	H1, H2, H3	3-4
97.5%	585	H1, H2, H3	4-5
95.0%	570	H1, H2, H3	5-6
Secondary Volts		Connect lines to	Inter-connect
208		X1, X2, X3	
120		X1,X0 X2,X0 X3, X0	

# Enclosure figures



Enclosure	Dimensions in Inches															
	A	A1	B	B1	C	D	E	F	K	MA	MB	WA*	WA1*	WB*	WE*	WF*
FIG1	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

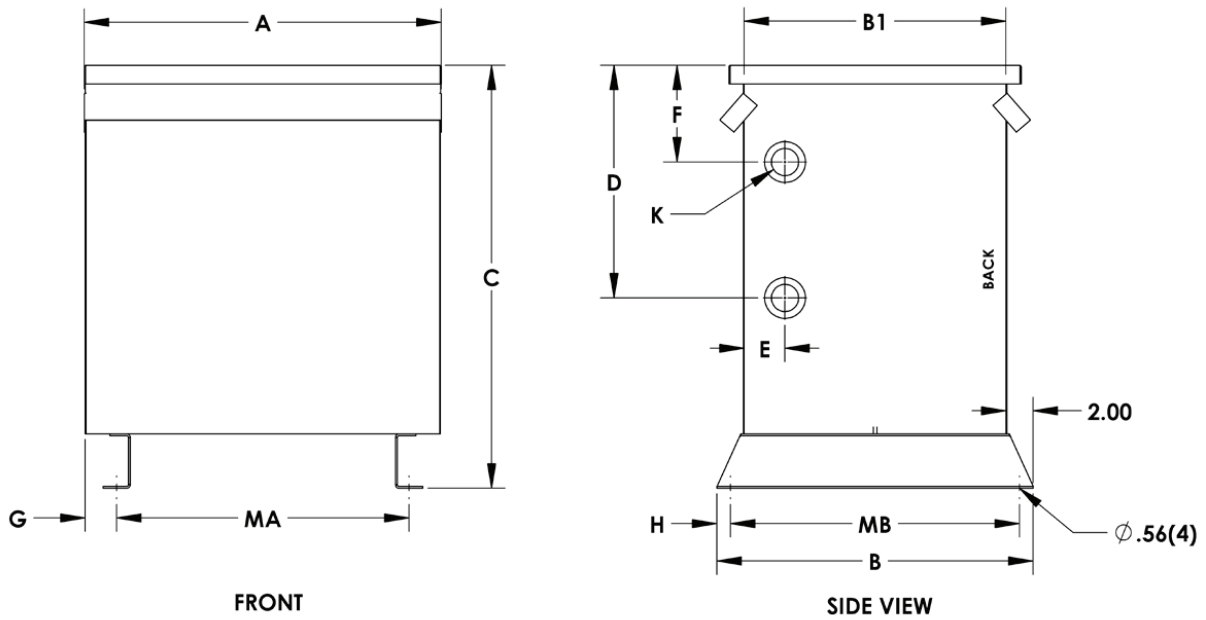
\* Dimensions of enclosure when wall-mounting bracket installed (optional accessory component).



Enclosure	Dimensions in Inches															
	A	A1	B	B1	C	D	E	F	K	MA	MB	WA*	WA1*	WB*	WE*	WF*
FIG2	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
FIG3	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

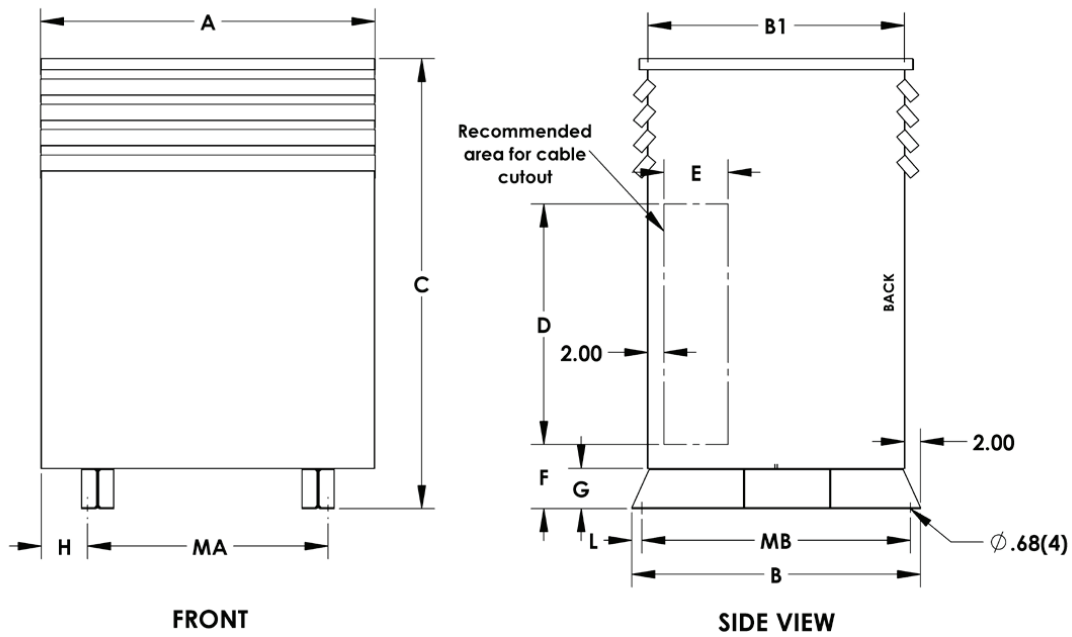
\* Dimensions of enclosure when wall-mounting bracket installed (optional accessory component).





Enclosure	Dimensions in Inches											
	A	B	B1	C	D	E	F	G	H	K	MA	MB
Fig 4	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
Fig 5	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
Fig 6	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

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



Enclosure	Dimensions in Inches											
	A	B	B1	C	D	E	F	G	H	L	MA	MB
Fig 7	41.8	36.0	32.0	56.1	30.0	8.0	8.0	5.0	5.9	0.8	30.0	34.5

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

# Termination details – Type 3R

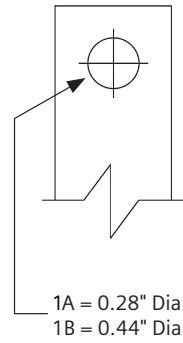
## Single phase

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

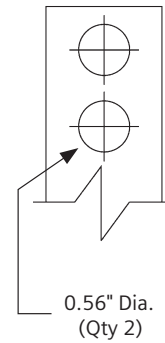
## Three phase

kVA	Voltage		
	120/240	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

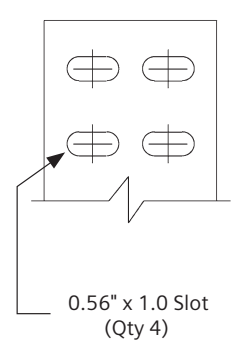
## Diagram 1



## Diagram 2



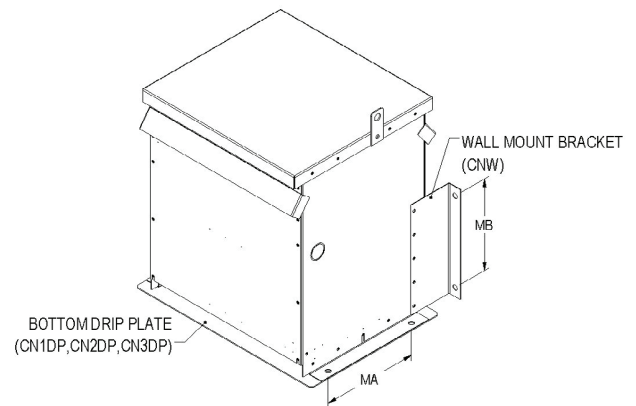
## Diagram 3



# Wall mounting kits

The FIG1, FIG2 and FIG3 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 FIG1, FIG2, or FIG3 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
CNW	FIG1, FIG2, FIG3	10.00

Drip plate kit P/N	Enclosure style	MB dimension
CN1DP	FIG1	10.50
CN2DP	FIG2	10.50
CN3DP	FIG3	10.50

# 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	FIG1–FIG6	Set of four (4) rubber anti-vibration pads which replace the standard steel enclosure washers.
PD2	FIG7	



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 (lbs)	Description
NMP1	Up to 340	Set of four (4) molded neoprene and steel plate assemblies that virtually eliminate vibration noise between the transformer and the mounting surface.
NMP2	341–680	
NMP3	681–1,040	
NMP4	1,041–1,740	
NMP5	1,741–2,330	
NMP6	2,331–3,450	
NMP7	3,451–4,690	



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.

# Guide specification standard format

## Part 1 – General

### 1.1 Sections

This section includes Dry-Type Distribution Transformers.

### 1.2 References

CSA C22.2 N° 47. The most recent NRCAN.

### 1.3 submittals

- A. Products Data: Include data on features, components, ratings and performance for each type of transformer specified. Include dimensioned plans, sections, elevation and side views.
- B. Wiring diagrams will identify, detail wiring and terminals for tap changing and connecting field-installed wiring.

### 1.4 standards

- A. Listing and Labeling: Transformers specified in the section are certified by CSA and UL.
- B. Transformers shall meet relevant recent NRCAN.

### 1.5 Delivery, storage and handling

- A. Section 01600, Material and equipment will address, transport, handling, storage and protection of products.
- B. Deliver transformers individually wrapped for protection.
- C. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or plastic cover to protect units from dirt, water, construction debris and traffic.
- D. Do not stack transformers.
- E. Temporary Heating: If transformer can not be stored in a space that is continuously under normal control of temperature and humidity, apply temporary heat according to manufacturer's written instructions until evidence of condensation is no longer visible.

### 1.6 warranty

- A. Provide a 12 month warranty against defects in materials and workmanship.

## Part 2 – Products

### 2.1 Manufacturers

- A. Acceptable Manufacturer: Siemens Transformers.
- B. Alternative manufacturer and product are subject to full compliance with this specification and must be approved by engineer at least 10 days prior to bid closing.
- C. The transformers must be a standard item in manufacturer's published catalog. A custom product, one that requires design and/or packaging modifications to meet this specification, is not acceptable.
- D. All transformers in the project must be provided by the same manufacturer.

### 2.2 Construction three-phase and single-phase transformers

- A. Transformer shall be [15, 30, 45, 75, 112,5, 150, 225, 450] kVA, three-phase, 3 coils or [25, 37,5, 50, 75, 100, 150, 200, 250] kVA, single-phase, 2 coils with a common core constructions, 60 Hz.
- B. Primary winding shall be 600 or 480 volts, three-phase, delta connected, or 600 volts, single-phase, complete with 4 full capacity 2.5% adjustment taps, 2 below (FCBN) and 2 above (FCAN) the rated voltage.
- C. Secondary winding shall be 208Y/120 volts, three-phases, wye connected, with a 30° angular displacement (lagging) with respect to the primary winding or 120/240 volts, single-phase.
- D. All winding conductors shall be of copper or aluminum.
- E. Temperature rise at full load shall not exceed 150°C, with a class 220 insulation system.
- F. Transformers to qualify to High Efficiency Values for dry-type transformers per CSA C802.2.
- G. Standard impedance at 60 Hz.
- H. Standard audible sound level.
- I. Windings shall be wound with the secondary winding nearest to the core.
- J. The core shall be constructed of high grade, silicon steel laminations.
- K. The impregnation process for the core-and-coil assembly shall include a period under vacuum, followed by pressure impregnation.
- L. The transformer shall be isolated from the enclosure to reduce noise and vibration by means of anti-vibration pads.
- M. The transformer enclosure shall be fabricated from sheet steel and shall be of Type 3R.
- N. The enclosure coating shall be grey ASA 61.

**Siemens Canada Limited**  
1577 North Service Road East  
Oakville, Ontario L6H 0H6  
Canada

Order No. EM-LP-1610  
03-2018 | All rights reserved  
Printed in Canada  
© Siemens Canada Limited 2018

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners. Subject to change without prior notice.