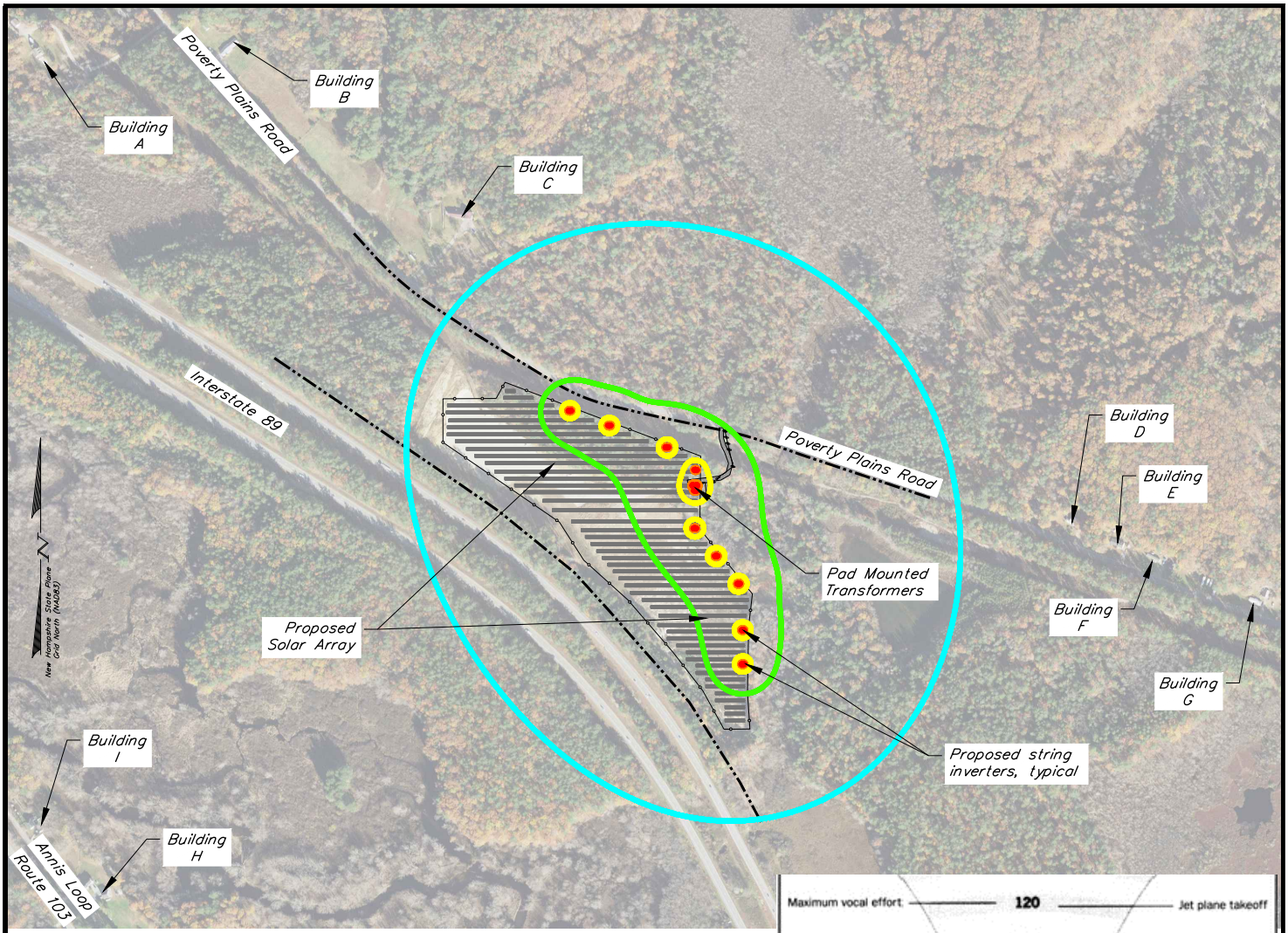


Notes:

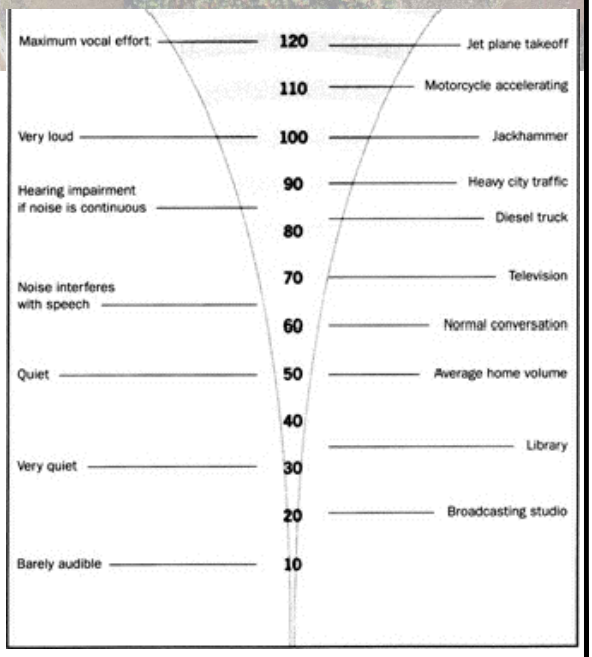
1. Chint specifies that the CPS SCH100-125KTL String Inverter creates less than 65 dBa at a distance of 1 meter from the unit, the calculated sound level at 3 meters is 55.5 dBa. Sound levels for the Cooper 2,500 kVA pad mounted transformer have sound levels of 62 dBA, assuming sound at 3 meters to be conservative.
2. Other decibel ranges were derived using the following distance damping equation [L2 = L1 -20 Log(d1/d2)]. This damping equation was the only factor considered in decibel range attenuation estimates. Elevation, ambient noise, vegetation, proposed solar array and other structures which would further effect the attenuation of sound levels were not considered in this study. Sound levels depicted are for all (40) Chint CPS SCH100-125KTL string inverters and (2) 2,500 kVA Cooper pad mounted transformers operating simultaneously at maximum noise level. See additional calculation information on Sound 2, Sound 3 and Sound 4.
3. Plans Sound 3 & Sound 4 run the calculations for nighttime operation. Site inverters make negligible noise when not loaded with power. For this calculation we assume they will make no noise. The site transformers and tracker motors do still make noise at night, to be conservative the nighttime calculation models the transformers and motors running at maximum noise.
4. Sound levels reported do not account for any background noise. Local background noise may exceed sound created by project equipment.

Legend:

- +70 dBa range
- 60 dBa range
- 50 dBa range
- 40 dBa range
- 30 dBa range

0' 400' 800' 1,600'

GRAPHIC SCALE 1" = 800'



Decibel Breakdown Compared to Everyday Noises

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FULL OPERATION DAYTIME SOUND LEVEL PLAN

Basic Sound Level Estimates for Noise Produced by Project Equipment

Project: Poverty Plains Solar Project

Location: Poverty Plains Road, Warner, NH

Source Data: Chart found at www.soundinstitute.com/article_detail.cfm/ID/95

DRAWN BY: GTD

CHECKED BY: GTD

Revision Date:

Plan ID: Sound 1

Scale: 1" = 800'

Date: 08/30/24

ER Poverty Plains Solar Project - Poverty Plains Road, Warner, New Hampshire - DAYTIME

Sound Source #	Easting (feet)	Northing (feet)	Noise Level (dBa @ 3 Meters)
Chint CPS SCH100-125KTL (40)	See Plan	See Plan	55.5
Cooper 2,500 kVA Pad Mounted Trans. (2)	See Plan	See Plan	62.0

Chint specifies that the CPS SCH100-125KTL String Inverter creates less than 65 dBa at a distance of 1 meter from the unit, the calculated sound level at 3 meters is 55.5 dBa.

Sound levels for the 2,500 kVA pad mounted transformers have sound levels of 62 dBA, assuming sound at 3 meters to be conservative.

Formulas used for Calculations

Adding of Noise Levels

$L_T = 10 \times \text{Log}_{10} (10^{L1/10} + 10^{L1/10} + ... + 10^{Ln/10})$

Where:

L_T = Total noise level of all equipment

Ln = Noise level for each piece of equipment

Noise Level Changes with Distance

Lb = La - 20 x Log10 (Db/Da)

Where:

Lb = Noise level at new distance

La = Noise level at original distance

Db = New distance from source of noise

Da = Original distance from source of noise

Equipment:	1 Meter	3 Meter
Chint CPS SCH100-125KTL String Inverters	65.000	55.458
Cooper 2,500 kVA Pad Mounted Transformer	-	62.000

Points of Interest were chosen based on close proximity to the proposed project.

Points of Interest	Easting (feet)	Northing (feet)	Estimated Noise Level Based on Project Components (Sound Pressure, dBa)
Residential Building A	957,715.65	280,007.77	21
Residential Building B	958,586.52	280,034.49	23
Residential Building C *Closest to Project*	959,721.27	279,269.02	28
Residential Building D	962,577.92	277,828.66	27
Residential Building E	962,782.54	277,730.81	26
Residential Building F	962,960.92	277,655.68	26
Residential Building G	963,445.35	277,461.73	24
Residential Building H	958,070.97	276,101.95	22
Residential Building I	957,769.93	276,442.05	22

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FULL OPERATION DAYTIME SOUND LEVEL PLAN

Basic Sound Level Estimates for Noise Produced by Project Equipment

DRAWN BY: GTD

CHECKED BY: GTD

Project: Poverty Plains Solar Project

Location: Poverty Plains Road, Warner, NH

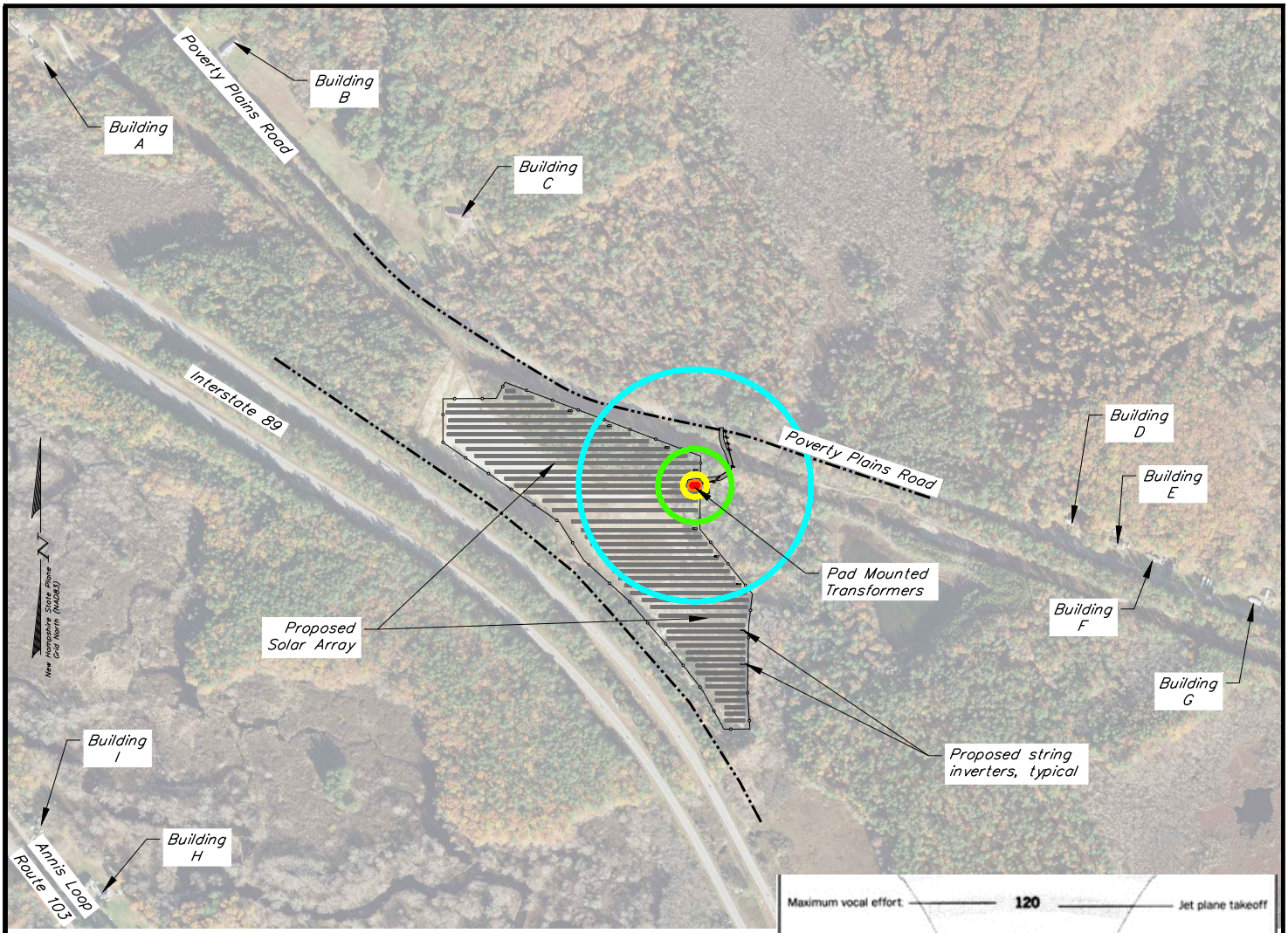
Source Data:

Revision Date:

Plan ID: Sound 2

Scale: N/A

Date: 08/30/24



Notes:

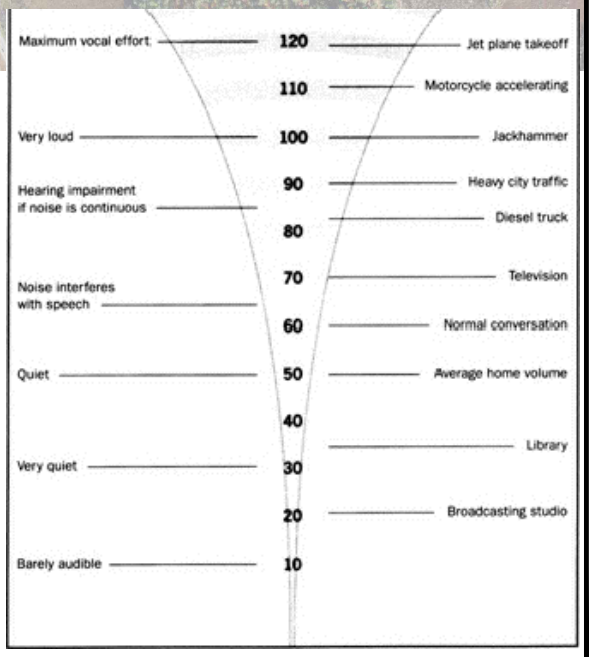
1. Sound levels for the Cooper 2,500 kVA pad mounted transformer have sound levels of 62 dBA, assuming sound at 3 meters to be conservative.
2. Other decibel ranges were derived using the following distance damping equation [L2 = L1 −20 Log(d1/d2)]. This damping equation was the only factor considered in decibel range attenuation estimates. Elevation, ambient noise, vegetation, proposed solar array and other structures which would further effect the attenuation of sound levels were not considered in this study. Sound levels depicted are for all (2) 2,500 kVA Cooper pad mounted transformers operating simultaneously at maximum noise level.
3. Sound levels reported do not account for any background noise. Local background noise may exceed sound created by project equipment.

Legend:

- +70 dBa range
- 60 dBa range
- 50 dBa range
- 40 dBa range
- 30 dBa range

0' 400' 800' 1,600'

GRAPHIC SCALE 1" = 800'



Decibel Breakdown Compared to Everyday Noises

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NIGHTTIME OPERATION SOUND LEVEL PLAN

Basic Sound Level Estimates for Noise Produced by Project Equipment

Project: Poverty Plains Solar Project	Plan ID: Sound 3
Location: Poverty Plains Road, Warner, NH	
Source Data: *Chart found at www.soundinstitute.com/article_detail.cfm/ID/95*	Scale: 1" = 800'
DRAWN BY: GTD / CHECKED BY: GTD	Revision Date: / Date: 08/30/24

ER Poverty Plains Solar Project - Poverty Plains Road, Warner, New Hampshire - NIGHTTIME

Sound Source #	Easting (feet)	Northing (feet)	Noise Level (dBa @ 3 Meters)
Cooper 2,500 kVA Pad Mounted Trans. (2)	See Plan	See Plan	62.0

Sound levels for the 2,500 kVA pad mounted transformers have sound levels of 62 dBA, assuming sound at 3 meters to be conservative.

Formulas used for Calculations

Adding of Noise Levels

$L_T = 10 \times \text{Log}_{10}(10^{L1/10} + 10^{L1/10} + ... + 10^{Ln/10})$

Where:

L_T = Total noise level of all equipment

Ln = Noise level for each piece of equipment

Noise Level Changes with Distance

Lb = La - 20 x Log10 (Db/Da)

Where:

Lb = Noise level at new distance

La = Noise level at original distance

Db = New distance from source of noise

Da = Original distance from source of noise

Equipment:	1 Meter	3 Meter
Cooper 2,500 kVA Pad Mounted Transformer	-	62.000

Points of Interest were chosen based on close proximity to the proposed project.

Points of Interest	Easting (feet)	Northing (feet)	Estimated Noise Level Based on Project Components (Sound Pressure, dBa)
Residential Building A	957,715.65	280,007.77	14
Residential Building B	958,586.52	280,034.49	15
Residential Building C *Closest to Project*	959,721.27	279,269.02	20
Residential Building D	962,577.92	277,828.66	20
Residential Building E	962,782.54	277,730.81	19
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Residential Building G	963,445.35	277,461.73	16
Residential Building H	958,070.97	276,101.95	14
Residential Building I	957,769.93	276,442.05	14

Site inverters make negligible noise when not loaded with power. For this calculation we assume they will make no noise.

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NIGHTTIME OPERATION SOUND LEVEL PLAN

Basic Sound Level Estimates for Noise Produced by Project Equipment

Project: Poverty Plains Solar Project

Location: Poverty Plains Road, Warner, NH

Source Data:

Plan ID: Sound 4

Scale: N/A

Date: 08/30/24

DRAWN BY: GTD

CHECKED BY: GTD

Revision Date:

100/125kW, 1500Vdc String Inverters for North America

CPS SCH100/125KTL-DO/US-600

The 100 & 125kW high power CPS three phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box inlcudes touch safe fusing for up to 20 strings. The CPS Flex Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70, NEC 2014 and 2017 compliant
- Touch safe DC Fuse holders adds convenience and safety
- CPS Flex Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA Headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.87 and 1.5 DC/AC Inverter Load Ratios
- Separable wire-box design for fast service
- Standard 5 year warranty with extensions to 20 years

100/125KTL Standard Wire-box

100/125KTL Centralized Wire-box

C SP US

This device complies with part 15 of the FCC Rules

Chint Power Systems America
6800 Koll Center Parkway, Suite 235 Pleasanton, CA 94566
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV Power	187.5kW	
Max. DC Input Voltage	1500V	
Operating DC Input Voltage Range	860-1450Vdc	
Start-up DC Input Voltage / Power	900V / 250W	
Number of MPP Trackers	1	
MPPT Voltage Range[1]	870-1300Vdc	
Max. PV Input Current (Isc x1.25)	275A	
Number of DC Inputs	20 PV source circuits, pos. & neg. fused (Standard Wire-box) 1 PV output circuit, 1-2 terminations per pole, non-fused (Centralized Wire-box)	
DC Disconnection Type	Load-rated DC switch	
DC Surge Protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)	
AC Output		
Rated AC Output Power	100kW	125kW
Max. AC Output Power[2]	100kVA (111KVA @ PF>0.9)	125kVA (132KVA @ PF>0.95)
Rated Output Voltage	600Vac	
Output Voltage Range[3]	528-660Vac	
Grid Connection Type[4]	3Φ / PE / N (Neutral optional)	
Max. AC Output Current @600Vac	96.2/106.8A	120.3/127.2A
Rated Output Frequency	60Hz	
Output Frequency Range[3]	57-63Hz	
Power Factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)
Current THD	<3%	
Max. Fault Current Contribution (1-cycle RMS)	41.47A	
Max. OCPD Rating	150A	175A
AC Disconnection Type	Load-rated AC switch	
AC Surge Protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)	
System		
Topology	Transformerless	
Max. Efficiency	99.1%	
CEC Efficiency	98.5%	
Stand-by / Night Consumption	<4W	
Environment		
Enclosure Protection Degree	NEMA Type 4X	
Cooling Method	Variable speed cooling fans	
Operating Temperature Range	-22°F to +140°F / -30°C to +60°C (derating from +113°F / +45°C)	
Non-Operating Temperature Range[5]	-40°F to +158°F / -40°C to +70°C maximum	
Operating Humidity	0-100%	
Operating Altitude	8202ft / 2500m (no derating)	
Audible Noise	<65dBA@1m and 25°C	
Display and Communication		
User Interface and Display	LED Indicators, WiFi + APP	
Inverter Monitoring	Modbus RS485	
Site Level Monitoring	CPS Flex Gateway (1 per 32 inverters)	
Modbus Data Mapping	SunSpec/CPS	
Remote Diagnostics / FW Upgrade Functions	Standard / (with Flex Gateway)	
Mechanical		
Dimensions (WxHxD)	45.28x24.25x9.84in (1150x616x250mm) with Standard Wire-box 39.37x24.25x9.84in (1000x616x250mm) with Centralized Wire-box	
Weight	Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (Standard Wire-box); 33lbs / 15kg (Centralized Wire-box)	
Mounting / Installation Angle	15 - 90 degrees from horizontal (vertical or angled)	
AC Termination	M10 Stud Type Terminal Block [3Φ] (Wire range: 1/0AWG - 500kcmil CU/AL, Lugs not supplied) Screw Clamp Terminal Block [N] (#12 - 1/0AWG CU/AL)	
DC Termination	Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box Busbar, M8 PEMserts (Wire range: #1AWG - 250kcmil CU/AL, Lugs not supplied) - Centralized Wire-box	
Fused String Inputs	15A or 20A fuses provided (Determined by product SKU)	
Safety		
Safety and EMC Standard	UL1741-SA-2016, CSA-C22.2 NO.107.1-01, IEEE1547a-2014; FCC PART15	
Selectable Grid Standard	IEEE 1547a-2014, CA Rule 21, ISO-NE	
Smart-Grid Features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAr, Freq-Watt, Volt-Watt	
Warranty		
Standard[6]	5 years	
Extended Terms	10, 15 and 20 years	

1) See user manual for further information regarding MPPT Voltage Range when operating at non-unity PF
2) "Max. AC Apparent Power" rating valid within MPPT voltage range and temperature range of -30°C to +40°C (-22°F to +104°F) for 100KW PF ≥0.9 and 125KW PF ≥0.95
3) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.
4) Wye neutral-grounded, Delta may not be corner-grounded.
5) See user manual for further requirements regarding non-operating conditions.
6) 5 year warranty effective for units purchased after October 1st, 2019.

Three-phase pad-mounted PEAK™ transformer

General

Eaton's Cooper Power™ series PEAK™ transformers represent the next generation of transformer design, and with three distinct product offerings there is a PEAK transformer to fit your needs. The first PEAK transformer option is a 75 °C average winding rise (AWR) design that offers users a potentially smaller and lighter footprint than today's 65 °C AWR transformers. This design is ideal for applications with cost, weight, or dimensional constraints. The second PEAK transformer option is a 65/75 °C AWR design that offers users sustained overload capacity while maintaining IEEE Std C57.91™-2011 standard per unit life requirements. This design offers customers flexibility in transformer sizing by offering the ability to accommodate future load growth without oversizing relative to current load, or the ability to meet periods of peak demand without oversizing based on continuous load. The third PEAK transformer option is a 55/75 °C AWR design that provides up to 22% additional loading capacity when compared to traditional mineral oil-filled transformers.

With all PEAK product offerings utilizing thermally upgraded kraft paper and Envirotemp™ FR3™ dielectric fluid, PEAK transformers offer customers a solution that is fully compatible with the new IEEE® standard for transformers using high-temperature insulation systems, IEEE Std C57.154™-2012 standard. In addition, all PEAK transformers provide the high fire point and environmental benefits of Envirotemp™ FR3™ fluid. PEAK transformers are available in various designs and configurations to match almost every application.

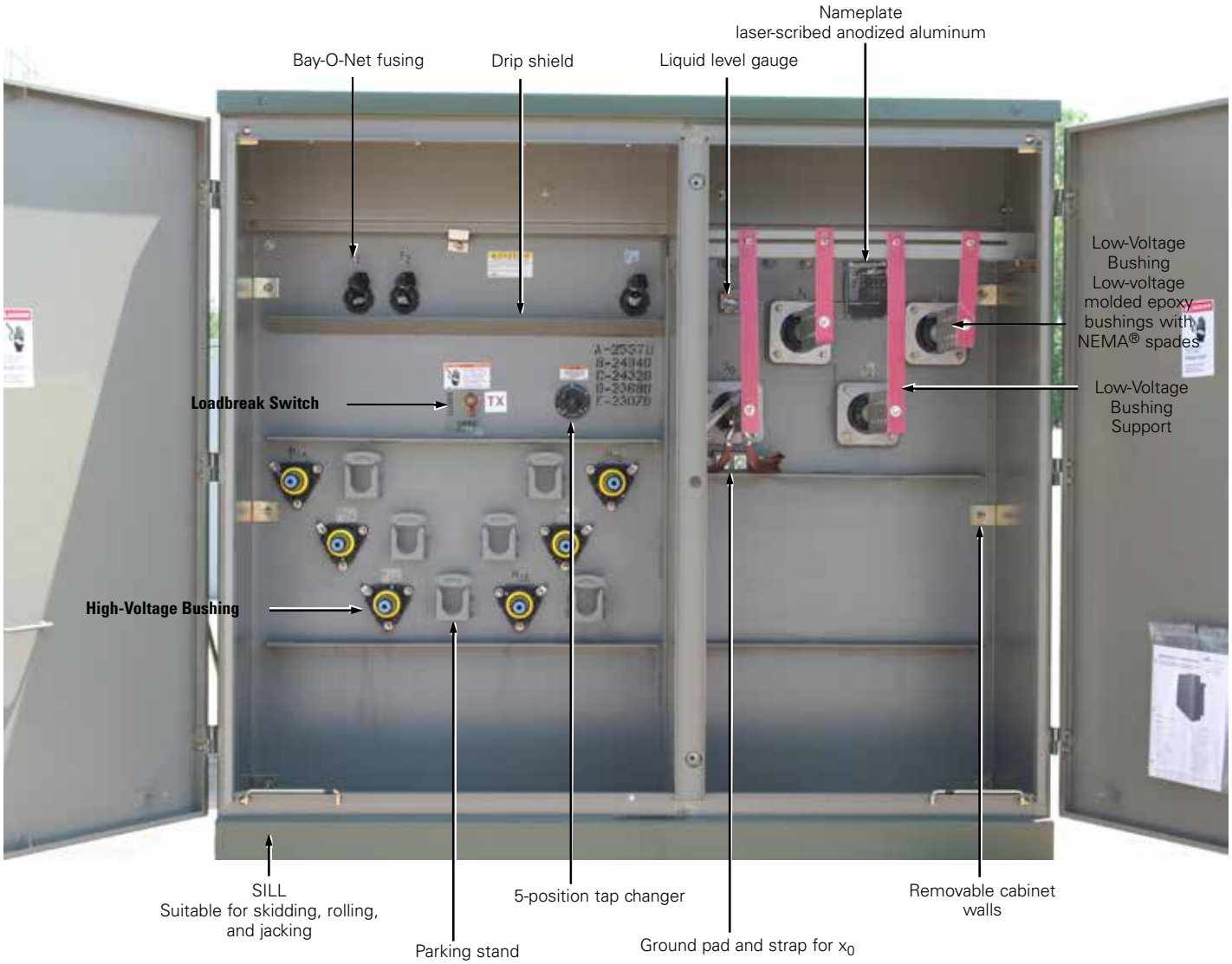

Figure 1. Three-phase pad-mounted PEAK transformer.

Table 1. Product scope

Type	Three-Phase, 50 or 60 Hz, 75 ºC Rise and 65 °C/75 °C and 55/75 °C
Fluid Type	Only Envirotemp™ FR3™ fluid
Coil Configuration	2-winding or 4-winding or 3-winding (Low-High-Low), 3-winding (Low-Low-High)
Size	45 – 10,000 kVA
Primary Voltage	2,400 – 46,000 V
Secondary Voltage	208Y/120 V to 14,400 V
Specialty Designs	Inverter/Rectifier Bridge
	K-Factor (up to K-19)
	Solar/Wind Designs
	Differential Protection
	Seismic Applications (including OSHPD)
	Hardened Data Center
	UL® Listed & Label and Classified

Table 2. Three-Phase Ratings

Three-Phase 50 or 60 Hz
kVA Available[1]: 45, 75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000, 2500, 3000, 3750, 5000, 7500, 10000

[1]Transformers are available in the standard ratings and configurations shown or can be customized to meet specific needs.

Table 3. Impedance Voltage

	Low-voltage rating		
Rating (kVA)	**≤ 600 V**	**2400 Δ through 4800 Δ**	**6900 Δ through 13800GY/7970 or 13800 Δ**
45-75	2.70-5.75	2.70-5.75	2.70-5.75
112.5-300	3.10-5.75	3.10-5.75	3.10-5.75
500	4.35-5.75	4.35-5.75	4.35-5.75
750-2500	5.75	5.75	5.75
3750	5.75	5.75	6.00
5000		6.00	6.50

Note: The standard tolerance is ± 7.5%

Table 4. Audible Sound Levels

	NEMA® TR-1 Average
Self-Cooled, Two Winding kVA Rating	**Decibels (dB)**
45-500	56
501-700	57
701-1000	58
1001-1500	60
1501-2000	61
2001-2500	62
2501-3000	63
3001-4000	64
4001-5000	65
5001-6000	66
6001-7500	67
7501-10000	68

Table 5. Insulation Test Levels

KV Class	Induced Test 180 or 400 Hz 7200 Cycle	kV BIL Distribution	Applied Test 60 Hz (kV)
1.2	Twice Rated Voltage	30	10
2.5		45	15
5		60	19
8.7		75	26
15		95	34
25		125	40
34.5		150	50

Table 6. Temperature Rise Ratings 0-3300 Feet (0-1000 meters)

	Unit Rating (Temperature Rise Winding)
	75, 65/75, 55/75 °C
Ambient Temperature Max.	40 °C
Ambient Temperature 24 Hour Average	30 °C
Temperature Rise Hotspot	90 °C