

# HPS Sentinel<sup>®</sup>

## Energy Efficient Distribution Transformers

### Specifications & Accessories - Copper or Aluminum



**15 to 45 kVA**



**75 to 150 kVA**



**225-1000 kVA**

### STANDARD SPECIFICATIONS

<p><b>kVA:</b> 15-1000kVA</p> <p><b>UL Listed:</b> File: E112313</p> <p><b>CSA Certified:</b> File: LR3902</p> <p><b>Frequency:</b> 60 Hz (optional 50/60 Hz available)</p> <p><b>Insulation System:</b> 220°C (150°C rise) (optional 115°C &amp; 80°C rise available)</p> <p><b>BIL Rating</b> 10 kV (on all 3PH low voltage products)</p> <p><b>Enclosure Type:</b> Heavy duty ventilated Type 3R standard (optional Type 4, 4X (stainless steel) &amp; 12)</p> <p><b>Enclosure Finish:</b> ANSI 61 Grey, UL50</p> <p><b>Neutral:</b> Neutral terminal for field connection (on applicable units)</p> <p><b>Standard Primary Taps:</b> Refer to wiring diagrams for details</p> <p><b>Optional Accessories:</b></p> <ul style="list-style-type: none"> <li>• Thermal sensing &amp; indication             <ul style="list-style-type: none"> <li>- Thermocouples</li> <li>- Thermometers (analog/digital)</li> <li>- Thermostat alarm / trip (N.O. /N.C. contacts)</li> </ul> </li> <li>• Electrostatic shielding</li> <li>• Rated to handle current harmonics [K4] [K9] [K13]</li> <li>• Strip heater (space heater to prevent condensation)</li> <li>• Surge protection devices</li> <li>• Type 3R or 4X available in stainless steel</li> <li>• Type 3R enhanced with baffling for horizontal blowing rain and snow</li> </ul>	<p><b>Termination:</b> Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.</p> <p><b>Conduit Entry:</b> Side knock-outs standard on all units; Bottom entry provision (exceptions apply)</p> <p><b>Impedance:</b> Typically 3.5% to 6.5%</p> <p><b>Mounting:</b> Floor or wall/ceiling mounting available. Refer to selection tables for details.</p> <p><b>Seismic:</b> Seismically qualified according to the International Building Code (IBC) 2012, and the American Society of Civil Engineers ASCE 7-10 specifications, with the following design parameters: Spectral acceleration: <math>S_{DS} \leq 2.0</math> g Importance factor: <math>I_p = 1.5</math> Attachment/height ratio: <math>z/h = 1.0</math>" O.S.H.P.D. California Certified</p> <p><b>Sound Level:</b> Meets NEMA ST-20 standards (optional low noise units available)</p> <p><b>Warranty:</b> 10 years</p>
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## HPS Sentinel Part Number Guide

Example

Family	Type	Generation	Phase	kVA				Pri. Volt.	Sec. Volt	K Rating	Winding Material/ Electrostatic Shield	Temp. Rise & Insul. Class	Enclosure
S	G	3	A	0	0	4	5	K	B	0	K	F	K

### Family:

S - Sentinel

### Type:

G - General  
K - K Rated  
H - Harmonic Mitigation

### Generation:

2 - current designs  
3 - current designs

### Phase (Pri-Sec):

A - 3PH Delta-Wye  
B - 3PH Wye-Delta  
C - 3PH Delta-Delta/CT  
D - 3PH Delta-Delta  
Y - 3PH Wye-Wye  
T - 3PH Zig Zag- 0° PH Shift  
U - 3PH Zig Zag- -30°PH Shift  
L- 1PH Single-Dual  
N- 1PH Dual-Dual  
M- 1PH Multiple-Dual

### kVA:

kVA Rating

### Primary Voltage:

1PH 3PH  
B 208 208D, 208Y/120  
D 240 240D  
F 277  
H 416 416D  
K 480 480D, 480Y/277  
L 240x480  
P 600 600D, 600Y/347  
X multiple

### Secondary Voltage:

1PH 3PH  
B 208 208D or 208Y/120  
D 240 240D, 240D/120CT or  
240Y/139  
E 120/240  
K 480 480D or 480Y/277  
P 600 600D or 600Y/347  
Y 380Y/220V w taps at  
400Y, 416Y and 430Y

### K Rating:

0 = None  
4 = K4  
9 = K9  
3 = K13  
2 = K20

### Winding Material/Electrostatic Shield:

A - Aluminum  
S - AL + Shield  
C - Copper  
K - CU + Shield

### Temperature Rise at standard 220°C Insulation Class:

B - 80°C  
F - 115°C  
G - 130°C  
H - 150°C

### Enclosure:

A - Type 1  
B - Type 2  
C - Type 3R  
D - Type 3RE  
E - Type 3RX  
F - Type 4  
G - Type 4X (304SS)  
H - Type 4X (316SS)  
K - Type 12  
X - None (Core & Coil)

Additional options include low sound level and special duty (marine, etc)

## Support & Resources

No other transformer company can offer our service and quality in a full range of products.

### Transformer Efficiency Calculator



The HPS Efficiency Calculator allows you to determine how much money and energy you can save by switching to a HPS Sentinel G3, K3, or H3 transformer. Visit the "Online Tools" area of the HPS website.

### Extensive Inventory



We carry a complete inventory of Distribution Transformers throughout North America to quickly meet your needs.

### Current Calculator



Calculate the Amps, Volts, or kVA of a transformer. Visit the "Online Tools" area of the HPS website.

### Live Telephone Technical Support



Our inside sales team is available to quickly answer your questions. They are technically trained and able to answer most questions right over the phone.

### Fast On-Site Response



On-site technicians are available to assist with any technical problems or issues that cannot be resolved over the phone.

### Easy-To-Access Installation Manuals



All transformer installation manuals are conveniently located on our website so you can access them anywhere, anytime.

# Selection Tables

HPS Sentinel G3  
Energy Efficient General Purpose Distribution



## 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	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram	
			Width	Depth	Height				
15	<b>SG3A0015KY</b>	DH1	21.5	20.1	22.0	210	F or W/C	SCD 52	
30	<b>SG3A0030KY</b>	DH2	25.8	23.8	28.8	310	F or W/C	SCD 52	
45	<b>SG3A0045KY</b>	DH2	25.8	23.8	28.8	380	F or W/C	SCD 52	
75	<b>SG3A0075KY</b>	DH3	28.3	27.0	36.0	510	F (Opt W/C)	SCD 52	
112.5	<b>SG3A0112KY</b>	DH3	28.3	27.0	36.0	680	F (Opt W/C)	SCD 52	
150	<b>SG3A0150KY</b>	DH4	31.5	29.5	44.5	870	F	SCD 52	
225	<b>SG3A0225KY</b>		Consult HPS Sales						
300	<b>SG3A0300KY</b>								
500	<b>SG3A0500KY</b>								
750	<b>SG3A0750KY</b>								
1000	<b>SG3A1000KY</b>								

W/C: Built-in Wall Ceiling Mounting    Opt W/C: Wall Ceiling Mounting Kit "DW3" Available    OSHPD Certified for Floor Mounting Only

480 Delta Primary Volts      480Y/277 Secondary Volts      60 Hz

kVA	Catalog Number	Case Style	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	<b>SG3A0015KK</b>	DH1	21.5	20.1	22.0	210	F or W/C	SCD 19
30	<b>SG3A0030KK</b>	DH2	25.8	23.8	28.8	310	F or W/C	SCD 19
45	<b>SG3A0045KK</b>	DH2	25.8	23.8	28.8	380	F or W/C	SCD 19
75	<b>SG3A0075KK</b>	DH3	28.3	27.0	36.0	510	F (Opt W/C)	SCD 19
112.5	<b>SG3A0112KK</b>	DH3	28.3	27.0	36.0	680	F (Opt W/C)	SCD 19
150	<b>SG3A0150KK</b>	DH4	31.5	29.5	44.5	870	F	SCD 19
225	<b>SG3A0225KK</b>	DH5	37.5	34.0	52.0	1350	F	SCD 19
300	<b>SG3A0300KK</b>	DH5	37.5	34.0	52.0	1800	F	SCD 19
500	<b>SG3A0500KK</b>	DH6	49.0	41.5	64.0	2750	F	SCD 20
750	<b>SG3A0750KK</b>	DH7	54.0	46.5	72.0	4100	F	SCD 20
1000	<b>SG3A1000KK</b>	DH8	60.0	49.5	82.0	5400	F	SCD 10

W/C: Built-in Wall Ceiling Mounting    Opt W/C: Wall Ceiling Mounting Kit "DW3" Available    OSHPD Certified for Floor Mounting Only

600 Delta Primary Volts      208Y/120 Secondary Volts      60 Hz

kVA	Catalog Number	Case Style	Approx. Dimensions (Inches)			Approx. Weight (Lbs.)	Mtg Type W - Wall F - Floor	Wiring Diagram
			Width	Depth	Height			
15	<b>SG3A0015PB</b>	DH1	21.5	20.1	22.0	210	F or W/C	SCD 19
30	<b>SG3A0030PB</b>	DH2	25.8	23.8	28.8	310	F or W/C	SCD 19
45	<b>SG3A0045PB</b>	DH2	25.8	23.8	28.8	380	F or W/C	SCD 19
75	<b>SG3A0075PB</b>	DH3	28.3	27.0	36.0	510	F (Opt W/C)	SCD 19
112.5	<b>SG3A0112PB</b>	DH3	28.3	27.0	36.0	680	F (Opt W/C)	SCD 19
150	<b>SG3A0150PB</b>	DH4	31.5	29.5	44.5	870	F	SCD 19
225	<b>SG3A0225PB</b>	DH5	37.5	34.0	52.0	1350	F	SCD 19
300	<b>SG3A0300PB</b>	DH5	37.5	34.0	52.0	1800	F	SCD 19
500	<b>SG3A0500PB</b>	DH6	49.0	41.5	64.0	2750	F	SCD 20
750	<b>SG3A0750PB</b>	DH7	54.0	46.5	72.0	4100	F	SCD 20
1000	<b>SG3A1000PB</b>	DH8	60.0	49.5	82.0	5400	F	SCD 10

W/C: Built-in Wall Ceiling Mounting    Opt W/C: Wall Ceiling Mounting Kit "DW3" Available    OSHPD Certified for Floor Mounting Only