

HPS SERIES MG

Distribution Transformer Up to 5kV



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Improved Efficiency For a Greener Tomorrow

Transformers have been and remain an essential part of our electrical infrastructure. Everywhere we look there is a transformer supplying power to industrial, commercial, or residential applications.

Improving the energy efficiency of new transformers is a primary goal for the U.S. Department of Energy (DOE), Natural Resources Canada (NRCAN) and the Secretariat of Economy (SE) in Mexico. New and more stringent energy efficiency regulations have been in effect since:

- US: January 1st, 2016
- Canada: April 30th, 2019
- Mexico: August 10th, 2022

HPS proudly supports the new legislations and the environmental benefits resulting from using higher efficiency transformers.

Environmental Benefits of Increased Energy Efficiency

Upgrading one 1000 kVA transformer at 5kV to a new DOE 2016/NRCAN 2019 design translates to one of the following environmental benefits*:



3
additional
acres of
forest in
one year



1.3
tons of
waste sent
to the
landfill



408
gallons
of gasoline
consumed



3,893
pounds
of coal
burned

*Estimated savings based on a pre TP-1 upgrade and a mix of energy sources. Calculations derived from www.epa.gov/cleanenergy/energy-resources/calculator.html

North American Energy Efficiency Regulations

US - DOE 2016 (DOE 10 CFR Part 431)

As of January 1st 2016, the US Department of Energy (DOE) introduced new, higher energy efficiency levels for dry-type transformers installed in the USA.

Canada - NRCAN 2019 (SOR/2018-201, Amd. 14) & ON Reg. 404/12

As of April 30th, 2019 Natural Resources Canada (NRCAN) aligned the dry-type transformer energy efficiency requirements to those prescribed by DOE 2016. Ontario was the first province to adopt the new NRCAN efficiency levels effective January 1st 2018.

Mexico - NMX 2021 (NMX-J-351-1-ANCE-2021)*

As of August 10th, 2022, the Secretariat of Economy introduced new, higher energy efficiency levels for dry-type low voltage transformers in Mexico. The new regulation is now aligned with the DOE 2016 efficiency levels.

*HPS will be referring to the NMX-J-351-1-ANCE-2021 standard as NMX 2021.

Medium Voltage Dry-type Distribution:

1PH 15-833kVA

3PH 15-2500kVA

(extended to 7500kVA for Canada)

* Non-ventilated and potted transformers are exempt from these efficiency requirements. Please refer to the DOE 2016 & NMX 2021 website for a full list of exemptions.



New Energy Efficiency Levels

The new North American energy efficiency levels for single and three phase medium voltage VPI distribution transformers are as follows:

Single Phase			Three Phase		
	20 45kV BIL	46 95kV BIL		20 45kV BIL	46 95kV BIL
kVA	Efficiency (%)		kVA	Efficiency (%)	
15	98.10	97.86	15	97.50	97.18
25	98.33	98.12	30	97.90	97.63
37.5	98.49	98.30	45	98.10	97.86
50	98.60	98.42	75	98.33	98.13
75	98.73	98.57	112.5	98.52	98.36
100	98.82	98.67	150	98.65	98.51
167	98.96	98.83	225	98.82	98.69
250	99.07	98.95	300	98.93	98.81
333	99.14	99.03	500	99.09	98.99
500	99.22	99.12	505	99.10	99.00
505	99.23	99.13	750	99.21	99.12
667	99.27	99.18	1000	99.28	99.20
833	99.31	99.23	1500	99.37	99.30

Note: Note: All efficiency values are at 50% of nameplate-rated load, determined according to the DOE 2016/NMX 2021 Test Method for Measuring the Energy Consumption of Distribution Transformers under Appendix A to Subpart K of DOE 10 CFR part 431 and NMX-J-351-1-ANCE-2021.

Compliant Energy Efficient Distribution Transformers

The DOE 2016, NRCAN 2019 and NMX 2021 product lines from HPS are based on extensive customer input resulting in industry leading technologies and materials to meet your most demanding applications.

HPS medium voltage VPI transformers are designed to meet the latest DOE 2016, NRCAN 2019 and NMX 2021 efficiency standards.

Medium Voltage VPI Distribution Transformers -

With three phase ratings from 15 to 1500kVA and single phase ratings from 15-333kVA, they feature the newest technology and manufacturing processes.

To service all of your medium voltage needs, HPS provides alternative product options also available for applications requiring voltages up to 34.5kV. For more information on HPS medium voltage transformers, please refer to the HPS website www.hammondpowersolutions.com.



HPS Online Tools

HPS offers many different tools to assist you in the selection of a HPS Transformer, these include an Energy Efficiency Calculator, a Current Calculator and a comprehensive Website.

Efficiency Calculator

Calculate the energy consumption (kWh), energy costs, and energy dollar savings using HPS energy efficient distribution transformers within a selected application profile.
www.hammondpowersolutions.com/hps-toolbox

Current Calculator

Calculates the Amps, Volts or kVA of a transformer.
www.hammondpowersolutions.com/hps-toolbox

HPS Website

Our HPS website has useful information to assist you when selecting and installing a transformer. These include a competitor cross reference tool, installation manuals, typical specifications, and warranty information.
www.hammondpowersolutions.com/hps-toolbox

HPS Medium Voltage VPI Transformers

Hammond Power Solutions Inc. (HPS) is the industry leading manufacturer of standard and custom dry-type transformers in North America. Every HPS product is built with the quality and dependability you count on.

Medium voltage VPI distribution transformers are designed for many demanding and diverse applications, while minimizing both installation and maintenance costs. Coils are precision wound with copper or aluminum conductors with a full vacuum-pressure impregnation (VPI) insulation system.

Applications

Medium voltage VPI Transformers are suitable for any commercial, industrial, or renewable energy application. They can be offered for a variety of environmental conditions and built to meet the most onerous duty.

- Industrial
- Commercial
- Renewable Energy



Standard type 3R enclosure drip shield



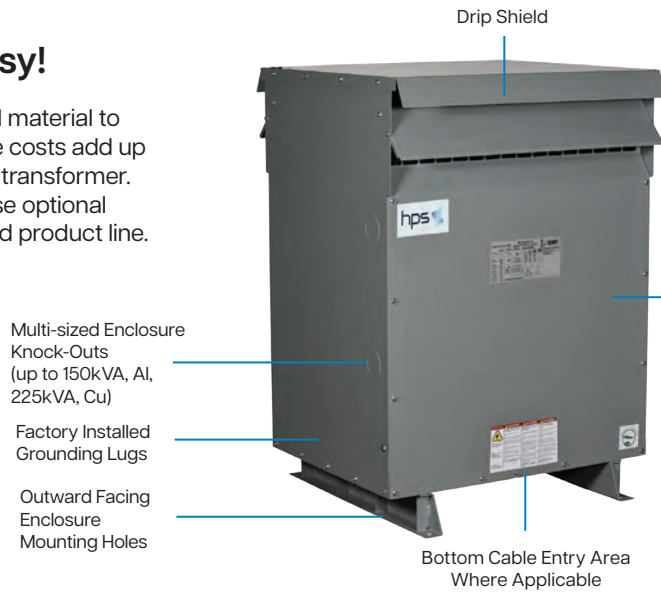
Wall mounting brackets
 (limited to lower kVA ratings and may require optional hardware)



Expanded neutral bar for multiple customer connections

Installation Made Fast & Easy!

Tired of spending extra money on labor and material to install optional transformer features? These costs add up unless you purchase a medium voltage VPI transformer. Medium voltage VPI transformers have these optional features pre-installed as part of our standard product line.



- Transformer features:
- Expanded Neutral Bar for Customer Convenience
 - Separate High Voltage & Low Voltage Terminal Boards for Safe & Easy Cabling
 - Vibration Isolator Pads

Features

Core & Coil Construction:

- Manufactured from quality non-aging, cold rolled grain oriented, silicon steel laminations
- Cores are precision cut to close tolerances which eliminates burrs and improves performance
- Core is coated to resist oxidation
- Precision wound with copper or aluminum conductors that are electrically balanced to minimize axial forces during short-circuit conditions
- Wire or foil conductors for optimum performance for the application
- Robust interface between core & coils for better short circuit performance
- Front accessible separate high and low voltage terminals with connectors suitable for either copper or aluminum cables.

Conductor material: Copper or Aluminum

Temperature rise: 150°C typical (low rise options available)

Insulation system: 200°C or 220°C

Benefits

- Meets the minimum efficiency standards mandated in DOE 10 CFR Part 431 (levels as of Jan. 1st 2016), NRCan 2019 SOR/2018-201 (effective April 30th, 2019), NMX 2021 (effective August 10th, 2022), resulting in increased dollar savings and positive societal/environmental payback
- Designed for indoor or outdoor applications
- VPI windings are mechanically durable for the most demanding environments
- Minimal maintenance required beyond removing surface contaminants, such as dust
- Ease of installation
- Excellent resistance to short circuits
- Self-extinguishing in the unlikely event of fire
- Environmentally friendly



Factory installed main grounding lugs



Bottom cable entry area (where applicable)



Offset outward facing floor installation holes for easy power tool access

Specifications & Accessories - Copper or Aluminum



DH2 Enclosure



DH3 Enclosure



DH5 Enclosure

Standard Specifications

kVA:	15-150kVA
High Voltage (Primary):	Up to 5kV Class Up to 45 kV BIL
Low Voltage (Secondary):	208Y/120V to 600Y/347V, 10kV BIL (3 phase units only) Options available upon request
Frequency:	60 Hz, others available upon request
Insulation System:	220°C (200°C for some units)
Enclosure Type:	Type 3/3R standard (other enclosure options available). Enhanced Type 3R option available for improved outdoor performance.
Enclosure Finish:	ANSI 61 Grey Compliant with UL 50
Neutral:	Neutral terminal for field connection (on applicable units)
Standard Primary Taps:	Refer to wiring diagrams for details
Temperature Rise:	150°C temperature rise, 130°C rise for some lower kVA units (optional 115°C & 80°C rise available)
Termination:	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.
Conduit Entry:	Knockouts standard on all lower kVA units; conduit entry zone defined for larger kVA units.
Impedance:	Single Phase: Typically 2-5% Three Phase: Typically 3-6%
Mounting:	Floor or wall/ceiling mounting available. Refer to selection tables for details.
Seismic:	Seismically qualified according to the International Building Code (IBC) 2018, and the American Society of Civil Engineers ASCE 7-16 specifications, with the following design parameters: Spectral acceleration: $S_{DS} \leq 2.0 g$ Importance factor: $I_p = 1.5$ Attachment/height ratio: $z/h = 0$
Sound Level:	Meets IEEE C57.12.01 (optional low noise units available)
Altitude:	Standard up to 1000 meters (de-rated above 1000 meters)
Ambient	-20 to 40°C (with de-rating from 40° to 60°C)

Optional Accessories:

- Thermal sensing & indication
- Thermocouples
- Thermometers (analog/digital)
- Thermostat alarm / trip (N.O. /N.C. contacts)
- Electrostatic shielding

HPS Medium Voltage VPI Transformer Number Guide

Example

Family	Appl. Type	Efficiency	Phase	kVA Rating				Pri. Volt.	Sec. Volt.	BIL	Winding Material/ Electrostatic Shield/ Thermostat - options incl.	Temp. Rise	Enclosure	Sound Level
M	G	3	A	0	0	4	5	R	B	S	K	F	C	3

Family	kVA	BIL	Enclosure
M - Medium Voltage VPI Transformer	kVA Rating	S - Standard 20kV for 2400V Pri. & 10kV for LV 30kV for 4160-4800V Pri. & 10kV for LV	A - Type 1 B - Type 2 C - Type 3R D - Type 3RE E - Type 3RX F - Type 4 G - Type 4X (304SS) H - Type 4X (316SS) K - Type 12 X - None (Core & Coil)
Type	Primary Voltage	P - Premium 30kV for 2400V Pri. & 10kV for LV 45kV for 4160-4800V Pri. & 10kV for LV	D - Type 3RE K - Type 12 X - None (Core & Coil)
G - General	1PH: R - 2400 S - 4160 T - 4800	3PH: 2400 4160 4800	Sound Level
Efficiency	Secondary Voltage	Winding Material/Electrostatic Shield	0 = Standard 3 = -3dB 5 = -5dB 8 = -8dB
1 - Non EE/ Legacy prod/ 2-TP1/CSA C802.2 3-DOE 2016, NRCAN 2019 and NMX 2021	1PH: A - 208 B D - 240 E - 120/240 K - 480 P - 600	A - Aluminum S - Aluminum + Shield T - Aluminum+Thermostat U - Aluminum+Shield+Thermostat R - Aluminum+Double Shield C - Copper K - Copper + Shielded L - Copper + Thermostat M - Copper + Shield + Thermostat J - Copper + Double Shield	
Phase (Pri-Sec)	3PH: 208D or 208Y/120 240 120/240 480D or 480Y/277 600D or 600Y/347	Temperature Rise	
A - 3PH Delta-Wye C - 3PH Delta-Delta/CT D - 3PH Delta-Delta K - 1PH-Single-Single L - 1PH-Single-Dual		B - 80°C G - 130°C F - 115°C H - 150°C	

Testing

All VPI Power transformers are tested at HPS prior to shipment. They must meet stringent criteria to be certified for release. The following tests are performed on each power transformer:

- Resistance Measurement*
- Voltage Ratio
- Polarity & Phase-Relation Test
- No-Load Loss and Excitation Current Test
- Induced Voltage
- Impedance, Voltage & Load Loss Test*
- Power frequency voltage-withstand each winding
- Other testing available upon customer request



* Typically not performed for units ≤ 500kVA

Compliance & Approvals

HPS Millennium™ is CSA certified and UL Listed to the following standards:

- CSA C22.2 No. 47
- CSA C9-02
- U.L. 1562



Compliant to the following industry standards:

- IEEE-C57.12.01
- IEEE-C57.12.51
- IEEE-C57.12.70
- IEEE-C57.12.91
- DOE 10 CFR Part 431: 2016
- NRCAN 2019 SOR/2018-201 Amd. 14
- NMX-J-351-1-ANCE-2021
- IEC 60076 (upon request)
- Seismic qualified per IBC 2018 (ASCE 7-16)

SELECTION TABLES

MEDIUM VOLTAGE VPI TRANSFORMER



Aluminum Wound, Single Phase

2400 PRIMARY VOLTS		120/240 SECONDARY VOLTS						60 HZ	
kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG2L0015RESAGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	290 [132]	F or W	SCD 6
25	MG2L0025RESAHC0	220	NH6	23.90 [608]	25.00 [635]	28.75 [731]	350 [159]	F or W	SCD 6
37.5	MG2L0037RESAHC0	220	NH6	23.90 [608]	25.00 [635]	28.75 [731]	420 [191]	F or W	SCD 6
50	MG2L0050RESAHC0	220	NH3	26.00 [661]	25.00 [635]	38.00 [966]	570 [259]	F or W	SCD 6
75	MG2L0075RESAHC0	220	NH3	26.00 [661]	25.00 [635]	38.00 [966]	660 [300]	F or W	SCD 6
100	MG2L0100RESAHC0	220	NH4	32.00 [813]	29.50 [750]	41.00 [1042]	810 [368]	F	SCD 6
150	MG2L0150RESAHC0	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1280 [581]	F	SCD 6
167	MG2L0167RESAHC0	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1320 [599]	F	SCD 6
250	MG2L0250RESAHC0	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1560 [708]	F	SCD 6
333	MG2L0333RESAHC0	220	NJ2	49.00 [1245]	39.00 [991]	59.00 [1499]	1980 [899]	F	SCD 6

*These units have a 130°C temperature rise.

4160 PRIMARY VOLTS		120/240 SECONDARY VOLTS						60 HZ	
kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG2L0015SESAGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	290 [132]	F or W	SCD 6
25*	MG2L0025SESAGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	350 [159]	F or W	SCD 6
37.5	MG2L0037SESAGCO	220	NH6	23.90 [608]	25.00 [635]	28.75 [731]	420 [191]	F or W	SCD 6
50	MG2L0050SESAGCO	220	NH3	26.00 [661]	25.00 [635]	38.00 [966]	570 [259]	F or W	SCD 6
75	MG2L0075SESAGCO	220	NH3	26.00 [661]	25.00 [635]	38.00 [966]	660 [300]	F or W	SCD 6
100	MG2L0100SESAGCO	220	NH4	32.00 [813]	29.50 [750]	41.00 [1042]	810 [368]	F	SCD 6
150	MG2L0150SESAGCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1280 [581]	F	SCD 6
167	MG2L0167SESAGCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1320 [599]	F	SCD 6
250	MG2L0250SESAGCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1560 [708]	F	SCD 6
333	MG2L0333SESAGCO	220	NJ2	49.00 [1245]	39.00 [991]	59.00 [1499]	1980 [899]	F	SCD 6

*These units have a 130°C temperature rise.

SELECTION TABLES

MEDIUM VOLTAGE VPI TRANSFORMER



Copper Wound, Single Phase

2400 PRIMARY VOLTS			120/240 SECONDARY VOLTS				60 HZ		
kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG2L0015RESCGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	320 [146]	F or W	SCD 6
25*	MG2L0025RESCGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	390 [177]	F or W	SCD 6
37.5*	MG2L0037RESCGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	480 [218]	F or W	SCD 6
50*	MG2L0050RESCGCO	200	NH3	26.00 [661]	25.00 [635]	38.00 [966]	660 [300]	F or W	SCD 6
75	MG2L0075RESCHCO	220	NH3	26.00 [661]	25.00 [635]	38.00 [966]	770 [350]	F	SCD 6
100	MG2L0100RESCHCO	220	NH4	32.00 [813]	29.50 [750]	41.00 [1042]	970 [440]	F	SCD 6
150	MG2L0150RESCHCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1300 [590]	F	SCD 6
167	MG2L0167RESCHCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1440 [654]	F	SCD 6
250	MG2L0250RESCHCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1800 [817]	F	SCD 6
333	MG2L0333RESCHCO	220	NJ2	49.00 [1245]	39.00 [991]	59.00 [1499]	2280 [1035]	F	SCD 6

*These units have a 130°C temperature rise.

4160 PRIMARY VOLTS			120/240 SECONDARY VOLTS				60 HZ		
kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG2L0015SESCGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	320 [146]	F or W	SCD 6
25*	MG2L0025SESCGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	390 [177]	F or W	SCD 6
37.5*	MG2L0037SESCGCO	200	NH6	23.90 [608]	25.00 [635]	28.75 [731]	480 [218]	F or W	SCD 6
50*	MG2L0050SESCGCO	200	NH3	26.00 [661]	25.00 [635]	38.00 [966]	660 [300]	F or W	SCD 6
75	MG2L0075SESCHCO	220	NH3	26.00 [661]	25.00 [635]	38.00 [966]	770 [350]	F	SCD 6
100	MG2L0100SESCHCO	220	NH4	32.00 [813]	29.50 [750]	41.00 [1042]	970 [440]	F	SCD 6
150	MG2L0150SESCHCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1300 [590]	F	SCD 6
167	MG2L0167SESCHCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1440 [654]	F	SCD 6
250	MG2L0250SESCHCO	220	NJ4	32.00 [813]	32.50 [826]	50.00 [1270]	1800 [817]	F	SCD 6
333	MG2L0333SESCHCO	220	NJ2	49.00 [1245]	39.00 [991]	59.00 [1499]	2280 [1035]	F	SCD 6

*These units have a 130°C temperature rise.

SELECTION TABLES

MEDIUM VOLTAGE VPI TRANSFORMER



Aluminum Wound, Three Phase

2400 PRIMARY VOLTS			208Y/120 SECONDARY VOLTS				60 HZ		
kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015RBSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030RBSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	400 [182]	F or W/C	SCD 10
45*	MG3A0045RBSAGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	550 [250]	F (Opt W/C)	SCD 10
75	MG3A0075RBSAHC0	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	850 [386]	F	SCD 10
112.5	MG3A0112RBSAHC0	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	900 [409]	F	SCD 10
150	MG3A0150RBSAHC0	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1200 [545]	F	SCD 10
225	MG3A0225RBSAHC0	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1500 [681]	F	SCD 10
300	MG3A0300RBSAHC0	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2000 [908]	F	SCD 10
500	MG3A0500RBSAHC0	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3100 [1407]	F	SCD 10
505	MG3A0505RBSAHC0	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3120 [1416]	F	SCD 10
750	MG3A0750RBSAHC0	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5400 [2450]	F	SCD 10
1000	MG3A1000RBSAHC0	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	7500 [3402]	F	SCD 10
1250	MG3A1250RBSAHC0	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8500 [3856]	F	SCD 10
1500	MG3A1500RBSAHC0	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9800 [4446]	F	SCD 10

2400 PRIMARY VOLTS			480Y/277 SECONDARY VOLTS				60 HZ		
kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015RKSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030RKSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	400 [182]	F or W/C	SCD 10
45*	MG3A0045RKSAGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	550 [250]	F (Opt W/C)	SCD 10
75	MG3A0075RKSAGCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	850 [386]	F	SCD 10
112.5	MG3A0112RKSAGCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	900 [409]	F	SCD 10
150	MG3A0150RKSAGCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1200 [545]	F	SCD 10
225	MG3A0225RKSAGCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1500 [681]	F	SCD 10
300	MG3A0300RKSAGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2000 [908]	F	SCD 10
500	MG3A0500RKSAGCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3100 [1407]	F	SCD 10
505	MG3A0505RKSAGCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3120 [1416]	F	SCD 10
750	MG3A0750RKSAGCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5400 [2450]	F	SCD 10
1000	MG3A1000RKSAGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	7500 [3402]	F	SCD 10
1250	MG3A1250RKSAGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8500 [3856]	F	SCD 10
1500	MG3A1500RKSAGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9800 [4446]	F	SCD 10

2400 PRIMARY VOLTS			600Y/347 SECONDARY VOLTS				60 HZ		
kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015RKSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030RKSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	400 [182]	F or W/C	SCD 10
45*	MG3A0045RKSAGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	550 [250]	F (Opt W/C)	SCD 10
75	MG3A0075RKSAGCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	850 [386]	F	SCD 10
112.5	MG3A0112RKSAGCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	900 [409]	F	SCD 10
150	MG3A0150RKSAGCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1200 [545]	F	SCD 10
225	MG3A0225RKSAGCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1500 [681]	F	SCD 10
300	MG3A0300RKSAGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2000 [908]	F	SCD 10
500	MG3A0500RKSAGCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3100 [1407]	F	SCD 10
505	MG3A0505RKSAGCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3120 [1416]	F	SCD 10
750	MG3A0750RKSAGCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5400 [2450]	F	SCD 10
1000	MG3A1000RKSAGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	7500 [3402]	F	SCD 10
1250	MG3A1250RKSAGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8500 [3856]	F	SCD 10
1500	MG3A1500RKSAGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9800 [4446]	F	SCD 10

W/C: Built-in Wall/Ceiling Mounting

Opt W/C: Wall/Ceiling Mounting Kit "DW3" Available
 *These units have a 130°C temperature rise.

MEDIUM VOLTAGE VPI TRANSFORMER

Copper Wound, Single Phase



4160 PRIMARY VOLTS 208Y/120 SECONDARY VOLTS 60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015SBSAGCO	200	DH2	25.8	23.8	28.8	350 [159]	F or W/C	SCD 8
30*	MG3A0030SBSAGCO	200	DH2	25.8	23.8	28.8	450 [205]	F or W/C	SCD 10
45*	MG3A0045SBSAGCO	200	DH3	28.3	27.0	36.0	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075SBSAGCO	200	DH4	31.5	29.5	44.5	700 [318]	F	SCD 10
112.5	MG3A0112SBSAHCO	220	DH4	31.5	29.5	44.5	900 [409]	F	SCD 10
150	MG3A0150SBSAHCO	220	DH5	38.0	34.0	52.0	1250 [567]	F	SCD 10
225	MG3A0225SBSAHCO	220	DH5	38.0	34.0	52.0	1500 [681]	F	SCD 10
300	MG3A0300SBSAHCO	220	DH6	49.0	42.0	64.0	2000 [908]	F	SCD 10
500	MG3A0500SBSAHCO	220	DH7	54.0	47.0	72.0	3100 [1407]	F	SCD 10
505	MG3A0505SBSAHCO	220	DH7	54.0	47.0	72.0	3130 [1420]	F	SCD 10
750	MG3A0750SBSAHCO	220	DH8	60.0	50.0	82.0	5400 [2450]	F	SCD 10
1000	MG3A1000SBSAHCO	220	DH10	78.0	55.0	86.0	7500 [3402]	F	SCD 10
1250	MG3A1250SBSAHCO	220	DH10	78.0	55.0	86.0	8600 [3901]	F	SCD 10
1500	MG3A1500SBSAHCO	220	DH10	78.0	55.0	86.0	9800 [4446]	F	SCD 10

4160 PRIMARY VOLTS 480Y/277 SECONDARY VOLTS 60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015SKSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030SKSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	450 [205]	F or W/C	SCD 10
45*	MG3A0045SKSAGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075SKSAGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	700 [318]	F	SCD 10
112.5	MG3A0112SKSAHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	900 [409]	F	SCD 10
150	MG3A0150SKSAHCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1250 [567]	F	SCD 10
225	MG3A0225SKSAHCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1500 [681]	F	SCD 10
300	MG3A0300SKSAHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2000 [908]	F	SCD 10
500	MG3A0500SKSAHCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3100 [1407]	F	SCD 10
505	MG3A0505SKSAHCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3130 [1420]	F	SCD 10
750	MG3A0750SKSAHCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5400 [2450]	F	SCD 10
1000	MG3A1000SKSAHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	7500 [3402]	F	SCD 10
1250	MG3A1250SKSAHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8600 [3901]	F	SCD 10
1500	MG3A1500SKSAHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9800 [4446]	F	SCD 10

4160 PRIMARY VOLTS 600Y/347 SECONDARY VOLTS 60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015SPSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030SPSAGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	450 [205]	F or W/C	SCD 10
45*	MG3A0045SPSAGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075SPSAGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	700 [318]	F	SCD 10
112.5	MG3A0112SPSAHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	900 [409]	F	SCD 10
150	MG3A0150SPSAHCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1250 [567]	F	SCD 10
225	MG3A0225SPSAHCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1500 [681]	F	SCD 10
300	MG3A0300SPSAHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2000 [908]	F	SCD 10
500	MG3A0500SPSAHCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3100 [1407]	F	SCD 10
505	MG3A0505SPSAHCO	220	DH7	54.0 [1372]	47.0 [1194]	72.0 [1829]	3130 [1420]	F	SCD 10
750	MG3A0750SPSAHCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5400 [2450]	F	SCD 10
1000	MG3A1000SPSAHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	7500 [3402]	F	SCD 10
1250	MG3A1250SPSAHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8600 [3901]	F	SCD 10
1500	MG3A1500SPSAHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9800 [4446]	F	SCD 10

W/C: Built-in Wall/Ceiling Mounting

Opt W/C: Wall/Ceiling Mounting Kit "DW3" Available
*These units have a 130°C temperature rise.

SELECTION TABLES

MEDIUM VOLTAGE VPI TRANSFORMER



Copper Wound, Three Phase

2400 PRIMARY VOLTS

208Y/120 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015RBSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030RBSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	460 [209]	F or W/C	SCD 10
45*	MG3A0045RBSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075RBSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	800 [363]	F (Opt W/C)	SCD 10
112.5	MG3A0112RBSCHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	850 [386]	F	SCD 10
150	MG3A0150RBSCHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	1150 [522]	F	SCD 10
225	MG3A0225RBSCHCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1600 [726]	F	SCD 10
300	MG3A0300RBSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2600 [1180]	F	SCD 10
500	MG3A0500RBSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3100 [1407]	F	SCD 10
505	MG3A0505RBSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3130 [1420]	F	SCD 10
750	MG3A0750RBSCHCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5500 [2495]	F	SCD 10
1000	MG3A1000RBSCHCO	220	DH9	68.0 [1728]	50.0 [1270]	82.0 [2083]	6900 [3130]	F	SCD 10
1250	MG3A1250RBSCHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8200 [3720]	F	SCD 10
1500	MG3A1500RBSCHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9300 [4219]	F	SCD 10

2400 PRIMARY VOLTS

480Y/277 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015RKSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030RKSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	460 [209]	F or W/C	SCD 10
45*	MG3A0045RKSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075RKSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	800 [363]	F (Opt W/C)	SCD 10
112.5	MG3A0112RKSCHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	850 [386]	F	SCD 10
150	MG3A0150RKSCHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	1150 [522]	F	SCD 10
225	MG3A0225RKSCHCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1600 [726]	F	SCD 10
300	MG3A0300RKSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2600 [1180]	F	SCD 10
500	MG3A0500RKSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3100 [1407]	F	SCD 10
505	MG3A0505RKSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3130 [1420]	F	SCD 10
750	MG3A0750RKSCHCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5500 [2495]	F	SCD 10
1000	MG3A1000RKSCHCO	220	DH9	68.0 [1728]	50.0 [1270]	82.0 [2083]	6900 [3130]	F	SCD 10
1250	MG3A1250RKSCHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8200 [3720]	F	SCD 10
1500	MG3A1500RKSCHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9300 [4219]	F	SCD 10

2400 PRIMARY VOLTS

600Y/347 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015RPSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	350 [159]	F or W/C	SCD 8
30*	MG3A0030RPSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	460 [209]	F or W/C	SCD 10
45*	MG3A0045RPSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075RPSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	800 [363]	F (Opt W/C)	SCD 10
112.5	MG3A0112RPSCHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	850 [386]	F	SCD 10
150	MG3A0150RPSCHCO	220	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	1150 [522]	F	SCD 10
225	MG3A0225RPSCHCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1600 [726]	F	SCD 10
300	MG3A0300RPSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2600 [1180]	F	SCD 10
500	MG3A0500RPSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3100 [1407]	F	SCD 10
505	MG3A0505RPSCHCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3130 [1420]	F	SCD 10
750	MG3A0750RPSCHCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5500 [2495]	F	SCD 10
1000	MG3A1000RPSCHCO	220	DH9	68.0 [1728]	50.0 [1270]	82.0 [2083]	6900 [3130]	F	SCD 10
1250	MG3A1250RPSCHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8200 [3720]	F	SCD 10
1500	MG3A1500RPSCHCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9300 [4219]	F	SCD 10

W/C: Built-in Wall/Ceiling Mounting

Opt W/C: Wall/Ceiling Mounting Kit "DW3" Available

*These units have a 130°C temperature rise.

SELECTION TABLES

MEDIUM VOLTAGE VPI TRANSFORMER

4160 PRIMARY VOLTS

208Y/120 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015SBSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	330 [150]	F or W/C	SCD 8
30*	MG3A0030SBSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	450 [205]	F or W/C	SCD 10
45*	MG3A0045SBSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075SBSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	850 [386]	F (Opt W/C)	SCD 10
112.5*	MG3A0112SBSCGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	875 [397]	F	SCD 10
150*	MG3A0150SBSCGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	1150 [522]	F	SCD 10
225	MG3A0225SBSCGCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1600 [726]	F	SCD 10
300	MG3A0300SBSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2600 [1180]	F	SCD 10
500	MG3A0500SBSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3100 [1407]	F	SCD 10
505	MG3A0505SBSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3130 [1420]	F	SCD 10
750	MG3A0750SBSCGCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5500 [2495]	F	SCD 10
1000	MG3A1000SBSCGCO	220	DH9	68.0 [1728]	50.0 [1270]	82.0 [2083]	6900 [3130]	F	SCD 10
1250	MG3A1250SBSCGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8200 [3720]	F	SCD 10
1500	MG3A1500SBSCGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9300 [4219]	F	SCD 10

4160 PRIMARY VOLTS

480Y/277 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015SKSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	330 [150]	F or W/C	SCD 8
30*	MG3A0030SKSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	450 [205]	F or W/C	SCD 10
45*	MG3A0045SKSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075SKSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	850 [386]	F (Opt W/C)	SCD 10
112.5*	MG3A0112SKSCGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	875 [397]	F	SCD 10
150*	MG3A0150SKSCGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	1150 [522]	F	SCD 10
225	MG3A0225SKSCGCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1600 [726]	F	SCD 10
300	MG3A0300SKSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2600 [1180]	F	SCD 10
500	MG3A0500SKSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3100 [1407]	F	SCD 20
505	MG3A0505SKSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3130 [1420]	F	SCD 20
750	MG3A0750SKSCGCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5500 [2495]	F	SCD 20
1000	MG3A1000SKSCGCO	220	DH9	68.0 [1728]	50.0 [1270]	82.0 [2083]	6900 [3130]	F	SCD 10
1250	MG3A1250SKSCGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8200 [3720]	F	SCD 10
1500	MG3A1500SKSCGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9300 [4219]	F	SCD 10

4160 PRIMARY VOLTS

600Y/347 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Insul. Temp Class (°C)	Enclosure Style (pg 18-21)	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
				Width	Depth	Height			
15*	MG3A0015SPSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	330 [150]	F or W/C	SCD 8
30*	MG3A0030SPSCGCO	200	DH2	25.8 [656]	23.8 [605]	28.8 [732]	450 [205]	F or W/C	SCD 10
45*	MG3A0045SPSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	600 [273]	F (Opt W/C)	SCD 10
75*	MG3A0075SPSCGCO	200	DH3	28.3 [719]	27.0 [686]	36.0 [915]	850 [386]	F (Opt W/C)	SCD 10
112.5*	MG3A0112SPSCGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	875 [397]	F	SCD 10
150*	MG3A0150SPSCGCO	200	DH4	31.5 [801]	29.5 [750]	44.5 [1131]	1150 [522]	F	SCD 10
225	MG3A0225SPSCGCO	220	DH5	38.0 [966]	34.0 [864]	52.0 [1321]	1600 [726]	F	SCD 10
300	MG3A0300SPSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	2600 [1180]	F	SCD 10
500	MG3A0500SPSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3100 [1407]	F	SCD 10
505	MG3A0505SPSCGCO	220	DH6	49.0 [1245]	42.0 [1067]	64.0 [1626]	3130 [1420]	F	SCD 10
750	MG3A0750SPSCGCO	220	DH8	60.0 [1524]	50.0 [1270]	82.0 [2083]	5500 [2495]	F	SCD 10
1000	MG3A1000SPSCGCO	220	DH9	68.0 [1728]	50.0 [1270]	82.0 [2083]	6900 [3130]	F	SCD 10
1250	MG3A1250SPSCGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	8200 [3720]	F	SCD 10
1500	MG3A1500SPSCGCO	220	DH10	78.0 [1982]	55.0 [1397]	86.0 [2185]	9300 [4219]	F	SCD 10

W/C: Built-in Wall/Ceiling Mounting

Opt W/C: Wall/Ceiling Mounting Kit "DW3" Available
*These units have a 130°C temperature rise.

TYPICAL PERFORMANCE DATA

5 kV, 30kV BIL - COPPER

75°C, 4160V DELTA (30 KV BIL) - 480 WYE/277V (10 KV BIL), 60 HZ

kVA	No Load Losses (W)	Full Load Losses (W)	Impedance	Regulation				% Efficiency at different % of rated load						
				at 35% load		at 100% load		15%	25%	35%	50%	65%	75%	100%
				pf=1	pf=0.8	pf=1	pf=0.8							
15	115	400	3.2%	0.72%	0.94%	2.06%	2.70%	94.86%	96.55%	97.17%	97.51%	97.55%	97.51%	97.26%
30	180	740	3.2%	0.67%	0.96%	1.92%	2.74%	95.89%	97.21%	97.68%	97.90%	97.89%	97.82%	97.56%
45	215	1150	3.3%	0.69%	0.99%	1.99%	2.83%	96.64%	97.65%	97.99%	98.10%	98.02%	97.93%	97.61%
75	320	1650	4.2%	0.60%	1.23%	1.76%	3.52%	96.99%	97.91%	98.22%	98.33%	98.27%	98.19%	97.92%
112.5	370	2460	4.2%	0.60%	1.23%	1.75%	3.52%	97.61%	98.29%	98.49%	98.52%	98.42%	98.32%	98.02%
150	440	3030	4.5%	0.56%	1.29%	1.65%	3.69%	97.86%	98.46%	98.63%	98.65%	98.55%	98.46%	98.18%
225	580	3870	4.8%	0.48%	1.32%	1.45%	3.81%	98.12%	98.65%	98.81%	98.82%	98.74%	98.66%	98.42%
300	680	4750	4.8%	0.45%	1.31%	1.36%	3.77%	98.33%	98.79%	98.92%	98.93%	98.85%	98.77%	98.54%
500	940	6800	4.8%	0.39%	1.28%	1.19%	3.68%	98.60%	98.99%	99.09%	99.09%	99.01%	98.94%	98.74%
505	940	6800	4.8%	0.40%	1.29%	1.20%	3.69%	98.61%	99.00%	99.10%	99.10%	99.02%	98.95%	98.75%
750	1400	7960	5.8%	0.32%	1.44%	1.01%	4.16%	98.65%	99.05%	99.17%	99.21%	99.16%	99.12%	98.97%
1000	1630	10000	5.8%	0.30%	1.44%	0.97%	4.16%	98.81%	99.15%	99.26%	99.28%	99.23%	99.18%	99.04%
1250	1720	12200	5.8%	0.30%	1.43%	0.96%	4.15%	98.97%	99.26%	99.33%	99.33%	99.28%	99.23%	99.08%
1500	1900	14100	5.8%	0.29%	1.43%	0.93%	4.13%	99.05%	99.31%	99.37%	99.37%	99.31%	99.26%	99.11%

5 KV, 30KV BIL - ALUMINUM

75°C, 4160V DELTA (30 KV BIL) - 480 WYE/277V (10 KV BIL), 60 HZ

kVA	No Load Losses (W)	Full Load Losses (W)	Impedance	Regulation				% Efficiency at different % of rated load						
				at 35% load		at 100% load		15%	25%	35%	50%	65%	75%	100%
				pf=1	pf=0.8	pf=1	pf=0.8							
15	116	400	3.2%	0.71%	0.94%	2.05%	2.69%	94.82%	96.52%	97.16%	97.50%	97.55%	97.51%	97.27%
30	180	740	3.2%	0.66%	0.96%	1.91%	2.73%	95.89%	97.21%	97.68%	97.90%	97.90%	97.83%	97.57%
45	215	1150	3.3%	0.69%	0.99%	1.98%	2.82%	96.64%	97.66%	97.99%	98.10%	98.03%	97.94%	97.62%
75	250	2030	4.2%	0.73%	1.26%	2.12%	3.59%	97.53%	98.18%	98.35%	98.33%	98.17%	98.04%	97.65%
112.5	380	2420	4.2%	0.58%	1.22%	1.71%	3.50%	97.56%	98.27%	98.48%	98.52%	98.43%	98.34%	98.05%
150	450	3000	4.5%	0.55%	1.28%	1.62%	3.68%	97.82%	98.44%	98.62%	98.65%	98.56%	98.47%	98.19%
225	630	3660	4.8%	0.46%	1.31%	1.37%	3.76%	97.98%	98.58%	98.77%	98.82%	98.76%	98.69%	98.48%
300	770	4350	4.8%	0.41%	1.29%	1.25%	3.71%	98.15%	98.70%	98.88%	98.93%	98.87%	98.81%	98.62%
500	1060	6260	4.8%	0.36%	1.26%	1.10%	3.63%	98.46%	98.91%	99.05%	99.09%	99.04%	98.98%	98.81%
505	1060	6260	4.8%	0.37%	1.27%	1.11%	3.64%	98.47%	98.92%	99.06%	99.10%	99.05%	98.99%	98.82%
750	1460	7550	5.8%	0.30%	1.42%	0.97%	4.12%	98.60%	99.03%	99.17%	99.21%	99.18%	99.14%	99.01%
1000	1800	9200	5.8%	0.28%	1.42%	0.90%	4.11%	98.71%	99.10%	99.23%	99.28%	99.25%	99.21%	99.09%
1250	1900	11590	5.8%	0.28%	1.42%	0.91%	4.12%	98.89%	99.21%	99.31%	99.33%	99.28%	99.24%	99.11%
1500	2100	13200	5.8%	0.27%	1.42%	0.88%	4.10%	98.97%	99.27%	99.35%	99.37%	99.32%	99.28%	99.15%

TERMINATION DETAILS - TYPE 3R

FOR STANDARD 150°C TEMPERATURE RISE UNITS

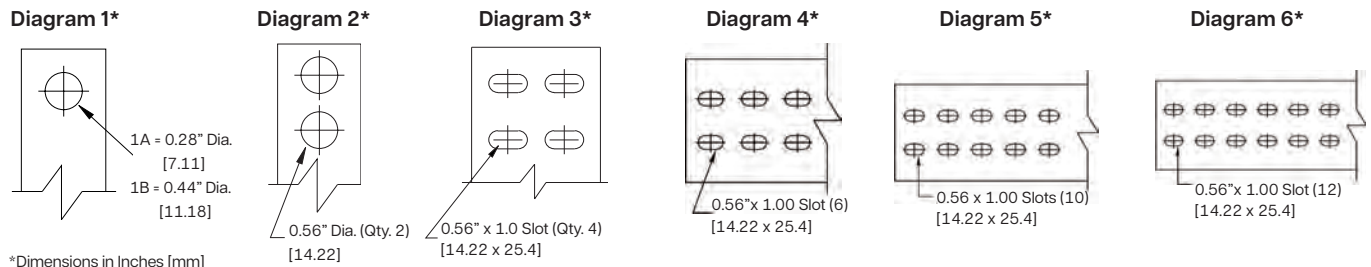
Single Phase, Aluminum and Copper Termination - Lugs or Pads

kVA	Voltage											
	120	120/240	208	240	277	347	380	416	480	600	2400	4160
0.25	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
0.5	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
0.75	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
1	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
1.5	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
2	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
3	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
5	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
7.5	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	-	-
10	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	-	-
15	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
25	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
37.5	Dia. 2	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
50	Dia. 2	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
75	Dia. 3	Dia. 2	Dia. 2	Dia. 2	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
100	Dia. 3	Dia. 2	Dia. 2	Dia. 2	Dia. 2	Dia. 2	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
150	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Dia. 2	Dia. 2	Dia. 2	Dia. 2	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
167	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Lugs (Dia. 1A)	Lugs (Dia. 1A)
250	Dia. 6	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Lugs (Dia. 1B)	Lugs (Dia. 1A)
333	Dia. 6	Dia. 4	Dia. 4	Dia. 4	Dia. 4	Dia. 4	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Lugs (Dia. 1B)	Lugs (Dia. 1A)

Three Phase, Aluminum and Copper Termination - Lugs or Pads

kVA	Voltage									
	208	230	240	277	380	416	480	600	2400	4160
2	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
3	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
6	Leads	Leads	Leads	Leads	Leads	Leads	Leads	Leads	-	-
9	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	-	-
15	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
30	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
45	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
75	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
112.5	Lugs**	Dia. 1B	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
150	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Lugs	Lugs	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
225	Dia. 2	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Lugs	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
300	Dia. 2	Dia. 2	Dia. 2	Dia. 2	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Lugs (Dia. 1A)	Lugs (Dia. 1A)
500	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Dia. 2	Dia. 1B	Lugs (Dia. 1A)	Lugs (Dia. 1A)
505	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Dia. 2	Dia. 1B	Lugs (Dia. 1A)	Lugs (Dia. 1A)
600	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Dia. 2	Dia. 1B	Lugs (Dia. 1A)	Lugs (Dia. 1A)
750	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Dia. 2	Lugs (Dia. 1B)	Lugs (Dia. 1A)
1000	Dia. 4	Dia. 4	Dia. 4	Dia. 4	Dia. 3	Dia. 3	Dia. 3	Dia. 3	Lugs (Dia. 1B)	Lugs (Dia. 1B)
1250	Dia. 5	Dia. 5	Dia. 5	Dia. 5	Dia. 4	Dia. 4	Dia. 4	Dia. 4	Dia. 1B	Lugs (Dia. 1B)
1500	Dia. 6	Dia. 6	Dia. 6	Dia. 6	Dia. 4	Dia. 4	Dia. 4	Dia. 4	Dia. 2	Lugs (Dia. 2)

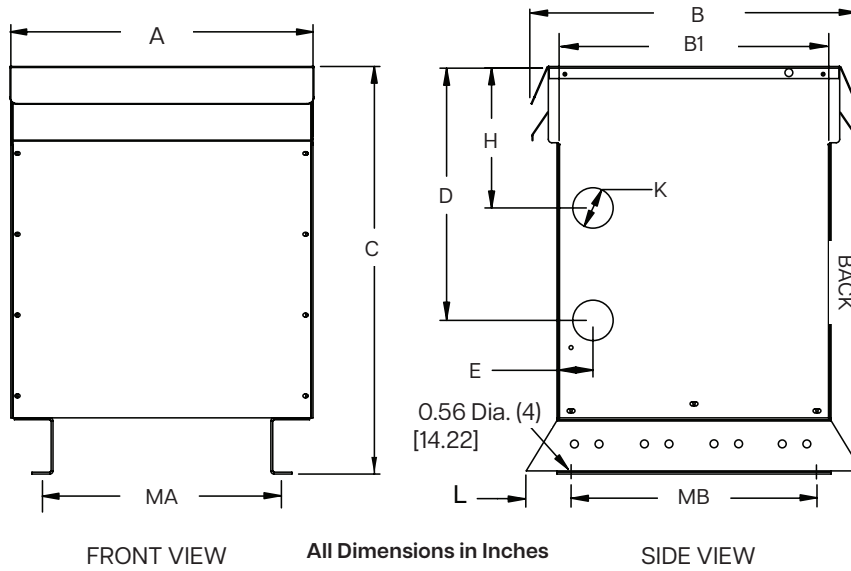
** Lugs only supplied standard on 600V primary to 208Y/120V secondary units.(excluding K-Factor transformers)
 All other voltages supplied standard with Diagram 1B pads.



*Dimensions in Inches [mm]

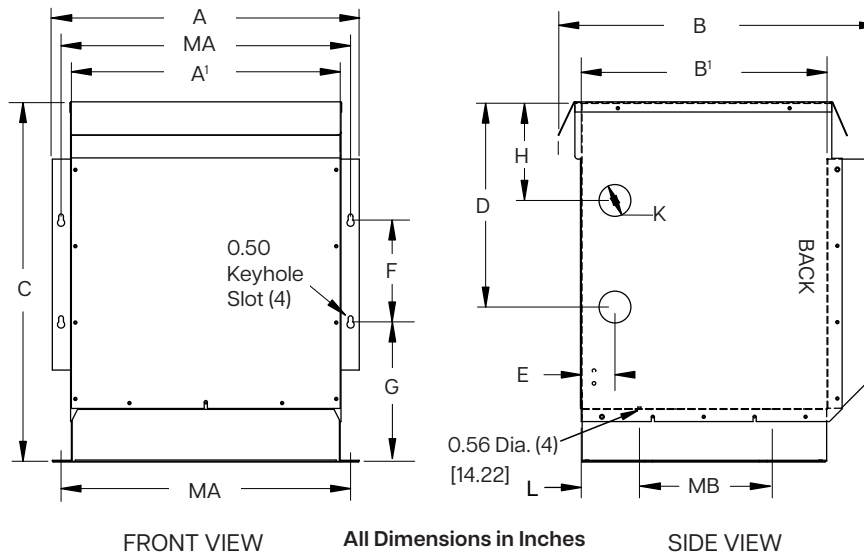
ENCLOSURE DRAWINGS

NH, NJ SERIES



Case Style	Dimensions in Inches [Millimeter]										
	A	B	B1	C	D	E	H	K ¹	L	MA	MB
NH3	26.00 [661]	25.00 [635]	24.00 [610]	38.00 [966]	24.00 [610]	2.50 [64]	14.00 [356]	2.00 X 3.00 [51 X 77]	2.50 [64]	21.50 [547]	19.00 [483]
NH4	32.00 [813]	29.50 [750]	28.50 [724]	41.00 [1042]	24.00 [610]	2.50 [64]	12.00 [305]	2.00 X 3.00 [51 X 77]	2.50 [64]	23.50 [597]	23.50 [597]

Note: Mounting hole dimension is 0.56" diameter.
¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes.

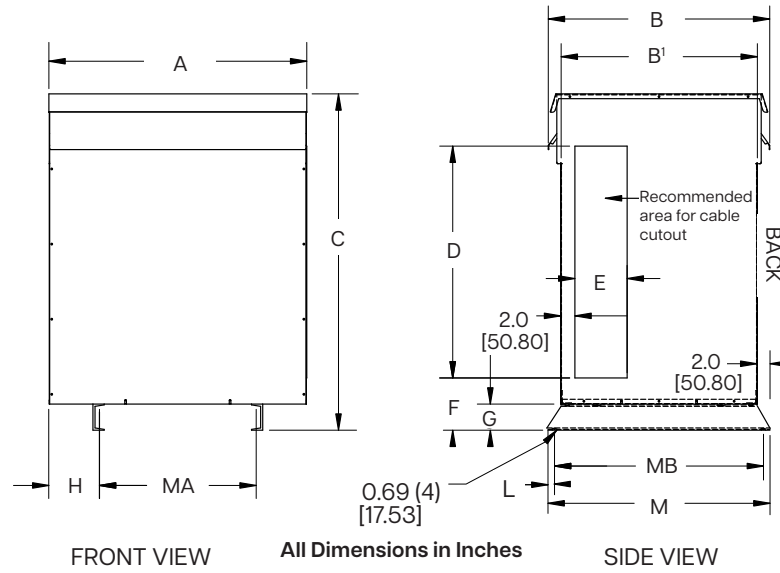


Case Style	Dimensions in Inches [Millimeter]													
	A	A1	B	B1	C	D	E	F	G	H	K ¹	L	MA	MB
NH6	23.90 [608]	21.50 [547]	25.00 [635]	19.50 [496]	28.75 [731]	17.00 [432]	2.00 [51]	8.00 [204]	10.29 [262]	8.50 [216]	1.38 X 2.50 [36 X 64]	5.20 [133]	22.75 [578]	9.00 [229]

Note: Mounting hole dimension is 0.56" diameter.
¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes.

ENCLOSURE DRAWINGS

NH, NJ SERIES

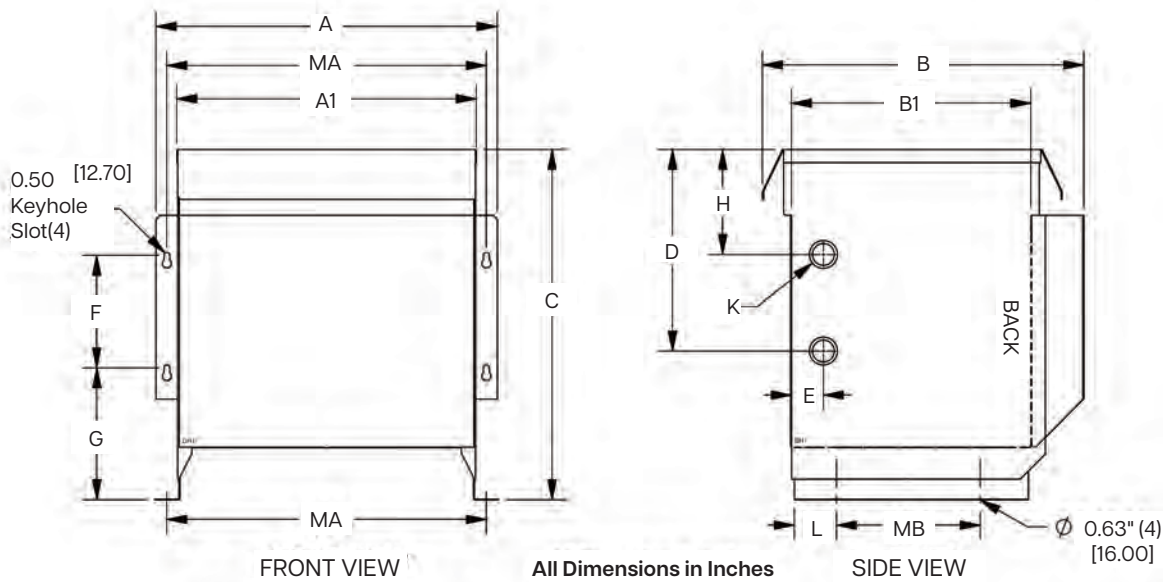


Case Style	Dimensions in Inches [Millimeter]												
	A	B	B1	C	D	E	F	G	H	L	M	MA	MB
NJ2	49.00	39.00	34.00	59.00	40.00	8.00	8.00	4.00	10.50	1.00	38.00	27.50	36.00
	[1245]	[991]	[864]	[1499]	[1016]	[204]	[204]	[102]	[267]	[26]	[966]	[699]	[915]
NJ4	32.00	32.50	28.50	50.00	34.00	8.00	8.00	4.00	5.00	1.00	32.50	22.00	30.50
	[813]	[826]	[724]	[1270]	[864]	[204]	[204]	[102]	[127]	[26]	[826]	[559]	[775]

Note: Mounting hole dimension is 0.69" diameter.

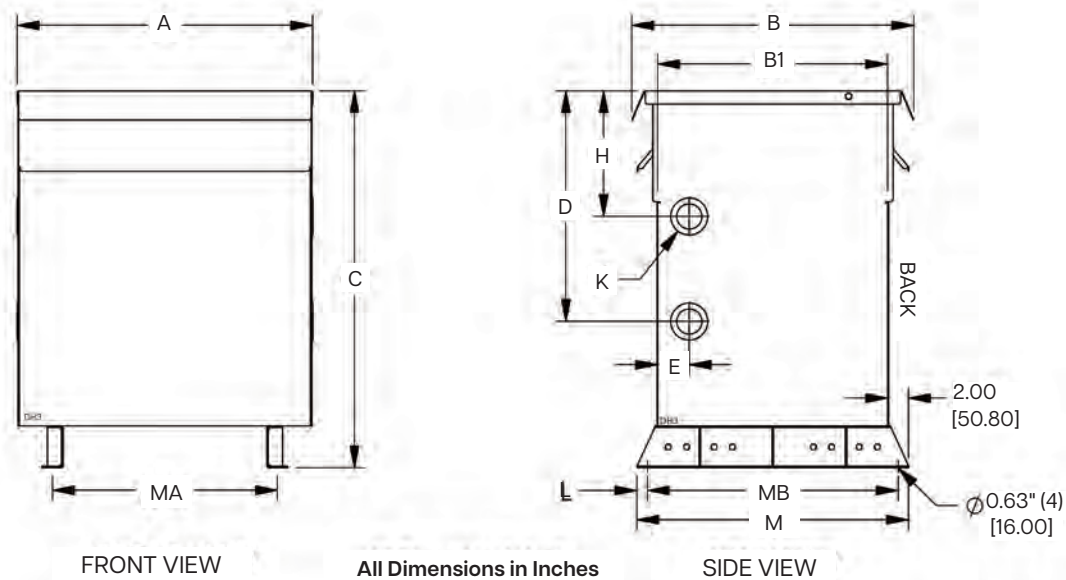
ENCLOSURE DRAWINGS

DH SERIES



Case Style	Dimensions in Inches [Millimeter]													
	A	A1	B	B1	C	D	E	F	G	H	K	L	MA	MB
DH2	25.8 [656]	23.3 [592]	23.8 [605]	18 [458]	28.8 [732]	17 [432]	2 [51]	8 [204]	10.3 [262]	8.6 [219]	1.75 X 2.50 K.O. [45 X 64]	3.8 [97]	24.6 [625]	9 [229]

¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes.

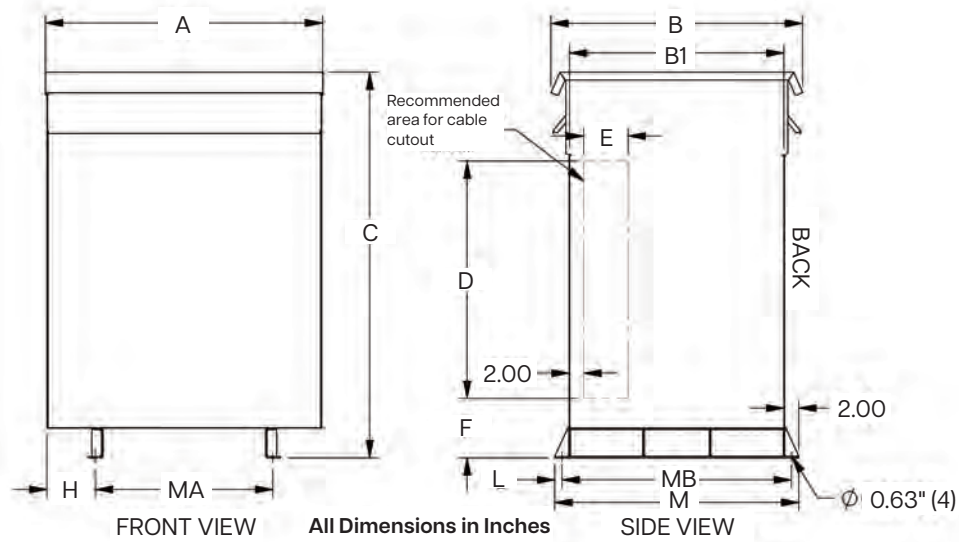


Case Style	Dimensions in Inches [Millimeter]											
	A	B	B1	C	D	E	H	K	L	M	MA	MB
DH3	28.3 [719]	27 [686]	22 [559]	36 [915]	22 [559]	3 [77]	12 [305]	2.00 X 3.00 K.O. [51 X 77]	1 [26]	26 [661]	21.5 [547]	24 [610]
DH4	31.5 [801]	29.5 [750]	24.5 [623]	44.5 [1131]	27.5 [699]	3 [77]	14.5 [369]	2.00 X 3.00 K.O. [51 X 77]	1 [26]	28.5 [724]	23.5 [597]	26.5 [674]

¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes.

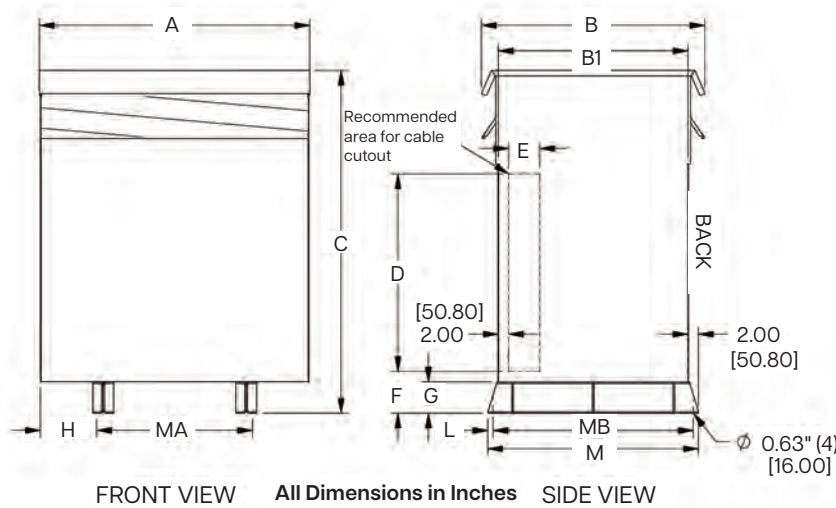
ENCLOSURE DRAWINGS

DH SERIES



Case Style	Dimensions in Inches [Millimeter]											
	A	B	B1	C	D	E	F	H	L	M	MA	MB
DH5	38 [966]	34 [864]	29 [737]	52 [1321]	32 [813]	6 [153]	8 [204]	6.6 [168]	1 [26]	33 [839]	24 [610]	31 [788]

¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes.



Case Style	Dimensions in Inches [Millimeter]												
	A	B	B1	C	D	E	F	G	H	L	M	MA	MB
DH6	49 [1245]	42 [1067]	35 [889]	64 [1626]	32 [813]	6 [153]	10 [254]	6 [153]	9.3 [237]	1 [26]	39 [991]	30 [762]	37 [940]
DH7	54 [1372]	47 [1194]	40 [1016]	72 [1829]	40 [1016]	8 [204]	10 [254]	6 [153]	8.8 [224]	1 [26]	44 [1118]	36 [915]	42 [1067]
DH8	60 [1524]	50 [1270]	43 [1093]	82 [2083]	50 [1270]	10 [254]	10 [254]	6 [153]	9.8 [249]	1 [26]	47 [1194]	40 [1016]	45 [1143]
DH9	68 [1728]	50 [1270]	43 [1093]	82 [2083]	40 [1016]	10 [254]	10 [254]	6 [153]	11.8 [300]	1 [26]	47 [1194]	44 [1118]	45 [1143]
DH10	78 [1982]	55 [1397]	48 [1220]	86 [2185]	46 [1169]	10 [254]	10 [254]	6 [153]	14.8 [376]	1 [26]	52 [1321]	48 [1220]	50 [1270]

¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes.

Enclosure Mounting Kits

If wall and/or ceiling mounting is desired for a transformer, optional mounting kits can be ordered separately. These mounting kits are NOT available for all enclosure case styles. Therefore, it is important that you confirm your enclosure case style, then use the selection table to the right to determine if A) a mounting kit is available and B) determine the correct HPS “Mounting Kit” part number that you must order. One kit is required for each transformer.

Note: Some of the mounting kits can be used for both wall and ceiling mount, while others are for wall mounting only. The table indicates which mounting methods are available for each kit. The NW2 and DW3 wall/ceiling mounting kit also includes a drip plate.

The NW2 and DW3 wall/ceiling mounting kit is only designed for units up to 800 pounds (341 kg) maximum.

If it is intended to wall and/or ceiling mount an enclosure that does not have a wall/ceiling mount kit available, considerations must be made to mechanically support the transformer safely and to install per the local building code. A drip plate must be provided beneath the enclosure per UL 1562 and CSA C22.2 No. 47.

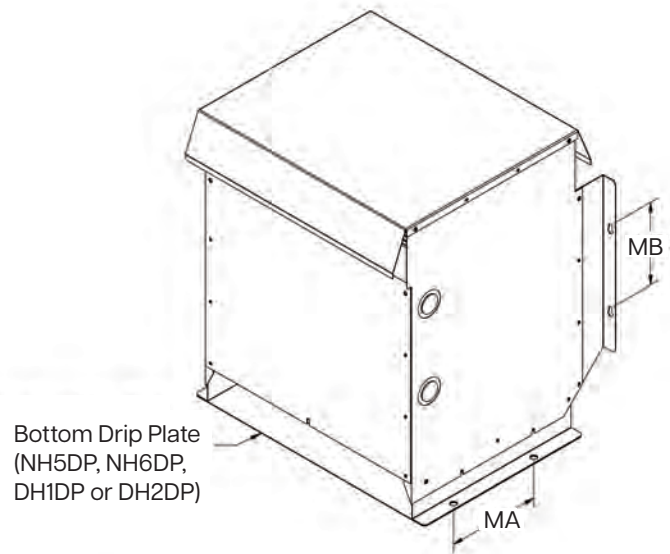
Enclosure Case Style	Wall Mount Available	Ceiling Mount Available	HPS Mounting Kit P/N
DH2	Yes	Yes	DH2DP
DH3	Yes	Yes	DW3
DH4	No	No	N/A
DH5	No	No	N/A
DH6	No	No	N/A
DH7	No	No	N/A
DH8	No	No	N/A
DH9	No	No	N/A
DH10	No	No	N/A
NJ2	No	No	N/A
NJ4	No	No	N/A
NH3	Yes	Yes	NW2
NH4	No	No	N/A
NH6	Yes	Yes	NH6DP

DH2DP, NH6DP Wall/Ceiling Mounting Kits

The DH2 and NH6 enclosures are designed with integral wall mounting capabilities. However, when you wall mount them, you must also install the bottom drip plate as shown below. The “MB” dimensions listed in the table below indicate the location for the wall mounting hardware.

For ceiling mounting of the DH2 and NH6, refer to the “MA” dimensions listed in the table below and hang the enclosure using appropriate sized ceiling hanger rods. However, you must be sure to install the bottom drip plate to the bottom of the enclosure, then bring the hanger rod down through both the enclosure bottom mounting holes, through the drip plate mounting holes, and install mounting hardware.

Note: Do not ceiling mount either the DH2 or NH6 enclosures without installing the bottom drip plate. All mounting hardware should be rated Grade 8 or higher.



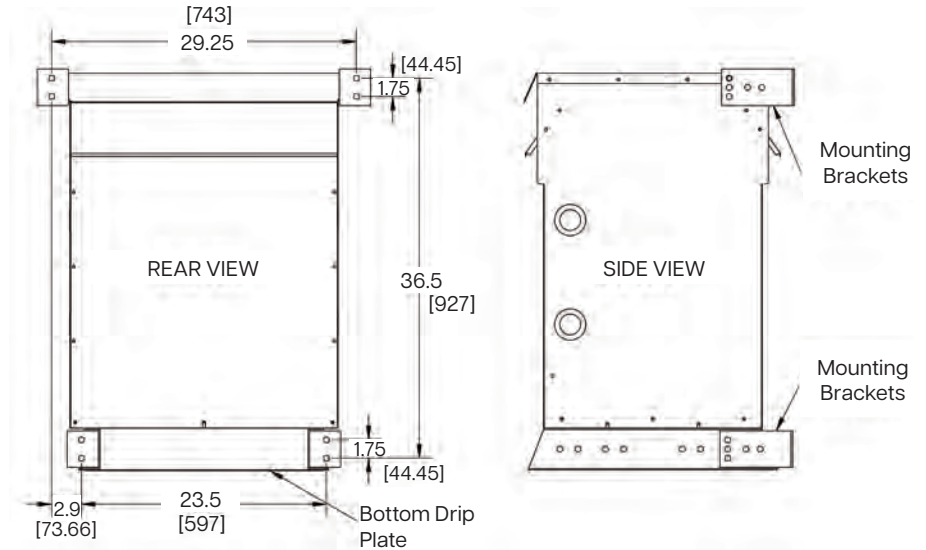
Mounting Kit P/N	Enclosure Style	MA Dimension Inches [mm]	MB Dimension Inches [mm]
NH6DP	NH6	9.00 [229]	8.00 [204]
DH2DP	DH2	9.00 [229]	8.00 [204]

ENCLOSURE WALL MOUNTING DIMENSIONS

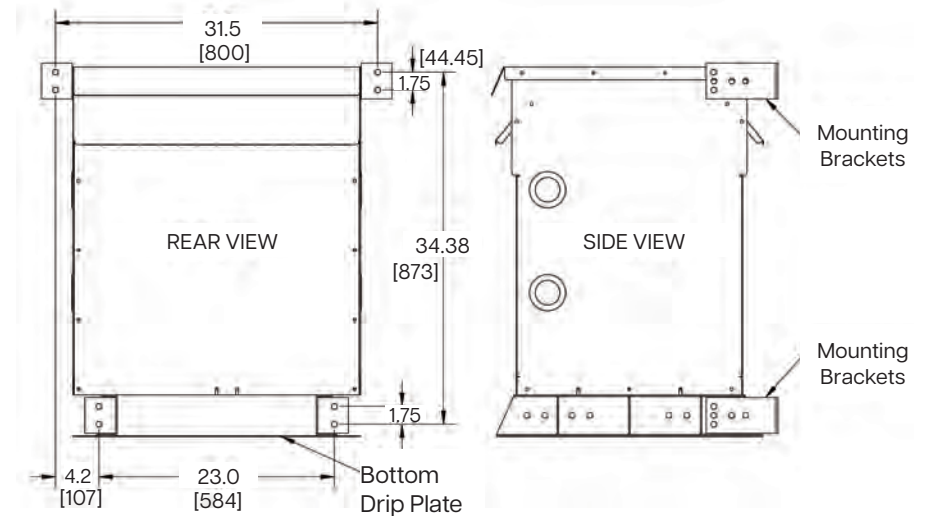
NW2, DW3 Wall Mounting Kit Dimensions

The following drawings detail the wall mounting dimensions required and method by which the NW2 and DW3 kits are installed on the NH3 and DH3 enclosures. The NW2 and DW3 wall mounting kit also includes a drip plate.

NW2 Wall Mount Dimensions



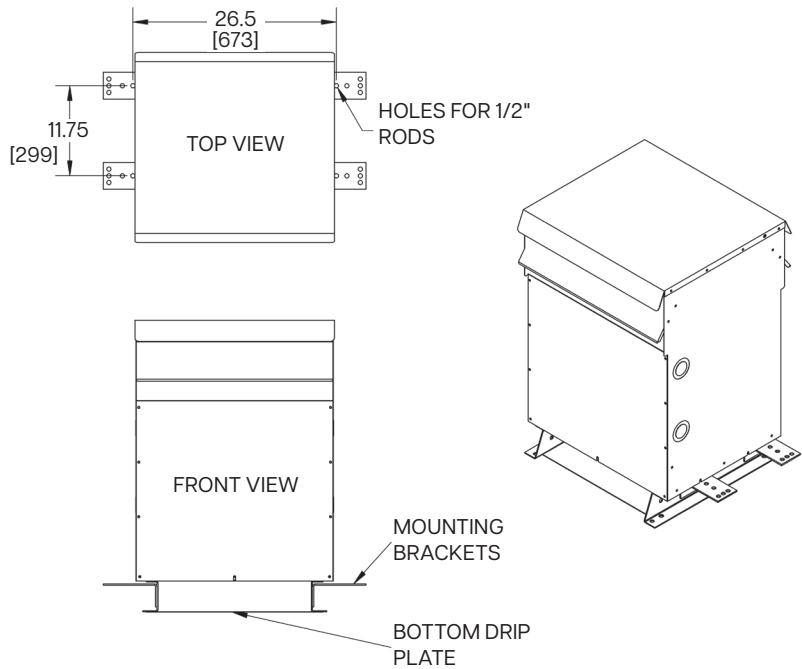
DW3 Wall Mount Dimensions



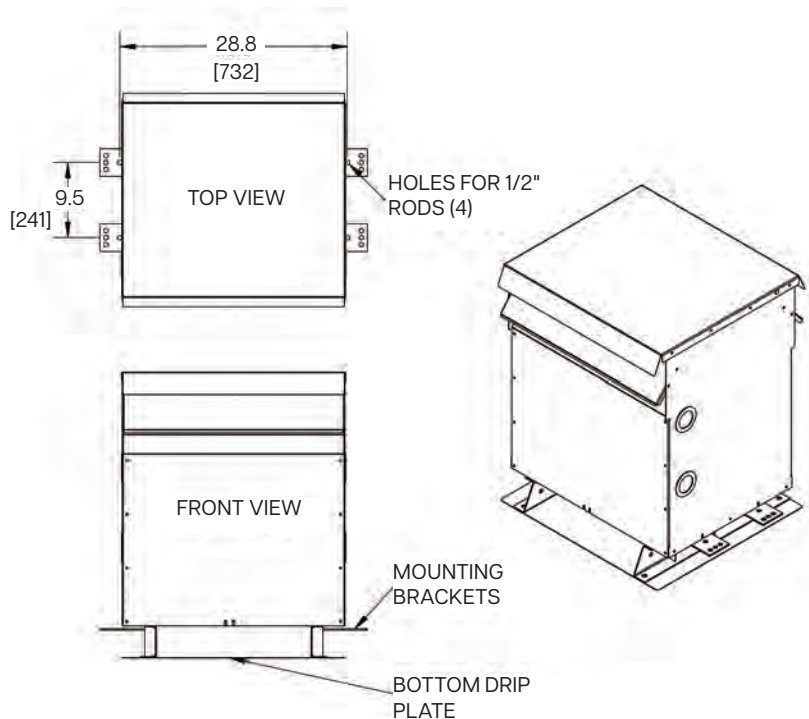
NW2, DW3 Ceiling Mounting Dimensions

The following drawings detail the ceiling mounting dimensions required and method by which the NW2 and DW3 kits are installed on the NH3 and DH3 enclosures

NW2 Ceiling Mount - Mounting Dimensions for NH3 Enclosure



DW3 Ceiling Mount - Mounting Dimensions for DH3 Enclosures



WIRING SCHEMATICS & CONNECTION DRAWINGS

SCD 6

Schematic	Connections									
	Primary Volts					Connect lines to		Inter-connect		
	218	277	291	437	504	630	2520	4368	H1, H2	1-2
	213	-	284	426	492	615	2460	4264	H1, H2	2-3
	208	240	277	416	480	600	2400	4160	H1, H2	3-4
	203	-	270	406	468	585	2340	4056	H1, H2	4-5
	198	208	263	395	456	570	2280	3852	H1, H2	5-6
	Secondary Volts					Connect lines to		Inter-connect		
	240					X1, X4		X2-X3		
	120/240					X1, X2, X4		X2-X3		
	120					X1, X2		X2-X4, X1-X3		

SCD 8

Schematic	Connections												
	% Voltage	Primary Volts					Connect lines to		Inter-connect				
	105.0%	218	242	252	437	483	504	604	630	2520	4368	H1, H2, H3	1-2
	100.0%	208	230	240	416	460	480	575	600	2400	4160	H1, H2, H3	2-3
	95.5%	198	219	228	395	437	456	546	570	2280	3952	H1, H2, H3	3-4
		Secondary Volts					Connect lines to						
			208	230	240	380	416	480	600	X1, X2, X3			
		120	133	139	220	240	277	347	X1, X0 X2,X0 X3,X0				

SCD 10

Schematic	Connections												
	% Voltage	Primary Volts					Connect lines to		Inter-connect				
	105.0%	218	242	252	437	483	504	604	630	2520	4368	H1, H2, H3	1-2
	102.5%	213	236	246	426	472	492	589	615	2460	4264	H1, H2, H3	2-3
	100.0%	208	230	240	416	460	480	575	600	2400	4160	H1, H2, H3	3-4
	97.5%	203	224	234	406	449	468	561	585	2340	4056	H1, H2, H3	4-5
	95.0%	198	219	228	395	437	456	546	570	2280	3952	H1, H2, H3	5-6
	Secondary Volts					Connect lines to							
		208	380	416	480	600	X1, X2, X3						
		120	220	240	277	347	X1, X0 X2,X0 X3,X0						

SCD 20

Schematic	Connections										
	% Voltage	Primary Volts					Connect lines to		Inter-connect		
	105.0%	218 242 252 437 483 504					630		H1, H2, H3		1-2
	102.5%	213 236 246 426 472 492					615		H1, H2, H3		2-3
	100.0%	208 230 240 416 460 480					600		H1, H2, H3		3-4
	97.5%	203 224 234 406 449 468					585		H1, H2, H3		4-5
	95.0%	198 219 228 395 456 570					570		H1, H2, H3		5-6
	92.5%	193 444 556					556		H1, H2, H3		6-7
	90.0%	188 432 542					542		H1, H2, H3		7-8
		Secondary Volts					Connect lines to				
		208	480				X1, X2, X3				
		120	277				X1, X0 X2, X0 X3, X0				

Tap arrangements shown are for catalog products only. May not be applicable for other products.

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 are resistant to industrial contaminants like oil, acids and alkalines.

ANTI-VIBRATION PAD KITS

Part No.	Case Style	Description
P1	NH Series	Set of four (4) rubber anti-vibration pads which replace the standard steel enclosure washers.
P2	NJ Series	
PD1	DH1-DH5	
PD2	DH6-DH8	



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 [kg]	Description
NMP1	Up to 340 lbs [160]	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 [161 to 310]	
NMP3	681 to 1040 lbs [311 to 480]	
NMP4	1041 to 1740 lbs [481 to 790]	
NMP5	1741 to 2330 lbs [791 to 1060]	
NMP6	2331 to 3450 lbs [1061 to 1570]	
NMP7	3451 to 4690 lbs [1571 to 2130]	



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.

Altitude Derating Factor

Altitude (FT)	kVA Correction	BIL Correction
3300	1.00	1.00
4000	0.994	0.98
5000	0.985	0.95
6000	0.975	0.92
7000	0.966	0.89
8000	0.957	0.86
9000	0.948	0.83
10,000	0.939	0.80
11,000	0.930	0.77
12,000	0.921	0.75
13,000	0.912	0.72
14,000	0.903	0.70
15,000	0.894	0.67

Per IEEE 100m = 330 ft

General Purpose Distribution Transformers



Generally used for supplying appliance, lighting, heating, motorized machine and power loads from electrical distribution systems.

Standard features include:

General Purpose Distribution Transformers

- Meets new DOE 2016, NRCAN 2019, ON Reg. 404/12 and NMX 2021 efficiency standards
- 10kV BIL on all transformers

K Rated Distribution Transformers



The use of K-factor distribution transformers has become a popular means of supplying power for non-linear loads such as electronic ballasts, drives, personal computers, telecommunications equipment, broadcasting equipment and other similar power electronics. These non-linear loads generate harmonic currents which can substantially increase transformer losses. Our K-rated transformers have been specifically designed to prevent failure due to overheating.

Standard features include:

K Rated Distribution Transformers

- K-Factor ratings of K4, K9, K13 and K20
- Meets new DOE 2016, NRCAN 2019, ON Reg. 404/12 and NMX 2021 efficiency standards
- 10kV BIL on all transformers

Harmonic Mitigating Transformers



HPS Harmonic Mitigating transformers reduce voltage distortion (flat-topping) and power losses due to current harmonics created by single-phase, non-linear loads such as computer equipment. They treat sequence harmonics (3rd, 9th and 15th) within the secondary windings and 5th and 7th harmonics upstream with appropriate phase shifting. Typical applications of severe non-linear loading conditions include data centers, internet-service providers, telecom sites, call centers, broadcast centers, etc.

Standard features include:

Harmonic Mitigating Transformers

- K-Factor rating of K13 (others available on request)
- Meets new DOE 2016, NRCAN 2019 and NMX 2021 efficiency standards
- 10kV BIL on all transformers

Energy Efficient Drive Isolation Transformers



HPS drive isolation transformers are suitable for both AC and DC variable speed drives. They are sized to match standard motor horsepower and voltage ratings.

Standard features include:

- Meets NRCAN 2019
- Three phase ratings from 7 kVA to 660 kVA
- Available in aluminum, copper and optional shield
- UL Listed and CSA Certified
- Type 3R enclosure (optional type 4, 12 or stainless)

Medium Voltage Cast Resin Transformers



Medium Voltage Cast Resin Transformers is a high-performance cast resin product designed for many demanding and diverse applications. Coils are precision wound with copper or aluminum conductors that are electrically balanced to minimize axial forces during short-circuit conditions.

Standard features include:

- kVA ratings from 300 to 3000 ANN, 4000 AFN, up to 34.5 kV Class
- Enclosure options (Type 1, 2, 3R, 3RE, 4, 12; other paint colors or stainless steel)
- Standard options
- UL Listed and CSA Certified
- Meets new DOE 2016, NRCAN 2019 and NMX 2021 efficiency standards

Medium Voltage VPI Transformers



Our medium voltage VPI transformers are regarded for their high level of quality and service reliability that has become synonymous with HPS transformer products. These transformers are suitable for any commercial, industrial, or renewable energy application within the most demanding of environments.

Standard features include:

- Ratings up to 34 MVA and 46 kV class
- Enclosure options (Type 1, 2, 3R, 3RE, 4, 12; other paint colors or stainless steel)
- Multiple standard options

Medium Voltage VPI Transformers

- Meets DOE 2016, NRCAN 2019 and NMX 2021 efficiency standards



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