

GENERATOR DATA

AUGUST 10, 2018

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Selected Model

Engine: C175-16 Generator Frame: 1868 Genset Rating (kW): 3140.0 Line Voltage: 480
Fuel: Diesel Generator Arrangement: 4330082 Genset Rating (kVA): 3925.0 Phase Voltage: 277
Frequency: 60 Excitation Type: Permanent Magnet Pwr. Factor: 0.8 Rated Current: 4721.0
Duty: STANDBY Connection: SERIES STAR Application: EPG Status: Pending

Version:
41205 /41403 /43322 /12153

Spec Information

Generator Specification			Generator Efficiency		
Frame: 1868	Type: SR5	No. of Bearings: 2	Per Unit Load	kW	Efficiency %
Winding Type: FORM WOUND Flywheel: 21.0			0.25	785.0	94.5
Connection: SERIES STAR Housing: 00			0.5	1570.0	96.3
Phases: 3 No. of Leads: 6			0.75	2355.0	96.5
Poles: 4 Wires per Lead: 8			1.0	3140.0	96.3
Sync Speed: 1800 Generator Pitch: 0.6667					

Reactances	Per Unit	Ohms
SUBTRANSIENT - DIRECT AXIS X''_d	0.1533	0.0090
SUBTRANSIENT - QUADRATURE AXIS X''_q	0.1516	0.0089
TRANSIENT - SATURATED X'_d	0.2709	0.0159
SYNCHRONOUS - DIRECT AXIS X_d	2.3577	0.1384
SYNCHRONOUS - QUADRATURE AXIS X_q	1.1738	0.0689
NEGATIVE SEQUENCE X_2	0.1516	0.0089
ZERO SEQUENCE X_0	0.0085	0.0005

Time Constants	Seconds
OPEN CIRCUIT TRANSIENT - DIRECT AXIS T'_{d0}	2.8630
SHORT CIRCUIT TRANSIENT - DIRECT AXIS T'_d	0.3280
OPEN CIRCUIT SUBTRANSIENT - DIRECT AXIS T''_{d0}	0.0070
SHORT CIRCUIT SUBTRANSIENT - DIRECT AXIS T''_d	0.0060
OPEN CIRCUIT SUBTRANSIENT - QUADRATURE AXIS T''_{q0}	0.0066
SHORT CIRCUIT SUBTRANSIENT - QUADRATURE AXIS T''_q	0.0057
EXCITER TIME CONSTANT T_e	0.2580
ARMATURE SHORT CIRCUIT T_a	0.0451

Short Circuit Ratio: 0.46 Stator Resistance = 9.0E-4 Ohms Field Resistance = 1.106 Ohms

Voltage Regulation		Generator Excitation			
Voltage level adjustment: +/-	5.0%	No Load	Full Load, (rated) pf		
Voltage regulation, steady state: +/-	0.5%		Series	Parallel	
Voltage regulation with 3% speed change: +/-	0.5%	Excitation voltage:	15.88 Volts	67.46 Volts	Volts
Waveform deviation line - line, no load: less than	3.0%	Excitation current	1.4 Amps	4.89 Amps	Amps
Telephone influence factor: less than	50				