

E-Saver-25H

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]	100						
	Continous Overload [kVA]	120 <i>Max. Linear Load; 1 THD < 0.05 p.u. < 30°C Amb.</i>						
	Primary [V]	480						
	Secondaries [V]	120/208						
	Frequency [Hz]/Phase/Shift	60 / 3-Phase -30 deg.						
	Primary Taps	2 x 2 1/2 % FCAN; 4 x 2 1/2 % FCBN; (6 Taps)						
	K-Rating (IEEE C57.110) [K]	K13 @ 100%; >K30 @ 80%; <i>Refer Powersmiths published tables for other ratings</i>						
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	Aluminium (Sec.)/Copper (Prim.); Welded/Brazed Internal Connections						
	Core / Configuration	3 Leg, Low loss super grain-oriented electrical steel						
	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)						
Regulatory Efficiency	35% Load @ 75 °C [%]	≥ 98.88 ; <i>tested per DOE 10CFR431⁺, Subpart K, & CSA C802.2</i>						
	Reference levels:	(100kVA): DOE 2016: 98.69%; CSA C802.2-12: 98.13%						
⁺ Powersmiths exceeds DOE test requirements by guaranteeing min. stated efficiency of every unit								
Load Performance	Percent Loading:	No Load	16.7%	25.0%	35.0%	50.0%	75.0%	100.0%
	Linear Load Efficiency* [%]		98.64	98.88	98.94	98.86	98.54	98.08
	Linear Load Loss* [W]	189	230	283	375	575	1103	1941
	[BTU/hr]	645	785	966	1280	1962	3763	6623
	K4 Load (IEEE C57.110)* [%]		98.6	98.8	98.8	98.7	98.3	97.7
<i>*Calculated @ 20°C Amb. Accuracy: Loss ± 3% measurement tolerance per DOE 10CFR431; Efficiencies ± 0.05%</i>								
General Operation	Temperature Rise/Ambient [°C]	< 105 (Full Linear Load)			40 (Per ANSI C57.96.2013)			
	Regulation (full load) [%]	1.8 (Cos Φ=1.0)			4 (Cos Φ =0.8)			
	Excitation [A]	0.9 (~ Effective Current)						
	Audible Noise [dBA]	47 (6 dBA less than NEMA ST-20 > K13 requirement 51-150kVA)						
Impedance	Z: +/- Sequence [%]	Z:	4.5	X:	4.2	R:	1.6	(per ANSI C57.12.91/UL1561)
	N/A	Zo:		Xo:		Ro:		(per ANSI C57.12.91)
Abnormal	Shortcircuit Current** [A]	Symmetrical Bolted fault		Primary: 2,718		Secondary: 6,271		
	**Zero Upstream Impedance	Asymmetrical Bolted faults		L - N: 6,271		L - L: 5,431		
	Inrush x FLA /@ % Source	3	/@ 3%	7	/@ 1½%	10	/@ 0%	(per IEEE 389)
Enclosure Type & Installation	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)						
	Paint / Finish	Polyester Powder Coat, Semi-Gloss, Textured; Color: Green (RAL 6018)						
Physical	Size & Drawing	TC0: (W: 32" D: 22" H: 40"); Drawing: 300-003761-800						
	Net Weight	985 lbs / 448 kg						
Quality, Standards & Certification	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>		
Additional Specified Attributes & Options: <i>(As listed)</i>								



POWERSMITHS INTERNATIONAL CORP.

10 Devon Rd. Brampton, ON. L6T 5B5, Canada

powersmiths.com

OPAL Series Model: E-Saver-25H-100-480-208

Prepared: D. Faria

Date: 9-Feb-16

Part No: 225-004513 -100

Revised:

Date:

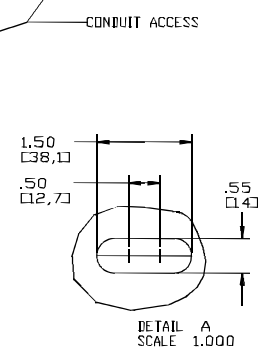
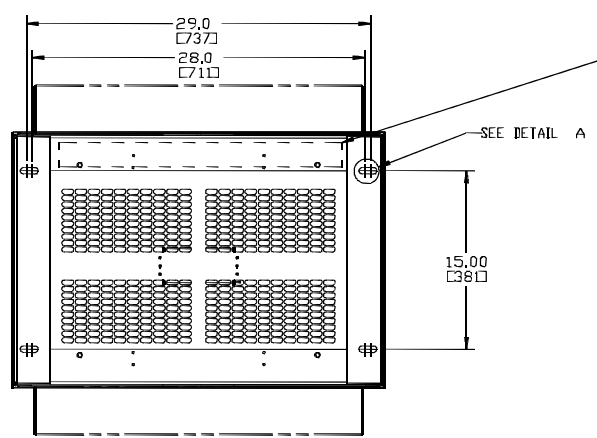
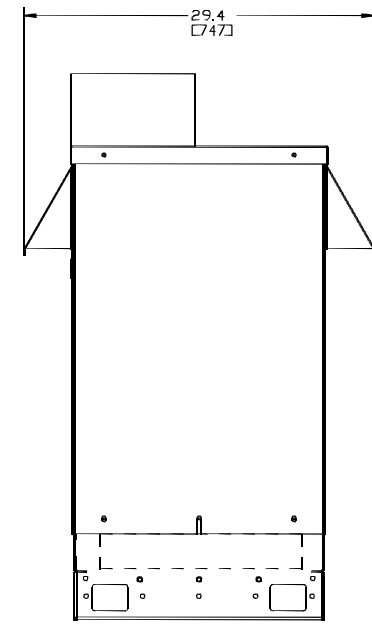
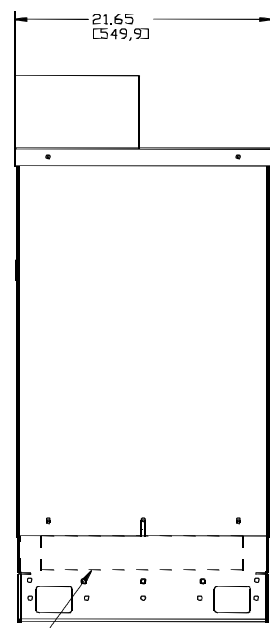
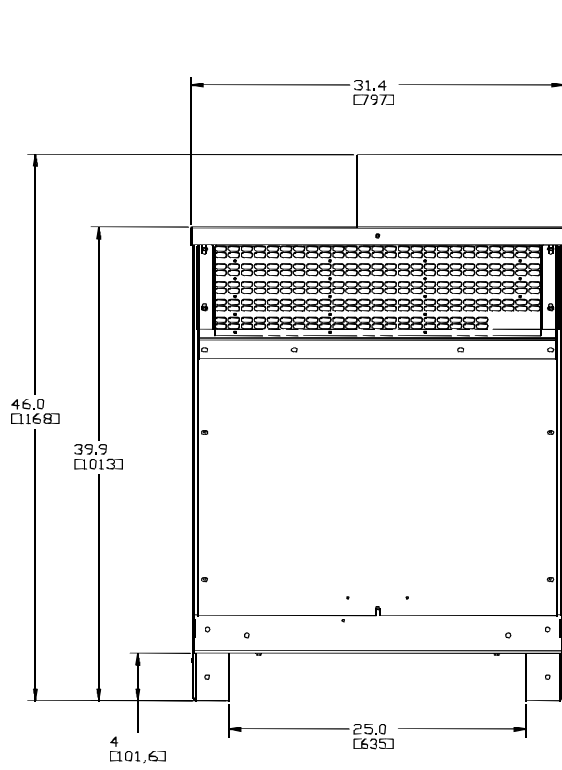
Doc No: 225-004513 -800

Rev: A00

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



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES	BY: DATE	POWERSMITHS INTERNATIONAL CORP 10 Brown Rd. Brampton, Ontario, Canada L6T 2S6
TOLERANCES ARE:	APPROVED BY: 05-JUN-14	
1-PLACE DECIMAL	APPROVED	TITLE:
2-PLACE DECIMAL	APPROVED	OUTLINE, TCO CASE
3-PLACE DECIMAL	APPROVED	
4-PLACE DECIMAL	APPROVED	
SURFACE FINISH:	APPROVED	
MATERIAL:	APPROVED	
FINISH:	UNLESS OTHERWISE NOTED BRACK ALL SURFACES AND SHARP EDGES	DRAWING NO. 300-003761-800
SCALE 0,188	REV. A00	REF: SHEET 1 OF 1

PRO/ENGINEER