

HPS Sentinel Energy Efficient Distribution Transformers



Designed for efficiency

HPS Sentinel G ventilated stand-up distribution transformers meet the latest energy efficiency standards as outlined by DOE and NRCAN. These transformers offer significant energy savings as well as a variety of environmental benefits.

Designed and manufactured using industry-leading design solutions, technology and materials, they feature higher efficiency which translates into increased profitability due to lower operating costs, decreased cost of ownership over the lifetime of the transformer, and reduced air conditioning costs due to lower heat emissions.

AutomationDirect offers HPS Sentinel models rated up to 75kVA, and the standard 10kV BIL rating provides increased reliability and protection against critical equipment failure (including protection against voltage spikes and other line transients).

Additionally, faster installation on models up to 45kVA is made possible through the use of standard integral floor and wall mounting brackets.

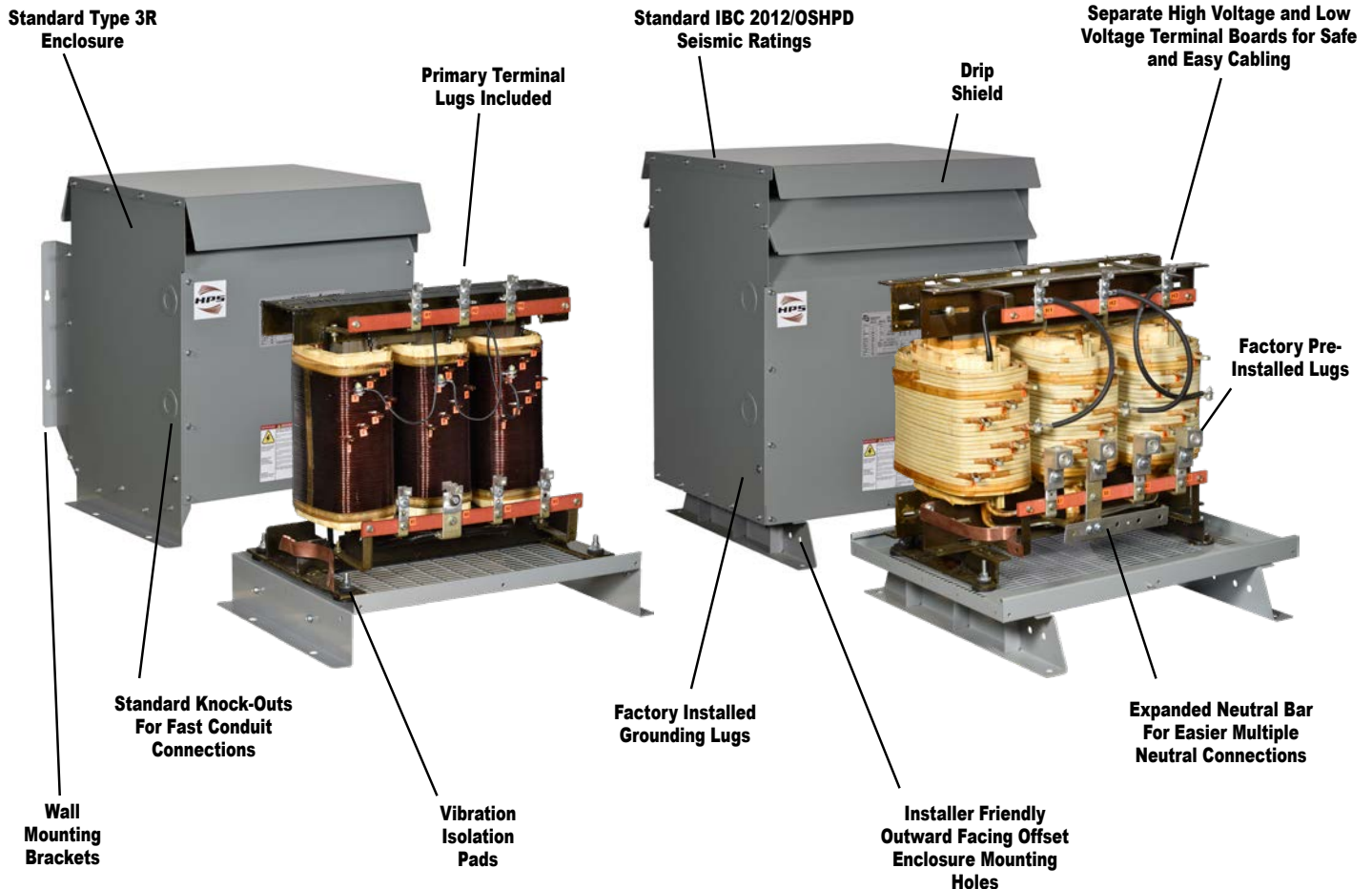
All models utilize a uniform 220°C insulation system with a 150°C temperature rise.

Features

- Advanced core and coil construction
- Core is manufactured from quality non-aging, cold-rolled, silicon steel laminations using state-of-the-art equipment.
- Cores are precision cut to close tolerances which eliminates burrs and improves performance.
- Core is coated to prevent the ingress of moisture.
- Precision wound aluminum conductors are electrically balanced to minimize axial forces during short-circuit conditions.
- Temperature rise 150°C.
- Robust interface between core and coils for better short circuit performance.

15-45 kVA Models

75 kVA Models



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Features

- Type 3R enclosures
- Integrated wall mounting brackets (up to 45kVA)
- Factory installed primary, secondary and neutral lugs (up to 75kVA)
- Expanded neutral bar for multiple neutral connections
- Factory installed main grounding lugs
- Removable lugs provide for easy field lug size changes or repairs
- Separate HV and LV terminal boards for easy cable installation
- All taps individually labelled for easy installation
- Conduit knockouts
- Bottom cable entry area
- Outward facing base mounting holes for quick and easy installation
- Captive pem-nuts for reliable and easy removal of front/back panels
- 10kV BIL on all 3-phase LV distribution transformers
- Dual UL and CSA certification
- Standard IBC 2012-OSHPD Seismic ratings (floor mount only)
- 10-year warranty

Agency Approvals



UL Listed File: E112313 Type K
CSA Certified File: LR3902

HPS Sentinel Energy Efficient Distribution Transformer Specifications										
Part Number	Price	kVA Rating	Wiring Diagram	Primary Voltage (VAC)(60Hz)	Secondary Voltage (VAC) (Nominal)	3-Phase Output Current (Amps) 208/240 VAC	Impedance %		Typical Heat Dissipation (Watts)	Weight lb [kg]
							kVA	%z		
SG3A0015KB	\$:,0047,1:	15kVA	SCD19	480 Delta	208Y/120	41.6 A / n/a	15	1.8-6	420	200 [90.72]
SG3A0030KB	\$:,0047,2:	30kVA				83.3 A / n/a	30	1.8-6	840	335 [151.95]
SG3A0045KB	\$:,0047,3:	45kVA				125A / n/a	45	1.8-6	1110	380 [172.37]
SG3A0075KB	\$:,0047,4:	75kVA				208A / n/a	75	2-6	1490	575 [260.82]
SG3C0015KD	\$:,0047,5:	15kVA	SCD21		240 Delta/120 CT (CenterTap)*	n/a / 36.1	15	1.8-6	420	175 [79.38]
SG3C0030KD	\$:,0047,6:	30kVA				n/a / 72.2	30	1.8-6	840	305 [138.35]
SG3C0045KD	\$:,0047,7:	45kVA				n/a / 108	45	1.8-6	1110	385 [174.63]
SG3C0075KD	\$:,0047,8:	75kVA				n/a / 180	75	2-6	1490	535 [242.67]

* Note: Center-tap is rated for 5% of the overall kVA of system. Example: On a 75kVA transformer, the center-tap is rated at 3.75 kVA.



[SG3A0015KB](#)



[SG3A0045KB](#)



[SG3A0075KB](#)

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Wiring Diagrams

SCD19

Schematic	Connections			
	% Voltage	Primary Volts	Connect lines to	Inter-connect
	105.0%	504	H1, H2, H3	H1-1, H2-1, H3-1
	102.5%	492	H1, H2, H3	H1-2, H2-2, H3-2
	100%	480	H1, H2, H3	H1-3, H2-3, H3-3
	97.5%	468	H1, H2, H3	H1-4, H2-4, H3-4
	95%	456	H1, H2, H3	H1-5, H2-5, H3-5
	92.5%	444	H1, H2, H3	H1-6, H2-6, H3-6
	90%	432	H1, H2, H3	H1-7, H2-7, H3-7
	Secondary Volts	Connect lines to		Inter-connect
	208	X1, X2, X3		
	120	X1, X0 X2, X0 X3, X0		

SCD21

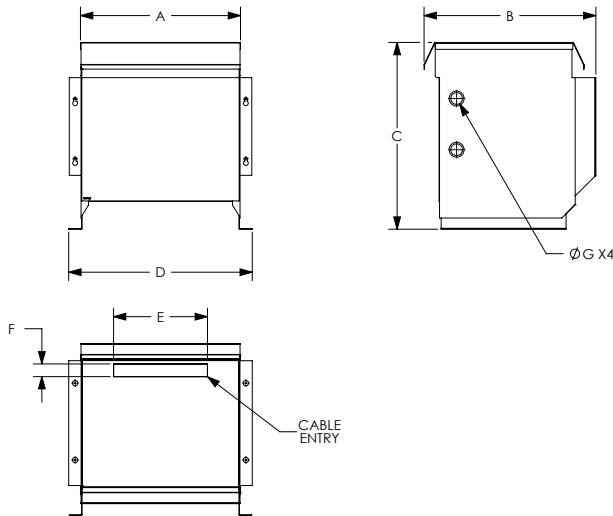
Schematic	Connections			
	% Voltage	Primary Volts	Connect lines to	Inter-connect
	105.0%	504	H1, H2, H3	H1-1, H2-1, H3-1
	102.5%	492	H1, H2, H3	H1-2, H2-2, H3-2
	100%	480	H1, H2, H3	H1-3, H2-3, H3-3
	97.5%	468	H1, H2, H3	H1-4, H2-4, H3-4
	95%	456	H1, H2, H3	H1-5, H2-5, H3-5
	92.5%	444	H1, H2, H3	H1-6, H2-6, H3-6
	90%	432	H1, H2, H3	H1-7, H2-7, H3-7
	Secondary Volts	Connect lines to		Inter-connect
	240	X1, X2, X3		
	120	X1, X6 X3, X6		

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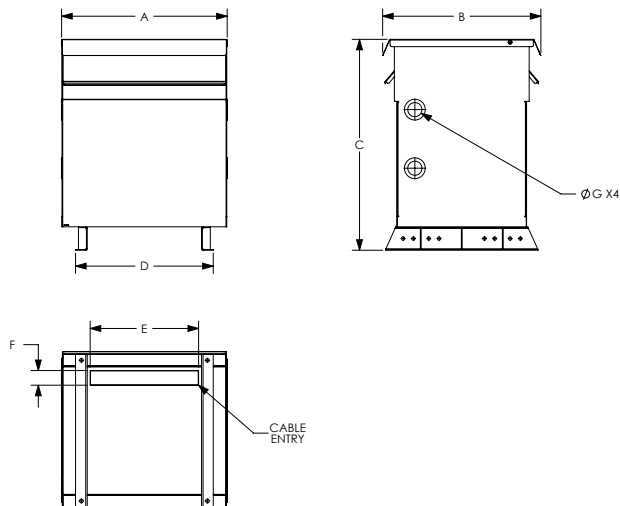
Dimensions

15-45 kVA Models



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75 kVA Models



75 kVA Models

HPS Sentinel Energy Efficient Distribution Transformer Dimensions

Part Number	Volt-Amp Rating	Overall Dimensions [in (mm)]				Cable Entry [in (mm)]		Knockout [in (mm)]
		A	B	C	D	E	F	G
SG3A0015KB	15kVA	18.75 [476.3]	20.12 [511.1]	21.88 [555.6]	21.50 [546.2]	11.00 [279.4]	1.49 [37.8]	1.38 [35.1] or 1.75 [44.5]
SG3A0030KB	30kVA	23.25 [590.6]	23.80 [604.6]	28.67 [728.2]	25.75 [653.9]	16.75 [425.5]	1.75 [44.5]	1.75 [44.5] or 2.50 [63.5]
SG3A0045KB	45kVA	23.25 [590.6]	23.80 [604.6]	28.67 [728.2]	25.75 [653.9]	16.75 [425.5]	1.75 [44.5]	1.75 [44.5] or 2.50 [63.5]
SG3A0075KB	75kVA	28.32 [719.3]	27.00 [685.9]	36.00 [914.3]	23.50 [596.9]	18.50 [469.9]	2.50 [63.5]	2.00 [50.8] or 3.00 [76.2]
SG3C0015KD	15kVA	18.75 [476.3]	20.12 [511.1]	21.88 [555.6]	21.50 [546.2]	11.00 [279.4]	1.49 [37.8]	1.38 [35.1] or 1.75 [44.5]
SG3C0030KD	30kVA	23.25 [590.6]	23.80 [604.6]	28.67 [728.2]	25.75 [653.9]	16.75 [425.5]	1.75 [44.5]	1.75 [44.5] or 2.50 [63.5]
SG3C0045KD	45kVA	23.25 [590.6]	23.80 [604.6]	28.67 [728.2]	25.75 [653.9]	16.75 [425.5]	1.75 [44.5]	1.75 [44.5] or 2.50 [63.5]
SG3C0075KD	75kVA	28.32 [719.3]	27.00 [685.9]	36.00 [914.3]	23.50 [596.9]	18.50 [469.9]	2.50 [63.5]	2.00 [50.8] or 3.00 [76.2]