

E-Saver-33L

Ultra Efficient Application Optimized Dry Type Transformer

Optimized for Application Load (OPAL) yields substantially lower losses than typical DOE compliant units

Electrical Ratings	Power [kVA]	15						
	Continous Overload [kVA]	17	Max. Linear Load; 1 THD < 0.05 p.u. < 30°C Amb.					
	Primary [V]	480						
	Secondaries [V]	120/208						
Topology & Materials	Electrical Topology	Primary: Delta 3 -Wire	Secondary: Wye 4 -Wire					
	Terminals: Material / Rating	Neutral: Copper/200%	Line: Copper/100%	Ground: Mechanical Lug				
	Coils / Construction	Copper; Welded/Brazed Internal Connections						
	Core / Configuration	3 Leg, Low loss super grain-oriented electrical steel						
Regulatory Efficiency	Insulation Class / Type	220 (UL Listed, E221932) Nomex based						
	Impregnant / Properties	Epoxy/Polyester co-polymer; Dielectric 3.2kV/mil. x 3 mil. build; Low VOCs						
	B.I.L.	10kV (Primary & Secondary)						
	35% Load @ 75 °C [%]	≥ 98.22 ;tested per DOE 10CFR431*, Subpart K, & CSA C802.2						
Load Performance	Reference levels:	(15kVA): DOE 2016: 97.89%; CSA C802.2-12: 97.00%						
	*Powersmiths exceeds DOE test requirements by guaranteeing performance of every unit							
	Percent Loading:	No Load	16.7%	25.0%	35.0%	50.0%	75.0%	100.0%
	Linear Load Efficiency ⁺ [%]		98.20	98.37	98.29	97.97	97.14	95.98
General Operation	Linear Load Loss ⁺ [W]	33	47	63	92	157	332	703
	[BTU/hr]	113	160	215	314	536	1133	2399
	K7 Load (IEEE C57.110) ⁺ [%]		98.1	98.3	98.1	97.7	96.7	95.3
	⁺ Calculated @ 20°C Amb. Accuracy: Linear Loss ± 3% measurement tolerance per DOE 10CFR431; Efficiencies ± 0.05%							
Impedance	Temperature Rise/Ambient [°C]	< 130 (Full Linear Load)			40 (Per ANSI C57.96.2013)			
	Regulation (full load) [%]	3.9 (Cos Φ=1.0)			4.7 (Cos Φ =0.8)			
	Excitation [A]	0.2 (~ Effective Current)						
Abnormal	Audible Noise [dBA]	42 (3 dBA less than NEMA ST-20 requirement 9.1-50kVA)						
	Z: +/- Sequence [%]	Z: 4.7	X: 2.8	R: 3.7	(per ANSI C57.12.91/UL1561)			
Enclosure Type & Installation	N/A	Zo:	Xo:	Ro:	(per ANSI C57.12.91)			
	Shortcircuit Current** [A]	Symmetrical Bolted faults		Primary: 400	Secondary: 923			
	**Zero Upstream Impedance	Asymmetrical Bolted faults		L - N: 923	L - L: 800			
Physical	Inrush x FLA /@ % Source	5 /@ 3%	10 /@ 1½%	15 /@ 0%	(per IEEE 389)			
	Type / Environment	2: Indoor Ventilated; 3R: Sprinkler/Weather Shields (Field Installed Option)						
	Installation / Location	Non-combustible floor; Restricted Access Area, non-public accessible						
Quality, Standards & Certification	Ventilation Clearances	2" to rear wall; zero clearance for sides (Grill opening < 1/2", Vermin Resistant)						
	Paint / Finish	Polyester Powder Coat, Semi-Gloss, Textured; Color: Green (RAL 6018)						
	Size & Drawing	TA0: (W: 18" D: 17" H: 27"); Drawing: 300-003759-800						
Additional Specified Attributes & Options: (As listed)	Net Weight	280 lbs / 127 kg						
	Quality	ISO 9001-2000: Quality Management System ISO 14001-2004: Environmental Management System ISO 17025: Efficiency Measurement Certification (CSA)						
	Design / Build / Test	UL 1561; CSA C22.2-47; NEMA ST-20; ANSI C57.91						
Certifications		UL/CUL Listed; CSA Certified				<i>UL1561 Listed for Non-linear loads</i>		



POWERSMITHS INTERNATIONAL CORP.

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OPAL Series Model: E-Saver-33L-15-480-208

Prepared: D. Faria

Date: 1-Dec-15

Part No: **200-004384 -100**

Revised:

Date: 20-Jan-16

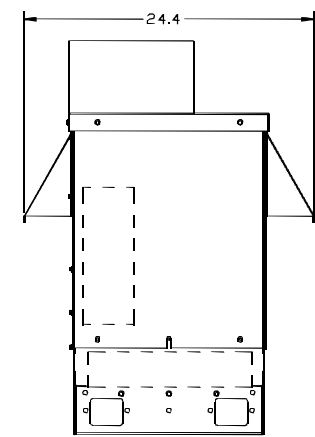
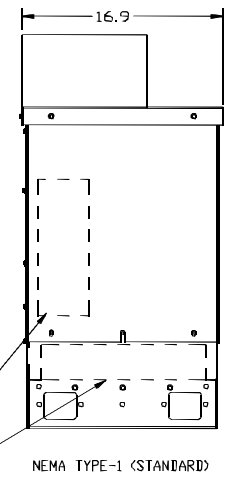
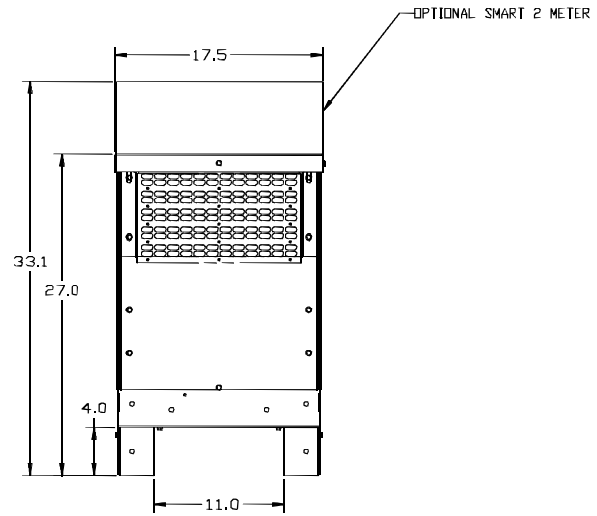
Doc No: **200-004384 -800**

Rev: **A01**

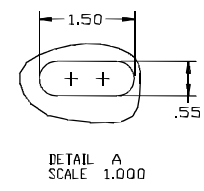
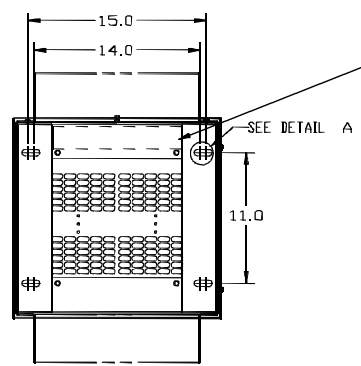
Note: Powersmiths International Corp. reserves the right to revise these specifications without notice; refer to most recent document revision

Ref. Project/Unit ID:

REV	ECO NO.	DESCRIPTION



UL/NEMA TYPE 2/3R (OPTIONAL WHEN SPECIFIED)
NOTE: DRIP SHIELDS INSTALLED AT SITE



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES	BY: [Signature] DATE: 19-JUN-14	POWERSMITHS INTERNATIONAL CORP 10 Brown Rd. Shelburne, Ontario, Canada L4T 2B6
TOLERANCES ARE: 1-PLACE DECIMAL 2-PLACE DECIMAL 3-PLACE DECIMAL ANGLES	APPROVED: BY: [Signature] DATE: 19-JUN-14	
SURFACE FINISH: MATERIAL:	APPROVED: DATE: [Signature]	DRAWING NO.: 300-003759-800
FINISH:	UNLESS OTHERWISE NOTED SHOWN ALL DIMENSIONS SHALL BE TO CENTER UNLESS SCALE 0.188	REV: A00
		REF: SHEET 1 OF 1

PRO/ENGINEER