



## SECTION 7

# ENERGY EFFICIENT GENERAL PURPOSE LOW VOLTAGE DISTRIBUTION TRANSFORMERS

## **600V Class, Single Phase & Three Phase**

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## Low Voltage Distribution Transformers Energy Efficiency Requirements

In the past decades, greenhouse gas emissions and their effects on our planet have become the focus of many governments, agencies, companies and individuals. Energy generation is a major contributor to greenhouse gas emissions. In addition to widespread efforts to make energy generation more environmentally friendly, lowering energy consumption within most industrial and commercial facilities also is a goal. HPS proudly supports these initiatives and is offering a complex Energy Efficient product basket that meets the current energy efficiency requirements both in US and Canada.

Improving the energy efficiency of new transformers is a primary objective for regulatory bodies in both the U.S. and Canada. As a result the legislation issued by the U.S. Department of Energy - DOE 10 CFR p.431 and the Canadian Energy Efficiency Act – Energy Efficiency Regulations (SOR/94-651) have strict energy efficiency requirements for low-voltage dry-type and medium-voltage dry-type distribution transformers.

As the above legislation is evolving, HPS improves its energy efficient product lines to meet or exceed the prescribed levels of energy efficiency. HPS has a new line of energy efficient distribution transformers to meet the new DOE 10 CFR p.431 that comes in effect on January 1, 2016 also known as DOE 2016. More details about this product offer can be found in the HPS Sentinel Energy Efficient Distribution Transformer Selection Guide (DOESEL15).

The Canadian product offer described in the current catalogue continues to comply with the CSA C802.2 energy efficiency requirements. This product line also meets the DOE energy efficiency levels that were in effect from January 1, 2007 to December 31, 2015 known also as TP-1 energy efficiency levels.

Effective December 1, 2015 our NEMA Premium product lines (SuperSentinel, SuperSynergy and SuperCenturion) are considered obsolete being replaced by the higher efficiency DOE 2016 product line.



DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241

## Low Voltage Distribution Transformers

### Canada - Energy Efficiency Regulations (CSA C802.2)

The laws in Canada state that all low voltage dry-type distribution transformers (as defined below) manufactured after January 1st, 2005, must meet the minimum energy efficiency guidelines outlined by CSA C802.2 and referenced in the Canadian Energy Efficiency Act - Energy Efficiency Regulations (SOR/94-651). The range of product covered by these standards are:

<b>Primary (high) Voltage</b>		Up to 1.2 kV
<b>Secondary (low) Voltage Line Current</b>		Less than 4000 amps
<b>Dry-Type Rating</b>	<b>Single Phase</b>	15-333 kVA
	<b>Three Phase</b>	15-1000 kVA
<b>Frequency</b>		60 Hz only

For transformers exempted from the Canadian Efficiency Regulations please visit: <http://laws.justice.gc.ca>

The HPS lines of 1.2 kV volt class energy efficient distribution transformers illustrated in this section, meet or exceed the minimum efficiencies required. These efficiencies are evaluated at 35% of the nameplate kVA transformer rating.

The specifications covering 1.2 kV volt class energy efficiency in transformers in Canada are outlined in the CSA Efficiency Standard C802, "Maximum Losses for Distribution, Power and Dry-Type Transformers" as referenced in the Canadian Energy Efficiency Act - Energy Efficiency Regulations (SOR/94-651).

<b>CSA C802.2 Energy Efficiency Levels Dry-Type Distribution Transformers - Low Voltage</b>			
<b>Single Phase</b>		<b>Three Phase</b>	
<b>kVA</b>	<b>Efficiency</b>	<b>kVA</b>	<b>Efficiency</b>
15	97.70	15	97.00
25	98.00	30	97.50
37.5	98.20	45	97.70
50	98.30	75	98.00
75	98.50	112.5	98.20
100	98.60	150	98.30
167	98.70	225	98.50
250	98.80	300	98.60
333	98.90	500	98.70
		750	98.80
		1000	98.90

All efficiency values are at 35% of nameplate rated load



# HPS Energy Efficient Distribution Transformer Product Offering:

HPS offers three lines of energy efficient distribution transformers:

## Linear Load General Purpose Transformers (pages 161 to 172)

General purpose distribution transformers are rated for 600 volts and below. They are generally used for supplying appliance, lighting, heating, motorized machine and power loads from electrical distribution systems. They are offered in a variety of enclosure types or as core & coil only.

## Non-Linear Load K-Factor Transformers (pages 173 to 178)

The use of k-factor distribution transformers has become a popular means of supplying power to 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.

K-factor is defined as a ratio between the additional losses due to harmonics and the eddy current losses at 60Hz. It is used to specify transformers for non-linear loads. Transformers with a rated k-factor of 4, 13, 20 and other are available.

## Harmonic Mitigating Transformers (pages 179 to 188)

Harmonic Mitigating transformers are superior to the above transformers in that they reduce voltage distortion (flat-topping) and power losses due to current harmonics created by single-phase, non-linear loads such as computer equipment. Secondary windings are arranged to cancel zero sequence fluxes and eliminate primary winding circulating currents. They treat zero sequence harmonics (3rd, 9th and 15th) within the secondary windings and 5th and 7th harmonics upstream with appropriate phase shifting.

Our dual output, phase shifting Harmonic Mitigating Transformers provide extremely low output voltage distortion and input current distortion even under severe non-linear load conditions (data centers, internet service providers, telecom sites, call centers, broadcasting studios, etc.). Combining zero sequence flux cancellation with phase shifting treats 3rd, 5th, 7th, 9th, 15th, 17th and 19th harmonics within its secondary windings.



## HPS Sentinel® 600 VOLT CLASS ENERGY EFFICIENT GENERAL PURPOSE DISTRIBUTION TRANSFORMERS

ALUMINUM & COPPER, SINGLE PHASE STANDARD SPECIFICATIONS

15 to 37.5 kVA

50 to 167 kVA



	15 to 37.5 kVA	50 to 167 kVA
<b>Applications</b>	Energy efficient general purpose transformers are designed for linear loads and are most frequently used for applications such as commercial buildings to supply a variety of general loads.	
<b>Efficiency</b>	Meets C802.2 efficiencies at 35% of rated load. Efficiencies are calculated under a linear load profile.	
<b>UL Listed</b>	File: E112313	File: E112313
<b>CSA Certified</b>	File: LR3902	File: LR3902
<b>Frequency</b>	60 Hz	60 Hz
<b>Insulation System</b>	220°C (150°C rise) (optional 115°C and 80°C rise available)	220°C (150°C rise) (optional 115°C and 80°C rise available)
<b>Enclosure Type</b>	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12.	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12.
<b>Enclosure Finish</b>	ANSI 61 Grey, UL50	ANSI 61 Grey, UL50
<b>Standard Primary Taps</b>	Refer to wiring diagrams for details.	Refer to wiring diagrams for details.
<b>Termination</b>	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.
<b>Conduit Knock-Outs</b>	Standard on all units (no knock-outs on Stainless Steel enclosures).	Standard on 50 kVA, 75 kVA & 100 kVA units (no knock-outs on Stainless Steel enclosures).
<b>Impedance</b>	Typically 2.5% to 6.5%	Typically 2.5% to 6.5%
<b>Mounting</b>	Floor or wall/ceiling mounting available. Refer to selection tables for details.	Floor or wall/ceiling mounting available. Refer to selection tables for details.
<b>Seismic</b>	Seismically certified in accordance with IBC 2009; Section 1613 Earthquake Loads, for $S_{DS} \leq 2.00g$ , $z/h = 1.0$ , and $I_p = 1.5$	Seismically certified in accordance with IBC 2009; Section 1613 Earthquake Loads, for $S_{DS} \leq 2.00g$ , $z/h = 1.0$ , and $I_p = 1.5$
<b>Sound level</b>	Meets NEMA ST-20 standards. <b>(Optional low noise units available)</b>	Meets NEMA ST-20 standards. <b>(Optional low noise units available)</b>

Other voltages and kVA sizes not listed in this section are available upon request for both aluminum and copper wound units. Standard features as listed above may differ. Please contact customer service for details, price and availability.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241





## ALUMINUM WOUND, SINGLE PHASE

208 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015BE	NH5	19.40	20.20	21.50	170	F or W *	SCD 32
25	NMF025BE	NH6	23.90	25.00	28.75	220	F or W *	SCD 31
37.5	NMF037BE	NH6	23.90	25.00	28.75	260	F or W *	SCD 31
50	NMF050BE	NH3	26.00	25.00	38.00	375	F or W *	SCD 2
75	NMF075BE	NH4	32.00	29.50	41.00	500	F	SCD 39
100	NMF100BE	NH4	32.00	29.50	41.00	650	F	SCD 39
150	NMF150BE	NJ4	32.00	32.50	50.00	850	F	SCD 39
167	NMF167BE	NJ4	32.00	32.50	50.00	950	F	SCD 39

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

240 X 480 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015LE	NH5	19.40	20.20	21.50	170	F or W *	SCD 34
25	NMF025LE	NH6	23.90	25.00	28.75	220	F or W *	SCD 17
37.5	NMF037LE	NH6	23.90	25.00	28.75	260	F or W *	SCD 17
50	NMF050LE	NH3	26.00	25.00	38.00	370	F or W *	SCD 17
75	NMF075LE	NH3	26.00	25.00	38.00	500	F or W *	SCD 17
100	NMF100LE	NH4	32.00	29.50	41.00	650	F	SCD 17
150	NMF150LE	NJ4	32.00	32.50	50.00	850	F	SCD 17
167	NMF167LE	NJ4	32.00	32.50	50.00	900	F	SCD 17

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

277 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015FE	NH5	19.40	20.20	21.50	170	F or W *	SCD 32
25	NMF025FE	NH6	23.90	25.00	28.75	260	F or W *	SCD 31
37.5	NMF037FE	NH6	23.90	25.00	28.75	400	F or W *	SCD 31
50	NMF050FE	NH3	26.00	25.00	38.00	450	F or W *	SCD 31
75	NMF075FE	NH3	26.00	25.00	38.00	650	F or W *	SCD 31
100	NMF100FE	NH4	32.00	29.50	41.00	700	F	SCD 39
150	NMF150FE	NJ4	32.00	32.50	50.00	830	F	SCD 39
167	NMF167FE	NJ4	32.00	32.50	50.00	880	F	SCD 39

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

416 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015HE	NH5	19.40	20.20	21.50	220	F or W *	SCD 32
25	NMF025HE	NH6	23.90	25.00	28.75	220	F or W *	SCD 31
37.5	NMF037HE	NH6	23.90	25.00	28.75	260	F or W *	SCD 31
50	NMF050HE	NH3	26.00	25.00	38.00	400	F or W *	SCD 31
75	NMF075HE	NH3	26.00	25.00	38.00	480	F or W *	SCD 31
100	NMF100HE	NH4	32.00	29.50	41.00	650	F	SCD 39
150	NMF150HE	NJ4	32.00	32.50	50.00	850	F	SCD 39
167	NMF167HE	NJ4	32.00	32.50	50.00	900	F	SCD 39

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note:** For units smaller than 15kVA, please refer to the single phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241





## ALUMINUM WOUND, SINGLE PHASE

600 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015PE	NH5	19.40	20.20	21.50	220	F or W *	SCD 32
25	NMF025PE	NH6	23.90	25.00	28.75	220	F or W *	SCD 31
37.5	NMF037PE	NH6	23.90	25.00	28.75	260	F or W *	SCD 31
50	NMF050PE	NH3	26.00	25.00	38.00	400	F or W *	SCD 31
75	NMF075PE	NH3	26.00	25.00	38.00	480	F or W *	SCD 31
100	NMF100PE	NH4	32.00	29.50	41.00	650	F	SCD 39
150	NMF150PE	NJ4	32.00	32.50	50.00	850	F	SCD 39
167	NMF167PE	NJ4	32.00	32.50	50.00	900	F	SCD 39

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

## SINGLE PHASE, EXPORT MODEL

190/200/208/220 X 380/400/416/440 Primary Volts

120/240 Secondary Volts

50/60 Hz\*\*

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015XE	NH6	23.90	25.00	28.75	190	F or W *	SCD 30
25	NMF025XE	NH6	23.90	25.00	28.75	240	F or W *	SCD 30
37.5	NMF037XE	NH6	23.90	25.00	28.75	300	F or W *	SCD 30
50	NMF050XE	NH3	26.00	25.00	38.00	390	F or W *	SCD 30
75	NMF075XE	NH3	26.00	25.00	38.00	540	F or W *	SCD 30
100	NMF100XE	NH4	32.00	29.50	41.00	700	F	SCD 30
150	NMF150XE		<b>CONSULT FACTORY</b>				F	SCD 30
167	NMF167XE		<b>CONSULT FACTORY</b>				F	SCD 30

For shielded units, please add the suffix "S" to the above part numbers.

\*\*Note: Meets DOE 10 CFR Part 431 and C802.2 at 60 Hz.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

## COPPER WOUND, SINGLE PHASE

208 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015BEC	NH5	19.40	20.20	21.50	180	F or W *	SCD 32
25	NMF025BEC	NH6	23.90	25.00	28.75	240	F or W *	SCD 31
37.5	NMF037BEC	NH6	23.90	25.00	28.75	300	F or W *	SCD 31
50	NMF050BEC	NH3	26.00	25.00	38.00	375	F or W *	SCD 2
75	NMF075BEC	NH3	26.00	25.00	38.00	525	F or W *	SCD 31
100	NMF100BEC	NH4	32.00	29.50	41.00	650	F	SCD 39
150	NMF150BEC	NJ4	32.00	32.50	50.00	900	F	SCD 39
167	NMF167BEC	NJ4	32.00	32.50	50.00	1000	F	SCD 39

For shielded units, please replace the suffix "C" with a 'K' on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

240 X 480 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015LEC	NH5	19.40	20.20	21.50	180	F or W *	SCD 34
25	NMF025LEC	NH6	23.90	25.00	28.75	240	F or W *	SCD 17
37.5	NMF037LEC	NH6	23.90	25.00	28.75	300	F or W *	SCD 17
50	NMF050LEC	NH3	26.00	25.00	38.00	375	F or W *	SCD 17
75	NMF075LEC	NH3	26.00	25.00	38.00	525	F or W *	SCD 17
100	NMF100LEC	NH4	32.00	29.50	41.00	650	F	SCD 17
150	NMF150LEC	NJ4	32.00	32.50	50.00	900	F	SCD 17
167	NMF167LEC	NJ4	32.00	32.50	50.00	1000	F	SCD 17

For shielded units, please replace the suffix "C" with a 'K' on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note: For units smaller than 15kVA, please refer to the single phase encapsulated units in Section 8.**

Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241





## COPPER WOUND, SINGLE PHASE

277 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015FEC	NH5	19.40	20.20	21.50	180	F or W *	SCD 32
25	NMF025FEC	NH6	23.90	25.00	28.75	240	F or W *	SCD 31
37.5	NMF037FEC	NH6	23.90	25.00	28.75	300	F or W *	SCD 31
50	NMF050FEC	NH3	26.00	25.00	38.00	375	F or W *	SCD 31
75	NMF075FEC	NH3	26.00	25.00	38.00	525	F or W *	SCD 31
100	NMF100FEC	NH4	32.00	29.50	41.00	650	F	SCD 39
150	NMF150FEC	NJ4	32.00	32.50	50.00	900	F	SCD 39
167	NMF167FEC	NJ4	32.00	32.50	50.00	1000	F	SCD 39

For shielded units, please replace the suffix "C" with a 'K' on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

416 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015HEC	NH5	19.40	20.20	21.50	180	F or W *	SCD 32
25	NMF025HEC	NH6	23.90	25.00	28.75	240	F or W *	SCD 31
37.5	NMF037HEC	NH6	23.90	25.00	28.75	300	F or W *	SCD 31
50	NMF050HEC	NH3	26.00	25.00	38.00	375	F or W *	SCD 31
75	NMF075HEC	NH3	26.00	25.00	38.00	525	F or W *	SCD 31
100	NMF100HEC	NH4	32.00	29.50	41.00	650	F	SCD 39
150	NMF150HEC	NJ4	32.00	32.50	50.00	900	F	SCD 39
167	NMF167HEC	NJ4	32.00	32.50	50.00	1000	F	SCD 39

For shielded units, please replace the suffix "C" with a 'K' on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Primary Volts

120/240 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015PEC	NH5	19.40	20.20	21.50	180	F or W *	SCD 32
25	NMF025PEC	NH6	23.90	25.00	28.75	240	F or W *	SCD 31
37.5	NMF037PEC	NH6	23.90	25.00	28.75	300	F or W *	SCD 31
50	NMF050PEC	NH3	26.00	25.00	38.00	375	F or W *	SCD 31
75	NMF075PEC	NH3	26.00	25.00	38.00	525	F or W *	SCD 31
100	NMF100PEC	NH4	32.00	29.50	41.00	650	F	SCD 39
150	NMF150PEC	NJ4	32.00	32.50	50.00	900	F	SCD 39
167	NMF167PEC	NJ4	32.00	32.50	50.00	1000	F	SCD 39

For shielded units, please replace the suffix "C" with a 'K' on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

## SINGLE PHASE, EXPORT MODEL

190/200/208/220 X 380/400/416/440 Primary Volts

120/240 Secondary Volts

50/60 Hz\*\*

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMF015XEC	NH6	23.90	25.00	28.75	190	F or W *	SCD 30
25	NMF025XEC	NH6	23.90	25.00	28.75	240	F or W *	SCD 30
37.5	NMF037XEC	NH6	23.90	25.00	28.75	300	F or W *	SCD 30
50	NMF050XEC	NH3	26.00	25.00	38.00	390	F or W *	SCD 30
75	NMF075XEC	NH3	26.00	25.00	38.00	540	F or W *	SCD 30
100	NMF100XEC	NH4	32.00	29.50	41.00	700	F	SCD 30
150	NMF150XEC		<b>CONSULT FACTORY</b>				F	SCD 30
167	NMF167XEC		<b>CONSULT FACTORY</b>				F	SCD 30

For shielded units, please add the suffix "S" to the above part numbers.

\*\*Note: Meets DOE 10 CFR Part 431 and C802.2 at 60 Hz.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note: For units smaller than 15kVA, please refer to the single phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.**

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241





## HPS Sentinel® 600 VOLT CLASS ENERGY EFFICIENT GENERAL PURPOSE DISTRIBUTION TRANSFORMER

ALUMINUM & COPPER, THREE PHASE STANDARD SPECIFICATIONS

15 to 45 kVA

75 to 750 kVA



	15 to 45 kVA	75 to 750 kVA
<b>Application</b>	Energy efficient general purpose transformers are designed for linear loads and are most frequently used for applications such as commercial buildings to supply a variety of general loads.	
<b>Efficiency</b>	Meets C802.2 efficiencies at 35% of rated load. Efficiencies are calculated under a linear load profile.	
<b>UL Listed</b>	File: E112313	File: E112313
<b>CSA Certified</b>	File: LR3902	File: LR3902
<b>Frequency</b>	60 Hz	60 Hz
<b>Insulation System</b>	220°C (150°C rise) 200°C (130°C rise) on 15 & 30kVA copper (optional 115°C and 80°C rise available)	220°C (150°C rise) (optional 115°C and 80°C rise available)
<b>Enclosure Type</b>	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12.	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12.
<b>Enclosure Finish</b>	ANSI 61 Grey, UL50	ANSI 61 Grey, UL50
<b>Neutral</b>	Neutral terminal for field connection (on applicable units).	Neutral terminal for field connection (on applicable units).
<b>Standard Primary Taps</b>	Refer to wiring diagrams for details.	Refer to wiring diagrams for details.
<b>Termination</b>	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.
<b>Conduit Knock-Outs</b>	Standard on all units (no knock-outs on Stainless Steel enclosures).	Standard on 75 kVA & 150 kVA units (no knock-outs on Stainless Steel enclosures).
<b>Impedance</b>	Typically 2.5% to 6.5%	Typically 2.5% to 6.5%
<b>Mounting</b>	Floor or wall/ceiling mounting available. Refer to selection tables for details.	Floor or wall/ceiling mounting available. Refer to selection tables for details.
<b>Seismic</b>	Seismically certified in accordance with IBC 2009; Section 1613 Earthquake Loads, for $S_{DS} \leq 2.00g$ , $z/h = 1.0$ , and $I_p = 1.5$	Seismically certified in accordance with IBC 2009; Section 1613 Earthquake Loads, for $S_{DS} \leq 2.00g$ , $z/h = 1.0$ , and $I_p = 1.5$
<b>Sound level</b>	Meets NEMA ST-20 standards. (Optional low noise units available)	Meets NEMA ST-20 standards. (Optional low noise units available)

Other voltages and kVA sizes not listed in this section are available upon request for both aluminum and copper wound units. Features as listed above may differ. Please contact customer service for details, price and availability.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241





## ALUMINUM WOUND, THREE PHASE

208 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015BB	NH5	19.40	20.20	21.50	200	F or W *	SCD 7
30	NMK030BB	NH6	23.90	25.00	28.75	280	F or W *	SCD 9
45	NMK045BB	NH6	23.90	25.00	28.75	375	F or W *	SCD 9
75	NMK075BB	NH3	26.00	25.00	38.00	540	F or W *	SCD 9
112.5	NMK112BB	NH3	26.00	25.00	38.00	775	F	SCD 9
150	NMK150BB	NH4	32.00	29.50	41.00	850	F	SCD 9
225	NMK225BB	NH4	32.00	29.50	41.00	1400	F	SCD 9
300	NMK300BB	NJ1	39.50	34.00	51.50	1700	F	SCD 9
500	NMK500BB	NJ2	48.50	38.40	59.00	2700	F	SCD 25
750	NMK750BB	NJ3	51.50	43.40	66.00	3250	F	SCD 25

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

208 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015BK	NH5	19.40	20.20	21.50	200	F or W *	SCD 40
30	NMK030BK	NH6	23.90	25.00	28.75	280	F or W *	SCD 26
45	NMK045BK	NH6	23.90	25.00	28.75	375	F or W *	SCD 26
75	NMK075BK	NH3	26.00	25.00	38.00	540	F or W *	SCD 26
112.5	NMK112BK	NH3	26.00	25.00	38.00	775	F	SCD 26
150	NMK150BK	NH4	32.00	29.50	41.00	850	F	SCD 26
225	NMK225BK	NH4	32.00	29.50	41.00	1400	F	SCD 26
300	NMK300BK	NJ1	39.50	34.00	51.50	1850	F	SCD 26
500	NMK500BK	NJ2	48.50	38.40	59.00	2700	F	SCD 23
750	NMK750BK	NJ3	51.50	43.40	66.00	3250	F	SCD 40

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

240 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015DB	NH5	19.40	20.20	21.50	200	F or W *	SCD 25
30	NMK030DB	NH6	23.90	25.00	28.75	280	F or W *	SCD 9
45	NMK045DB	NH6	23.90	25.00	28.75	375	F or W *	SCD 9
75	NMK075DB	NH3	26.00	25.00	38.00	540	F or W *	SCD 9
112.5	NMK112DB	NH3	26.00	25.00	38.00	775	F	SCD 9
150	NMK150DB	NH4	32.00	29.50	41.00	850	F	SCD 9
225	NMK225DB	NH4	32.00	29.50	41.00	1400	F	SCD 9
300	NMK300DB	NJ1	39.50	34.00	51.50	1700	F	SCD 9
500	NMK500DB	NJ2	48.50	38.40	59.00	2700	F	NO TAPS
750	NMK750DB	NJ3	51.50	43.40	66.00	3250	F	NO TAPS

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note: For units smaller than 15kVA, please refer to the three phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.**

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241



## ALUMINUM WOUND, THREE PHASE



240 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015DK	NH5	19.40	20.20	21.50	200	F or W *	SCD 40
30	NMK030DK	NH6	23.90	25.00	28.75	280	F or W *	SCD 26
45	NMK045DK	NH6	23.90	25.00	28.75	375	F or W *	SCD 26
75	NMK075DK	NH3	26.00	25.00	38.00	540	F or W *	SCD 26
112.5	NMK112DK	NH3	26.00	25.00	38.00	775	F	SCD 26
150	NMK150DK	NH4	32.00	29.50	41.00	850	F	SCD 26
225	NMK225DK	NH4	32.00	29.50	41.00	1400	F	SCD 26
300	NMK300DK	NJ1	39.50	34.00	51.50	1700	F	SCD 26
500	NMK500DK	NJ2	48.50	38.40	59.00	2700	F	NO TAPS
750	NMK750DK	NJ3	51.50	43.40	66.00	3250	F	NO TAPS

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015KB	NH5	19.40	20.20	21.50	200	F or W *	SCD 7
30	NMK030KB	NH6	23.90	25.00	28.75	280	F or W *	SCD 19
45	NMK045KB	NH6	23.90	25.00	28.75	375	F or W *	SCD 19
75	NMK075KB	NH3	26.00	25.00	38.00	540	F or W *	SCD 19
112.5	NMK112KB	NH3	26.00	25.00	38.00	775	F	SCD 19
150	NMK150KB	NH4	32.00	29.50	41.00	850	F	SCD 19
225	NMK225KB	NH4	32.00	29.50	41.00	1400	F	SCD 19
300	NMK300KB	NJ1	39.50	34.00	51.50	1400	F	SCD 19
500	NMK500KB	NJ2	48.50	38.40	59.00	2150	F	SCD 20
750	NMK750KB	NJ3	51.50	43.40	66.00	3200	F	SCD 20

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Delta Primary Volts

240 Delta/120 CT Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015KD	NH5	19.40	20.20	21.50	200	F or W *	SCD 13
30	NMK030KD	NH6	23.90	25.00	28.75	280	F or W *	SCD 21
45	NMK045KD	NH6	23.90	25.00	28.75	375	F or W *	SCD 21
75	NMK075KD	NH3	26.00	25.00	38.00	540	F or W *	SCD 21
112.5	NMK112KD	NH3	26.00	25.00	38.00	775	F	SCD 21
150	NMK150KD	NH4	32.00	29.50	41.00	850	F	SCD 21
225	NMK225KD	NH4	32.00	29.50	41.00	1400	F	SCD 21
300	NMK300KD	NJ1	39.50	34.00	51.50	1700	F	SCD 21
500	NMK500KD	NJ2	48.50	38.40	59.00	2700	F	SCD 22
750	NMK750KD	NJ3	51.50	43.40	66.00	3250	F	SCD 22

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note:** For units smaller than 15kVA, please refer to the three phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241



## ALUMINUM WOUND, THREE PHASE



480 Delta Primary Volts

380Y/220, 400Y/231, 416Y/240, 430Y/248 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015KY	NH6	23.9	25	28.75	170	F or W*	SCD 52
30	NMK030KY	NH6	23.9	25	28.75	290	F or W*	SCD 52
45	NMK045KY	NH6	23.9	25	28.75	435	F or W*	SCD 52
75	NMK075KY	NH3	26	25	38	550	F	SCD 52
112.5	NMK112KY	NH3	26	25	38	755	F	SCD 52

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015KK	NH5	19.40	20.20	21.50	200	F or W *	SCD 25
30	NMK030KK	NH6	23.90	25.00	28.75	280	F or W *	SCD 19
45	NMK045KK	NH6	23.90	25.00	28.75	375	F or W *	SCD 19
75	NMK075KK	NH3	26.00	25.00	38.00	540	F or W *	SCD 19
112.5	NMK112KK	NH3	26.00	25.00	38.00	775	F	SCD 19
150	NMK150KK	NH4	32.00	29.50	41.00	850	F	SCD 19
225	NMK225KK	NH4	32.00	29.50	41.00	1400	F	SCD 19
300	NMK300KK	NJ1	39.50	34.00	51.50	1700	F	SCD 19
500	NMK500KK	NJ2	48.50	38.40	59.00	2700	F	SCD 20
750	NMK750KK	NJ3	51.50	43.40	66.00	3250	F	SCD 20

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015PB	NH5	19.40	20.20	21.50	200	F or W *	SCD 9
30	NMK030PB	NH6	23.90	25.00	28.75	280	F or W *	SCD 9
45	NMK045PB	NH6	23.90	25.00	28.75	375	F or W *	SCD 9
75	NMK075PB	NH3	26.00	25.00	38.00	540	F or W *	SCD 9
112.5	NMK112PB	NH3	26.00	25.00	38.00	775	F	SCD 9
150	NMK150PB	NH4	32.00	29.50	41.00	850	F	SCD 9
225	NMK225PB	NH4	32.00	29.50	41.00	1400	F	SCD 9
300	NMK300PB	NJ1	39.50	34.00	51.50	1700	F	SCD 9
500	NMK500PB	NJ2	48.50	38.40	59.00	2200	F	SCD 10
750	NMK750PB	NJ3	51.50	43.40	66.00	3250	F	SCD 10

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note: For units smaller than 15kVA, please refer to the three phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.**

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241





## ALUMINUM WOUND, THREE PHASE

600Y Primary Volts

240 Delta Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015PD	NH5	19.40	20.20	21.50	200	F or W *	SCD 16
30	NMK030PD	NH6	23.90	25.00	28.75	280	F or W *	SCD 16
45	NMK045PD	NH6	23.90	25.00	28.75	375	F or W *	SCD 16
75	NMK075PD	NH3	26.00	25.00	38.00	540	F or W *	SCD 16
112.5	NMK112PD	NH3	26.00	25.00	38.00	775	F	SCD 16
150	NMK150PD	NH4	32.00	29.50	41.00	850	F	SCD 16
225	NMK225PD	NH4	32.00	29.50	41.00	1400	F	SCD 16
300	NMK300PD	NJ1	39.50	34.00	51.50	1700	F	SCD 16
500	NMK500PD	NJ2	48.50	38.40	59.00	2700	F	SCD 29
750	NMK750PD	NJ3	51.50	43.40	66.00	3250	F	SCD 29

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015PK	NH5	19.40	20.20	21.50	200	F or W *	SCD 9
30	NMK030PK	NH6	23.90	25.00	28.75	280	F or W *	SCD 9
45	NMK045PK	NH6	23.90	25.00	28.75	375	F or W *	SCD 9
75	NMK075PK	NH3	26.00	25.00	38.00	540	F or W *	SCD 9
112.5	NMK112PK	NH3	26.00	25.00	38.00	775	F	SCD 9
150	NMK150PK	NH4	32.00	29.50	41.00	850	F	SCD 9
225	NMK225PK	NH4	32.00	29.50	41.00	1400	F	SCD 9
300	NMK300PK	NJ1	39.50	34.00	51.50	1700	F	SCD 9
500	NMK500PK	NJ2	48.50	38.40	59.00	2700	F	SCD 10
750	NMK750PK	NJ3	51.50	43.40	66.00	3250	F	SCD 10

For shielded units, please add the suffix "S" to the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

## COPPER WOUND, THREE PHASE

208 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015BBCN	NH5	19.40	20.20	21.50	200	F or W *	SCD 7
30	NMK030BBC	NH6	23.90	25.00	28.75	300	F or W *	SCD 9
45	NMK045BBC	NH6	23.90	25.00	28.75	400	F or W *	SCD 9
75	NMK075BBC	NH3	26.00	25.00	38.00	600	F or W *	SCD 9
112.5	NMK112BBC	NH3	26.00	25.00	38.00	850	F	SCD 9
150	NMK150BBC	NH4	32.00	29.50	41.00	975	F	SCD 9
225	NMK225BBC	NH4	32.00	29.50	41.00	1850	F	SCD 9
300	NMK300BBC	NJ1	39.50	34.00	51.50	1850	F	SCD 9
500	NMK500BBC	NJ2	48.50	38.40	59.00	2800	F	SCD 25
750	NMK750BBC	NJ3	51.50	43.40	66.00	3550	F	SCD 25

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note:** For units smaller than 15kVA, please refer to the three phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241



## COPPER WOUND, THREE PHASE



208 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015BKC	NH5	19.40	20.20	21.50	200	F or W *	SCD 40
30	NMK030BKC	NH6	23.90	25.00	28.75	300	F or W *	SCD 26
45	NMK045BKC	NH6	23.90	25.00	28.75	400	F or W *	SCD 26
75	NMK075BKC	NH3	26.00	25.00	38.00	600	F or W *	SCD 26
112.5	NMK112BKC	NH3	26.00	25.00	38.00	850	F	SCD 26
150	NMK150BKC	NH4	32.00	29.50	41.00	975	F	SCD 26
225	NMK225BKC	NH4	32.00	29.50	41.00	1500	F	SCD 26
300	NMK300BKC	NJ1	39.50	34.00	51.50	1850	F	SCD 26
500	NMK500BKC	NJ2	48.50	38.40	59.00	2800	F	SCD 23
750	NMK750BKC	NJ3	51.50	43.40	66.00	3550	F	SCD 23

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

240 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015DBC	NH5	19.40	20.20	21.50	200	F or W *	SCD 40
30	NMK030DBC	NH6	23.90	25.00	28.75	300	F or W *	SCD 9
45	NMK045DBC	NH6	23.90	25.00	28.75	400	F or W *	SCD 9
75	NMK075DBC	NH3	26.00	25.00	38.00	600	F or W *	SCD 9
112.5	NMK112DBC	NH3	26.00	25.00	38.00	850	F	SCD 9
150	NMK150DBC	NH4	32.00	29.50	41.00	975	F	SCD 9
225	NMK225DBC	NH4	32.00	29.50	41.00	1500	F	SCD 9
300	NMK300DBC	NJ1	39.50	34.00	51.50	1850	F	SCD 9
500	NMK500DBC	NJ2	48.50	38.40	59.00	2800	F	NO TAPS
750	NMK750DBC	NJ3	51.50	43.40	66.00	3550	F	NO TAPS

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

240 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015DKC	NH5	19.40	20.20	21.50	200	F or W *	SCD 40
30	NMK030DKC	NH6	23.90	25.00	28.75	300	F or W *	SCD 26
45	NMK045DKC	NH6	23.90	25.00	28.75	400	F or W *	SCD 26
75	NMK075DKC	NH3	26.00	25.00	38.00	600	F or W *	SCD 26
112.5	NMK112DKC	NH3	26.00	25.00	38.00	850	F	SCD 26
150	NMK150DKC	NH4	32.00	29.50	41.00	975	F	SCD 26
225	NMK225DKC	NH4	32.00	29.50	41.00	1500	F	SCD 26
300	NMK300DKC	NJ1	39.50	34.00	51.50	1850	F	SCD 26
500	NMK500DKC	NJ2	48.50	38.40	59.00	2800	F	NO TAPS
750	NMK750DKC	NJ3	51.50	43.40	66.00	3550	F	NO TAPS

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note: For units smaller than 15kVA, please refer to the three phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.**

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241



## COPPER WOUND, THREE PHASE



480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015KBCN	NH5	19.40	20.20	21.50	200	F or W *	SCD 7
30	NMK030KBCN	NH6	23.90	25.00	28.75	300	F or W *	SCD 19
45	NMK045KBC	NH6	23.90	25.00	28.75	400	F or W *	SCD 19
75	NMK075KBC	NH3	26.00	25.00	38.00	600	F or W *	SCD 19
112.5	NMK112KBC	NH3	26.00	25.00	38.00	850	F	SCD 19
150	NMK150KBC	NH4	32.00	29.50	41.00	975	F	SCD 19
225	NMK225KBC	NH4	32.00	29.50	41.00	1500	F	SCD 19
300	NMK300KBC	NJ1	39.50	34.00	51.50	1850	F	SCD 19
500	NMK500KBC	NJ2	48.50	38.40	59.00	2500	F	SCD 19
750	NMK750KBC	NJ3	51.50	43.40	66.00	3300	F	SCD 19

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Delta Primary Volts

240 Delta/120 CT Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015KDCN	NH5	19.40	20.20	21.50	200	F or W *	SCD 13
30	NMK030KDCN	NH6	23.90	25.00	28.75	300	F or W *	SCD 21
45	NMK045KDC	NH6	23.90	25.00	28.75	400	F or W *	SCD 21
75	NMK075KDC	NH3	26.00	25.00	38.00	600	F or W *	SCD 21
112.5	NMK112KDC	NH3	26.00	25.00	38.00	850	F	SCD 21
150	NMK150KDC	NH4	32.00	29.50	41.00	975	F	SCD 21
225	NMK225KDC	NH4	32.00	29.50	41.00	1500	F	SCD 21
300	NMK300KDC	NJ1	39.50	34.00	51.50	1850	F	SCD 21
500	NMK500KDC	NJ2	48.50	38.40	59.00	2800	F	SCD 22
750	NMK750KDC	NJ3	51.50	43.40	66.00	3550	F	SCD 22

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMK015KKCN	NH5	19.40	20.20	21.50	200	F or W *	SCD 25
30	NMK030KKCN	NH6	23.90	25.00	28.75	300	F or W *	SCD 19
45	NMK045KKC	NH6	23.90	25.00	28.75	400	F or W *	SCD 19
75	NMK075KKC	NH3	26.00	25.00	38.00	600	F or W *	SCD 19
112.5	NMK112KKC	NH3	26.00	25.00	38.00	850	F	SCD 19
150	NMK150KKC	NH4	32.00	29.50	41.00	975	F	SCD 19
225	NMK225KKC	NH4	32.00	29.50	41.00	1500	F	SCD 19
300	NMK300KKC	NJ1	39.50	34.00	51.50	1850	F	SCD 19
500	NMK500KKC	NJ2	48.50	38.40	59.00	2800	F	SCD 20
750	NMK750KKC	NJ3	51.50	43.40	66.00	3550	F	SCD 20

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note:** For units smaller than 15kVA, please refer to the three phase encapsulated units in Section 8. Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241



## COPPER WOUND, THREE PHASE



600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	<b>NMK015PBCN</b>	NH5	19.40	20.20	21.50	200	F or W *	SCD 9
30	<b>NMK030PBCN</b>	NH6	23.90	25.00	28.75	300	F or W *	SCD 9
45	<b>NMK045PBC</b>	NH6	23.90	25.00	28.75	400	F or W *	SCD 9
75	<b>NMK075PBC</b>	NH3	26.00	25.00	38.00	600	F or W *	SCD 9
112.5	<b>NMK112PBC</b>	NH3	26.00	25.00	38.00	850	F	SCD 9
150	<b>NMK150PBC</b>	NH4	32.00	29.50	41.00	975	F	SCD 9
225	<b>NMK225PBC</b>	NH4	32.00	29.50	41.00	1500	F	SCD 9
300	<b>NMK300PBC</b>	NJ1	39.50	34.00	51.50	1850	F	SCD 9
500	<b>NMK500PBC</b>	NJ2	48.50	38.40	59.00	2500	F	SCD 10
750	<b>NMK750PBC</b>	NJ3	51.50	43.40	66.00	3550	F	SCD 10

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600Y Primary Volts

240 Delta Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	<b>NMK015PDCN</b>	NH5	19.40	20.20	21.50	200	F or W *	SCD 16
30	<b>NMK030PDC</b>	NH6	23.90	25.00	28.75	300	F or W *	SCD 16
45	<b>NMK045PDC</b>	NH6	23.90	25.00	28.75	400	F or W *	SCD 16
75	<b>NMK075PDC</b>	NH3	26.00	25.00	38.00	600	F or W *	SCD 16
112.5	<b>NMK112PDC</b>	NH3	26.00	25.00	38.00	850	F	SCD 16
150	<b>NMK150PDC</b>	NH4	32.00	29.50	41.00	975	F	SCD 16
225	<b>NMK225PDC</b>	NH4	32.00	29.50	41.00	1500	F	SCD 16
300	<b>NMK300PDC</b>	NJ1	39.50	34.00	51.50	1850	F	SCD 16
500	<b>NMK500PDC</b>	NJ2	48.50	38.40	59.00	2800	F	SCD 29
750	<b>NMK750PDC</b>	NJ3	51.50	43.40	66.00	3550	F	SCD 29

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	<b>NMK015PKCN</b>	NH5	19.40	20.20	21.50	200	F or W *	SCD 9
30	<b>NMK030PKCN</b>	NH6	23.90	25.00	28.75	300	F or W *	SCD 9
45	<b>NMK045PKC</b>	NH6	23.90	25.00	28.75	400	F or W *	SCD 9
75	<b>NMK075PKC</b>	NH3	26.00	25.00	38.00	600	F or W *	SCD 9
112.5	<b>NMK112PKC</b>	NH3	26.00	25.00	38.00	850	F	SCD 9
150	<b>NMK150PKC</b>	NH4	32.00	29.50	41.00	975	F	SCD 9
225	<b>NMK225PKC</b>	NH4	32.00	29.50	41.00	1500	F	SCD 9
300	<b>NMK300PKC</b>	NJ1	39.50	34.00	51.50	1850	F	SCD 9
500	<b>NMK500PKC</b>	NJ2	48.50	38.40	59.00	2800	F	SCD 10
750	<b>NMK750PKC</b>	NJ3	51.50	43.40	66.00	3550	F	SCD 10

For shielded units, please replace the suffix "C" with "K" on the above part numbers.

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

**Note: For units smaller than 15kVA, please refer to the three phase encapsulated units in Section 8. Products listed on this page are available as "CE Mark" products. Please consult our sales office.**

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

FOR TERMINATION DETAILS SEE PAGE 242

FOR ACCESSORIES SEE PAGES 238 TO 241





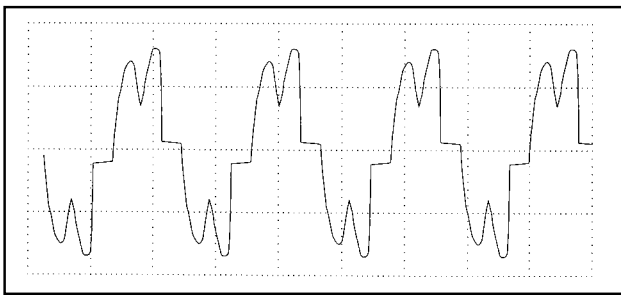
# HPS Synergy® Series

## 600V CLASS ENERGY EFFICIENT K-FACTOR TRANSFORMER

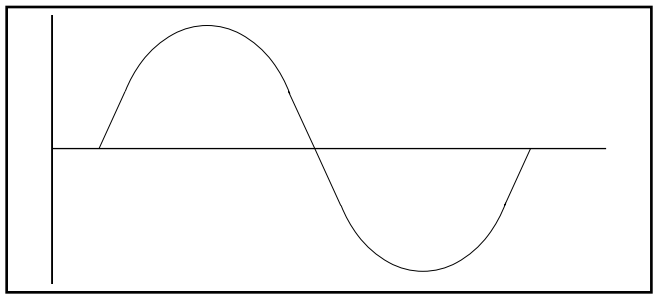
The use of electronic equipment has continued to proliferate in both offices and industrial plants. These electronic devices are powered by either switching power supplies or a rectifier circuit. Examples of these devices include computers, fax machines, copiers, printers, cash registers, UPS's and solid-state ballasts. They all contribute to the distortion of the current waveform and the generation of harmonics.

### HARMONICS AND NON-LINEAR LOADS

Harmonics, in an electrical system, are currents created by non-linear loads that generate non-sinusoidal (non-linear) current waveforms. These current and voltage waveforms operate on frequencies that are in multiples of the fundamental 60 hertz frequency. That is, the fundamental frequency is at 60 hertz, the 2<sup>nd</sup> harmonic is at 120 hertz frequency (60 x 2), the 3<sup>rd</sup> at 180 hertz, and so forth.



An example of harmonics



An example of a perfect waveform

Harmonics are principally the by-product of switch-mode power supply technology where AC is rectified to DC, and back again. In the process, a capacitor is charged in the first half-cycle and then discharged in the next half-cycle in supplying current to the load. This cycle is repeated. This action of recharging causes AC current to flow only during a portion of the AC voltage wave in abrupt pulses. These abrupt pulses distort the fundamental wave shape causing distortion to the various harmonic frequencies.

### Non-Linear Loads

Today, non-linear loads make up the majority of all electrical demand. Rectified input, switching power supplies and electronic lighting ballasts are the most common single phase non-linear loads. Harmonic currents and voltages produced by single phase, non-linear loads which are connected phase-to-neutral in a three phase four wire system, are third order, zero sequence harmonics (the third harmonic and its odd multiples - 3<sup>rd</sup>, 9<sup>th</sup>, 15<sup>th</sup>, 21<sup>st</sup>, etc., phasors displaced by zero degrees). These third order, zero sequence harmonic currents do not cancel, but add up arithmetically on the neutral bus, creating a primary source of excessive neutral current.

# HPS Synergy® Series

## 600V CLASS ENERGY EFFICIENT K-FACTOR TRANSFORMER continued...

Energy efficient general purpose distribution transformers, most frequently used for applications such as commercial or institutional buildings, will supply widely varied single phase loads. Energy Efficient K-Factor transformers are energy efficient general purpose transformers, but are designed to tolerate the harmonic distortion associated with these loads.

Harmonics indicate their presence in a number of ways:

- Overheating
- Device malfunctions
- Telephone interference
- Equipment vibration
- Breakers tripping

### Harmonics For A 60Hz System

In a 60 Hz power system, the fundamental and harmonic frequencies are outlined in the table below.

Fundamental	60 Hz
2nd Harmonic	120 Hz
3rd Harmonic	180 Hz
4th Harmonic	240 Hz
5th Harmonic	300 Hz
6th Harmonic	360 Hz
7th Harmonic	420 Hz
8th Harmonic	480 Hz
9th Harmonic	540 Hz
10th Harmonic	600 Hz
11th Harmonic	660 Hz
12th Harmonic	720 Hz
13th Harmonic	780 Hz

14th Harmonic	840 Hz
15th Harmonic	900 Hz
16th Harmonic	960 Hz
17th Harmonic	1020 Hz
18th Harmonic	1080 Hz
19th Harmonic	1140 Hz
20th Harmonic	1200 Hz
21st Harmonic	1260 Hz
22nd Harmonic	1320 Hz
23rd Harmonic	1380 Hz
24th Harmonic	1440 Hz
25th Harmonic	1500 Hz

### K-Factor

K-factor is defined as a ratio between the additional losses due to harmonics and the eddy current losses at 60Hz. It is used to specify transformers for non-linear loads. Transformers with a rated K-factor of 4, 7, 13, 20 and 30 are available. For balanced loading, a transformer with a K-factor of 4 should be specified when no more than 50% of the total load is non-linear. A transformer with K-factor 13 should be specified when 100% of the load is non-linear.



## HPS Synergy®

### 600V CLASS ENERGY EFFICIENT K-FACTOR TRANSFORMERS ALUMINUM & COPPER, THREE PHASE STANDARD SPECIFICATIONS



15 to 45 kVA



75 to 750 kVA



	15 to 45 kVA	75 to 750 kVA
<b>Application</b>	Most frequently used for applications such as commercial or institutional buildings, will supply widely varied single phase loads	
<b>Efficiency</b>	Meets C802.2 efficiencies at 35% of rated load. Efficiencies are calculated under a linear load profile.	
<b>UL Listed</b>	File: E112313	File: E112313
<b>CSA Certified</b>	File: LR3902	File: LR3902
<b>Frequency</b>	60 Hz	60 Hz
<b>Insulation System</b>	220°C (150°C rise) 200°C (130°C rise) on 15 & 30kVA copper (optional 115°C and 80°C rise available)	220°C (150°C rise) (optional 115°C and 80°C rise available)
<b>Electrostatic Shield</b>	60dB Common Mode - typical	60dB Common Mode - typical
<b>Enclosure Type</b>	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12.	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12.
<b>Enclosure Finish</b>	ANSI 61 Grey, UL50	ANSI 61 Grey, UL50
<b>Neutral</b>	Neutral terminal for field connection (on applicable units).	Neutral terminal for field connection (on applicable units).
<b>Standard Primary Taps</b>	Refer to wiring diagrams for details.	Refer to wiring diagrams for details.
<b>Termination</b>	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.
<b>Conduit Knock-Outs</b>	Standard on all units (no knock-outs on Stainless Steel enclosures).	Standard on 75 kVA & 225 kVA units (no knock-outs on Stainless Steel enclosures).
<b>Impedance</b>	Typically 2.5% to 6.5%	Typically 2.5% to 6.5%
<b>Mounting</b>	Floor or wall/ceiling mounting available. Refer to selection tables for details.	Floor or wall/ceiling mounting available. Refer to selection tables for details.
<b>Sound level</b>	Meets NEMA ST-20 standards. (Optional low noise units available)	Meets NEMA ST-20 standards. (Optional low noise units available)

Other voltages and kVA sizes not listed in this section are available upon request for both aluminum and copper wound units. Features as listed above may differ. Please contact customer service for details, price and availability.



## ALUMINUM WOUND, SHIELDED, THREE PHASE K-FACTOR 4



480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT04K015KBS	NH5	19.40	20.20	21.50	190	F or W *	SCD 7
30	NMT04K030KBS	NH6	23.90	25.00	28.75	330	F or W *	SCD 19
45	NMT04K045KBS	NH6	23.90	25.00	28.75	430	F or W *	SCD 19
75	NMT04K075KBS	NH3	26.00	25.00	38.00	640	F or W *	SCD 19
112.5	NMT04K112KBS	NH3	26.00	25.00	38.00	920	F	SCD 19
150	NMT04K150KBS	NH4	32.00	29.50	41.00	1050	F	SCD 19
225	NMT04K225KBS	NH4	32.00	29.50	41.00	1575	F	SCD 19
300	NMT04K300KBS	NJ1	39.50	34.00	51.50	1830	F	SCD 19
500	NMT04K500KBS	NJ2	48.50	38.40	59.00	2150	F	SCD 20
750	NMT04K750KBS	NJ3	51.50	43.40	66.00	3375	F	SCD 20

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT04K015PBS	NH5	19.40	20.20	21.50	190	F or W *	SCD 9
30	NMT04K030PBS	NH6	23.90	25.00	28.75	330	F or W *	SCD 9
45	NMT04K045PBS	NH6	23.90	25.00	28.75	430	F or W *	SCD 9
75	NMT04K075PBS	NH3	26.00	25.00	38.00	640	F or W *	SCD 9
112.5	NMT04K112PBS	NH3	26.00	25.00	38.00	920	F	SCD 9
150	NMT04K150PBS	NH4	32.00	29.50	41.00	1050	F	SCD 9
225	NMT04K225PBS	NH4	32.00	29.50	41.00	1575	F	SCD 9
300	NMT04K300PBS	NJ1	39.50	34.00	51.50	1830	F	SCD 9
500	NMT04K500PBS	NJ2	48.50	38.40	59.00	3000	F	SCD 10
750	NMT04K750PBS	NJ3	51.50	43.40	66.00	3375	F	SCD 10

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

## COPPER WOUND, SHIELDED, THREE PHASE K-FACTOR 4

480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT04K015KBKF	NH5	19.40	20.20	21.50	210	F or W *	SCD 7
30	NMT04K030KBKN	NH6	23.90	25.00	28.75	350	F or W *	SCD 19
45	NMT04K045KBK	NH6	23.90	25.00	28.75	460	F or W *	SCD 19
75	NMT04K075KBK	NH3	26.00	25.00	38.00	665	F or W *	SCD 19
112.5	NMT04K112KBK	NH3	26.00	25.00	38.00	945	F	SCD 19
150	NMT04K150KBK	NH4	32.00	29.50	41.00	1070	F	SCD 19
225	NMT04K225KBK	NH4	32.00	29.50	41.00	1725	F	SCD 19
300	NMT04K300KBK	NJ1	39.50	34.00	51.50	1925	F	SCD 19
500	NMT04K500KBK	NJ2	48.50	38.40	59.00	2500	F	SCD 20
750	NMT04K750KBK	NJ3	51.50	43.40	66.00	3300	F	SCD 20

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT04K015PBKF	NH5	19.40	20.20	21.50	210	F or W *	SCD 9
30	NMT04K030PBKN	NH6	23.90	25.00	28.75	350	F or W *	SCD 9
45	NMT04K045PBK	NH6	23.90	25.00	28.75	460	F or W *	SCD 19
75	NMT04K075PBK	NH3	26.00	25.00	38.00	665	F or W *	SCD 9
112.5	NMT04K112PBK	NH3	26.00	25.00	38.00	945	F	SCD 9
150	NMT04K150PBK	NH4	32.00	29.50	41.00	1070	F	SCD 9
225	NMT04K225PBK	NJ1	39.50	34.00	51.50	1725	F	SCD 9
300	NMT04K300PBK	NJ1	39.50	34.00	51.50	1925	F	SCD 9
500	NMT04K500PBK	NJ2	48.50	38.40	59.00	2925	F	SCD 10
750	NMT04K750PBK	NJ3	51.50	43.40	66.00	3375	F	SCD 10

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



## ALUMINUM WOUND, SHIELDED, THREE PHASE K-FACTOR 13



480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT13K015KBS	NH6	23.90	25.00	28.75	190	F or W *	SCD 19
30	NMT13K030KBS	NH6	23.90	25.00	28.75	340	F or W *	SCD 19
45	NMT13K045KBS	NH6	23.90	25.00	28.75	410	F or W *	SCD 19
75	NMT13K075KBS	NH3	26.00	25.00	38.00	675	F or W *	SCD 19
112.5	NMT13K112KBS	NH4	32.00	29.50	41.00	920	F	SCD 19
150	NMT13K150KBS	NH4	32.00	29.50	41.00	1050	F	SCD 19
225	NMT13K225KBS	NJ1	39.50	34.00	51.50	1600	F	SCD 19
300	NMT13K300KBS	NJ1	39.50	34.00	51.50	1830	F	SCD 20
500	NMT13K500KBS	NJ3	51.50	43.40	66.00	3000	F	SCD 20
750	NMT13K750KBS	NJ3	51.50	43.40	66.00	4300	F	SCD 10

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT13K015PBS	NH5	19.40	20.20	21.50	190	F or W *	SCD 9
30	NMT13K030PBS	NH6	23.90	25.00	28.75	340	F or W *	SCD 9
45	NMT13K045PBS	NH6	23.90	25.00	28.75	410	F or W *	SCD 9
75	NMT13K075PBS	NH3	26.00	25.00	38.00	675	F or W *	SCD 9
112.5	NMT13K112PBS	NH4	32.00	29.50	41.00	920	F	SCD 9
150	NMT13K150PBS	NH4	32.00	29.50	41.00	1050	F	SCD 9
225	NMT13K225PBS	NJ1	39.50	34.00	51.50	1600	F	SCD 9
300	NMT13K300PBS	NJ1	39.50	34.00	51.50	1900	F	SCD 9
500	NMT13K500PBS	NJ3	51.50	43.40	66.00	3000	F	SCD 10
750	NMT13K750PBS	NJ3	51.50	43.40	66.00	4300	F	SCD 10

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

## COPPER WOUND, SHIELDED, THREE PHASE K-FACTOR 13

480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT13K015KBKF	NH6	23.90	25.00	28.75	280	F or W *	SCD 19
30	NMT13K030KBKN	NH6	23.90	25.00	28.75	350	F or W *	SCD 19
45	NMT13K045KBK	NH6	23.90	25.00	28.75	470	F or W *	SCD 19
75	NMT13K075KBK	NH3	26.00	25.00	38.00	680	F or W *	SCD 19
112.5	NMT13K112KBK	NH4	32.00	29.50	41.00	970	F	SCD 19
150	NMT13K150KBK	NH4	32.00	29.50	41.00	1200	F	SCD 19
225	NMT13K225KBK	NJ1	39.50	34.00	51.50	1900	F	SCD 19
300	NMT13K300KBK	NJ1	39.50	34.00	51.50	2150	F	SCD 19
500	NMT13K500KBK	NJ2	51.50	43.40	66.00	3200	F	SCD 20
750	NMT13K750KBK	NJ3	51.50	43.40	66.00	4500	F	SCD 20

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT13K015PBKF	NH6	23.90	25.00	28.75	295	F or W *	SCD 9
30	NMT13K030PBKN	NH6	23.90	25.00	28.75	350	F or W *	SCD 9
45	NMT13K045PBK	NH6	23.90	25.00	28.75	480	F or W *	SCD 19
75	NMT13K075PBK	NH3	26.00	25.00	38.00	700	F or W *	SCD 9
112.5	NMT13K112PBK	NH4	32.00	29.50	41.00	970	F	SCD 9
150	NMT13K150PBK	NH4	32.00	29.50	41.00	1200	F	SCD 9
225	NMT13K225PBK	NJ1	39.50	34.00	51.50	1900	F	SCD 9
300	NMT13K300PBK	NJ1	39.50	34.00	51.50	2400	F	SCD 9
500	NMT13K500PBK	NJ2	51.50	43.40	66.00	3200	F	SCD 10
750	NMT13K750PBK	NJ3	51.50	43.40	66.00	4500	F	SCD 10

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



## ALUMINUM WOUND, SHIELDED, THREE PHASE K-FACTOR 20



480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT20K015KBS	NH6	23.90	25.00	28.75	275	F or W *	SCD 19
30	NMT20K030KBS	NH6	23.90	25.00	28.75	365	F or W *	SCD 19
45	NMT20K045KBS	NH3	26.00	25.00	38.00	565	F or W *	SCD 19
75	NMT20K075KBS	NH3	26.00	25.00	38.00	730	F or W *	SCD 19
112.5	NMT20K112KBS	NH4	32.00	29.50	41.00	950	F	SCD 19
150	NMT20K150KBS	NH4	32.00	29.50	41.00	1400	F	SCD 19
225	NMT20K225KBS	NJ1	39.50	34.00	51.50	1900	F	SCD 19
300	NMT20K300KBS	NJ2	48.50	38.40	59.00	2400	F	SCD 20
500	NMT20K500KBS	NJ3	51.50	43.40	66.00	3600	F	SCD 20
750	NMT20K750KBS		<b>CONSULT FACTORY</b>					

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT20K015PBS	NH6	23.90	25.00	28.75	275	F or W *	SCD 9
30	NMT20K030PBS	NH6	23.90	25.00	28.75	365	F or W *	SCD 9
45	NMT20K045PBS	NH3	26.00	25.00	38.00	565	F or W *	SCD 9
75	NMT20K075PBS	NH3	26.00	25.00	38.00	730	F or W *	SCD 9
112.5	NMT20K112PBS	NH4	32.00	29.50	41.00	950	F	SCD 9
150	NMT20K150PBS	NH4	32.00	29.50	41.00	1400	F	SCD 9
225	NMT20K225PBS	NJ1	39.50	34.00	51.50	1900	F	SCD 9
300	NMT20K300PBS	NJ2	48.50	38.40	59.00	2400	F	SCD 10
500	NMT20K500PBS	NJ3	51.50	43.40	66.00	3600	F	SCD 10
750	NMT20K750PBS		<b>CONSULT FACTORY</b>					

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

## COPPER WOUND, SHIELDED, THREE PHASE K-FACTOR 20

480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT20K015KBKF	NH6	23.90	25.00	28.75	275	F or W *	SCD 19
30	NMT20K030KBKN	NH6	23.90	25.00	28.75	440	F or W *	SCD 19
45	NMT20K045KBK	NH3	26.00	25.00	38.00	700	F or W *	SCD 19
75	NMT20K075KBK	NH3	26.00	25.00	38.00	860	F or W *	SCD 19
112.5	NMT20K112KBK	NH4	32.00	29.50	41.00	1150	F	SCD 19
150	NMT20K150KBK	NH4	32.00	29.50	41.00	1600	F	SCD 19
225	NMT20K225KBK	NJ1	39.50	34.00	51.50	2100	F	SCD 19
300	NMT20K300KBK	NJ2	48.50	38.40	59.00	2600	F	SCD 20
500	NMT20K500KBK	NJ3	51.50	43.40	66.00	3800	F	SCD 20
750	NMT20K750KBK		<b>CONSULT FACTORY</b>					

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	NMT20K015PBKF	NH6	23.90	25.00	28.75	275	F or W *	SCD 9
30	NMT20K030PBKN	NH6	23.90	25.00	28.75	440	F or W *	SCD 9
45	NMT20K045PBK	NH3	26.00	25.00	38.00	700	F or W *	SCD 9
75	NMT20K075PBK	NH3	26.00	25.00	38.00	860	F or W *	SCD 9
112.5	NMT20K112PBK	NH4	32.00	29.50	41.00	1150	F	SCD 9
150	NMT20K150PBK	NH4	32.00	29.50	41.00	1600	F	SCD 9
225	NMT20K225PBK	NJ1	39.50	34.00	51.50	2100	F	SCD 9
300	NMT20K300PBK	NJ2	48.50	38.40	59.00	2600	F	SCD 10
500	NMT20K500PBK	NJ3	51.50	43.40	66.00	3800	F	SCD 10
750	NMT20K750PBK		<b>CONSULT FACTORY</b>					

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED. REFER TO PAGES 238 TO 239 FOR DETAILS.

Products listed on this page are available as 'CE Mark' products. Please consult our sales office.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

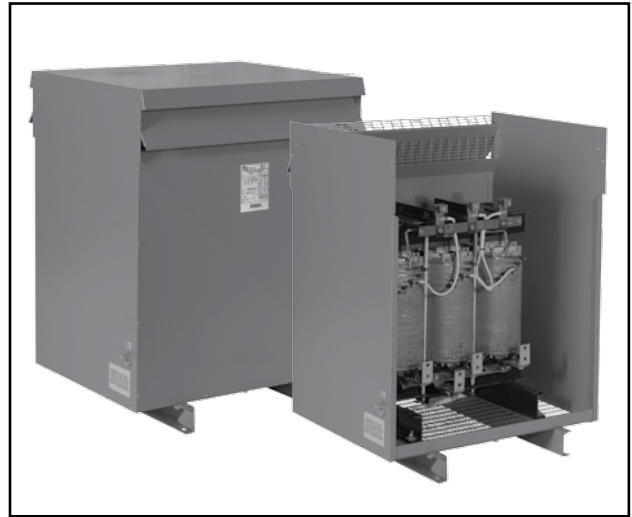


# HPS CENTURION® Series

## 600V CLASS HARMONIC MITIGATING TRANSFORMERS

The HPS Centurion Energy Efficient, Harmonic Mitigating Transformers with zero sequence flux cancellation technology is specifically designed to treat the harmonics generated by computer equipment and other non-linear, power electronic loads.

Harmonic mitigating transformers are superior to K-Rated and conventional transformers in reducing voltage distortion (flat-topping) and power losses due to current harmonics created by single-phase, non-linear loads such as computer equipment. Secondary windings are designed to cancel zero sequence fluxes and eliminate primary winding circulating currents. They treat zero sequence harmonics (3rd, 9th and 15th) within the secondary windings and 5th and 7th harmonics upstream with an appropriate phase shift.



### Dual Output Option

Dual output, phase shifting HMT provides extremely low output voltage distortion and input current distortion even under severe non-linear loading conditions (Data Centers, Internet Service Providers, Telecom Sites, Broadcasting Studios, etc). Combining zero sequence flux cancellation with phase shifting treats 3rd, 5th, 7th, 9th, 15th, 17th and 19th harmonics within its secondary windings.

### HPS Centurion Series Harmonic Mitigating Transformer:

- Prevents voltage flat-topping caused by non-linear loads
- Reduces upstream harmonic currents
- Eliminates transformer overheating and high operating temperatures
- Eliminates primary winding circulating current
- Saves energy by reducing harmonic losses
- Maintains high energy efficiency even under non-linear loading conditions
- Electrostatic shielding for high frequency noise attenuation
- Lowers voltage distortion to prevent premature equipment failure
- Restores ride-through capability of computer equipment
- Treats power quality harmonic issues which K-rated transformers do not address
- Suitable for high K-factor loads
- Reduces current distortion at UPS, generator or Utility service
- Improves Upstream Total Power Factor

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



# HPS Centurion®

## 600V CLASS ENERGY EFFICIENT HARMONIC MITIGATING TRANSFORMERS

### THREE PHASE STANDARD SPECIFICATIONS

15 to 45 kVA



75 TO 750 KVA



	15 to 45 kVA	75 to 750 kVA
<b>Application</b>	Typical applications of severe non-linear loading conditions include data centers, internet-service providers, telecom sites, call centers, broadcast centers, etc.	
<b>Efficiency</b>	Meets C802.2 efficiencies at an operating range from 35% to 65% of rated linear load. Meets C802.2 efficiency standards when measured under a non-linear load profile up to K20 in an operating range from 35% to 50%.	
<b>UL Listed</b>	File: E112313	File: E112313
<b>CSA Certified</b>	File: LR3902	File: LR3902
<b>Frequency</b>	60 Hz	60 Hz
<b>Insulation System</b>	220°C (150°C rise) 200°C (130°C rise) on 15 & 30kVA copper (optional 115°C and 80°C rise available)	220°C (150°C rise) (optional 115°C and 80°C rise available)
<b>Electrostatic Shield</b>	60dB Common Mode - typical	60dB Common Mode - typical
<b>Enclosure Type</b>	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12	Heavy duty ventilated type 3R Optional type 4, 4X (stainless steel) and 12
<b>Enclosure Finish</b>	ANSI 61 Grey, UL50	ANSI 61 Grey, UL50
<b>Neutral</b>	Neutral terminal for field connection (on applicable units).	Neutral terminal for field connection (on applicable units).
<b>Standard Primary Taps</b>	Refer to wiring diagrams for details.	Refer to wiring diagrams for details.
<b>Termination</b>	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.
<b>Conduit Knock-Outs</b>	Standard on all units (no knock-outs on Stainless Steel enclosures).	Standard on 75 kVA & 150 kVA units (no knock-outs on Stainless Steel enclosures).
<b>Impedance</b>	Typically 2.5% to 6.5%	Typically 2.5% to 6.5%
<b>Mounting</b>	Floor or wall/ceiling mounting available. Refer to selection tables for details.	Floor or wall/ceiling mounting available. Refer to selection tables for details.
<b>Sound level</b>	Meets NEMA ST-20 standards. (Optional low noise units available)	Meets NEMA ST-20 standards. (Optional low noise units available)

\* Optional TVSS available. Dual Output option also available. Features as listed above may differ. Contact sales for more details.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



SECTION 7





## ALUMINUM WOUND, THREE PHASE, SHIELDED 0° PHASE SHIFT

208 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BB00S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030BB00S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045BB00S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075BB00S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112BB00S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150BB00S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225BB00S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300BB00S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500BB00S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750BB00S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

208 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BK00S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030BK00S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045BK00S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075BK00S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112BK00S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150BK00S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225BK00S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300BK00S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500BK00S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750BK00S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KB00S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030KB00S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045KB00S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075KB00S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112KB00S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150KB00S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225KB00S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300KB00S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500KB00S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750KB00S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



## ALUMINUM WOUND, THREE PHASE, SHIELDED 0° PHASE SHIFT



480 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KK00S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030KK00S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045KK00S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075KK00S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112KK00S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150KK00S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225KK00S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300KK00S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500KK00S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750KK00S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PB00S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030PB00S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045PB00S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075PB00S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112PB00S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150PB00S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225PB00S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300PB00S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500PB00S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750PB00S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PK00S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030PK00S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045PK00S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075PK00S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112PK00S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150PK00S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225PK00S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300PK00S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500PK00S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750PK00S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



SECTION 7



## ALUMINUM WOUND, THREE PHASE, SHIELDED -30° PHASE SHIFT

208 Wye Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BB30S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030BB30S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045BB30S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075BB30S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112BB30S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150BB30S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225BB30S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300BB30S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500BB30S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750BB30S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

208 Wye Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BK30S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030BK30S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045BK30S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075BK30S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112BK30S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150BK30S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225BK30S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300BK30S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500BK30S	NJ3	51.50	43.40	66.00	3200	F	SCD 35
750	H1EM750BK30S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Wye Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KB30S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030KB30S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045KB30S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075KB30S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112KB30S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150KB30S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225KB30S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300KB30S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500KB30S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750KB30S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



## ALUMINUM WOUND, THREE PHASE, SHIELDED -30° PHASE SHIFT



480 Wye Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KK30S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030KK30S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045KK30S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075KK30S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112KK30S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150KK30S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225KK30S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300KK30S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500KK30S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750KK30S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Wye Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PB30S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030PB30S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045PB30S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075PB30S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112PB30S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150PB30S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225PB30S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300PB30S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500PB30S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750PB30S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Wye Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PK30S	NH5	19.40	20.20	21.50	220	F or W *	SCD 35
30	H1EM030PK30S	NH6	23.90	25.00	28.75	320	F or W *	SCD 35
45	H1EM045PK30S	NH6	23.90	25.00	28.75	430	F or W *	SCD 35
75	H1EM075PK30S	NH3	26.00	25.00	38.00	640	F or W *	SCD 35
112.5	H1EM112PK30S	NH4	32.00	29.50	41.00	920	F	SCD 35
150	H1EM150PK30S	NH4	32.00	29.50	41.00	1100	F	SCD 35
225	H1EM225PK30S	NJ1	39.50	34.00	51.50	1575	F	SCD 35
300	H1EM300PK30S	NJ2	48.50	38.40	59.00	1830	F	SCD 35
500	H1EM500PK30S	NJ3	51.50	43.40	66.00	2700	F	SCD 35
750	H1EM750PK30S	NJ3	51.50	43.40	66.00	3800	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)





## COPPER WOUND, THREE PHASE, SHIELDED 0° PHASE SHIFT

208 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BB00	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030BB00	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045BB00	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075BB00	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112BB00	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150BB00	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225BB00	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300BB00	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500BB00	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750BB00	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

208 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BK00	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030BK00	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045BK00	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075BK00	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112BK00	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150BK00	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225BK00	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300BK00	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500BK00	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750BK00	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KB00	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030KB00	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045KB00	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075KB00	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112KB00	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150KB00	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225KB00	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300KB00	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500KB00	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750KB00	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



## COPPER WOUND, THREE PHASE, SHIELDED 0° PHASE SHIFT



480 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KK00	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030KK00	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045KK00	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075KK00	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112KK00	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150KK00	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225KK00	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300KK00	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500KK00	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750KK00	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PB00	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030PB00	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045PB00	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075PB00	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112PB00	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150PB00	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225PB00	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300PB00	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500PB00	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750PB00	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Delta Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PK00	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030PK00	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045PK00	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075PK00	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112PK00	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150PK00	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225PK00	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300PK00	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500PK00	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750PK00	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)





## COPPER WOUND, THREE PHASE, SHIELDED -30° PHASE SHIFT

208 Wye Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BB30	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030BB30	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045BB30	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075BB30	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112BB30	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150BB30	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225BB30	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300BB30	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500BB30	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750BB30	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

208 Wye Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015BK30	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030BK30	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045BK30	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075BK30	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112BK30	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150BK30	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225BK30	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300BK30	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500BK30	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750BK30	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

480 Wye Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KB30	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030KB30	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045KB30	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075KB30	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112KB30	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150KB30	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225KB30	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300KB30	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500KB30	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750KB30	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)



## COPPER WOUND, THREE PHASE, SHIELDED -30° PHASE SHIFT



480 Wye Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015KK30	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030KK30	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045KK30	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075KK30	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112KK30	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150KK30	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225KK30	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300KK30	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500KK30	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750KK30	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Wye Primary Volts

208Y/120 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PB30	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030PB30	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045PB30	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075PB30	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112PB30	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150PB30	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225PB30	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300PB30	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500PB30	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750PB30	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

600 Wye Primary Volts

480Y/277 Secondary Volts

60 Hz

kVA	Catalog Number	Case Style (Pages 226 - 234)	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram (Pages 243 - 258)
			Width	Depth	Height			
15	H1EM015PK30	NH5	19.40	20.20	21.50	240	F or W *	SCD 35
30	H1EM030PK30	NH6	23.90	25.00	28.75	360	F or W *	SCD 35
45	H1EM045PK30	NH6	23.90	25.00	28.75	465	F or W *	SCD 35
75	H1EM075PK30	NH3	26.00	25.00	38.00	740	F or W *	SCD 35
112.5	H1EM112PK30	NH4	32.00	29.50	41.00	1100	F	SCD 35
150	H1EM150PK30	NH4	32.00	29.50	41.00	1350	F	SCD 35
225	H1EM225PK30	NJ1	39.50	34.00	51.50	1800	F	SCD 35
300	H1EM300PK30	NJ2	48.50	38.40	59.00	2250	F	SCD 35
500	H1EM500PK30	NJ3	51.50	43.40	66.00	3000	F	SCD 35
750	H1EM750PK30	NJ3	51.50	43.40	66.00	4200	F	SCD 35

\*WALL MOUNTING KIT AND/OR DRIP PLATE KIT REQUIRED.  
REFER TO PAGES 238 TO 239 FOR DETAILS.

DOE 2016 product please see the HPS Sentinel® Energy Efficient Distribution Transformer Selection Guide (DOESEL15)

