

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]	750						
	Continous Overload [kVA]	825 <i>Max. Linear Load; 1THD < 0.05 p.u. < 30°C Amb.</i>						
	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 (<i>UL Listed, E221932</i>)		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 [%]	≥ 99.31 ; <i>tested per DOE 10CFR431*, Subpart K, & CSA C802.2</i>						
Load Performance	Reference levels:	(750kVA): DOE 2016: 99.23%; CSA C802.2-12: 98.80%						
	<i>*Powersmiths exceeds DOE test requirements by guaranteeing performance of every unit</i>							
	Percent Loading:	No Load	16.7%	25.0%	35.0%	50.0%	75.0%	100.0%
	Linear Load Efficiency ⁺ [%]		99.27	99.37	99.36	99.26	98.98	98.57
General Operation	Linear Load Loss ⁺ [W]	697	916	1193	1682	2766	5722	10796
	[BTU/hr]	2378	3125	4071	5739	9438	19523	36836
	K7 Load (IEEE C57.110) ⁺ [%]		99.2	99.3	99.3	99.1	98.7	98.2
	⁺ Calculated @ 20°C Amb. Accuracy: Linear Loss ± 3% measurement tolerance per DOE 10CFR431; Efficiencies ± 0.05%							
Impedance	Temperature Rise/Ambient [°C]	< 130 (<i>Full Linear Load</i>)			40 (<i>Per ANSI C57.96.2013</i>)			
	Regulation (<i>full load</i>) [%]	1.3 (<i>Cos Φ=1.0</i>)			3.6 (<i>Cos Φ =0.8</i>)			
	Excitation [A]	3.4 (<i>~ Effective Current</i>)						
Abnormal	Audible Noise [dBA]	61 (3 dBA less than NEMA ST-20 requirement 701-1000kVA)						
	Z: +/- Sequence [%]	Z: 4.3	X: 4.2	R: 1.2	<i>(per ANSI C57.12.91/UL1561)</i>			
	N/A	Zo:	Xo:	Ro:	<i>(per ANSI C57.12.91)</i>			
Enclosure Type & Installation	Shortcircuit Current** [A]	Symmetrical Bolted faults		Primary: 21,103		Secondary: 48,698		
	**Zero Upstream Impedance	Asymmetrical Bolted faults		L - N: 48,698		L - L: 42,173		
	Inrush x FLA /@ % Source	3 /@ 3%	6 /@ 1½%	9 /@ 0%	<i>(per IEEE 389)</i>			
Physical	Type / Environment	2: Indoor Ventilated; 3R: Sprinkler/Weather Shields (Field Installed Option)						
	Installation / Location	Non-combustible floor; Restricted Access Area, non-public accessible						
	Ventilation Clearances	2" to rear wall; zero clearance for sides (Grill opening < 1/2", Vermin Resistant)						
Quality, Standards & Certification	Paint / Finish	Polyester Powder Coat, Semi-Gloss, Textured; Color: Green (RAL 6018)						
	Size & Drawing	TF0: (W: 64" D: 45" H: 72"); Drawing: 300-003764-800						
	Net Weight	4010 lbs / 1823 kg						
Additional Specified Attributes & Options: <i>(As listed)</i>	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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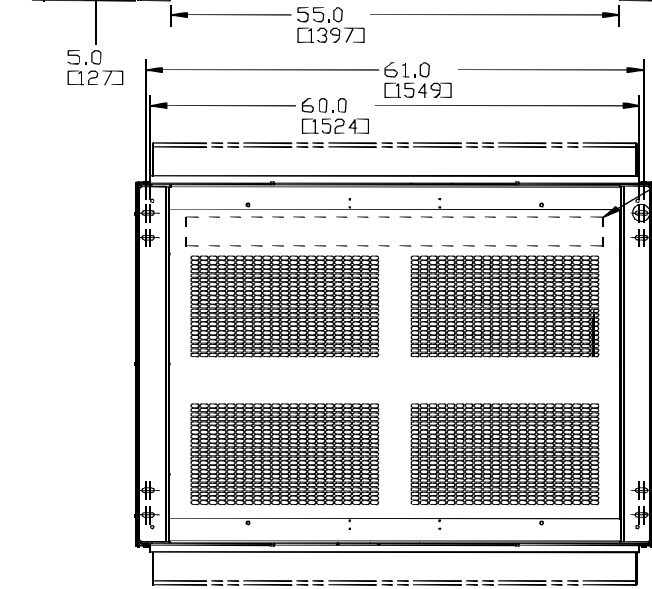
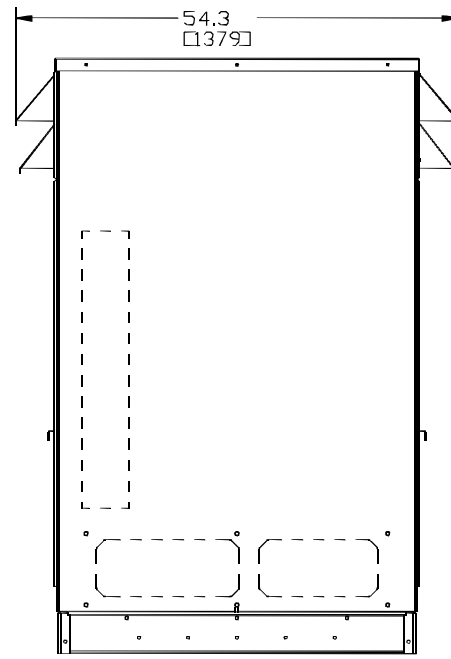
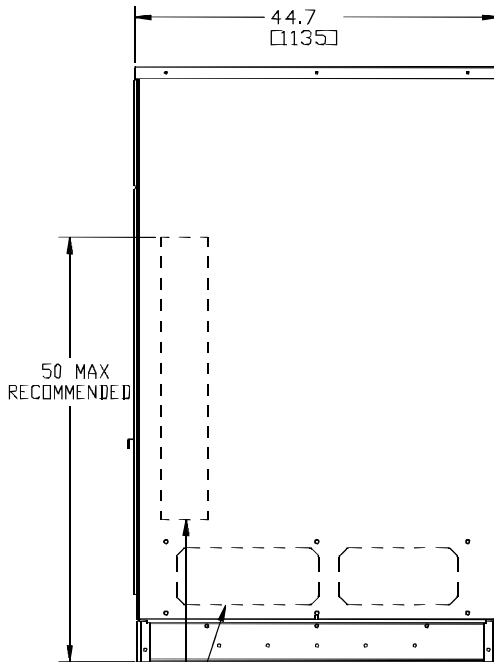
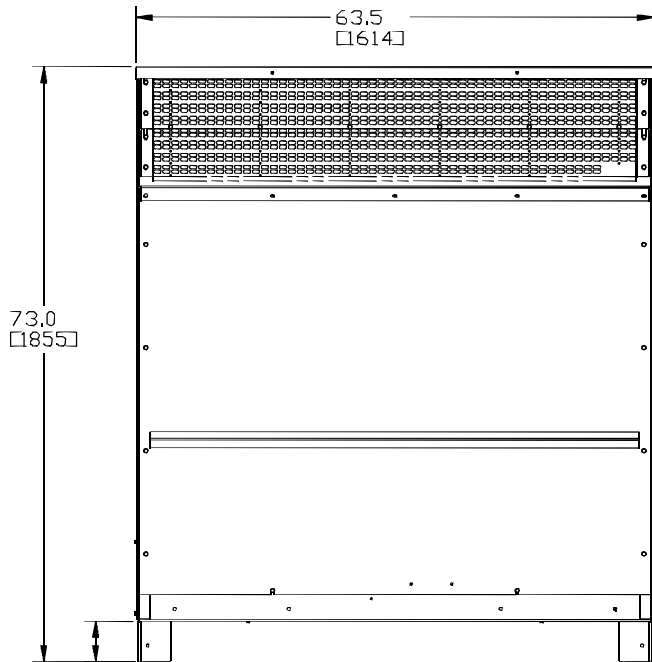
OPAL Series Model: E-Saver-33L-750-480-208

Prepared:	D. Faria	Date:	30-Nov-15	Part No:	222-004418 -100
Revised:	D. Faria	Date:	3-Feb-16	Doc No:	222-004418 -800
				Rev:	A02

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

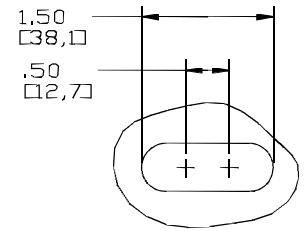
Ref. Project/Unit ID:

REV	ECD No.	DESCRIPTION
A00		RELEASED
A01		INCREASED HEIGHT BY 1"
A02		ADDED DUAL RAINSHIELDS
A03		



CONDUIT ACCESS
NEMA TYPE-1 (STANDARD)

SEE DETAIL A



DETAIL A
SCALE 1

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

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.		BY	DATE
TOLERANCES ARE:		DT	08-Sep-01
1-PLACE DECIMAL	±.02	APPROVED	
2-PLACE DECIMAL	±0.010	APPROVED	
3-PLACE DECIMAL	±0.005	APPROVED	
ANGULAR	±1/2°	APPROVED	
SURFACE FINISH:	125	APPROVED	
MATERIAL		APPROVED	
FINISH		UNLESS OTHERWISE NOTED REMOVE ALL BURRS AND SWAMP EDGES	
	SCALE 0.093		

POWERSMITHS INTERNATIONAL CORP 10 Devon Rd. Brampton, Ontario, Canada, L6T 5B5	
TITLE	
OUTLINE, TFO CASE	
DRAWING NO.	REV.
300-003764-800	A02
REF:	SHEET 1 of 1

PRO/ENGINEER