

ALTERNATOR TECHNICAL DATASHEET

LSA 47.2 S4

Reference LS : 525V

Nidec Industrial Automation India Private Ltd.
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General Characteristics

Alternator Frame	LSA 47.2 S4		
Rating	350	kVA	280 kW
Phase	3		
Pole	4		
Rated Speed	1500	RPM	
Rated Voltage [L-L] (V)	525	V	
Rated Current	384,9	A	
Frequency	50	Hz	
Rated Power Factor	0,8	Lag	
Voltage Regulation	±1%	With 4 % Engine Governing.	
Insulation System	H	Class	
Temperature Rise Limit	H	Class	
Winding Pitch	2/3		
Over Load	10 % Over Load for 1 hour once in 12 hours		
Waveform Distortion	No-Load < 1.5%		
Temperature Ambient	40	° C	
Altitude	1000	m	

Electrical Parameters

Stator Wdg Res(L-L) @20°C	0,0185	Ω
Rotor Wdg Res @20°C	0,876	Ω
Excn. Current At No Load	1,10	A
Excn. Current At Full Load	3,25	A

Connection & Controls

Stator Winding	Double layer concentric winding
Control System	Self-regulated and self-excited
Excitation System	Brushless (AREP)
AVR Type	Analogue
AVR Model	R 450

Performance: Efficiency @0.8 p.f

100% Load	94,5	%
75% Load	94,5	%
50% Load	94,0	%
25% Load	91,0	%

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Reactance & Time constant

Reactances are Saturated & Per Unit at Rating and Voltage Indicated. Time Constant are In Seconds

Reactances

Short Circuit Ratio	0,540
X_d Dir Axis Reactance	1,851
X'_d Dir Axis Transient Reactance	0,133
X''_d Dir Axis Sub Transient Reactance	0,093
X_q Quad Axis Reactance	0,945
X''_q Quad Axis Subtransient Reactance	0,125
X_l Leakage Reactance	0,067
X_2 Negative Sequence Reactance	0,109
X_0 Zero Sequence Reactance	0,006

Time Constant

T'_d Transient Time Constant	0,100
T''_d Sub Transient Time Constant	0,010
T'_{do} O.C Field Time Constant	1,771
T_a Armature Time Constant	0,015

Mechanical Parameters

Protection	IP 23
Cooling	IC01
Air flow	0,90 m ³ /sec
GD ²	7,29 kg-m ²
Bearing Drive End	NA
Bearing Non-Drive End	BALL 6315 C3
Coupling	Single bearing (SAE 1-14")
Maximum Over Speed	120% for 2 mins
Dimensional Drawing	AG314265
Machine Dim. L x B x H (mm)	Refer Dimension Drawing

Weight

Weight of Generator	1113 kg
Weight of Wound Rotor	442 kg
Weight of Wound Stator	486 kg

Note: The rating is industrial and conforms to IS:13364 and IS/IEC: 60034-1

Continuous development of our products entitles us to change specification details without notice