

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]	15						
	Continous Overload [kVA]	18 <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 (<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)						
Regulatory Efficiency	35% Load @ 75 °C [%]	≥ 98.22 ; <i>tested per DOE 10CFR431⁺, Subpart K, & CSA C802.2</i>						
	Reference levels:	(15kVA): DOE 2016: 97.89%; CSA C802.2-12: 97.00%						
⁺ 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* [%]		98.06	98.35	98.39	98.21	97.64	96.84
	Linear Load Loss* [W]	40	51	64	88	138	273	491
	[BTU/hr]	136	174	218	300	471	931	1675
	K7 Load (IEEE C57.110)* [%]		98.0	98.3	98.3	98.0	97.4	96.4
<i>*Calculated @ 20°C Amb. Accuracy: Loss ± 3% measurement tolerance per DOE 10CFR431; Efficiencies ± 0.05%</i>								
General Operation	Temperature Rise/Ambient [°C]	< 105 (<i>Full Linear Load</i>)			40 (<i>Per ANSI C57.96.2013</i>)			
	Regulation (<i>full load</i>) [%]	2.9 (<i>Cos Φ=1.0</i>)			4.1 (<i>Cos Φ =0.8</i>)			
	Excitation [A]	0.2 (<i>~ Effective Current</i>)						
	Audible Noise [dBA]	40 (5 dBA less than NEMA ST-20 > K13 requirement 9.1-30kVA)						
Impedance	Z: +/- Sequence [%]	Z:	4.2	X:	3.1	R:	2.9	(<i>per ANSI C57.12.91/UL1561</i>)
	N/A	Zo:		Xo:		Ro:		(<i>per ANSI C57.12.91</i>)
Abnormal	Bolted Faults (Output)** [A]	Symmetrical:	Source (reflected):			447	L/L-L-N:	1,031
	**Zero Upstream Impedance	Asymmetrical:		L - N:		1,031	L - L:	893
	Inrush x FLA (@ % Source Imp.)	5 @ 3%	10 @ 1½%	15 @ 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	TA0: (W: 18" D: 17" H: 27"); Drawing: 300-003759-800						
	Net Weight	305 lbs / 139 kg <i>Note: Wall or ceiling brackets available</i>						
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: (As listed)								



POWERSMITHS INTERNATIONAL CORP.

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OPAL Series Model: E-Saver-25H-15-480-208

Prepared: D. Faria

Date: 11-Feb-16

Part No: **2xx-004501 -100**

Revised:

Date: 23-Nov-15

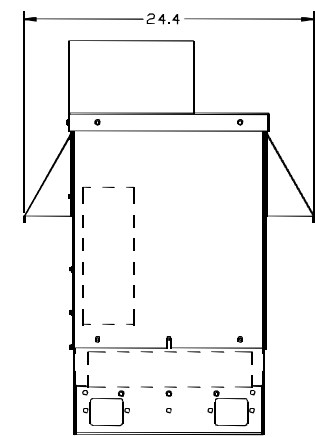
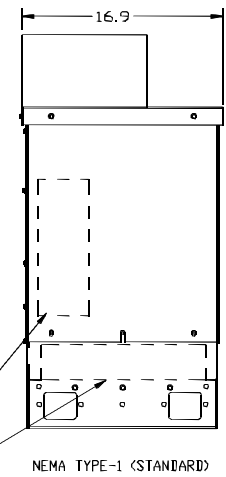
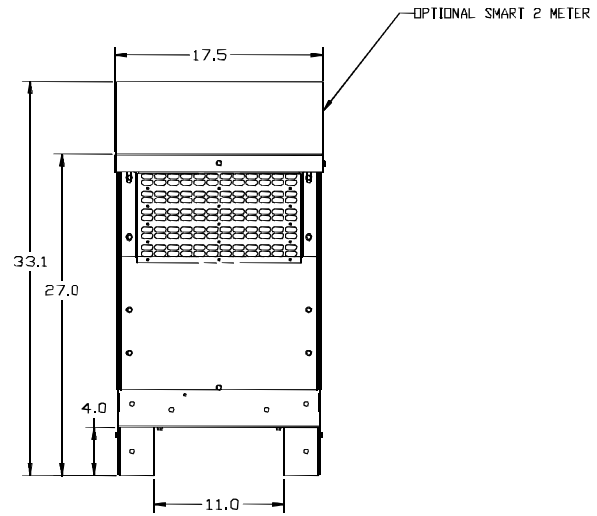
Doc No: **2xx-004501 -800**

Rev: **A01**

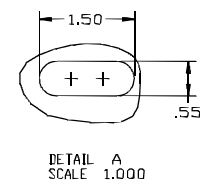
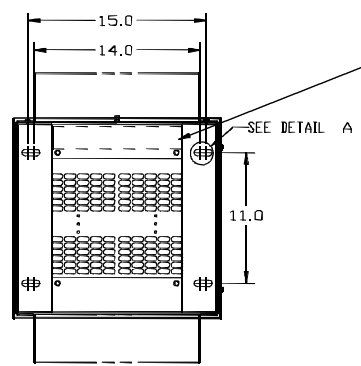
Note: Powersmiths International Corp. reserves the right to revise these specifications without notice; refer to most recent document revision

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 2S6
TOLERANCES ARE: 1-PLACE DECIMAL 2-PLACE DECIMAL 3-PLACE DECIMAL ANGLES	APPROVED: BY: [Signature] DATE: 19-JUN-14	
SURFACE FINISH: MATERIAL:	APPROVED: DATE: 19-JUN-14	DRAWING NO.: 300-003759-800
FINISH:	UNLESS OTHERWISE NOTED SHARP EDGES SCALE 0.198	REV.: A00
		REF: SHEET 1 OF 1