

45kVA HIGH EFFICIENCY HARMONIC TREATMENT COPPER WOUND TRANSFORMER, DRY TYPE

PARAMETER		DATA							UNITS
Electrical Rating	Power	45							kVA
	Frequency	60							Hz
	Primary	480 (Nominal)							Volts
	Primary Taps	2 x 2.5 % FCAN, 4 x 2.5 % FCBN (6 Taps)							%
	Secondary	480/277 (no load)							Volts
	Phase Shift	0 (Primary/Secondary)							Degrees
	Load Compatibility	K13							K-Factor
Construction	Connection	Primary: 3 Ph 3-Wire, Secondary: 3 Ph. 4 -Wire							
	Neutral Bus Rating	200% of Line Current							
	Coils	Copper, Braised Internal Connections							
	Core	3-Leg, Very Low Loss Grain Oriented Steel							
	Insulation Class	220 (UL Listed-E221932)							
	Insulation Impregnation / Properties	Nomex with Epoxy Co-Polymer impregnant Epoxy Copolymer: Build > 2 mils @ 3.2 kV/mil (dielectric); H ₂ O absorption < 0.05%; Curing VOC < 1.65 lbs/gal.							
Losses	Linear Loading	no load	15%:	25%:	35%:	50%:	75%:	100%:	%
	Watt Loss	143	164	204	263	394	742	1,303	Watts
	Heat	488	560	696	897	1,344	2,532	4,446	BTU/hr
Efficiency	Per NEMA TP-2 (35% Load)	98.3 (NEMA TP-1/CSA C802.3-01; requirement 97.7%) (DOE 10 CFR Part 430 CSL 3 requirement 98.3%)							%
	Linear Loading	¹ / ₆ : 98.2	¹ / ₄ : 98.6	¹ / ₂ : 98.4	³ / ₄ : 97.8	¹ / ₁ : 97.0			
	Non-linear (I THD ~ 80%)	¹ / ₆ : 97.5	¹ / ₄ : 98.0	¹ / ₂ : 97.8	³ / ₄ : 97.1	¹ / ₁ : 96.1			
Operation	Temperature Rise	< 115 (full linear load at nominal conditions)							°C
	Excitation	0.653							Amps
	Audible Noise	45 (per NEMA ST-20)							dBA
	Ambient	40 °C (per ANSI C57.96-01.100)							°C
	B.I.L.	10							kV
Harmonic Treatment	Transformer secondary System (common coupling)	Triplens: 3 rd , 9 th , 15 th 5 th , 7 th , 17 th and 19 th with complimentary 30 degree transformer							
Abnormal	Short Circuit	Primary	1,244 (symmetrical output short circuit)					Amps	
		Secondary	1,741 (asymmetrical L-N/G short circuit)						
		Inrush	279 (typical 3 cycle recovery)						
Impedance	Z: (+/- Sequence)	Z:	4.5	X:	3.9	R:	2.2	%	
	Z ₀ : (IEEE C57.12.91-1995/9.5.1)	Z ₀ :	1.1	X ₀ :	0.3	R ₀ :	1.1		
Mechanical	Enclosure	Type	Type 1 (2/3R opt.): Vermin resistant with < 1/2" wide openings						
		Finish	Green Epoxy Powder Coating						
	Drawing	B Case / 300-000068-402 (attached)							
	Weight	500					lbs		
Certification /Approvals	ISO Certifications	ISO 9001-2000: Quality Management System ISO 14001-2004: Environmental Management System							
	UL/CSA / Specifications	UL 1561 Listed, CSA C22.2 No. 47-M90 Certified, NEMA ST-20							
Options: (Supplied only when marked with 'X')	X	Electrostatic Shield	> 60 (CM Attenuation @ 10kHz)					dB	
		LK	Lug Kit						
		TVSS	Surge Protection						
		SB	Seismic Bracing						



POWERSMITHS INTERNATIONAL CORP.
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DATA SHEET

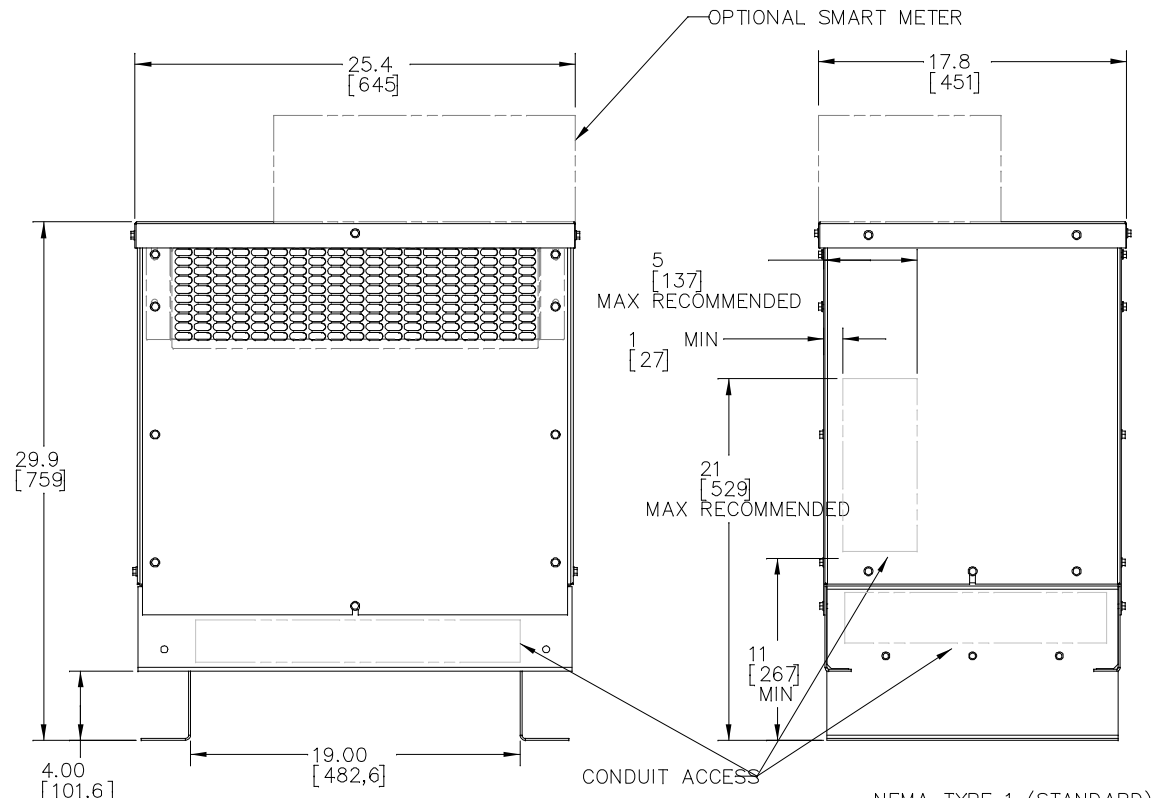
MODEL:

HC-ISO-C3-45-0-480-480

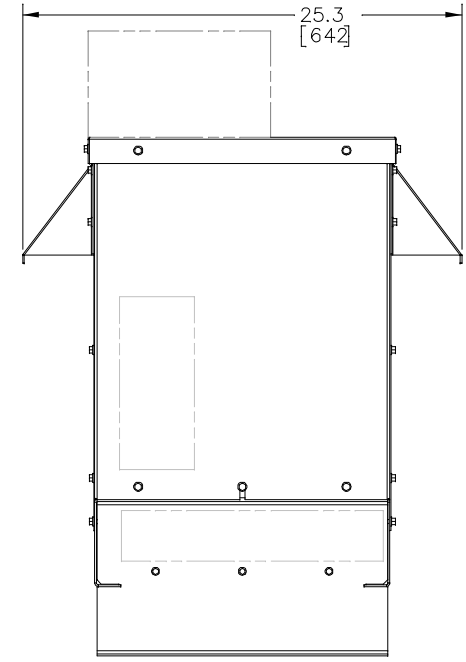
Prepared: N.Xie	Date: May 17, 11	Part No: 200-003164-100	
Revised:	Date:	Doc. No: 200-003164-800	Rev: A00

Note: Powersmiths International Corp. reserves the right to change/revise these specifications without notice

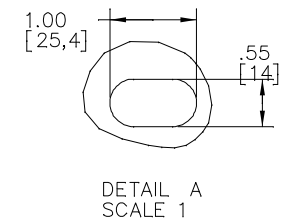
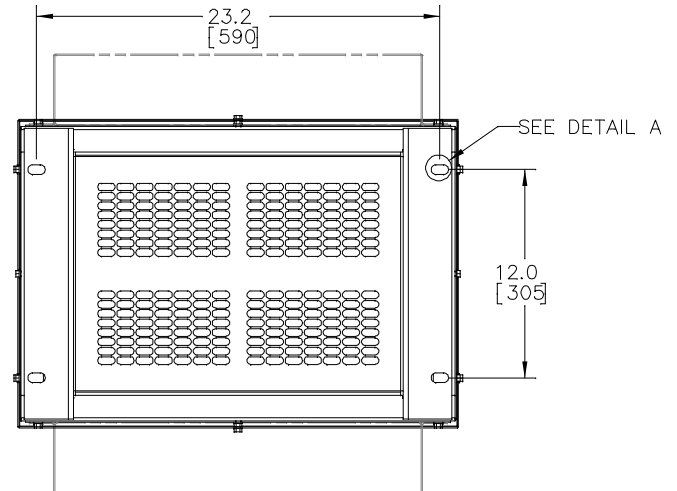
REV	ECO No.	DESCRIPTION
A00		RELEASED
A01		ADDED -3R SIDE VIEW
A02		ADDED SUGGESTED DIMENSIONS FOR SIDE PANEL ACCESS
A03		ADDED DIMENSIONS
A04		ADDED METRIC DIMS
A05		ADDED OPTIONAL SMART METER



NEMA TYPE-1 (STANDARD)



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



DETAIL A
SCALE 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.		BY DATE	POWERSMITHS INTERNATIONAL CORP 10 Devon Rd. Brampton, Ontario, Canada, L6T 5B5
TOLERANCES ARE: 1-PLACE DECIMAL : ±.03 ±.8 2-PLACE DECIMAL : ±.010 ±.25 3-PLACE DECIMAL : ±.005 ±.10 ANGULAR : ±1/2° ±1/2°		APPROVED DT 08-Sep-01	
SURFACE FINISH : 125 ✓		APPROVED	TITLE
MATERIAL		APPROVED	OUTLINE, B CASE
FINISH		UNLESS OTHERWISE NOTED REMOVE ALL BURRS AND SHARP EDGES	DRAWING NO. 300-000068-402 REV. A05
DO NOT SCALE DRAWING		REF:	SHEET 1 of 1