



Shown with optional equipment

C18 PACKAGE GENERATORS

Standby Power

50 Hz: 550-700 kVA 1500 rpm

Prime Power

50 Hz: 500-635 kVA 1500 rpm

STANDARD FEATURES

GENERAL

- Class H Insulation (rotor and stator)
- Random wound
- 2/3 Pitch minimizes harmonic distortion and facilitates parallel operation
- 12 Lead standard for differential protection
- IP23 Housing protects against accidental contact with hazardous parts and the ingress of water projection up to 60° spray angle
- ISO9001, CE, UL (self-excited only), CSA

EXCITATION SYSTEM

- Self-excited Standard
 - 550/500 kVA
 - 600/545 kVA
- AREP Standard
 - 650/591 kVA
 - 700/635 kVA
- R448 Automatic Voltage Regulator is encapsulated for better protection and improved resistance to vibration. The R448 includes a load adjustment module to provide engine relief upon load impact and improves load acceptance and recovery time.

VOLTAGES

- 415V, 400V, 380V, 220V @ 50 Hz

GENERATOR OPTIONS

- AREP: auxiliary windings provide an isolated power source to the voltage regulator, 300% short-circuit sustainability, improved motor starting as well as immunity from distortion of non-linear loads
- Permanent Magnet Excitation: a separate power excitation system ensures voltage build up and improves response to transient loads. The isolated power source protects regulation from non-linear loads
- Premium generator includes:
 - Permanent magnet excitation
 - R448 Automatic Voltage Regulator
 - Coastal Protection (increased insulation on stator windings)
 - 100 Ohm platinum RTD bearing temperature detector
 - PT100 Thermocouple stator winding temperature detectors
 - Space heater
- Single and double oversize
- Three phase sensing
- Quadrature Droop Kit
- RFI Filter
- Space heater

CATERPILLAR® C18 PACKAGE GENERATORS

Type	Brushless	Voltage regulator.....	Single phase sensing
Construction	Single bearing, three phase, wye connected		1:1 volts per hertz response
Insulation.....	Class H	Voltage regulation.....	±0.5% at steady state from no load to full load
Enclosure	Drip proof IP 23	Frequency.....	±0.25% for constant load from no load to full load
Overspeed capability		Waveform distortion	THD <0.4%
60 Hz	125%	Radio interference. . .	Compliance with EN61000-6
50 Hz	150%	Telephone interference	TIF<50, THF<2%
Temperature rise.....	Within class H limits	Deration.....	Consult factory
Paralleling capability.....	With optional droop kit		

		50 Hz 1500 rpm — Standby				
Frame		LC6114F	LC6114G	LC7024F	LC7024J	
Volts		400	400	400	400	
Arrgt Number		247-6119	247-6121	247-6127	247-6128	
Ratings						
Rise °C		163	163	163	163	
kVA		550	600	650	700	
ekW		440	480	520	560	
Motor Starting Capability at 30% Voltage Dip		1114	1124	1376	1681	
Pitch		0.6666	0.6666	0.6666	0.6666	
Efficiency (%)	100%	94.3	94.1	93.1	93.6	
	75%	94.7	94.8	93.9	94.3	
	50%	94.9	95.0	94.3	94.6	
Reactance (per unit)						
Subtransient Direct Axis	$X''d$	0.1380	0.1610	0.1500	0.1400	
Subtransient Quadrature Axis	$X''q$	0.1860	0.2100	0.1750	0.1580	
Transient Saturated	$X'd$	0.1750	0.1990	0.1870	0.1750	
Synchronous Direct Axis	X_d	3.3760	3.9260	3.5950	3.5350	
Synchronous Quadrature Axis	X_q	2.0250	2.3550	2.1570	2.1220	
Negative Sequence	X_2	0.1620	0.1840	0.1630	0.1490	
Zero Sequence	X_0	0.0100	0.0110	0.0120	0.0090	
Time Constants (seconds)						
Open Circuit	Transient Direct Axis	$T'do$	1.9300	1.9580	1.9290	2.0390
Short Circuit	Transient Direct Axis	$T'd$	0.1000	0.1000	0.1000	0.1000
Open Circuit	Subtransient Direct Axis	$T''do$	0.0130	0.0130	0.0130	0.0130
Short Circuit	Subtransient Direct Axis	$T''d$	0.0100	0.0100	0.0100	0.0100
Open Circuit	Subtransient Quadrature Axis	$T''qo$	2.0840	2.0400	1.8030	1.8740
Short Circuit	Subtransient Quadrature Axis	$T''q$	0.0100	0.0100	0.0100	0.0100
Armature		T_a	0.0150	0.0150	0.0150	0.0150

		50 Hz 1500 rpm — Prime Power			
Frame		LC6114F	LC6114G	LC7024F	LC7024J
Volts		400	400	400	400
Arrgt Number		247-6119	247-6121	247-6127	247-6128
Ratings					
Rise °C		125	125	125	125
kVA		500	545	591	635
ekW		400	436	473	508
Motor Starting Capability at 30% Voltage Dip		1114	1124	1376	1681
Pitch		0.6666	0.6666	0.6666	0.6666
Efficiency (%)	100%	94.5	94.4	93.4	93.9
	75%	94.8	94.9	94.1	94.5
	50%	94.8	95.0	94.2	94.5

Reactance (per unit)					
Subtransient Direct Axis					
X''_d		0.1250	0.1460	0.1370	0.1270
Subtransient Quadrature Axis					
X''_q		0.1690	0.1910	0.1590	0.1430
Transient Saturated					
X'_d		0.1590	0.1810	0.1700	0.1590
Synchronous Direct Axis					
X_d		3.0690	3.5660	3.2700	3.2070
Synchronous Quadrature Axis					
X_q		1.8410	2.1390	1.9620	1.9250
Negative Sequence					
X_2		0.1470	0.1670	0.1480	0.1350
Zero Sequence					
X_0		0.0090	0.0100	0.0110	0.0080
Time Constants (seconds)					
Open Circuit Transient Direct Axis					
T'_{do}		1.9300	1.9580	1.9290	2.0390
Short Circuit Transient Direct Axis					
T''_d		0.1000	0.1000	0.1000	0.1000
Open Circuit Subtransient Direct Axis					
T''_{do}		0.0130	0.0130	0.0130	0.0130
Short Circuit Subtransient Direct Axis					
T'''_d		0.0100	0.0100	0.0100	0.0100
Open Circuit Subtransient Quadrature Axis					
T''_{qo}		2.0840	2.0400	1.8030	1.8740
Short Circuit Subtransient Quadrature Axis					
T'''_q		0.0100	0.0100	0.0100	0.0100
Armature					
T_a		0.0150	0.0150	0.0150	0.0150

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