



Low Voltage Distribution Transformers



Low Voltage Distribution Transformers

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This catalog contains product information for DOE 2016 & NRCAN 2019 compliant low voltage distribution transformers.



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 both the U.S. Department of Energy (DOE) and Natural Resources Canada (NRCAN). New and more stringent energy efficiency regulations are in effect in the US since January 1st, 2016; regulations for Canada are in effect since April 30th, 2019.

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

Environmental Benefits of Increased Energy Efficiency

Upgrading one 75kVA transformer to a new DOE 2016/NRCAN 2019 design translates to one of the following environmental benefits per year*



2.9
additional
acres of
forest in
one year



1.3
tons of
waste sent
to the
landfill



403
gallons
of gasoline
consumed



3,486
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

US & Canada Energy Efficiency Regulations

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.

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.

Low Voltage Dry-Type Distribution:

- › 1PH 15-333kVA, $\leq 10\text{kV}$ BIL
- › 3PH 15-1000kVA, $\leq 10\text{kV}$ BIL

**Non-Ventilated and encapsulated transformers are exempt from these efficiency requirements.*

DOE 2016/NRCAN 2019 Compliant Micron Distribution Transformers

The DOE 2016/NRCAN 2019 product lines have been redesigned based on extensive customer input using industry leading technologies and materials to meet your most demanding applications.

Micron has three lines of low voltage DOE 2016/NRCAN 2019 compliant energy efficient distribution transformers:

General Purpose Distribution Transformers:

Rated for 600 volts and below and are generally used to power appliances, lighting, heating, motorized machine and power loads from the electrical distribution system.



New Energy Efficiency Levels

The new energy efficiency levels for low voltage distribution transformers:

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
		225	98.94
		300	99.02

Low Voltage Distribution Transformers

Benefits

- Micron low voltage distribution transformer product lines meet the latest energy efficiency standards outlined by DOE and NRCan offering significant energy savings to our customers and positive societal/environmental benefits.
- Standard Type 3R enclosure suitable for indoor or outdoor applications.
- **For our customers, higher efficiency translates into:**
 - › Increased profitability due to lower operating costs
 - › Decreased cost of ownership over the lifetime of the transformer
 - › Less air conditioning cost due to lower heat emissions
- Standard 10kV BIL rating provides increased reliability and protection against critical equipment failure (including voltage spikes and other line transients).
- Standard integral floor and wall mounting brackets up to 50kVA allow for faster installation.
- All units utilize a uniform 220°C insulation system with a 80°C, 115°C, or 150°C temperature rise.
- Industry leading design solutions, technology and materials continue the legacy of quality and reliability in all Micron products.



Features

Core & Coil Construction:

- Manufactured from quality non-aging, cold rolled, silicon steel laminations using state-of-the-art equipment
- Cores are precision cut to close tolerances which eliminates burrs and improves performance
- Core is coated to prevent the ingress of moisture
- Precision wound with aluminum conductors that are electrically balanced to minimize axial forces during short-circuit conditions
- Robust interface between core & coils for better short circuit performance

Conductor material: Aluminum

Temperature rise: 150°C typical

Insulation system: 220°C



Standard type 3R enclosure on all low voltage Micron transformers



Integrated wall mounting brackets for added convenience at no extra cost



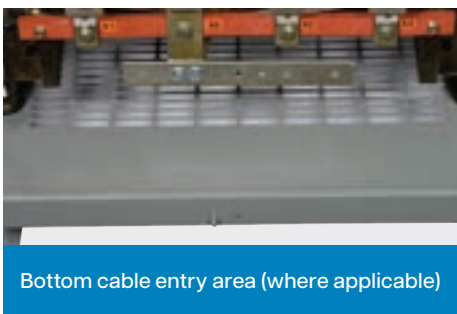
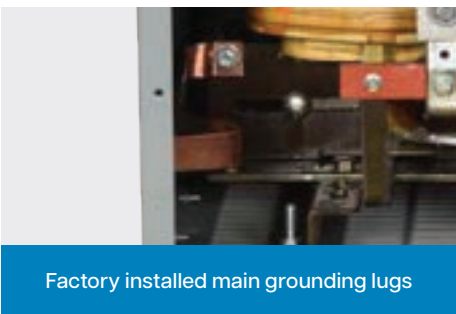
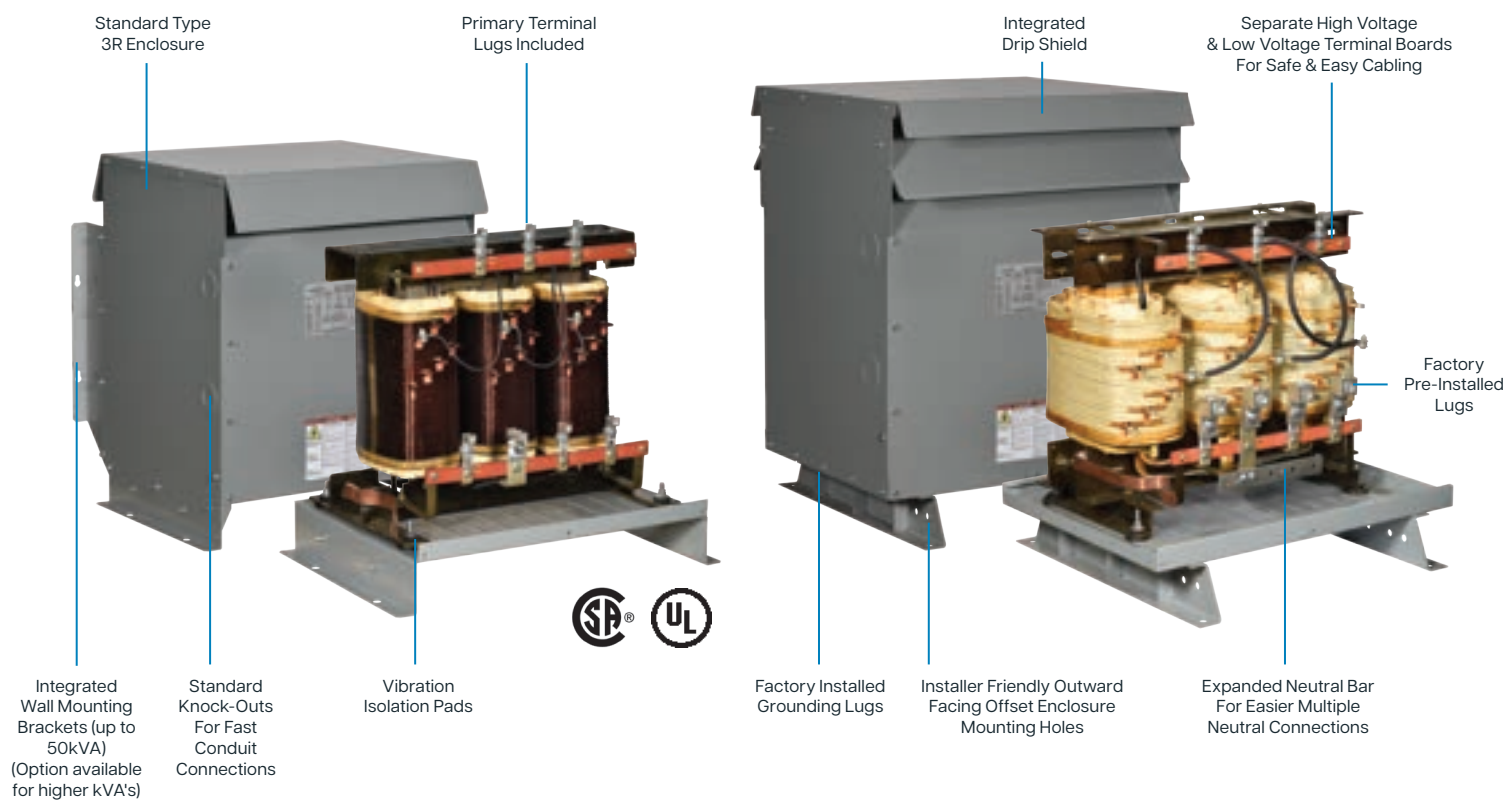
Expanded neutral bar for multiple customer connections

Installation made fast & easy!

Tired of spending extra money on labor and material to install optional transformer features? Purchasing a Micron low voltage distribution transformer will save you all these additional costs. Micron low voltage distribution transformers have these optional features pre-installed as part of our standard product line.

Testing

All Micron transformers are tested at Micron prior to shipment. They must meet very stringent quality criteria prior to release.



Low Voltage Distribution Transformers

Specifications & Accessories - Aluminum



15 to 45 kVA



75 to 150 kVA



225 to 300 kVA

Standard Specifications

kVA:	15-300kVA
UL Listed:	File: E112313
CSA Certified:	File: LR3902
Frequency:	60 Hz
Insulation System:	220°C (150°C rise)
BIL Rating:	10 kV
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 separate high and low voltage terminals; connectors suitable for aluminum are provided for easy cable installation (exceptions apply).
Conduit Entry:	Side knock-outs standard on all units; Bottom entry provision (exceptions apply).
Impedance:	Typically 1.8% to 7.5%
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: $SDS \leq 2.0 \text{ g}$ Importance factor: $I_p = 1.5$ Attachment/Height ratio: $z/h = 1.0$ (up to and including DH4 enclosure). Attachment/Height ratio: $z/h = 0$ (for all other enclosures). O.S.H.P.D (optional). Please contact Micron for more information on seismic compliances.
Sound Level:	Meets NEMA ST-20 standards
Warranty:	10 years

Micron Low Voltage Distribution Transformers Part Number Guide

Example

Product Family	VA Rating	Const. Type/Phase	Pri & Sec Voltages	Taps	Features & Options
GH	0 3 0 K	3	Q H	1	A 0 4

Product Line:	kVA:	VA Code:	Const. Type/Phase:	Single Phase			Taps:	Features & Options:
				P/N Suffix:	Pri:	Sec:		
GH - General Purpose	0.05	050A	1 = 1Ø Potted	KF	240X480	120X240	1 = No Taps	A04 = 150C Rise,
	0.1	100A	2 = 1Ø Ventilated	PF	190/.../220X380/.../440	120X240	2 = +2/-4 X 2.5%	AL
	0.15	150A	3 = 3Ø Potted D-Y	RF	600	120X240	3 = ±2 X 2.5%	A22 = 80C Rise, CU,
	0.25	250A	4 = 3Ø Potted D-D	SF	120/208/240/277	120X240	4 = +1/-2 X 5.0%	ES
	0.5	500A	5 = 3Ø Ventilated D-Y	EF	120X240	120X240	5 = -4 X 2.5%	A66 = 135C Rise, AL,
	0.75	750A	6 = 3Ø Ventilated D-D				6 = -2 X 5.0%, -4 X 2.5%	ES
	1	001K	7 = 3Ø Ventilated Y-Y				7 = -1 X 10%, -2 X 5.0%	A67 = 95C Rise,
	1.5	1X5K					8 = -2 X 5.0%	CU
	2	002K					9 = OTHER	A71 = 95C Rise, CU,
	3	003K						ES
	5	005K						A72 = 135C Rise, CU,
	10	010K						ES
	15	015K						A80 = 135C Rise, ES,
	25	025K						50/60Hz
	30	030K						A81 = 95C Rise, CU,
	37.5	037K						50/60Hz
	45	045K						A85 = 95C Rise, CU, ES,
	50	050K						50/60Hz
	75	075K						A86 = 135C Rise, CU,
	112.5	112K						ES, 50/60Hz
	150	150K						
	225	225K						
	300	300K						
				Three Phase				
				P/N Suffix:	Pri:	Sec:		
				HQ	208D	480Y/277		
				JH	240D	208Y/120		
				QH	480D	208Y/120		
				QJ	480D	240D/120LT		
				QQ	480D	480Y/277		
				RH	600D	208Y/120		

SELECTION TABLES

GENERAL PURPOSE DISTRIBUTION TRANSFORMERS

Aluminum Wound, Single Phase



208 PRIMARY VOLTS

120/240 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
25	GH025K2SF3A04	DH1-1	22.30 [566]	23.80 [604]	26.70 [678]	210 [95]	F or W/C*	SCD 6
37.5	GH037K2SF3A04	DH1-1	22.30 [566]	23.80 [604]	26.70 [678]	270 [122]	F or W/C*	SCD 6
50	GH050K2SF3A04	DH2	25.75 [654]	23.75 [603]	28.75 [730]	330 [150]	F or W/C*	SCD 6
75	GH075K2SF3A04	DH3	28.25 [717]	27.00 [686]	36.00 [914]	480 [218]	F (Opt W/C)	SCD 6
100	GH100K2SF3A04	DH3	28.25 [717]	27.00 [686]	36.00 [914]	540 [245]	F (Opt W/C)	SCD 6

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

240 X 480 PRIMARY VOLTS

120/240 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	GH015K2KF2A04	DH1-1	22.30 [566]	23.80 [604]	26.70 [678]	160 [72]	F or W/C*	SCD 17
25	GH025K2KF2A04	DH1-1	22.30 [566]	23.80 [604]	26.70 [678]	210 [95]	F or W/C*	SCD 17
37.5	GH037K2KF2A04	DH1-1	22.30 [566]	23.80 [604]	26.70 [678]	270 [122]	F or W/C*	SCD 17
50	GH050K2KF2A04	DH2	25.75 [654]	23.75 [603]	28.75 [730]	330 [150]	F or W/C*	SCD 17
75	GH075K2KF2A04	DH3	28.25 [717]	27.00 [686]	36.00 [914]	480 [218]	F (Opt W/C)	SCD 17
100	GH100K2KF2A04	DH3	28.25 [717]	27.00 [686]	36.00 [914]	540 [245]	F (Opt W/C)	SCD 17

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

600 PRIMARY VOLTS

120/240 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
25	GH025K2RF3A04	DH1-1	22.30 [566]	23.80 [604]	26.70 [678]	210 [95]	F or W/C*	SCD 6
37.5	GH037K2RF3A04	DH1-1	22.30 [566]	23.80 [604]	26.70 [678]	270 [122]	F or W/C*	SCD 6
50	GH050K2RF3A04	DH2	25.75 [654]	23.75 [603]	28.75 [730]	330 [150]	F or W/C*	SCD 6
75	GH075K2RF3A04	DH3	28.25 [717]	27.00 [686]	36.00 [914]	480 [218]	F (Opt W/C)	SCD 6
100	GH100K2RF3A04	DH3	28.25 [717]	27.00 [686]	36.00 [914]	540 [245]	F (Opt W/C)	SCD 6

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

SELECTION TABLES

GENERAL PURPOSE DISTRIBUTION TRANSFORMERS

Aluminum Wound, Three Phase



208 DELTA PRIMARY VOLTS			480Y/277 SECONDARY VOLTS				60 HZ	
kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	GH015K5HQ2A04	DH1	21.5 [546]	20.1 [510]	22.0 [559]	210 [95]	F or W/C*	SCD 53
30	GH030K5HQ2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	310 [141]	F or W/C*	SCD 53
45	GH045K5HQ2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	380 [172]	F or W/C*	SCD 53
75	GH075K5HQ2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	510 [231]	F (Opt W/C)	SCD 53
112.5	GH112K5HQ2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	680 [308]	F (Opt W/C)	SCD 53
150	GH150K5HQ2A04	DH4	31.5 [800]	29.5 [749]	44.5 [1130]	870 [395]	F	SCD 53
225	GH225K5HQ9A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1350 [612]	F	SCD 56
300	GH300K5HQ9A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1800 [816]	F	SCD 56

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

240 DELTA PRIMARY VOLTS			208Y/120 SECONDARY VOLTS				60 HZ	
kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	GH015K5JH2A04	DH1	21.5 [546]	20.1 [510]	22.0 [559]	210 [95]	F or W/C*	SCD 19
30	GH030K5JH2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	310 [141]	F or W/C*	SCD 19
45	GH045K5JH2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	380 [172]	F or W/C*	SCD 19
75	GH075K5JH2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	510 [231]	F (Opt W/C)	SCD 19
112.5	GH112K5JH2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	680 [308]	F (Opt W/C)	SCD 19
150	GH150K5JH2A04	DH4	31.5 [800]	29.5 [749]	44.5 [1130]	870 [395]	F	SCD 19
225	GH225K5JH9A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1350 [612]	F	SCD 7A
300	GH300K5JH9A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1800 [816]	F	SCD 7A

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

480 DELTA PRIMARY VOLTS			208Y/120 SECONDARY VOLTS				60 HZ	
kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	GH015K5QH2A04	DH1	21.5 [546]	20.1 [510]	22.0 [559]	210 [95]	F or W/C*	SCD 19
30	GH030K5QH2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	310 [141]	F or W/C*	SCD 19
45	GH045K5QH2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	380 [172]	F or W/C*	SCD 19
75	GH075K5QH2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	510 [231]	F (Opt W/C)	SCD 19
112.5	GH112K5QH2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	680 [308]	F (Opt W/C)	SCD 19
150	GH150K5QH2A04	DH4	31.5 [800]	29.5 [749]	44.5 [1130]	870 [395]	F	SCD 19
225	GH225K5QH2A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1350 [612]	F	SCD 19
300	GH300K5QH2A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1800 [816]	F	SCD 19

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

SELECTION TABLES

GENERAL PURPOSE DISTRIBUTION TRANSFORMERS

Aluminum Wound, Three Phase



480 DELTA PRIMARY VOLTS

240 DELTA/120 CT SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	GH015K5QJ2A04	DH1	21.5 [546]	20.1 [510]	22.0 [559]	210 [95]	F or W/C*	SCD 21
30	GH030K5QJ2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	310 [141]	F or W/C*	SCD 21
45	GH045K5QJ2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	380 [172]	F or W/C*	SCD 21
75	GH075K5QJ2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	510 [231]	F (Opt W/C)	SCD 21
112.5	GH112K5QJ2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	680 [308]	F (Opt W/C)	SCD 21
150	GH150K5QJ2A04	DH4	31.5 [800]	29.5 [749]	44.5 [1130]	870 [395]	F	SCD 21
225	GH225K5QJ2A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1350 [612]	F	SCD 21
300	GH300K5QJ2A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1800 [816]	F	SCD 21

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

600 DELTA PRIMARY VOLTS

208Y/120 SECONDARY VOLTS

60 HZ

kVA	Catalog Number	Case Style	Approx. Dimensions - Inches [mm]			Approx. Weight Lbs [kg]	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	GH015K5RH2A04	DH1	21.5 [546]	20.1 [510]	22.0 [559]	210 [95]	F or W/C*	SCD 19
30	GH030K5RH2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	310 [141]	F or W/C*	SCD 19
45	GH045K5RH2A04	DH2	25.8 [655]	23.8 [604]	28.8 [731]	380 [172]	F or W/C*	SCD 19
75	GH075K5RH2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	510 [231]	F (Opt W/C)	SCD 19
112.5	GH112K5RH2A04	DH3	28.3 [719]	27.0 [686]	36.0 [914]	680 [308]	F (Opt W/C)	SCD 19
150	GH150K5RH2A04	DH4	31.5 [800]	29.5 [749]	44.5 [1130]	870 [395]	F	SCD 19
225	GH225K5RH2A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1350 [612]	F	SCD 19
300	GH300K5RH2A04	DH5	38.0 [965]	34.0 [864]	52.0 [1321]	1800 [816]	F	SCD 19

*W/C: Built-in Wall Ceiling Mounting Opt W/C: Wall Ceiling Mounting Kit "DW3" Available

TYPICAL PERFORMANCE DATA

GENERAL PURPOSE DISTRIBUTION TRANSFORMERS

Single Phase - Aluminum

208V TO 600V PRIMARY, 120/240V SECONDARY, 60 HZ, 150°C

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	55	650	6.0%	1.17%	1.80%	3.39%	5.14%	97.14%	97.76%	97.84%	97.67%	97.36%	97.12%	96.46%	
25	88	870	6.0%	0.95%	1.78%	2.79%	5.09%	97.33%	97.97%	98.10%	98.00%	97.77%	97.59%	97.07%	
37.5	90	1500	6.0%	1.09%	1.80%	3.17%	5.15%	97.98%	98.30%	98.27%	98.03%	97.69%	97.45%	96.80%	
50	130	1650	6.0%	0.91%	1.77%	2.67%	5.07%	97.93%	98.35%	98.39%	98.24%	97.99%	97.80%	97.27%	
75	170	2300	6.0%	0.85%	1.75%	2.51%	5.03%	98.17%	98.52%	98.54%	98.39%	98.14%	97.96%	97.46%	
100	212	2990	6.0%	0.83%	1.75%	2.47%	5.03%	98.27%	98.59%	98.60%	98.43%	98.19%	98.00%	97.51%	

**Full load losses & full load efficiencies are at a reference temperature of 170°C in accordance with IEEE Standard C57.12.91
Performance data is subject to change without notice.*

Three Phase - Aluminum

600V CLASS

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	62	420	4.0%	0.98%	1.12%	2.81%	3.21%	96.92%	97.70%	97.89%	97.82%	97.61%	97.42%	96.89%
30	86	840	4.1%	0.98%	1.19%	2.82%	3.40%	97.72%	98.19%	98.23%	98.06%	97.79%	97.58%	97.00%
45	120	1110	4.5%	0.87%	1.36%	2.51%	3.89%	97.90%	98.35%	98.40%	98.27%	98.03%	97.84%	97.34%
75	190	1490	5.0%	0.71%	1.46%	2.08%	4.18%	98.05%	98.51%	98.60%	98.52%	98.35%	98.20%	97.81%
112.5	226	2260	5.0%	0.71%	1.46%	2.10%	4.18%	98.38%	98.71%	98.74%	98.61%	98.41%	98.26%	97.84%
150	315	2500	5.0%	0.60%	1.42%	1.77%	4.07%	98.38%	98.76%	98.83%	98.76%	98.61%	98.49%	98.16%
225	405	3580	5.4%	0.57%	1.51%	1.72%	4.33%	98.58%	98.89%	98.94%	98.86%	98.70%	98.59%	98.26%
300	540	4040	4.8%	0.48%	1.32%	1.45%	3.79%	98.62%	98.95%	99.02%	98.98%	98.86%	98.77%	98.50%

**Full load losses & full load efficiencies are at a reference temperature of 170°C in accordance with IEEE Standard C57.12.91
Performance data is subject to change without notice.*

TYPICAL IMPEDANCE & INRUSH CURRENT RANGE

GENERAL PURPOSE



Single Phase

VOLTAGE RANGE 120V TO 600V

80°C TO 150°C TEMP. RISE

kVA	Efficiency at 35% of Rated Load, @75°C	Impedance	Peak Inrush Current Multiple of RMS Current
15	97.70%	3.5-6.5%	12 to 15
25	98.00%		
37.5	98.20%		
50	98.31%		
75	98.50%		
100	98.60%		

Three Phase

VOLTAGE RANGE 208V TO 600V

80°C TO 150°C TEMP. RISE

kVA	Efficiency at 35% of Rated Load, @75°C	Impedance	Peak Inrush Current Multiple of RMS Current
15	97.89%	1.8-6%	12 to 15
30	98.23%		
45	98.40%		
75	98.60%	2-6.5%	10 to 12
112.5	98.74%		
150	98.83%		
225	98.94%		
300	99.02%		

TERMINATION DETAILS - TYPE 3R

FOR STANDARD 150°C TEMPERATURE RISE UNITS

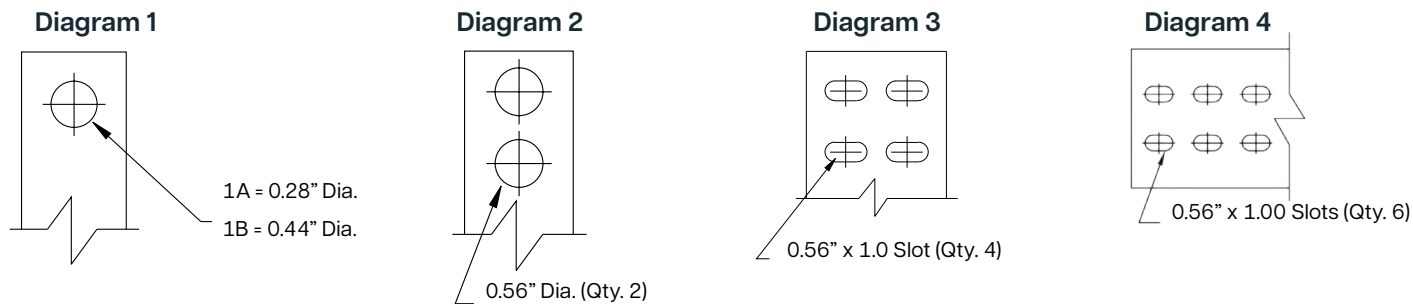
Single Phase, Aluminum Termination - Lugs or Pads

kVA	Voltage									
	120	120/240	208	240	277	347	380	416	480	600
15	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs
25	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs
37.5	Dia. 1B	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs
50	Dia. 1B	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs	Lugs
75	Dia. 2	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Lugs	Lugs	Lugs	Lugs	Lugs
100	Dia. 2	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Lugs	Lugs	Lugs	Lugs

Three Phase, Aluminum Termination - Lugs or Pads

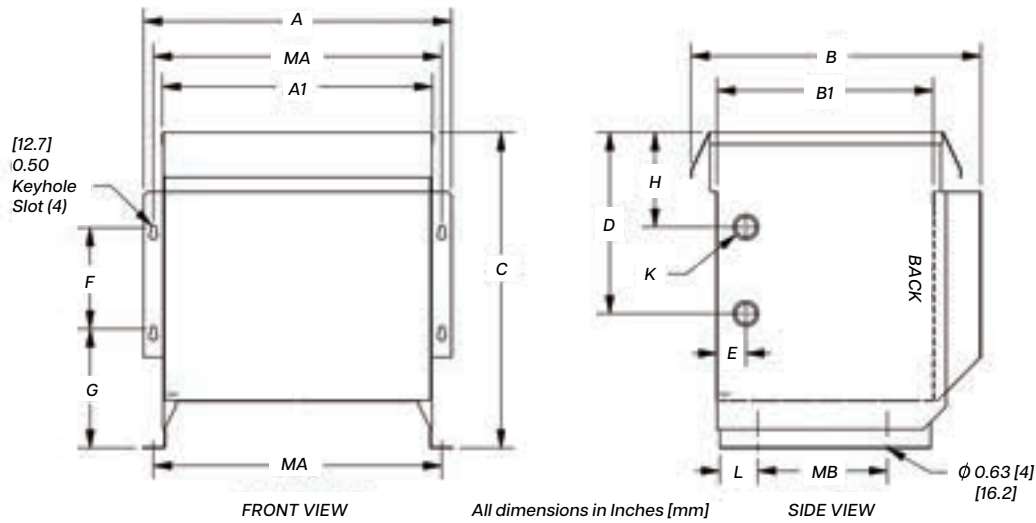
kVA	Voltage							
	208	230	240	277	380	416	480	600
15	Lugs (Dia.1A)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
30	Lugs (Dia.1A)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
45	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
75	Lugs (Dia. 1B)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
112.5	Lugs (Dia. 1B)	Dia. 1B	Dia. 1B	Lugs	Lugs (Dia. 1A)	Lugs	Lugs (Dia. 1A)	Lugs (Dia. 1A)
150	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Lugs (Dia. 1B)	Lugs	Lugs (Dia. 1B)	Lugs
225	Dia. 2	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B	Lugs (Dia. 1B)	Lugs
300	Dia. 2	Dia. 2	Dia. 2	Dia. 2	Dia. 1B	Dia. 1B	Dia. 1B	Dia. 1B

***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.*



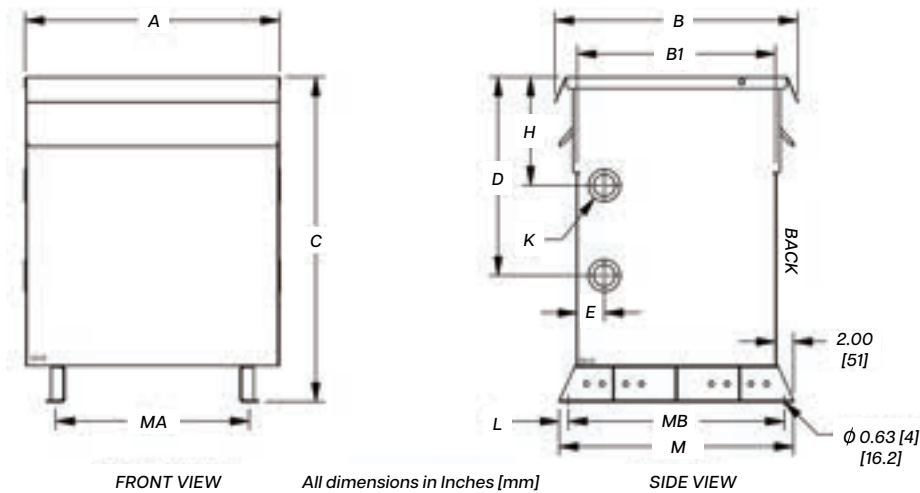
ENCLOSURE DRAWINGS

DH SERIES



Case Style	Dimensions in Inches [Millimeter]													
	A	A1	B	B1	C	D	E	F	G	H	K	L	MA	MB
DH1	21.5	18.8	20.1	15	22	12.6	2	7	8.3	6.6	1.38 X 1.75 K.O.	2.6	20	9
	[546]	[477]	[510]	[381]	[559]	[320]	[51]	[178]	[211]	[168]	[35 x 44 K.O.]	[66]	[508]	[229]
DH1-1	22.3	19.8	23.8	18	26.7	16	2	8	9.2	8.6	1.38 X 2.50 K.O.	3.8	21.1	9
	[566]	[503]	[604]	[457]	[678]	[406]	[51]	[203]	[234]	[218]	[35 X 63 K.O.]	[96]	[536]	[229]
DH2	25.8	23.3	23.8	18	28.8	17	2	8	10.3	8.6	1.75 X 2.50 K.O.	3.8	24.6	9
	[655]	[592]	[604]	[457]	[731]	[432]	[51]	[203]	[262]	[218]	[44 X 63 K.O.]	[96]	[625]	[229]

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

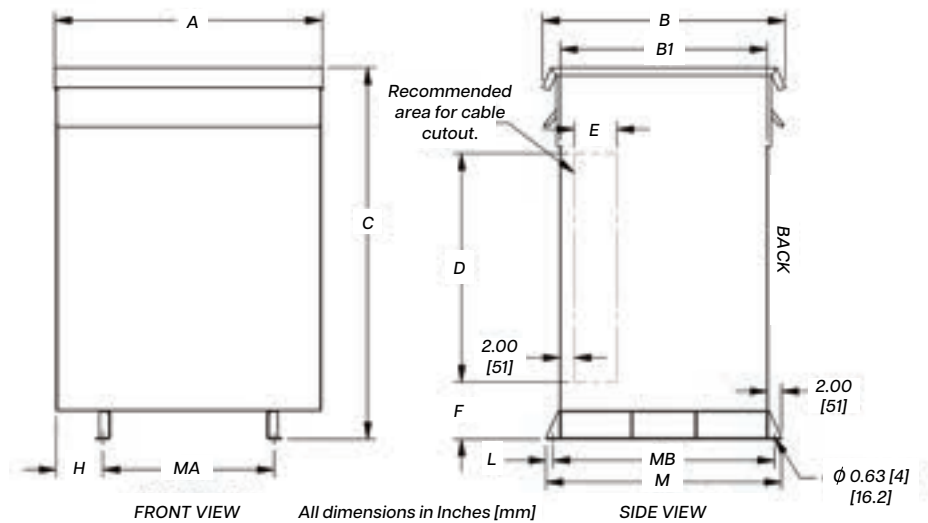


Case Style	Dimensions in Inches [Millimeter]											
	A	B	B1	C	D	E	H	K	L	M	MA	MB
DH3	28.3 [719]	27 [687]	22 [559]	36 [914]	22 [559]	3 [76]	12 [305]	2.00 X 3.00 K.O. [50 X 76 K.O.]	1 [25]	26 [660]	21.5 [546]	24 [610]
DH4	31.5 [800]	29.5 [749]	24.5 [622]	44.5 [1130]	27.5 [698]	3 [76]	14.5 [368]	2.00 X 3.00 K.O. [50 X 76 K.O.]	1 [25]	28.5 [724]	23.5 [597]	26.5 [673]

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 [965]	34 [864]	29 [737]	52 [1321]	32 [813]	6 [152]	8 [203]	6.6 [168]	1 [25]	33 [838]	24 [610]	31 [787]

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

ENCLOSURE MOUNTING KITS

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 Micron “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 DW3 wall/ceiling mounting kit also includes a drip plate.

The DW3 wall/ceiling mounting kit is only designed for units up to 1000 pounds (453 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 1561 and CSA C22.2 No. 47.

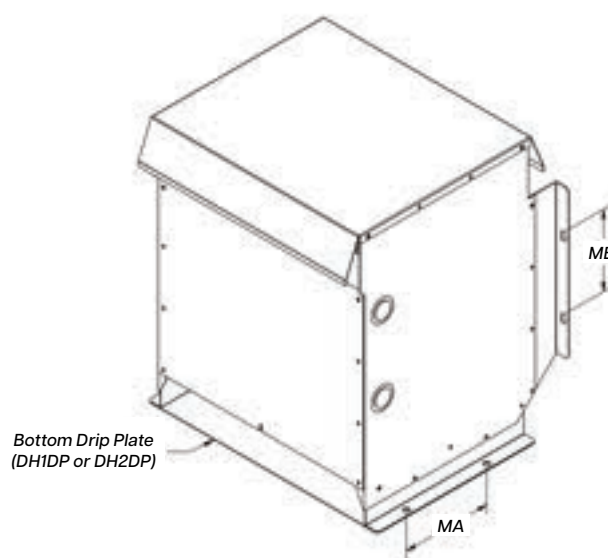
DH1DP And DH2DP Wall/Ceiling Mounting Kits

The DH1, DH1-1 and DH2 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 DH1, DH1-1 and DH2, 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 DH1, DH1-1 and DH2 enclosures without installing the bottom drip plate. All mounting hardware should be rated Grade 8 or higher.

Enclosure Case Style	Wall Mount Available	Ceiling Mount Available	Micron Mounting Kit P/N
DH1	Yes	Yes	DH1DP
DH1-1	Yes	Yes	DH1-IDP
DH2	Yes	Yes	DH2DP
DH3	Yes	Yes	DW3
DH4	No	No	N/A
DH5	No	No	N/A

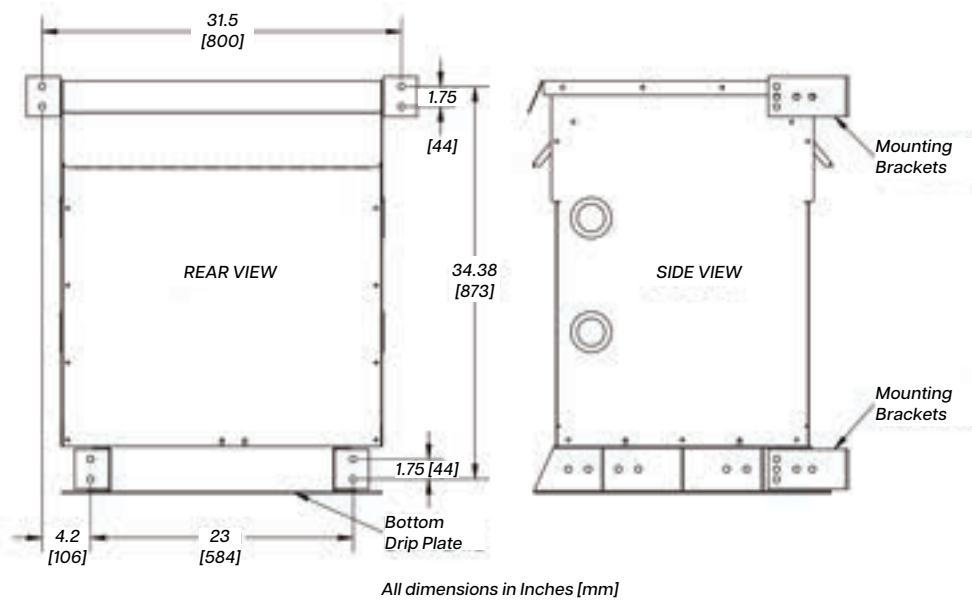


Mounting Kit P/N	Enclosure Style	MA Dimension Inches [mm]	MB Dimension Inches [mm]
DH1DP	DH1	9.00 [229]	7.00 [178]
DH1-IDP	DH1-1	9.00 [229]	8.00 [203]
DH2DP	DH2	9.00 [229]	8.00 [203]

ENCLOSURE WALL MOUNTING DIMENSIONS

DW3 Wall Mounting Kit Dimensions

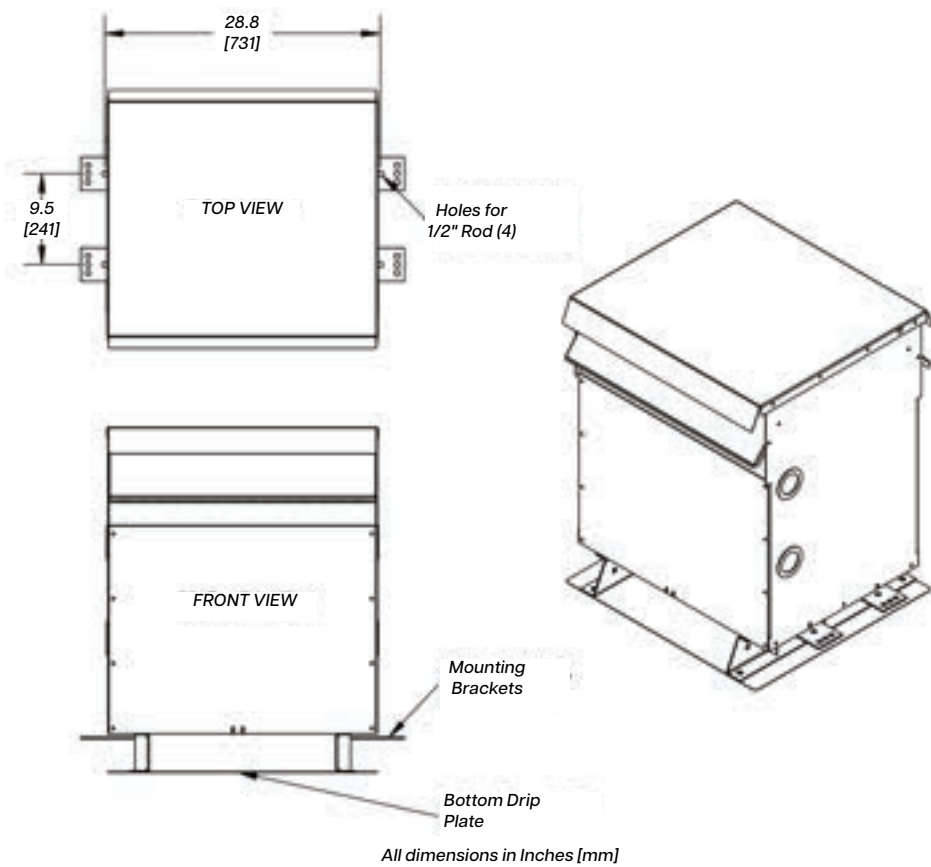
The following drawings detail the wall mounting dimensions required and method by which the DW3 kit are installed on their respective DH3 enclosures. The DW3 wall mounting kit also includes a drip plate.



DW3 Wall Mount Dimensions

DW3 Ceiling Mounting Kit Dimensions

The following drawings detail the ceiling mounting dimensions required and method by which the DW3 kit are installed on the DH3 enclosure.



DW3 Ceiling Mount - Mounting Dimensions for DH3 Enclosures

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	DH1-DH5	Set of four (4) rubber anti-vibration pads which replace the standard steel enclosure washers.
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 [154]	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 [155 to 608]	
NMP3	681 to 1040 lbs [309 to 472]	
NMP4	1041 to 1740 lbs [472 to 789]	
NMP5	1741 to 2330 lbs [790 to 1057]	
NMP6	2331 to 3450 lbs [1057 to 1565]	
NMP7	3451 to 4690 lbs [1565 to 2127]	



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.

ENCLOSURE SPARE PARTS

Minimum Order Size applies to enclosure spare parts.

Due to technical and certification compliance reasons only selected enclosure parts are offered as spare parts (as per table). For front panel replacements please contact your Micron sales office.



Micron Part No.	Part Description	Qty per Package
DH1001	DH1 Enclosure Top Panel	1
DH1002	DH1 Enclosure Left Side Panel	1
DH1003	DH1 Enclosure Right Side Panel	1
DH1-1001	DH1-1 Enclosure Top Panel	1
DH1-1002	DH1-1 Enclosure Left Side Panel	1
DH1-1003	DH1-1 Enclosure Right Side Panel	1
DH2001	DH2 Enclosure Top Panel	1
DH2002	DH2 Enclosure Left Side Panel	1
DH2003	DH2 Enclosure Right Side Panel	1
DH3001	DH3 Enclosure Top Panel	1
DH3002	DH3 Enclosure Left Side Panel	1
DH3003	DH3 Enclosure Right Side Panel	1
DH3005	DH3 Enclosure Back Panel	1
DH3007	DH3 Enclosure Drip-Shield	1
DH4001	DH4 Enclosure Top Panel	1
DH4002	DH4 Enclosure Left Side Panel	1
DH4003	DH4 Enclosure Right Side Panel	1
DH4005	DH4 Enclosure Back Panel	1
DH4007	DH4 Enclosure Drip-Shield	1
DH5001	DH5 Enclosure Top Panel	1
DH5002	DH5 Enclosure Left Side Panel	1
DH5003	DH5 Enclosure Right Side Panel	1
DH5005	DH5 Enclosure Back Panel	1
DH5007	DH5 Drip-Shield	1
DH5008	DH5 Enclosure Jacking Angle - Front	1
DH5009	DH5 Enclosure Jacking Angle - Back	1

TOUCH-UP PAINT

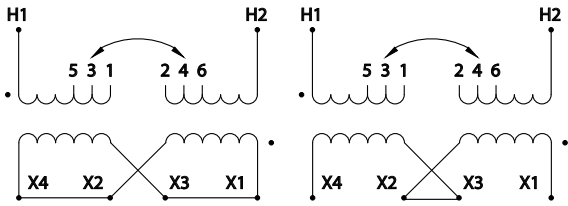
Please verify part number with Micron Customer Service to determine which shade of paint to use.

Mexico Built Products: **PNT10098**

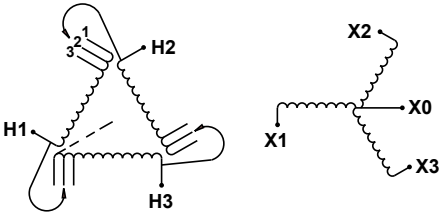
Canada/US Built Products: **PNT10099**

ELECTRICAL SCHEMATICS & CONNECTION DRAWINGS

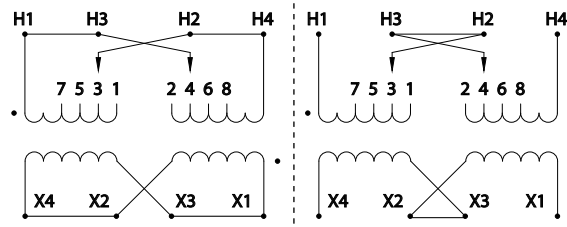
SCD 6

Schematic		Connections			
	% Voltage	Primary Volts		Connect lines to	Inter-connect
	105.0%	218	630	H1, H2	1-2
	102.5%	213	615	H1, H2	2-3
	100.0%	208	600	H1, H2	3-4
	97.5%	203	585	H1, H2	4-5
	95.0%	198	570	H1, H2	5-6
	Secondary Volts		Connect lines to	Inter-connect	
	240		X1, X4	X2-X3	
	120		X1, X2	X2-X4, X1-X3	
	120/240		X1, X2, X4	X2-X3	

SCD 7A

Schematic		Connections			
		% Voltage	Primary Volts	Connect lines to	Inter-connect
		105.0%	252	H1, H2, H3	1
		100.0%	240	H1, H2, H3	2
		95.0%	228	H1, H2, H3	3
		Connect lines to		Inter-connect	
		208		X1, X2, X3	
		120		X1, X0 X2, X0 X3, X0	

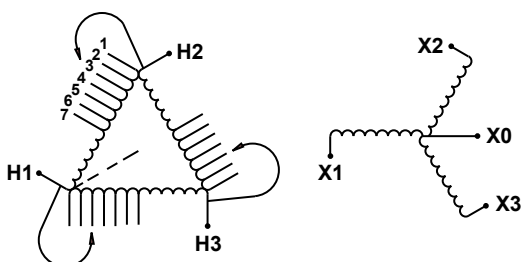
SCD 17

Schematic		Connections			
		% Voltage	Primary Volts	Connect lines to	Inter-connect
		105.0%	252	H1, H2	1-H2, 2-H3, H1-H3, H2-H4
		100.0%	240	H1, H2	3-H2, 4-H3, H1-H3, H2-H4
		95.0%	228	H1, H2	5-H2, 6-H3, H1-H3, H2-H4
		90.0%	216	H1, H2	7-H2, 8-H3, H1-H3, H2-H4
		105.0%	504	H1, H4	1-H2, 2-H3, H2-H3
		102.5%	492	H1, H4	3-H2, 2-H3, H2-H3
		100.0%	480	H1, H4	3-H2, 4-H3, H2-H3
		97.5%	468	H1, H4	5-H2, 4-H3, H2-H3
		95.0%	456	H1, H4	5-H2, 6-H3, H2-H3
		92.5%	444	H1, H4	7-H2, 6-H3, H2-H3
		90.0%	432	H1, H4	7-H2, 8-H3, H2-H3
		Secondary Volts		Connect lines to	Inter-connect
		240		X1, X4	X2-X3
		120		X1, X2	X2-X4, X1-X3
		120/240		X1, X2, X4	X2-X3

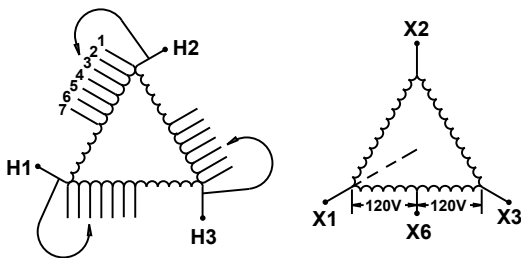
Tap arrangements shown are for catalog products only. May not be applicable for other products.

ELECTRICAL SCHEMATICS & CONNECTION DRAWINGS

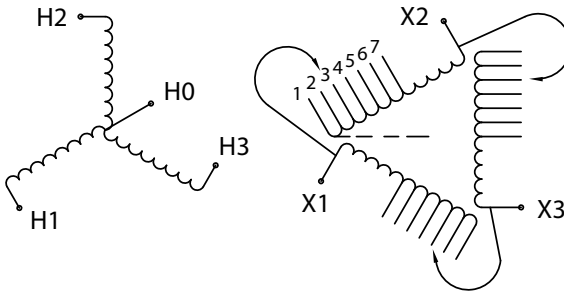
SCD 19

Schematic	Connections					
	% Voltage	Primary Volts			Connect lines to	Inter-connect
	105.0%	252	504	630	H1, H2, H3	1
	102.5%	246	492	615	H1, H2, H3	2
	100.0%	240	480	600	H1, H2, H3	3
	97.5%	234	468	585	H1, H2, H3	4
	95.0%	228	456	570	H1, H2, H3	5
	92.5%	222	444	556	H1, H2, H3	6
	90.0%	216	432	542	H1, H2, H3	7
	Secondary Volts			Connect lines to		Inter-connect
	208			X1, X2, X3		
120			X1 X0	X2 X0	X3 X0	

SCD 21

Schematic	Connections			
	% Voltage	Primary Volts	Connect lines to	Inter-connect
	105.0%	504	H1, H2, H3	1
	102.5%	492	H1, H2, H3	2
	100.0%	480	H1, H2, H3	3
	97.5%	468	H1, H2, H3	4
	95.0%	456	H1, H2, H3	5
	92.5%	444	H1, H2, H3	6
	90.0%	432	H1, H2, H3	7
	Secondary Volts		Connect lines to	Inter-connect
	240		X1, X2, X3	
120		X1, X6 X3, X6		

SCD 53

Schematic	Connections			
	% Voltage	Primary Volts	Connect lines to	Inter-connect
	105.0%	218	X1, X2, X3	1
	102.5%	213	X1, X2, X3	2
	100.0%	208	X1, X2, X3	3
	97.5%	203	X1, X2, X3	4
	95.0%	198	X1, X2, X3	5
	92.5%	192	X1, X2, X3	6
	90.0%	187	X1, X2, X3	7
	Secondary Volts		Connect lines to	Inter-connect
	480		H1, H2, H3	
277		H1, H0 H2, H0 H3, H0		

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

ELECTRICAL SCHEMATICS & CONNECTION DRAWINGS

SCD 56

Schematic	Connections			
	% Voltage	Primary Volts		Inter-connect
	105.0%	218	252	1
	100.0%	208	240	2
	95.0%	198	228	3
	Secondary Volts		Inter-connect	
	480		H1, H2, H3	
		277	H1, H0	H2, H0 H3, H0

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

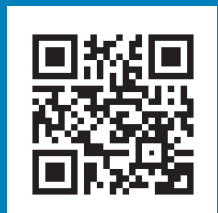
Low Voltage Distribution Transformers

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LVDISP-BBI2-EN
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