

Single Phase Overhead Distribution Pole Mounted Transformer
Part Number: CWS-75-1PP-13.8-120

CWS Engineering		Jun-25	
357 West Grove Ave, Orange, Ca 92865			
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	Description	Unit	Specifications
	General		
1.1	Manufacturer		CWS Engineering
1.2	Transformer Type		Overhead Distribution Transformer, Conventional Type
1.3	Transformer Configuration		Liquid Filled Pole Mounted
1.4	Mounting Type		Pole-Mounted
1.5	Phase		Single Phase
1.6	Polarity Type		Subtractive
	Electrical Characteristics		
2.1	Capacity	KVA	75 KVA
2.2a	Primary Voltage	V	13800 V
2.2b	Primary Voltage Switch		N/A
2.2c	Primary Voltage Class	kV	15 kV Class
2.2d	Primary Phasor		Delta
2.2e	Primary BIL	kV	95 kV
2.3a	Secondary Voltage		120/240V (L-N-L)
2.3b	Secondary Voltage Class		1.2 kV Class
2.3c	Secondary Phasor		Dual Winding Single Phase
2.3d	Secondary BIL	KV	30 KV
2.4	Frequency	Hz	60 Hz
2.5	Temperature Rise	°C	65°C
2.6	Insulation Rating	°C, °F	Class E Insulation - 120°C, 248°F
2.7	Forced Air (Fans)		None
2.8	Cooling Class		ONAN; Self-Cooled
2.9a	Tap Changer		5-Position Tap Changer w/ External Operating Handle
2.9b	Tap Qty		(2) FCAN Above Taps, (2) FCBN Below Taps
2.9c	Tap %	%	2.5%
2.9d	Tap Changer Switch Rating	kV	15 kV Rated, 95 kV BIL
2.9e	Tap Changer Switch Location		Tank Sidewall
	Ratings		
3.1	Efficiency Ratings		Meets/Exceeds DOE 2016, CSA Efficiency Ratings
3.2	Complies with		ANSI / IEEE C57.12.00
			ANSI / IEEE C57.12.20
			ANSI / IEEE C57.12.30
			ANSI / IEEE C57.12.31
			ANSI / IEEE C57.12.35
			ANSI / IEEE C57.12.70
			ANSI / IEEE C62.11
			ANSI / IEEE C62.22
			ANSI / IEEE C2
			ANSI / IEEE C37.47
			ANSI Z535.4
			ASTM D3487
			ASTM D6871
			10 CFR Part 431
			CSA C2.2:06
			CAN / CSA C50
			CAN / CSA C233.1-87
			CAN / CSA C802.1-13
	Features		
3.3	Insulating Fluid		Non-PCB
3.4	Lifting Lugs		Included
3.5	Efficiency	%	99%
	Load Losses Based on 85°C Reference Temp.		
4.1	No Load Loss (in watts):	W	± 247W
4.2	Full Load Loss (in watts):	W	± 845W
4.3	Total Load Loss (in watts)	W	± 1,092W
	Connections		
5.1	Impedance	%	4.0 % Typical
5.2a	Primary Connection Type		Live Bushing Lug
5.2b	Primary Termination		Porcelain High Voltage Bushing
5.2c	Primary Connection Qty		2
5.2d	Primary Lightning Arrestors		N/A
5.2e	Primary Lightning Mounting Provision		Mounting Provisions for Installing Lightning Arrestor on H1 & H2 Primary Terminals
5.2f	Primary Lightning Arrestors Voltage Rating		N/A
5.2g	Primary Lightning Arrestors MCOV Rating		N/A
5.3a	Secondary Connection Type		Live Bushing Lug
5.3b	Secondary Connections		Threaded Stud Terminals
5.3c	Secondary Connection Qty		2
5.3d	Secondary Neutral Connection	"	Secondary X2 Neutral Grounded to Tank via 1/2"-13 UNC Tapped Hole, 7/16" Deep Bung & Copper Ground
5.4	Terminals		Tin Plated Primary and Secondary - Accepts Copper or Aluminum Connections
5.5	Grounding Provisions		(1) Lug w/ Grounding Strap, Tank Grounding Lug
5.6	Transformer Protection		N/A
5.7	Load Break Switch		N/A
5.8	Efficiency Standard(s)		Meets DOE 2016 Standards, Meets CSA Standards Meets ANSI/IEEE Standards
5.9a	K-Factor Rating (Harmonic Mitigation)		K-1 (Standard)
5.9b	Pulse Drive Rating		N/A
	Physical Characteristics / Accessories		

6.1	Insulation Fluid		Mineral Oil - Non PCB Fluid
6.2a	Fluid Capacity	Gallons	21.51 Gallons
6.2b	Fluid Weight	lbs	194 lbs
6.3	Liquid Level Indicator		Internal In-Tank Oil Level Line
6.4	Temperature Indicator		N/A
6.5a	Pressure/Vacuum Indicator		N/A
6.5b	Pressure Relief Device		Included, Automatic Action
6.6	Fault Indicator		N/A
6.7a	Oil Level Marking		Internal
6.7b	Fill Valve		N/A (Tank Filled via Removable Lid)
6.7c	Drain Valve	"	1/2" NPT Port w/ Removable Bolt
6.8	Winding Material		Copper
6.9	Ambient Temperature Rating	°C	40°C
	Ambient Operating Temperature Range	°C, °F	-40°C to +40°C (-50°F to +104°F)
7.1	Sound Level	dBA	51 dBA
7.2	Elevation Level		N/A
7.3a	Core Material		Grain Oriented Steel
7.3b	Tank Material		Coated Steel
7.3c	Housing Material		Coated Steel w/ Corrosion Resistant Cover Band, Removable Top Cover
7.3d	Hardware Material		Stainless Steel Hardware
7.4a	Paint Type		Weatherproof and UV Resistant Epoxy Coating and Undercoating
7.4b	Finish Color		ANSI 70 Light Gray
7.5a	Mounting		Single Hanger Bracket
7.5b	Mounting		Pole Mount via Hangar Brackets
7.6	Lifting Lugs		Included
7.7	Dimensions*	"	26.77"-W x 28.35"-D x 47.24"-H
7.8	Tank Diameter*	"	21.66" OD
7.9a	Dry Weight*	lbs	396.83 lbs
7.9b	Total Weight (Liquid Filled)*	lbs	875 lbs