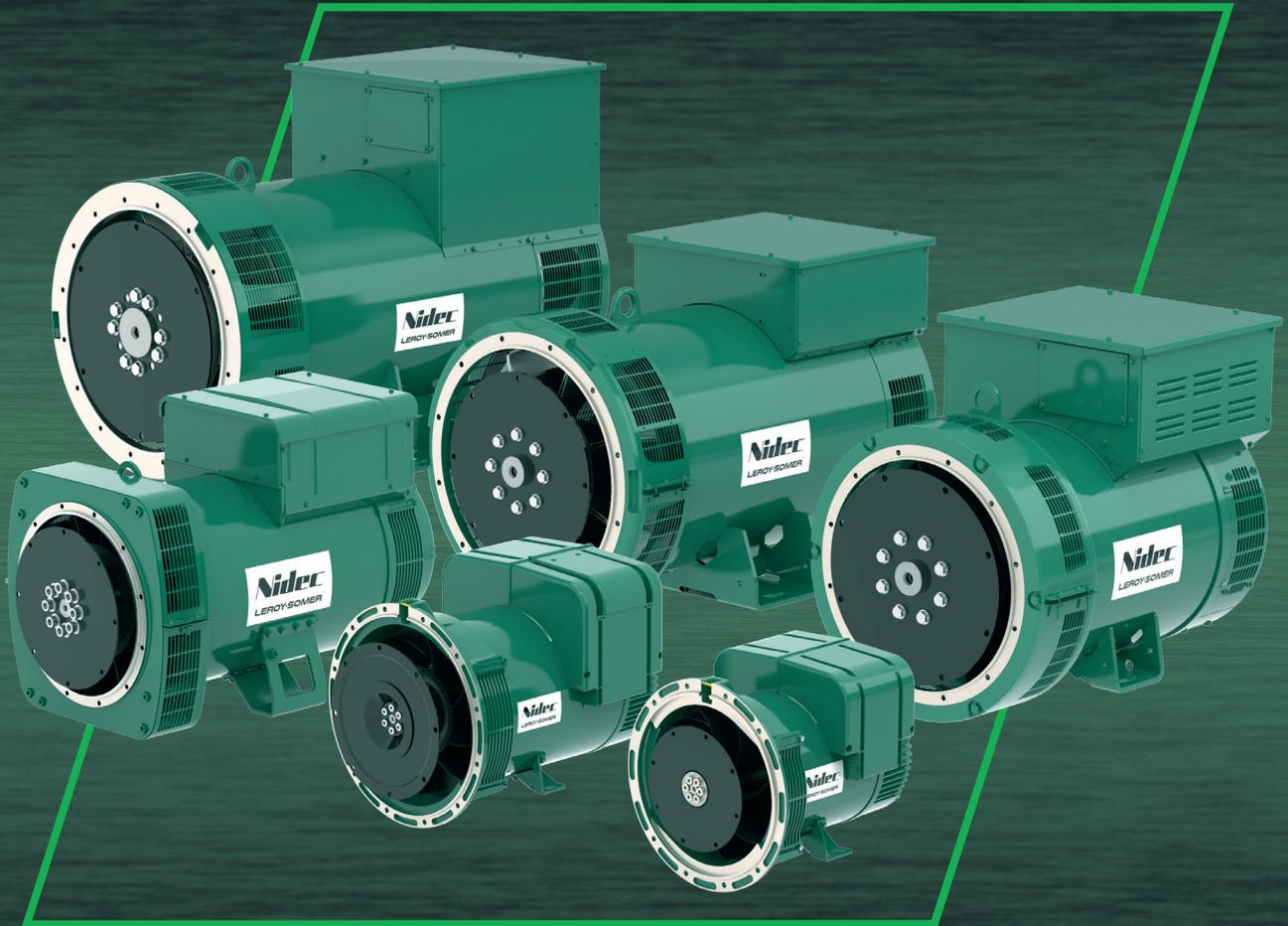


**Nidec**

**Power**



# LSA Rating Table

Low Voltage Alternators - 4 poles

General features and ratings

**LEROY-SOMER**<sup>™</sup>

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# Technical definitions

## INTRODUCTION

This catalogue is a summary of ratings for the LSA low voltage range at the most common voltages around the world. For other voltages, please consult Nidec Power.

## 1 - NOMINAL RATING DEFINITION

### - Continuous rating S1/40°C - IEC 60034-1 definition

Running at constant load limited to the insulation class ; permissible overload 1 h every 12 hours.

### - Stand-by rating 40°C (H: 150K)

Running at constant load **without** over load, for a limited duration of maximum 500h/year, with a permissible increase of the temperature rise above class H.

### - Stand-by rating 27°C (H: 163K)

Running at constant load **without** over load, for a limited duration of maximum 500h/year, with a permissible increase of the temperature rise above class H. The lower ambient temperature (27°C) allows to increase the nominal rating.

A same machine is capable of the following operations:

example: **S1/40°C = 100 kW - std by/40°C = 105 kW - std by/27°C = 110 kW**

## 2 - INSULATION CLASS AND TEMPERATURE RISE

The windings on all Leroy-Somer™ alternators are protected with class H insulation system.

The tables in this document give power values for class H (125K) and F (105K) temperature rises.

For more information on insulation and temperature rise classes, please read our technical note TN11 ([ref. 5202](#)).

## 3 - DERATING

Multiply nominal rating by derating factors indicated in the following table.

Altitude (m)	1 000	1 500	2 000	2 500	3 000	3 500	4 000
Derating factor	1	0.975	0.949	0.922	0.894	0.866	0.837

Ambient T °C	25	40	45	50	55	60 (*)
Class H	1.076	1	0.973	0.946	0.918	0.889
Class F	1.095	1	0.966	0.931	0.894	0.856
Class B	1.140	1	0.949	0.894	0.837	0.775

(\*) External AVR if  $\geq 56$  °C

Lagging PF	0.6	0.7	0.8	0.9	1
Derating factor	0.86	0.93	1	1	1

For a rated P.F. at 0.8

## 4 - WINDING

The windings proposed by Nidec Power in this document are in 2/3 pitch.

- Standard winding No.: 6 (12 wires)

- Optimized winding No.: 7, 8, 9, 10, 22, 23 and 52

- Winding M or M1, dedicated 1-phase winding (4 wires)

“S” after the winding number means “6 leads” ex: 6S.

“T” or “+” after winding give an information about the saturation level of the stator.

# Technical definitions

## 5 - GENERAL FEATURES

### 5.1 - Standards

The Leroy-Somer™ LSA alternators meet all key international standards and regulations, including IEC 60034, NEMA MG 1.32-33, ISO 8528-3, CSA C22.2 n°100-14 and UL 1446 (UL 1004 on request). Also compliant with IEC 61000-6-2, IEC 61000-6-3, IEC 61000-6-4, VDE 0875G, VDE 0875N and EN 55011, group 1 class A for European zone.

The Leroy-Somer™ LSA alternators can be integrated in EC marked generator sets, and they bear EC, UKCA and CMIM markings. They are designed, manufactured and marketed in an ISO 9001 and ISO 14001 quality assurance environment.

### 5.2 - Electrical features

#### - Excitation systems

Nidec Power propose a large choice of excitation systems, depending on the customer needs:

- **SHUNT** system, without short-circuit capacity

- **AREP** or **PMG** system, with a short-circuit capacity of 3 times the nominal current for 10 seconds

#### - Voltage regulators

The 4-pole LSA alternators are fitted with reliable and performant AVR's, designed and manufactured by Nidec Power.

Available excitation systems depending on selected alternator and are indicated in nominal rating tables.

Alternators LSA	40	42.3	44.3	46.3	47.3	49.3	50.2	52.3	53.2	54.2	55.3
<b>SHUNT</b>	R220		R250			-					
<b>SHUNT dedicated 1-phase 50 and 60 Hz</b>	R221		R251	-							
<b>AREP / PMG</b>	D350*	D350					D550				
<b>SHUNT / AREP / PMG</b>	D550 (optional)										

\*AREP only

#### - Frequency

LSA alternators may operate either 50 or 60 Hz. The standard winding (code 6) is suitable both for 50 and 60 Hz. For dedicated windings, see specific table or consult factory.

#### - Power factor: P.F.

LSA alternators are designed to operate between 0.8 and 1 power factor.

A derating is necessary below 0.8 power factor (see derating chart). Consult us for other P.F. needs.

#### - Waveform

Total harmonic distortion (THD), at no load or linear load is less than 5% according to IEC.

TIF/Telephone influence factor according to NEMA is less than 50.

#### - Transient features

Transient voltage dip for rated step load at 0.8 power factor is less than 18 %.

Recovery time for a 20 % transient voltage dip is less than 0.5 s.

#### - Parallel operation

All LSA alternators can operate in parallel with other alternators (2/3 pitch winding) with AREP/PMG (except LSA 40 with AREP only), or with the mains, when they are equipped with the appropriate devices (AVR, current transformer...).

#### - Overload acceptance

LSA alternators can be overloaded according to NEMA.

#### - Single phase operation

LSA 40, LSA 42.3, LSA 44.3 and LSA 46.3 alternators can be reconnected for single phase operation. The single phase rating is given in the various alternator data sheets. LSA 40, LSA 42.3 and LSA 44.3 can be supplied with a dedicated single phase winding (code M or M1).

### 5.3 - Mechanical features

#### - Mechanical arrangement

LSA alternators can be provided in single bearing or two bearing configurations. A large range of engine adaptors and coupling discs are available to fit the major engines.

#### - Enclosure

Standard enclosure is IP 23. Other enclosures such as IP 44, IP 55 can be proposed on request (possible derating).

# Technical definitions

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## - Bearings

Sealed for life bearings up to LSA 50.2 (regreasable bearing option from LSA 44.3), regreasable bearings from LSA 52.3.

## - Balancing

All rotors are dynamically balanced according to ISO 1940 and IEC 60034-14. Two bearing rotors are balanced with a half key.

## - Direction of rotation

LSA alternators can operate in both directions (5% derating for anticlockwise running for LSA 47.3, LSA 49.3 and LSA 50.2). LSA 52.3, LSA 53.2, LSA 54.2 and LSA 55.3 alternators are designed to have only one direction of rotation, which has to be defined upon ordering.

## - Overspeed

The maximum overspeed is 2250 R.P.M. (1.25 times the 60 Hz rated speed).

## - Insulation and protection

LSA alternators are class H insulated. The standard winding protection can accept up to 95 % relative humidity and is suitable for indoors marine applications. Specific added coatings can be proposed for harsh environments. Refer to technical note TN12 ([ref. 5538](#)).

## - Terminal box and connectors

LSA alternators are fitted with a large terminal box which facilitates access to the AVR and allows easy access to the connections. Current transformers and other optional modules can be fitted within the terminal box.

## - Mechanical structure

Steel frame. Aluminum, cast iron or steel housings and flanges depending on models.

## - Painting

LSA alternators are supplied painted. The color can be chosen by the customer. For more details on the paint specification LSA 52, refer to technical note TN18 ([ref. 5727](#)).

## 6 - ACCESSORIES AND OPTIONS

- Digital AVR D550 (includes three phase sensing and paralleling with the grid)
- EMI suppression module R791 for other areas than EC
- PMG (from LSA 42.3)
- Engine adaptors for two bearing alternators
- Air inlet filters (5% derating)
- Air inlet or outlet filters with IP44 (10% derating) (8% derating for LSA 52.3)
- Specific stator protections for harsh environments
- Specific painting
- Greasable bearings for LSA 44.3, LSA 46.3, LSA 47.3, LSA 49.3 and LSA 50.2
- Thermal sensors for bearings
- Thermal sensors for stator windings
- Anti condensation heaters (retrofitable)
- Remote voltage potentiometers
- Current transformers for paralleling with other alternators
- First emergency kits (AVR + diodes)

## 7 - PRODUCT DESCRIPTION

The machine name is defined according to various criteria (see below).

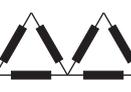
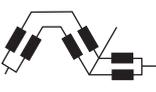
Example of description for:

### **LSA 49.3 M6 C6/4**

- LSA: Range
- 49.3: Frame size
- M6: Core length
- C: Excitation system (C: AREP / J: SHUNT or SHUNT + PMG)
- 6/4: Winding number / number of poles

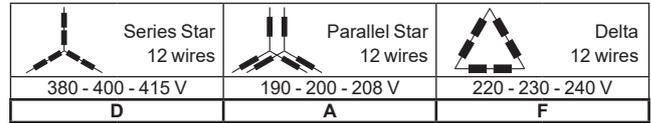
# Voltage reconnections

## 8 - RECONNECTIONS 50 Hz

4 POLES - 1 500 R.P.M.							
Phase - Code	3-phase - D	3-phase - F	3-phase - D	3-phase - F	3-phase - A	1-phase - FF	1-phase - G
Connections							
	Star	Delta	Series Star	Delta	Parallel Star	Double Delta	Open Delta
Number of wires	6	6	12	12	12	12	12
Standard 6 winding	380-400-415 V (pages 7 & 9)	220-230-240 V (pages 7 & 9)	380-400-415 V (pages 7 & 9)	220-230-240 V (pages 7 & 9)	190-200-208 V (pages 7 & 9)	220 - 240 V (page 15)	220 - 240 V (page 15)
Standard 6 winding	440 V (page 8)	-	440 V (page 8)	-	220 V (page 8)	-	-
Specific 7 winding (on request)	415 - 440 V (page 10)	240 - 254 V (page 10)	415 - 440 V (page 10)	240 - 254 V (page 10)	208 - 220 V (page 10)	240 - 254 V (consult factory)	240 - 254 V (consult factory)
Specific 9 winding (on request)	500 - 525 V (page 11)	-	500 - 525 V (page 11)	-	-	-	-
Specific 22 or 23 winding (on request)	550 V (page 12) 600 V (page 13)	-	550 V (page 12) 600 V (page 13)	-	-	-	-
Specific 10 or 52 winding (on request)	660 - 690 V (page 14)	-	660 - 690 V (page 14)	-	-	-	-
<b>Dedicated 1-phase M winding</b> <b>4 wires</b> (on request)							
			 <b>SE Series</b>			 <b>PA Parallel</b>	
			<b>220 - 240 V</b> (page 15)			<b>110 - 120 V</b> (page 15)	

# Power ratings at 50 Hz

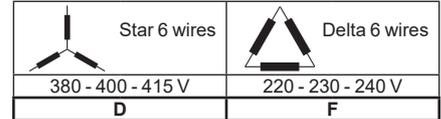
## 8.1 - Standard 6 winding



### 1 500 R.P.M. - 3-phase - P.F. 0.8

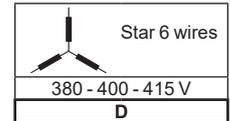
Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>6 winding / 12 wires</b>					<b>kVA</b> D: 380 V / A: 190 V / F: 220 V				<b>kVA</b> D: 400 V / A: 200 V / F: 230 V				<b>kVA</b> D: 415 V / A: 208 V / F: 240 V			
LSA 40 VS1	J6/4	C6/4	-	12	10	9	10.5	11	10	9	10.5	11	10	9	10.5	11
LSA 40 VS2	J6/4	C6/4	-	12	12.5	11.5	13.5	14	12.5	11.5	13.5	14	12.5	11.5	13.5	14
LSA 40 S3	J6/4	C6/4	-	12	15	14	16	16.5	15	14	16	16.5	15	14	16	16.5
LSA 40 S4	J6/4	C6/4	-	12	17.5	16	19	19.5	17.5	16	19	19.5	17.5	16	19	19.5
LSA 40 M5	J6/4	C6/4	-	12	20	18.5	21.5	22	20	18.5	21.5	22	20	18.5	21.5	22
LSA 42.3 VS1	J6/4	C6/4	Option	12	25	23	26.5	27.5	25	23	26.5	27.5	25	23	26.5	27.5
LSA 42.3 VS2	J6/4	C6/4	Option	12	27	24.5	28.5	30	27	24.5	28.5	30	27	24.5	28.5	30
LSA 42.3 VS3	J6/4	C6/4	Option	12	32	29	34	35	32	29	34	35	32	29	34	35
LSA 42.3 S4	J6/4	C6/4	Option	12	35	32	37	38.5	35	32	37	38.5	35	32	37	38.5
LSA 42.3 S5	J6/4	C6/4	Option	12	40	36.5	42.5	45	40	36.5	42.5	45	40	36.5	42.5	45
LSA 42.3 M7	J6/4	C6/4	Option	12	45	41	48	50	45	41	48	50	45	41	48	50
LSA 42.3 M8	J6/4	C6/4	Option	12	50	45.5	53	55	50	45.5	53	55	50	45.5	53	55
LSA 42.3 L9	J6/4	C6/4	Option	12	60	55	64	66	63	58	67	70	63	58	67	70
LSA 44.3 S2	J6/4	C6/4	Option	12	70	64	74	77	70	64	74	77	70	64	74	77
LSA 44.3 S3	J6/4	C6/4	Option	12	80	73	85	88	80	73	85	88	80	73	85	88
LSA 44.3 S4	J6/4	C6/4	Option	12	90	82	95	100	90	82	95	100	90	82	95	100
LSA 44.3 S5	J6/4	C6/4	Option	12	100	91	106	110	100	91	106	110	100	91	106	110
LSA 44.3 M6 *	J6/4	C6/4	Option	12	125	114	133	138	125	114	133	138	125	114	133	138
LSA 44.3 M8	J6/4	C6/4	Option	12	135	123	143	150	135	123	143	150	135	123	143	150
LSA 44.3 L10 *	J6/4	C6/4	Option	12	150	137	159	165	150	137	159	165	150	137	159	165
LSA 44.3 L12 *	J6/4	C6/4	Option	12	165	150	175	182	165	150	175	182	165	150	175	182
LSA 44.3 VL13	J6/4	C6/4	Option	12	180	164	191	200	180	164	191	200	180	164	191	200
LSA 44.3 VL14	J6/4	C6/4	Option	12	192	175	204	211	200	182	212	220	200	182	212	220
LSA 46.3 S4	J6/4	C6/4	Option	12	230	209	244	253	230	209	244	253	230	209	244	253
LSA 46.3 S5	J6/4	C6/4	Option	12	240	218	254	264	250	228	265	275	250	228	265	275
LSA 46.3 M7 *	J6/4	C6/4	Option	12	275	250	292	303	275	250	292	303	275	250	292	303
LSA 46.3 M8 *	J6/4	C6/4	Option	12	290	264	307	319	300	273	318	330	300	273	318	330
LSA 46.3 L10	J6/4	C6/4	Option	12	325	300	345	358	325	300	345	358	325	300	345	358
LSA 46.3 L11	J6/4	C6/4	Option	12	350	319	371	385	365	332	387	400	365	332	387	400
LSA 47.3 S4 *	J6/4	C6/4	Option	12	410	375	435	450	410	375	435	450	410	375	435	450
LSA 47.3 S5	J6/4	C6/4	Option	12	455	415	480	500	455	415	480	500	455	415	480	500
LSA 47.3 M7	J6/4	C6/4	Option	12	500	465	550	570	500	465	550	570	500	465	550	570
LSA 47.3 M8	J6/4	C6/4	Option	12	550	500	585	600	550	500	585	600	550	500	585	600
LSA 47.3 L9 *	J6/4	C6/4	Option	12	600	545	635	660	600	545	635	660	600	545	635	660
LSA 47.3 L10 *	J6/4	C6/4	Option	12	645	587	684	710	660	600	730	745	660	600	730	745

\* Paralleling with the grid or between alternators, select the 6 wires configuration.



### 1 500 R.P.M. - 3-phase - P.F. 0.8

6S winding / 6 wires					<b>kVA</b> D: 380 V / F: 220 V				<b>kVA</b> D: 400 V / F: 230 V				<b>kVA</b> D: 415 V / F: 240 V			
LSA 49.3 M6	-	C6S/4	Option	6	730	660	780	810	730	660	780	810	730	660	780	810
LSA 49.3 M8	-	C6S/4	Option	6	820	760	910	945	820	760	910	945	820	760	910	945
LSA 49.3 L9	-	C6S/4	Option	6	910	820	1 000	1 020	910	820	1 000	1 020	910	820	1 000	1 020
LSA 49.3 L10	-	C6S/4	Option	6	1 000	900	1 085	1 130	1 000	900	1 085	1 130	1 000	900	1 085	1 130



### 1 500 R.P.M. - 3-phase - P.F. 0.8

6S winding / 6 wires					<b>kVA</b> D: 380 V				<b>kVA</b> D: 400 V				<b>kVA</b> D: 415 V			
LSA 50.2 M6	-	C6S/4	Option	6	1 250	1 125	1 315	1 375	1 250	1 125	1 315	1 375	1 250	1 125	1 315	1 375
LSA 50.2 L7 **	-	C6S/4	Option	6	1 350	1 215	1 420	1 485	1 350	1 215	1 420	1 485	1 350	1 215	1 420	1 485
LSA 50.2 L8	-	C6S/4	Option	6	1 450	1 320	1 520	1 595	1 500	1 350	1 575	1 650	1 500	1 350	1 575	1 650
LSA 50.2 VL10	-	C6S/4	Option	6	1 600	1 455	1 680	1 760	1 640	1 475	1 720	1 800	1 600	1 455	1 680	1 760
LSA 52.3 S5	-	C6S/4	Option	6	1 860	1 696	1 953	2 046	1 860	1 696	1 953	2 046	1 860	1 696	1 953	2 046
LSA 52.3 S6	-	C6S/4	Option	6	2 000	1 824	2 100	2 200	2 000	1 824	2 100	2 200	2 000	1 824	2 100	2 200
LSA 52.3 S7	-	C6S/4	Option	6	2 200	2 006	2 310	2 420	2 200	2 006	2 310	2 420	2 200	2 006	2 310	2 420
LSA 52.3 L9	-	C6S/4	Option	6	2 360	2 152	2 478	2 596	2 360	2 152	2 478	2 596	2 360	2 152	2 478	2 596
LSA 52.3 L12	-	C6S/4	Option	6	2 560	2 335	2 688	2 816	2 560	2 335	2 688	2 816	2 560	2 335	2 688	2 816
LSA 52.3 UL16	-	C6S/4	Option	6	2 750	2 508	2 888	3 025	2 750	2 508	2 888	3 025	2 750	2 508	2 888	3 025
LSA 53.2 M9	-	C6S/4	Option	6	3 000	2 736	3 150	3 300	3 000	2 736	3 150	3 300	3 000	2 736	3 150	3 300
LSA 53.2 M12	-	C6S/4	Option	6	3 300	3 010	3 465	3 630	3 300	3 010	3 465	3 630	3 300	3 010	3 465	3 630
LSA 54.2 M10	-	C6S/4	Option	6	3 420	3 119	3 591	3 762	3 420	3 119	3 591	3 762	3 420	3 119	3 591	3 762
LSA 54.2 UL14	-	C6TS/4	Option	6	4 320	3 940	4 536	4 752	4 320	3 940	4 536	4 752	3 900	3 557	4 095	4 290
LSA 55.3 S9	-	C6S/4	Option	6	4 400	4 013	4 620	4 840	4 400	4 013	4 620	4 840	4 400	4 013	4 620	4 840
LSA 55.3 L13	-	C6S/4	Option	6	4 750	4 332	4 988	5 225	4 750	4 332	4 988	5 225	4 750	4 332	4 988	5 225

\*\* Paralleling with the grid or between alternators, contact us.

# Power ratings at 50 Hz

## 8.2 - Standard 6 winding

	Series Star 12 wires		Parallel Star 12 wires
440 V (max. voltage)		220 V (max. voltage)	
<b>D</b>		<b>A</b>	

### 1 500 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>6 winding / 12 wires</b>					<b>kVA</b> D: 440 V / A: 220 V (1)			
LSA 40 VS1	J6/4	C6/4	-	12	9	8	9.5	10
LSA 40 VS2	J6/4	C6/4	-	12	11	10	12	12.5
LSA 40 S3	J6/4	C6/4	-	12	13	12	14	15
LSA 40 S4	J6/4	C6/4	-	12	16	14.5	17	17.5
LSA 40 M5	J6/4	C6/4	-	12	18	16.5	19	20
LSA 42.3 VS1	J6/4	C6/4	Option	12	24.5	22.5	26	27
LSA 42.3 VS2	J6/4	C6/4	Option	12	26	23.5	27.5	28.5
LSA 42.3 VS3	J6/4	C6/4	Option	12	30	27.5	32	33
LSA 42.3 S4	J6/4	C6/4	Option	12	30.5	28	32.5	33.5
LSA 42.3 S5	J6/4	C6/4	Option	12	35	32	37	38.5
LSA 42.3 M7	J6/4	C6/4	Option	12	39	35.5	41.5	43
LSA 42.3 M8	J6/4	C6/4	Option	12	43	39	45.5	47.5
LSA 42.3 L9	J6/4	C6/4	Option	12	52	47.5	55	57
LSA 44.3 S2	J6/4	C6/4	Option	12	63	57	67	69
LSA 44.3 S3	J6/4	C6/4	Option	12	72	66	76	79
LSA 44.3 S4	J6/4	C6/4	Option	12	81	74	86	89
LSA 44.3 S5	J6/4	C6/4	Option	12	90	82	95	99
LSA 44.3 M6 *	J6/4	C6/4	Option	12	113	103	120	124
LSA 44.3 M8	J6/4	C6/4	Option	12	122	111	129	134
LSA 44.3 L10 *	J6/4	C6/4	Option	12	135	123	143	149
LSA 44.3 L12 *	J6/4	C6/4	Option	12	138	126	150	157
LSA 44.3 VL13	J6/4	C6/4	Option	12	171	156	181	188
LSA 44.3 VL14	J6/4	C6/4	Option	12	192	175	204	211
LSA 46.3 S4	J6/4	C6/4	Option	12	219	200	232	240
LSA 46.3 S5	J6/4	C6/4	Option	12	238	216	252	261
LSA 46.3 M7 *	J6/4	C6/4	Option	12	261	238	277	287
LSA 46.3 M8 *	J6/4	C6/4	Option	12	285	259	302	313
LSA 46.3 L10	J6/4	C6/4	Option	12	309	281	327	340
LSA 46.3 L11	J6/4	C6/4	Option	12	347	316	368	380
LSA 47.3 S4 *	J6/4	C6/4	Option	12	400	364	424	440
LSA 47.3 S5	J6/4	C6/4	Option	12	445	405	472	490
LSA 47.3 M7	J6/4	C6/4	Option	12	490	449	519	539
LSA 47.3 M8	J6/4	C6/4	Option	12	540	491	572	594
LSA 47.3 L9 *	J6/4	C6/4	Option	12	500	455	530	550
LSA 47.3 L10 *	J6/4	C6/4	Option	12	630	573	668	693

\* Paralleling with the grid or between alternators, select the 6 wires configuration.

	Star 6 wires
440 V (max. voltage)	
<b>D</b>	

### 1 500 R.P.M. - 3-phase - P.F. 0.8

6S winding / 6 wires					<b>kVA</b> D: 440 V (1)			
LSA 49.3 M6	-	C6S/4	Option	6	665	600	730	765
LSA 49.3 M8	-	C6S/4	Option	6	810	710	885	925
LSA 49.3 L9	-	C6S/4	Option	6	820	740	920	965
LSA 49.3 L10	-	C6S/4	Option	6	950	840	1 030	1 080
LSA 50.2 M6	-	C6S/4	Option	6	1 190	1 095	1 275	1 330
LSA 50.2 L7 **	-	C6S/4	Option	6	1 260	1 150	1 365	1 425
LSA 50.2 L8	-	C6S/4	Option	6	1 440	1 320	1 555	1 625
LSA 50.2 VL10	-	C6S/4	Option	6	1 545	1 420	1 670	1 730

\*\* Paralleling with the grid or between alternators, contact us.

(1) Use winding 7 for parallel operation with the main

# Power ratings at 50 Hz

## 8.3 - Standard 6 winding - 12 wires option

 Series Star 12 wires	 Parallel Star 12 wires	 Delta 12 wires
380 - 400 - 415 V	190 - 200 - 208 V	220 - 230 - 240 V
<b>D</b>	<b>A</b>	<b>F</b>

1 500 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>6 winding / 12 wires OPTION</b>					<b>kVA</b> D: 380 V / A: 190 V / F: 220 V				<b>kVA</b> D: 400 V / A: 200 V / F: 230 V				<b>kVA</b> D: 415 V / A: 208 V / F: 240 V			
LSA 49.3 M6	-	C6/4	Option	12	730	660	780	810	730	660	780	810	730	660	780	810
LSA 49.3 M8	-	C6/4	Option	12	820	760	910	945	820	760	910	945	820	760	910	945
LSA 49.3 L9	-	C6/4	Option	12	910	820	1 000	1 020	910	820	1 000	1 020	910	820	1 000	1 020
LSA 49.3 L10	-	C6/4	Option	12	1 000	900	1 085	1 130	1 000	900	1 085	1 130	1 000	900	1 085	1 130

 Series Star 12 wires	 Parallel Star 12 wires
380 - 400 - 415 V	190 - 200 - 208 V
<b>D</b>	<b>A</b>

1 500 R.P.M. - 3-phase - P.F. 0.8

6 winding / 12 wires OPTION					<b>kVA</b> D: 380 V / A: 190 V				<b>kVA</b> D: 400 V / A: 200 V				<b>kVA</b> D: 415 V / A: 208 V			
LSA 50.2 M6	-	C6/4	Option	12	1 045	940	1 045	1 045	1 100	990	1 100	1 100	1 140	1 026	1 140	1 140
LSA 50.2 L8	-	C6/4	Option	12	1 250	1 125	1 250	1 250	1 300	1 170	1 300	1 300	1 350	1 215	1 350	1 350

## 8.4 - Standard 6 winding - 12 wires option

 Series Star 12 wires	 Parallel Star 12 wires
440 V (max. voltage)	220 V (max. voltage)
<b>D</b>	<b>A</b>

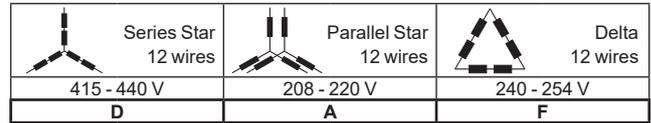
1 500 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.				40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K		F: 105 K		H: 150 K	H: 163 K
<b>6 winding / 12 wires OPTION</b>					<b>kVA</b> D: 440 V / A: 220 V (1)					
LSA 49.3 M6	-	C6/4	Option	12	665		600		730	765
LSA 49.3 M8	-	C6/4	Option	12	810		710		885	925
LSA 49.3 L9	-	C6/4	Option	12	820		740		920	965
LSA 49.3 L10	-	C6/4	Option	12	950		840		1 030	1 080
LSA 50.2 M6	-	C6/4	Option	12	1 210		1 089		1 210	1 210
LSA 50.2 L8	-	C6/4	Option	12	1 430		1 287		1 430	1 430

(1) Use winding 7 for parallel operation with the main

# Power ratings at 50 Hz

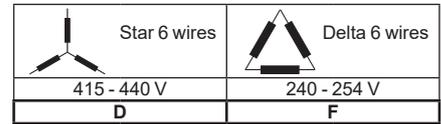
## 8.5 - Specific 7 winding



### 1 500 R.P.M. - 3-phase - P.F. 0.8

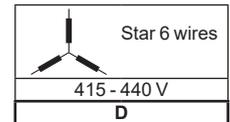
Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by	
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K	
<b>7 winding / 12 wires</b>					<b>kVA</b> D: 415 V / A: 208 V / F: 240 V				<b>kVA</b> D: 440 V / A: 220 V / F: 254 V				
LSA 40 VS1	*	J7/4	C7/4	-	12	10	9	10.6	11	10	9	10.6	11
LSA 40 VS2		J7/4	C7/4	-	12	12.5	11.4	13.5	14	12.5	11.4	13.5	14
LSA 40 S3		J7/4	C7/4	-	12	15	13.7	16	16.5	15	13.7	16	16.5
LSA 40 S4		J7/4	C7/4	-	12	17.5	16	18.6	19.5	17.5	16	18.6	19.5
LSA 40 M5		J7/4	C7/4	-	12	20	18.2	21.2	22	20	18.2	21.2	22
LSA 42.3 VS1		J7/4	C7/4	Option	12	25	23	26.5	27.5	25	23	26.5	27.5
LSA 42.3 VS2		J7/4	C7/4	Option	12	27	24.5	28.5	29.5	27	24.5	28.5	29.5
LSA 42.3 VS3		J7/4	C7/4	Option	12	30.5	28	32.5	33.5	32	29	34	35
LSA 42.3 S4		J7/4	C7/4	Option	12	33.5	30.5	35.5	37	35	32	37	38.5
LSA 42.3 S5		J7/4	C7/4	Option	12	38	34.5	40.5	42	40	36.5	42.5	44
LSA 42.3 M7		J7/4	C7/4	Option	12	43	39	45.5	47.5	45	41	47.5	49.5
LSA 42.3 M8		J7/4	C7/4	Option	12	47.5	43	50	52	50	45.5	53	55
LSA 42.3 L9		J7/4	C7/4	Option	12	57	52	60	63	60	55	64	66
LSA 44.3 S2		J7/4	C7/4	Option	12	70	64	74	77	70	64	74	77
LSA 44.3 S3		J7/4	C7/4	Option	12	80	73	85	88	80	73	85	88
LSA 44.3 S4	*	J7/4	C7/4	Option	12	90	82	95	99	90	82	95	99
LSA 44.3 S5	*	J7/4	C7/4	Option	12	100	91	106	110	100	91	106	110
LSA 44.3 M6		J7/4	C7/4	Option	12	121	110	128	133	125	114	133	138
LSA 44.3 M8	*	J7/4	C7/4	Option	12	134	122	142	147	135	123	143	149
LSA 44.3 L10		J7/4	C7/4	Option	12	149	136	158	164	150	137	159	165
LSA 44.3 L12		J7/4	C7/4	Option	12	160	146	170	176	165	150	175	182
LSA 44.3 VL13	*	J7/4	C7/4	Option	12	169	154	179	186	180	164	191	198
LSA 44.3 VL14	*	J7/4	C7/4	Option	12	178	162	189	196	192	175	204	211
LSA 46.3 S4	*	J7/4	C7/4	Option	12	215	196	228	237	225	205	239	248
LSA 46.3 S5	*	J7/4	C7/4	Option	12	230	209	244	253	240	218	254	264
LSA 46.3 M7		J7/4	C7/4	Option	12	245	223	260	270	260	237	276	286
LSA 46.3 M8		J7/4	C7/4	Option	12	265	241	281	292	280	255	297	308
LSA 46.3 L10	*	J7/4	C7/4	Option	12	285	259	302	314	300	273	318	330
LSA 46.3 L11	*	J7/4	C7/4	Option	12	310	282	329	341	325	296	345	358
LSA 47.3 S4		-	C7/4	Option	12	384	349	407	422	410	373	435	451

\* Paralleling with the grid or between alternators, select the 6 wires configuration.



### 1 500 R.P.M. - 3-phase - P.F. 0.8

7S winding / 6 wires					<b>kVA</b> D: 415 V / F: 240 V			<b>kVA</b> D: 440 V / F: 254 V				
LSA 49.3 S4	-	C7S/4	Option	6	600	546	636	660	620	564	657	682
LSA 49.3 M6	-	C7S/4	Option	6	730	664	774	803	730	664	774	803
LSA 49.3 M8	-	C7S/4	Option	6	785	714	832	864	820	746	869	902
LSA 49.3 L9	-	C7S/4	Option	6	850	774	901	935	910	828	965	1 001
LSA 49.3 L10	-	C7S/4	Option	6	900	819	954	990	960	874	1 018	1 056



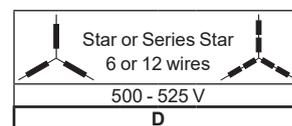
### 1 500 R.P.M. - 3-phase - P.F. 0.8

7S winding / 6 wires					<b>kVA</b> D: 415 V			<b>kVA</b> D: 440 V				
LSA 50.2 S4	-	C7S/4	Option	6	960	864	1 008	1 056	1 010	910	1 060	1 110
LSA 50.2 M6	-	C7+S/4	Option	6	1 120	1 008	1 176	1 235	1 150	1 035	1 207	1 265
LSA 50.2 L7	-	C7S/4	Option	6	1 325	1 193	1 391	1 460	1 325	1 193	1 391	1 460
LSA 50.2 L8	**	C7S/4	Option	6	1 370	1 233	1 440	1 510	1 370	1 233	1 440	1 510
LSA 50.2 VL10	-	C7S/4	Option	6	1 520	1 368	1 596	1 672	1 520	1 368	1 596	1 672
LSA 52.3 S6	-	C7S/4	Option	6	-	-	-	-	1 860	1 696	1 953	2 046
LSA 52.3 S7	-	C7S/4	Option	6	-	-	-	-	2 000	1 824	2 100	2 200
LSA 52.3 L9	-	C7S/4	Option	6	-	-	-	-	2 100	1 915	2 205	2 310
LSA 52.3 L12	-	C7S/4	Option	6	-	-	-	-	2 200	2 006	2 310	2 420
LSA 53.2 M7	-	C7S/4	Option	6	-	-	-	-	2 500	2 280	2 625	2 750
LSA 53.2 M9	-	C7S/4	Option	6	-	-	-	-	2 750	2 508	2 888	3 025
LSA 53.2 M12	-	C7S/4	Option	6	-	-	-	-	3 000	2 736	3 150	3 300
LSA 54.2 M10	-	C7S/4	Option	6	-	-	-	-	3 100	2 827	3 255	3 410
LSA 54.2 UL14	-	C7S/4	Option	6	-	-	-	-	4 100	3 739	4 305	4 510
LSA 55.3 S10	-	C7S/4	Option	6	-	-	-	-	4 400	4 013	4 620	4 840
LSA 55.3 VL15	-	C7S/4	Option	6	-	-	-	-	4 750	4 332	4 988	5 225

\*\* Paralleling with the grid or between alternators, contact us.

# Power ratings at 50 Hz

## 8.6 - Specific 9 winding



1 500 R.P.M. - 3-phase - P.F. 0.8

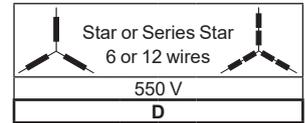
Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
9 or 9S winding / 12 or 6 wires					kVA D: 500 V				kVA D: 525 V			
LSA 40 VS1	-	C9/4	-	12	10	9	10.5	11	10	9	10.5	11
LSA 40 VS2	-	C9/4	-	12	12.5	11.5	13.5	14	12.5	11.5	13.5	14
LSA 40 S3	-	C9/4	-	12	15	14	16	16.5	15	14	16	16.5
LSA 40 S4	-	C9/4	-	12	17.5	16	18.5	19.5	17.5	16	18.5	19.5
LSA 40 M5 *	-	C9/4	-	12	20	18	21	22	20	18	21	22
LSA 42.3 VS1	-	C9/4	Option	12	25	23	26.5	27.5	25	23	26.5	27.5
LSA 42.3 VS2	-	C9/4	Option	12	27	24.5	28.5	29.5	27	24.5	28.5	29.5
LSA 42.3 VS3	-	C9/4	Option	12	32	29	34	35	30.5	28	32.5	33.5
LSA 42.3 S4	-	C9/4	Option	12	35	32	37	38.5	33.5	30.5	35.5	37
LSA 42.3 S5	-	C9/4	Option	12	40	36.5	42.5	44	38	34.5	40.5	42
LSA 42.3 M7	-	C9/4	Option	12	45	41	47.5	49.5	43	39	45.5	47.5
LSA 42.3 M8	-	C9/4	Option	12	50	45.5	53	55	47.5	43	50	52
LSA 42.3 L9	-	C9/4	Option	12	60	55	64	66	57	52	60	63
LSA 44.3 S2 *	-	C9/4	Option	12	70	64	74	77	70	64	74	77
LSA 44.3 S3 *	-	C9/4	Option	12	80	73	85	88	80	73	85	88
LSA 44.3 S4 *	-	C9/4	Option	12	90	82	95	99	90	82	95	99
LSA 44.3 S5 *	-	C9/4	Option	12	100	91	106	110	100	91	106	110
LSA 44.3 M6	-	C9/4	Option	12	125	114	133	138	125	114	133	138
LSA 44.3 M8	-	C9/4	Option	12	135	123	143	149	135	123	143	149
LSA 44.3 L10 *	-	C9/4	Option	12	150	137	159	165	150	137	159	165
LSA 44.3 L12 *	-	C9/4	Option	12	160	146	170	176	160	146	170	176
LSA 44.3 VL13	-	C9+/4	Option	12	180	164	191	198	180	164	191	198
LSA 44.3 VL14	-	C9+/4	Option	12	185	168	196	204	196	178	208	216
LSA 46.3 S4	-	C9S/4	Option	6	225	205	239	248	235	214	249	259
LSA 46.3 S5	-	C9S/4	Option	6	235	214	249	259	245	223	260	270
LSA 46.3 M7	-	C9/4	Option	12	275	250	292	303	275	250	292	303
LSA 46.3 M8	-	C9/4	Option	12	300	273	318	330	300	273	318	330
LSA 46.3 L10	-	C9S/4	Option	6	320	291	339	352	325	296	345	358
LSA 46.3 L11	-	C9S/4	Option	6	355	323	376	391	365	332	387	402
LSA 47.3 S4	-	C9T/4	Option	12	410	373	435	451	410	373	435	451
LSA 47.3 S5 *	-	C9/4	Option	12	450	410	477	495	455	414	482	501
LSA 47.3 M7 *	-	C9T/4	Option	12	500	455	530	550	500	455	530	550
LSA 47.3 M8 *	-	C9T/4	Option	12	547	498	580	602	550	501	583	605
LSA 47.3 L9	-	C9+/4	Option	12	600	546	636	660	600	546	636	660
LSA 47.3 L10	-	C9+/4	Option	12	625	569	663	688	660	601	700	726
LSA 49.3 M6	-	C9S/4	Option	6	730	664	774	803	730	664	774	803
LSA 49.3 M8	-	C9S/4	Option	6	770	701	816	847	775	705	822	853
LSA 49.3 L9	-	C9S/4	Option	6	850	774	901	935	850	774	901	935
LSA 49.3 L10	-	C9S/4	Option	6	910	828	965	1 001	910	828	965	1 001
LSA 50.2 M6	-	C9TS/4	Option	6	1 100	990	1 144	1 210	1 100	990	1 144	1 210
LSA 50.2 L7	-	C9+S/4	Option	6	1 150	1 035	1 210	1 265	1 240	1 115	1 305	1 364
LSA 50.2 L8	-	C9S/4	Option	6	1 335	1 200	1 400	1 465	1 380	1 245	1 450	1 520
LSA 50.2 VL10 **	-	C9S/4	Option	6	1 500	1 350	1 575	1 650	1 545	1 390	1 625	1 700
LSA 52.3 S6	-	C9S/4	Option	6	1 750	1 596	1 838	1 925	1 750	1 596	1 838	1 925
LSA 52.3 S7	-	C9S/4	Option	6	1 925	1 756	2 021	2 118	1 925	1 756	2 021	2 118
LSA 52.3 L9	-	C9S/4	Option	6	2 000	1 824	2 100	2 200	2 000	1 824	2 100	2 200
LSA 52.3 L12	-	C9S/4	Option	6	2 100	1 915	2 205	2 310	2 100	1 915	2 205	2 310
LSA 52.3 UL16	-	C9S/4	Option	6	2 700	2 462	2 835	2 970	2 700	2 462	2 835	2 970
LSA 53.2 M12	-	C9S/4	Option	6	2 900	2 645	3 045	3 190	2 900	2 645	3 045	3 190
LSA 54.2 M10	-	C9S/4	Option	6	3 000	2 736	3 150	3 300	3 000	2 736	3 150	3 300
LSA 54.2 L14	-	C9S/4	Option	6	3 600	3 283	3 780	3 960	3 600	3 283	3 780	3 960
LSA 55.3 S10	-	C9S/4	Option	6	4 150	3 785	4 358	4 565	4 150	3 785	4 358	4 565
LSA 55.3 L14	-	C9S/4	Option	6	5 000	4 560	5 250	5 500	5 000	4 560	5 250	5 500
LSA 55.3 XL19	-	C9S/4	Option	6	6 000	5 472	6 300	6 600	6 000	5 472	6 300	6 600

\* Paralleling with the grid or between alternators, select the 6 wires configuration.

\*\* Paralleling with the grid or between alternators, contact us.

# Power ratings at 50 Hz

## 8.7 - Specific 22 or 23 winding



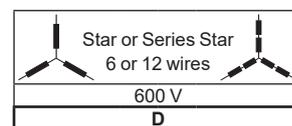
1 500 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>22/23 or 22S/23S winding / 12 or 6 wires</b>					<b>kVA D: 550 V</b>			
LSA 42.3 VS1	-	C22T/4	Option	12	21.5	19.5	23	23.5
LSA 42.3 VS2	-	C22T/4	Option	12	23	21	24.5	25.5
LSA 42.3 VS3	-	C22T/4	Option	12	27	24.5	28.5	29.5
LSA 42.3 S4	-	C22T/4	Option	12	30	27.5	32	33
LSA 42.3 S5	-	C22T/4	Option	12	34	31	36	37.5
LSA 42.3 M7	-	C22T/4	Option	12	38.5	35	41	42.5
LSA 42.3 M8	-	C22T/4	Option	12	42.5	38.5	45	47
LSA 42.3 L9	-	C22T/4	Option	12	51	46.5	54	56
LSA 44.3 S2	-	C22TS/4	Option	6	67	61	71	74
LSA 44.3 S3	-	C22TS/4	Option	6	76	69	81	84
LSA 44.3 S4	-	C22T/4	Option	12	85	77	90	94
LSA 44.3 S5	-	C22T/4	Option	12	94	86	100	103
LSA 44.3 M6	-	C22T/4	Option	12	105	96	111	116
LSA 44.3 M8	-	C22TS/4	Option	6	110	100	117	121
LSA 44.3 L10	-	C22T/4	Option	12	128	116	136	141
LSA 44.3 L12	-	C22T/4	Option	12	140	127	148	154
LSA 44.3 VL13	-	C22T/4	Option	12	155	141	164	171
LSA 44.3 VL14	-	C22T/4	Option	12	178	162	189	196
LSA 46.3 S4	-	C22T/4	Option	12	210	191	223	231
LSA 46.3 S5	-	C22T/4	Option	12	224	204	237	246
LSA 46.3 M7	-	C22TS/4	Option	6	230	209	244	253
LSA 46.3 M8	-	C22TS/4	Option	6	250	228	265	275
LSA 46.3 L10	-	C22T/4	Option	12	260	237	276	286
LSA 46.3 L11	-	C22T/4	Option	12	290	264	307	319
LSA 47.3 S4 *	-	C22T/4	Option	12	380	346	403	418
LSA 47.3 S5	-	C23/4	Option	12	400	364	424	440
LSA 47.3 M7	-	C23/4	Option	12	425	387	451	468
LSA 47.3 M8	-	C23/4	Option	12	450	410	477	495
LSA 47.3 L9	-	C22T/4	Option	12	500	455	530	550
LSA 47.3 L10	-	C22T/4	Option	12	596	542	632	656
LSA 49.3 M6	-	C22TS/4	Option	6	650	592	689	715
LSA 49.3 M8	-	C22TS/4	Option	6	720	655	763	792
LSA 49.3 L9	-	C22TS/4	Option	6	860	783	912	946
LSA 50.2 S4	-	C22S/4	Option	6	950	855	1 000	1 045
LSA 50.2 M6	-	C22S/4	Option	6	1 080	975	1 135	1 190
LSA 50.2 L8	-	C23S/4	Option	6	1 230	1 110	1 290	1 355
LSA 50.2 VL10	-	C22S/4	Option	6	1 410	1 270	1 480	1 550

\* Paralleling with the grid or between alternators, select the 6 wires configuration.

# Power ratings at 50 Hz

## 8.8 - Specific 22 or 23 winding



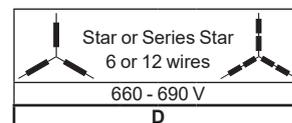
1 500 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C	27 °C
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	St.by H: 150 K	St.by H: 163 K
<b>22/23 or 22S/23S winding / 12 or 6 wires</b>					<b>kVA D: 600 V</b>			
LSA 42.3 VS1	-	C23/4	Option	12	21.5	19.5	23	23.5
LSA 42.3 VS2	-	C23/4	Option	12	23	21	24.5	25.5
LSA 42.3 VS3	-	C23/4	Option	12	27	24.5	28.5	29.5
LSA 42.3 S4	-	C23/4	Option	12	30	27.5	32	33
LSA 42.3 S5	-	C23/4	Option	12	34	31	36	37.5
LSA 42.3 M7	-	C23/4	Option	12	38.5	35	41	42.5
LSA 42.3 M8	-	C23/4	Option	12	42.5	38.5	45	47
LSA 42.3 L9	-	C23/4	Option	12	51	46.5	54	56
LSA 44.3 S2	-	C23/4	Option	12	70	64	74	77
LSA 44.3 S3	-	C23/4	Option	12	77	70	82	85
LSA 44.3 S4 *	-	C23/4	Option	12	82	75	87	90
LSA 44.3 S5 *	-	C23/4	Option	12	91	83	96	100
LSA 44.3 M6	-	C23/4	Option	12	100	91	106	110
LSA 44.3 M8	-	C23/4	Option	12	115	105	122	127
LSA 44.3 L10 *	-	C23/4	Option	12	120	109	127	132
LSA 44.3 L12 *	-	C23/4	Option	12	130	118	138	143
LSA 44.3 VL13	-	C23S/4	Option	6	168	153	178	185
LSA 44.3 VL14	-	C23S/4	Option	6	178	162	189	196
LSA 46.3 S4	-	C23S/4	Option	6	205	187	217	226
LSA 46.3 S5	-	C23S/4	Option	6	215	196	228	237
LSA 46.3 M7	-	C23S/4	Option	6	225	205	239	248
LSA 46.3 M8	-	C23S/4	Option	6	240	218	254	264
LSA 46.3 L10	-	C23/4	Option	12	280	255	297	308
LSA 46.3 L11	-	C23/4	Option	12	315	287	334	347
LSA 47.3 S4 *	-	C22T/4	Option	12	400	364	424	440
LSA 47.3 S5	-	C23/4	Option	12	425	387	451	468
LSA 47.3 M7	-	C23/4	Option	12	450	410	477	495
LSA 47.3 M8	-	C23/4	Option	12	475	432	504	523
LSA 47.3 L10	-	C22T/4	Option	12	512	466	543	563
LSA 49.3 S4	-	C23S/4	Option	6	585	532	620	644
LSA 49.3 M6	-	C23S/4	Option	6	700	637	742	770
LSA 49.3 M8	-	C23S/4	Option	6	750	683	795	825
LSA 49.3 L9	-	C23S/4	Option	6	800	728	848	880
LSA 49.3 L10	-	C23S/4	Option	6	870	792	922	957
LSA 50.2 S4	-	C23S/4	Option	6	980	880	1 030	1 080
LSA 50.2 M6	-	C23S/4	Option	6	1 140	1 026	1 197	1 254
LSA 50.2 L7	-	C23S/4	Option	6	1 210	1 089	1 271	1 331
LSA 50.2 L8	-	C23S/4	Option	6	1 350	1 215	1 418	1 485
LSA 50.2 VL10	-	C22S/4	Option	6	1 500	1 350	1 575	1 650
LSA 52.3 S6	-	C23S/4	Option	6	1 700	1 550	1 785	1 870
LSA 52.3 S7	-	C23S/4	Option	6	1 900	1 733	1 995	2 090
LSA 52.3 L9	-	C23S/4	Option	6	2 000	1 824	2 100	2 200
LSA 52.3 L12	-	C23S/4	Option	6	2 150	1 961	2 258	2 365
LSA 53.2 M9	-	C23S/4	Option	6	2 450	2 234	2 573	2 695
LSA 53.2 M11	-	C23S/4	Option	6	2 750	2 508	2 888	3 025
LSA 54.2 M10	-	C23S/4	Option	6	3 100	2 827	3 255	3 410
LSA 54.2 L14	-	C23S/4	Option	6	3 500	3 192	3 675	3 850
LSA 55.3 S10	-	C23S/4	Option	6	4 200	3 830	4 410	4 620
LSA 55.3 L14	-	C23S/4	Option	6	5 000	4 560	5 250	5 500
LSA 55.3 UL17	-	C23S/4	Option	6	5 800	5 290	6 090	6 380

\* Paralleling with the grid or between alternators, select the 6 wires configuration.

# Power ratings at 50 Hz

## 8.9 - Specific 10 or 52 winding



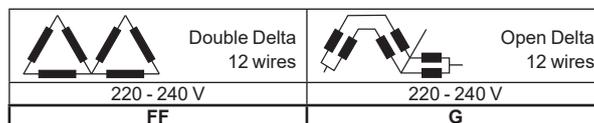
1 500 R.P.M. - 3-phase - P.F. 0.8

Excitation				40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by	
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K	
10/52 or 10S/52S winding / 12 or 6 wires				kVA D: 660 V				kVA D: 690 V				
LSA 42.3 VS1	-	C10/4	Option	12	21.5	19.5	23	23.5	21.5	19.5	23	23.5
LSA 42.3 VS2	-	C10/4	Option	12	23	21	24.5	25.5	23	21	24.5	25.5
LSA 42.3 VS3	-	C10/4	Option	12	27	24.5	28.5	29.5	27	24.5	28.5	29.5
LSA 42.3 S4	-	C10/4	Option	12	30	27.5	32	33	30	27.5	32	33
LSA 42.3 S5	-	C10/4	Option	12	34	31	36	37.5	34	31	36	37.5
LSA 42.3 M7	-	C10/4	Option	12	38.5	35	41	42.5	38.5	35	41	42.5
LSA 42.3 M8	-	C10/4	Option	12	42.5	38.5	45	47	42.5	38.5	45	47
LSA 42.3 L9	-	C10/4	Option	12	51	46.5	54	56	51	46.5	54	56
LSA 44.3 S2	-	C10/4	Option	12	70	64	74	77	70	64	74	77
LSA 44.3 S3	-	C10/4	Option	12	80	73	85	88	80	73	85	88
LSA 44.3 S4	-	C52/4	Option	12	85	77	90	94	85	77	90	94
LSA 44.3 S5	-	C52/4	Option	12	90	82	95	99	92	84	98	101
LSA 44.3 M6	-	C52/4	Option	12	95	86	101	105	100	91	106	110
LSA 44.3 M8	-	C52/4	Option	12	111	101	118	122	115	105	122	127
LSA 44.3 L10	-	C52/4	Option	12	127	116	135	140	132	120	140	145
LSA 44.3 L12	-	C52/4	Option	12	135	123	143	149	145	132	154	160
LSA 44.3 VL13	-	C10/4	Option	12	157	143	166	173	168	153	178	185
LSA 44.3 VL14	-	C10/4	Option	12	166	151	176	183	178	162	189	196
LSA 46.3 S4	-	C10/4	Option	12	208	189	220	229	215	196	228	237
LSA 46.3 S5	-	C10/4	Option	12	220	200	233	242	228	207	242	251
LSA 46.3 M7	-	C10/4	Option	12	244	222	259	268	253	230	268	278
LSA 46.3 M8	-	C10/4	Option	12	265	241	281	292	275	250	292	303
LSA 46.3 L10	-	C52S/4	Option	6	275	250	292	303	285	259	302	314
LSA 46.3 L11	-	C52S/4	Option	6	295	268	313	325	305	278	323	336
LSA 47.3 S4	-	C52T/4	Option	12	350	319	371	385	350	319	371	385
LSA 47.3 S5 *	*	C52/4	Option	12	400	364	424	440	400	364	424	440
LSA 47.3 M7 *	*	C52/4	Option	12	425	387	451	468	450	410	477	495
LSA 47.3 M8 *	*	C52/4	Option	12	450	410	477	495	475	432	504	523
LSA 47.3 L9 *	*	C10/4	Option	12	500	455	530	550	550	501	583	605
LSA 47.3 L10 *	*	C10/4	Option	12	550	501	583	605	595	541	631	655
LSA 49.3 S4	-	C10S/4	Option	6	600	546	636	660	625	569	663	688
LSA 49.3 M6	-	C10S/4	Option	6	650	592	689	715	680	619	721	748
LSA 49.3 M8	-	C10S/4	Option	6	700	637	742	770	730	664	774	803
LSA 49.3 L9	-	C10S/4	Option	6	775	705	822	853	800	728	848	880
LSA 49.3 L10	-	C10S/4	Option	6	825	751	875	908	850	774	901	935
LSA 50.2 S4	-	C52S/4	Option	6	935	845	985	1 030	980	880	1 030	1 080
LSA 50.2 M6	-	C52S/4	Option	6	1 056	950	1 110	1 160	1 100	990	1 155	1 210
LSA 50.2 L7	-	C52S/4	Option	6	1 165	1 045	1 220	1 280	1 210	1 040	1 270	1 330
LSA 50.2 L8	-	C52S/4	Option	6	1 265	1 145	1 325	1 390	1 340	1 210	1 405	1 475
LSA 50.2 VL10	-	C52S/4	Option	6	1 420	1 280	1 490	1 555	1 500	1 350	1 575	1 650
LSA 52.3 S6	-	C52S/4	Option	6	1 750	1 596	1 838	1 925	1 750	1 596	1 838	1 925
LSA 52.3 S7	-	C52S/4	Option	6	1 975	1 801	2 074	2 173	1 975	1 801	2 074	2 173
LSA 52.3 L9	-	C52S/4	Option	6	2 100	1 915	2 205	2 310	2 100	1 915	2 205	2 310
LSA 52.3 L12	-	C52S/4	Option	6	2 420	2 207	2 541	2 662	2 420	2 207	2 541	2 662
LSA 52.3 UL16	-	C52S/4	Option	6	2 500	2 280	2 625	2 750	2 500	2 280	2 625	2 750
LSA 53.2 M9	-	C52S/4	Option	6	2 600	2 371	2 730	2 860	2 600	2 371	2 730	2 860
LSA 53.2 M11	-	C52S/4	Option	6	2 880	2 627	3 024	3 168	2 880	2 627	3 024	3 168
LSA 54.2 M11	-	C52S/4	Option	6	3 050	2 782	3 203	3 355	3 050	2 782	3 203	3 355
LSA 54.2 L14	-	C52S/4	Option	6	3 400	3 101	3 570	3 740	3 400	3 101	3 570	3 740
LSA 54.2 UL17	-	C52S/4	Option	6	4 400	4 013	4 620	4 840	4 400	4 013	4 620	4 840
LSA 55.3 L14	-	C52S/4	Option	6	4 850	4 423	5 093	5 335	4 850	4 423	5 093	5 335
LSA 55.3 VL16	-	C52S/4	Option	6	5 400	4 925	5 670	5 940	5 400	4 925	5 670	5 940

\* Paralleling with the grid or between alternators, select the 6 wires configuration.

# Power ratings at 50 Hz

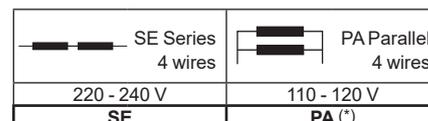
## 8.10 - Standard 6 winding



1 500 R.P.M. - 1-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>6 winding / 12 wires</b>					<b>kVA</b> FF / G: 220 - 240 V			
LSA 40 VS1	J6/4	C6/4	-	12	7	6.5	7.5	8
LSA 40 VS2	J6/4	C6/4	-	12	9	8	9.5	10
LSA 40 S3	J6/4	C6/4	-	12	10.5	10	11.5	12
LSA 40 S4	J6/4	C6/4	-	12	12.5	11.5	13.5	14
LSA 40 M5	J6/4	C6/4	-	12	14	13	15	15.5
LSA 42.3 VS1	J6/4	C6/4	Option	12	15	13.5	16	16.5
LSA 42.3 VS2	J6/4	C6/4	Option	12	16	14.5	17	17.5
LSA 42.3 VS3	J6/4	C6/4	Option	12	19	17.5	20	21
LSA 42.3 S4	J6/4	C6/4	Option	12	22	20	23.5	24
LSA 42.3 S5	J6/4	C6/4	Option	12	25	23	26.5	27.5
LSA 42.3 M7	J6/4	C6/4	Option	12	27	24.5	28.5	29.5
LSA 42.3 M8	J6/4	C6/4	Option	12	30	27.5	32	33
LSA 42.3 L9	J6/4	C6/4	Option	12	36	33	38	39.5
LSA 44.3 S2	J6/4	C6/4	Option	12	42	38	45	46
LSA 44.3 S3	J6/4	C6/4	Option	12	48	44	51	53
LSA 44.3 S4	J6/4	C6/4	Option	12	54	49	57	59
LSA 44.3 S5	J6/4	C6/4	Option	12	60	55	64	66
LSA 44.3 M6	J6/4	C6/4	Option	12	67	61	71	74
LSA 44.3 M8	J6/4	C6/4	Option	12	73	66	77	80
LSA 44.3 L10	J6/4	C6/4	Option	12	80	73	85	88
LSA 44.3 L12	J6/4	C6/4	Option	12	88	80	93	97
LSA 44.3 VL13	J6/4	C6/4	Option	12	90	82	95	99
LSA 44.3 VL14	J6/4	C6/4	Option	12	100	91	106	110
LSA 46.3 S4	J6/4	C6/4	Option	12	138	126	146	152
LSA 46.3 S5	J6/4	C6/4	Option	12	150	137	159	165
LSA 46.3 M7	J6/4	C6/4	Option	12	165	150	175	182
LSA 46.3 M8	J6/4	C6/4	Option	12	180	164	191	200
LSA 46.3 L10	J6/4	C6/4	Option	12	195	177	207	215
LSA 46.3 L11	J6/4	C6/4	Option	12	210	191	225	231

## 8.11 - Dedicated 1-phase M winding



1 500 R.P.M. - Dedicated 1-phase - P.F. 1

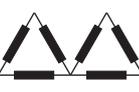
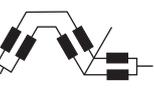
(\*) LSA 44.3 not possible

Excitation					40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>M winding / 4 wires</b>					<b>kVA</b> SE: 220 - 240 V / PA: 110 - 120 V			
LSA 40 VS1	JM/4	-	-	4	10.5	9.5	11	11.4
LSA 40 VS2	JM/4	-	-	4	12	11	12.7	13.2
LSA 40 S3	JM/4	-	-	4	13.2	12	14	14.5
LSA 40 S4	JM/4	-	-	4	14.5	13.2	15.4	16
LSA 40 M5	JM/4	-	-	4	16	14.6	17	17.6
LSA 42.3 VS1	JM/4	-	-	4	18.2	16.6	19.3	20
LSA 42.3 VS2	JM/4	-	-	4	20.3	18.5	21.5	22.3
LSA 42.3 VS3	JM/4	-	-	4	22.4	20.4	23.7	24.6
LSA 42.3 S4	JM/4	-	-	4	25	22.8	26.5	27.5
LSA 42.3 S5	JM/4	-	-	4	28	25.5	29.7	30.8
LSA 42.3 M7	JM/4	-	-	4	31.5	28.7	33.4	34.7
LSA 42.3 M8	JM/4	-	-	4	35	31.9	37.1	38.5
LSA 42.3 L9	JM/4	-	-	4	42	38.2	44.5	46.2
LSA 44.3 S3	JM/4	-	-	4	57	51	60	63
LSA 44.3 S5	JM/4	-	-	4	69	62	73	76
LSA 44.3 M8	JM/4	-	-	4	82	74	87	90

kVA at P.F. 0.8 = kVA/kW at P.F. 1 x 0.85

# Voltage reconnections

## 9 - RECONNECTIONS 60 Hz

4 POLES - 1 800 R.P.M.							
Phase - Code	3-ph - D	3-ph - F	3-ph - D	3-ph - F	3-ph - A	1-ph - FF	1-ph - G
Connections							
	Star	Delta	Series Star	Delta	Parallel Star	Double Delta	Open Delta
Number of wires	6	6	12	12	12	12	12
Standard 6 winding	380 - 480 V (pages 17 to 19)	220 - 277 V (pages 17 to 19)	380 - 480 V (pages 17 to 19)	220 - 277 V (pages 17 to 19)	190 - 240 V (pages 17 to 19)	220 - 240 V (page 23)	220 - 240 V (page 23)
Specific 8 winding (on request)	380 - 416 V (page 20)	220 - 240 V (page 20)	380 - 416 V (page 20)	220 - 240 V (page 20)	190 - 208 V (page 20)	220 - 240 V (consult factory)	220 - 240 V (consult factory)
Specific 9 winding (on request)	600 V (page 21)	347 V (page 21)	600 V (page 21)	347 V (page 21)	-	-	-
Specific 22 or 23 winding (on request)	660 - 690 V (page 22)	-	660 - 690 V (page 22)	-	-	-	-
<b>Dedicated 1-phase M or M1 winding</b> <b>4 wires (on request)</b>							
			 <b>230 - 240 V</b> (page 23) SE Series			 <b>115 - 120 V</b> (page 23) PA Parallel	

# Power ratings at 60 Hz

## 9.1 - Standard 6 winding

 Series Star 12 wires	 Parallel star 12 wires	 Delta 12 wires
380 - 416 V	190 - 208 V	220 - 240 V
<b>D</b>	<b>A</b>	<b>F</b>

### 1 800 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
6 winding / 12 wires					kVA D: 380 V / A: 190 V / F: 220 V (1)				kVA D: 416 V / A: 208 V / F: 240 V (1)			
LSA 40 VS1	J6/4	C6/4	-	12	10	9.5	11	11.5	11	10.5	11.5	12
LSA 40 VS2	J6/4	C6/4	-	12	12.5	11.5	13.5	14	13.5	12.5	14.5	15
LSA 40 S3	J6/4	C6/4	-	12	15	14	16	17	16.5	15.5	18	18.5
LSA 40 S4	J6/4	C6/4	-	12	17.5	16.5	19	19.5	19	18	20.5	21
LSA 40 M5	J6/4	C6/4	-	12	20	18.5	21.5	22	22	20.5	23.5	24.5
LSA 42.3 VS1	J6/4	C6/4	Option	12	29	26.5	30.5	32	31.5	28.5	33.5	34.5
LSA 42.3 VS2	J6/4	C6/4	Option	12	30	27.5	32	33	32	29	34	35
LSA 42.3 VS3	J6/4	C6/4	Option	12	34.5	31.5	36.5	38	38	34.5	40.5	42
LSA 42.3 S4	J6/4	C6/4	Option	12	37.5	34	40	41.5	40.5	37	43	44.5
LSA 42.3 S5	J6/4	C6/4	Option	12	42	38	44.5	46	46	42	49	51
LSA 42.3 M7	J6/4	C6/4	Option	12	46	42	49	51	50	45.5	53	55
LSA 42.3 M8	J6/4	C6/4	Option	12	51.5	47	55	57	56.5	51	60	62.5
LSA 42.3 L9	J6/4	C6/4	Option	12	63	58	67	69	68	62	73	75
LSA 44.3 S2	J6/4	C6/4	Option	12	69	63	73	76	76	69	81	84
LSA 44.3 S3	J6/4	C6/4	Option	12	79	72	84	87	87	79	92	96
LSA 44.3 S4	J6/4	C6/4	Option	12	89	81	94	98	98	89	104	108
LSA 44.3 S5	J6/4	C6/4	Option	12	99	90	105	109	108	99	114	119
LSA 44.3 M6 *	J6/4	C6/4	Option	12	124	113	131	136	135	123	143	149
LSA 44.3 M8	J6/4	C6/4	Option	12	134	122	142	147	146	133	155	161
LSA 44.3 L10 *	J6/4	C6/4	Option	12	148	135	157	163	163	148	173	179
LSA 44.3 L12 *	J6/4	C6/4	Option	12	165	150	175	182	179	163	190	197
LSA 44.3 VL13	J6/4	C6/4	Option	12	180	164	191	200	195	177	207	215
LSA 44.3 VL14	J6/4	C6/4	Option	12	200	182	212	220	215	196	228	237
LSA 46.3 S4	J6/4	C6/4	Option	12	226	206	240	250	250	227	264	274
LSA 46.3 S5	J6/4	C6/4	Option	12	245	223	260	270	265	241	281	292
LSA 46.3 M7 *	J6/4	C6/4	Option	12	275	250	292	303	300	273	318	330
LSA 46.3 M8 *	J6/4	C6/4	Option	12	290	264	307	319	315	287	334	347
LSA 46.3 L10	J6/4	C6/4	Option	12	315	287	334	347	345	314	366	380
LSA 46.3 L11	J6/4	C6/4	Option	12	360	328	382	396	393	358	417	432
LSA 47.3 S4 *	J6/4	C6/4	Option	12	450	410	475	500	480	442	513	530
LSA 47.3 S5	J6/4	C6/4	Option	12	475	441	505	527	510	473	543	562
LSA 47.3 M7	J6/4	C6/4	Option	12	562	523	600	625	610	566	651	668
LSA 47.3 M8	J6/4	C6/4	Option	12	562	523	600	625	610	566	651	671
LSA 47.3 L9 *	J6/4	C6/4	Option	12	602	556	643	667	661	609	707	728
LSA 47.3 L10 *	J6/4	C6/4	Option	12	650	590	690	720	715	650	760	785

\* Paralleling with the grid or between alternators, select the 6 wires configuration.

(1) Use winding 8 for parallel operation with the main

 Star 6 wires	 Delta 6 wires
380 - 416 V	220 - 240 V
<b>D</b>	<b>F</b>

### 1 800 R.P.M. - 3-phase - P.F. 0.8

6S winding / 6 wires					kVA D: 380 V / F: 220 V				kVA D: 416 V / F: 240 V			
LSA 49.3 M6	-	C6S/4	Option	6	725	655	770	800	795	715	845	875
LSA 49.3 M8	-	C6S/4	Option	6	815	735	865	895	890	805	945	980
LSA 49.3 L9	-	C6S/4	Option	6	905	815	960	1 000	990	895	1 050	1 090
LSA 49.3 L10	-	C6S/4	Option	6	990	891	1 049	1 089	1 083	975	1 148	1 192

 Star 6 wires
380 - 416 V
<b>D</b>

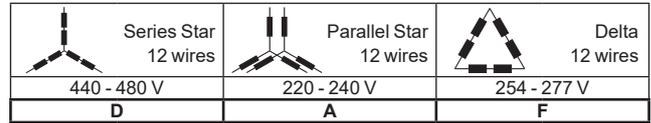
### 1 800 R.P.M. - 3-phase - P.F. 0.8

6S winding / 6 wires					kVA D: 380 V				kVA D: 416 V			
LSA 50.2 M6	-	C6S/4	Option	6	1 285	1 155	1 350	1 410	1 405	1 265	1 475	1 545
LSA 50.2 L7 **	-	C6S/4	Option	6	1 375	1 240	1 440	1 510	1 500	1 350	1 575	1 650
LSA 50.2 L8	-	C6S/4	Option	6	1 485	1 335	1 560	1 630	1 625	1 460	1 705	1 785
LSA 50.2 VL10	-	C6S/4	Option	6	1 635	1 470	1 715	1 800	1 785	1 605	1 875	1 965

\*\* Paralleling with the grid or between alternators, contact us.

# Power ratings at 60 Hz

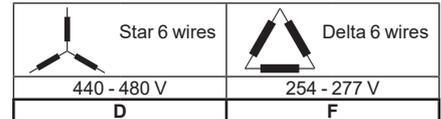
## 9.2 - Standard 6 winding



### 1 800 R.P.M. - 3-phase - P.F. 0.8

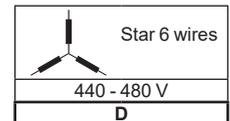
Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
6 winding / 12 wires					kVA D: 440 V / A: 220 V / F: 254 V				kVA D: 480 V / A: 240 V / F: 277 V			
LSA 40 VS1	J6/4	C6/4	-	12	11.5	10.5	12.5	13	12.5	11.5	13.5	14
LSA 40 VS2	J6/4	C6/4	-	12	14.5	13.5	15.5	16	15.5	14.5	16.5	17
LSA 40 S3	J6/4	C6/4	-	12	17.5	16.5	19	19.5	19	17.5	20	21
LSA 40 S4	J6/4	C6/4	-	12	20	19	21.5	22	22	20.5	23.5	24.5
LSA 40 M5	J6/4	C6/4	-	12	23	21.5	25	26	25	23	27	27.5
LSA 42.3 VS1	J6/4	C6/4	Option	12	31.5	28.5	33.5	34.5	31.5	28.5	33.5	34.5
LSA 42.3 VS2	J6/4	C6/4	Option	12	34	31	36	37.5	34	31	36	37.5
LSA 42.3 VS3	J6/4	C6/4	Option	12	40	36.5	42.5	44	40	36.5	42.5	44
LSA 42.3 S4	J6/4	C6/4	Option	12	43	39	45.5	47.5	44	40	46.5	48.5
LSA 42.3 S5	J6/4	C6/4	Option	12	49	44.5	52	54	50	45.5	53	55
LSA 42.3 M7	J6/4	C6/4	Option	12	53.5	48.5	57	59	56.5	51	60	62.5
LSA 42.3 M8	J6/4	C6/4	Option	12	59.5	54	63	65.5	62.5	57	66.5	69
LSA 42.3 L9	J6/4	C6/4	Option	12	72	66	77	79	79	72	84	87
LSA 44.3 S2	J6/4	C6/4	Option	12	80	73	85	88	88	80	93	97
LSA 44.3 S3	J6/4	C6/4	Option	12	92	84	98	101	100	91	106	110
LSA 44.3 S4	J6/4	C6/4	Option	12	103	94	109	113	113	103	120	124
LSA 44.3 S5	J6/4	C6/4	Option	12	115	105	122	127	125	114	133	138
LSA 44.3 M6 *	J6/4	C6/4	Option	12	143	130	152	157	156	142	165	172
LSA 44.3 M8	J6/4	C6/4	Option	12	155	141	164	171	169	154	179	186
LSA 44.3 L10 *	J6/4	C6/4	Option	12	172	157	182	189	188	171	199	207
LSA 44.3 L12 *	J6/4	C6/4	Option	12	189	172	200	208	206	187	218	227
LSA 44.3 VL13	J6/4	C6/4	Option	12	210	191	223	231	225	205	239	250
LSA 44.3 VL14	J6/4	C6/4	Option	12	230	209	244	253	250	228	265	275
LSA 46.3 S4	J6/4	C6/4	Option	12	262	238	278	288	288	262	305	316
LSA 46.3 S5	J6/4	C6/4	Option	12	280	255	297	308	313	284	331	344
LSA 46.3 M7 *	J6/4	C6/4	Option	12	315	287	334	347	344	313	364	378
LSA 46.3 M8 *	J6/4	C6/4	Option	12	340	309	360	375	375	337	395	412
LSA 46.3 L10	J6/4	C6/4	Option	12	365	332	387	402	406	370	431	447
LSA 46.3 L11	J6/4	C6/4	Option	12	419	381	444	461	456	415	483	502
LSA 47.3 S4 *	J6/4	C6/4	Option	12	500	455	533	550	512	465	550	581
LSA 47.3 S5	J6/4	C6/4	Option	12	531	493	566	585	570	520	605	625
LSA 47.3 M7	J6/4	C6/4	Option	12	625	581	669	690	625	590	680	700
LSA 47.3 M8	J6/4	C6/4	Option	12	630	587	672	705	690	632	730	750
LSA 47.3 L9 *	J6/4	C6/4	Option	12	685	634	734	763	750	685	795	825
LSA 47.3 L10 *	J6/4	C6/4	Option	12	755	685	800	830	825	750	875	910

\* Paralleling with the grid or between alternators, select the 6 wires configuration.



### 1 800 R.P.M. - 3-phase - P.F. 0.8

6S winding / 6 wires					kVA D: 440 V / F: 254 V				kVA D: 480 V / F: 277 V			
LSA 49.3 M6	-	C6S/4	Option	6	840	760	890	925	915	825	970	1 005
LSA 49.3 M8	-	C6S/4	Option	6	940	850	1 000	1 040	1 025	925	1 090	1 130
LSA 49.3 L9	-	C6S/4	Option	6	1 045	940	1 110	1 155	1 140	1 025	1 210	1 255
LSA 49.3 L10	-	C6S/4	Option	6	1 146	1 031	1 215	1 260	1 250	1 125	1 325	1 375



### 1 800 R.P.M. - 3-phase - P.F. 0.8

6S winding / 6 wires					kVA D: 440 V				kVA D: 480 V			
LSA 50.2 M6	-	C6S/4	Option	6	1 455	1 310	1 530	1 600	1 560	1 405	1 640	1 720
LSA 50.2 L7 **	-	C6S/4	Option	6	1 555	1 400	1 630	1 710	1 680	1 510	1 765	1 850
LSA 50.2 L8	-	C6S/4	Option	6	1 720	1 550	1 805	1 890	1 875	1 685	1 965	2 060
LSA 50.2 VL10	-	C6S/4	Option	6	1 860	1 675	1 950	2 050	2 000	1 800	2 100	2 200
LSA 52.3 S5	-	C6S/4	Option	6	2 046	1 866	2 148	2 251	2 232	2 036	2 344	2 455
LSA 52.3 S6	-	C6S/4	Option	6	2 200	2 006	2 310	2 420	2 400	2 189	2 520	2 640
LSA 52.3 S7	-	C6S/4	Option	6	2 420	2 207	2 541	2 662	2 640	2 408	2 772	2 904
LSA 52.3 L9	-	C6S/4	Option	6	2 596	2 368	2 726	2 856	2 832	2 583	2 974	3 115
LSA 52.3 L12	-	C6S/4	Option	6	2 850	2 599	2 993	3 135	3 250	2 964	3 413	3 575
LSA 52.3 UL16	-	C6S/4	Option	6	3 100	2 827	3 255	3 410	3 400	3 101	3 570	3 740
LSA 53.2 M9	-	C6S/4	Option	6	3 300	3 010	3 465	3 630	3 600	3 283	3 780	3 960
LSA 53.2 M12	-	C6S/4	Option	6	3 630	3 311	3 812	3 993	3 900	3 557	4 095	4 290
LSA 54.2 M10	-	C6S/4	Option	6	3 760	3 429	3 948	4 136	4 050	3 694	4 253	4 455
LSA 54.2 UL14	-	C6S/4	Option	6	4 750	4 332	4 988	5 225	5 130	4 679	5 387	5 643
LSA 55.3 S9	-	C6S/4	Option	6	4 900	4 469	5 145	5 390	5 300	4 834	5 565	5 830
LSA 55.3 L13	-	C6S/4	Option	6	5 225	4 765	5 486	5 748	5 700	5 198	5 985	6 270

\*\* Paralleling with the grid or between alternators, contact us.

# Power ratings at 60 Hz

## 9.3 - Standard 6 winding - 12 wires option

 Series Star 12 wires	 Parallel Star 12 wires	 Delta 12 wires
380 - 416 V	190 - 208 V	220 - 240 V
<b>D</b>	<b>A</b>	<b>F</b>

1 800 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>6 winding / 12 wires OPTION</b>					<b>kVA</b> D: 380 V / A: 190 V / F: 220 V (1)				<b>kVA</b> D: 416 V / A: 208 V / F: 240 V (1)			
LSA 49.3 M6	-	C6/4	Option	12	<b>725</b>	655	770	800	<b>795</b>	715	845	875
LSA 49.3 M8	-	C6/4	Option	12	<b>815</b>	735	865	895	<b>890</b>	805	945	980
LSA 49.3 L9	-	C6/4	Option	12	<b>905</b>	815	960	1 000	<b>990</b>	895	1 050	1 090
LSA 49.3 L10	-	C6/4	Option	12	<b>990</b>	891	1 049	1 089	<b>1 083</b>	975	1 148	1 192

(1) Use winding 8 for parallel operation with the main

 Series Star 12 wires	 Parallel Star 12 wires
380 - 416 V	190 - 208 V
<b>D</b>	<b>A</b>

1 800 R.P.M. - 3-phase - P.F. 0.8

Excitation					kVA				kVA			
Type	SHUNT	AREP	PMG	wires	D: 380 V / A: 190 V (1)				D: 416 V / A: 208 V (1)			
<b>6 winding / 12 wires OPTION</b>					<b>990</b>	891	990	990	<b>1 080</b>	972	1 080	1 080
LSA 50.2 S4	-	C6/4	Option	12	<b>990</b>	891	990	990	<b>1 080</b>	972	1 080	1 080
LSA 50.2 M6	-	C6/4	Option	12	<b>1 210</b>	1 089	1 210	1 210	<b>1 320</b>	1 188	1 320	1 320
LSA 50.2 L8	-	C6/4	Option	12	<b>1 430</b>	1 287	1 430	1 430	<b>1 565</b>	1 409	1 565	1 565

(1) Use winding 8 for parallel operation with the main

## 9.4 - Standard 6 winding - 12 wires option

 Series Star 12 wires	 Parallel Star 12 wires	 Delta 12 wires
440 - 480 V	220 - 240 V	254 - 277 V
<b>D</b>	<b>A</b>	<b>F</b>

1 800 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
<b>6 winding / 12 wires OPTION</b>					<b>kVA</b> D: 440 V / A: 220 V / F: 254 V				<b>kVA</b> D: 480 V / A: 240 V / F: 277 V			
LSA 49.3 M6	-	C6/4	Option	12	<b>840</b>	760	890	925	<b>915</b>	825	970	1 005
LSA 49.3 M8	-	C6/4	Option	12	<b>940</b>	850	1 000	1 040	<b>1 025</b>	925	1 090	1 130
LSA 49.3 L9	-	C6/4	Option	12	<b>1 045</b>	940	1 110	1 155	<b>1 140</b>	1 025	1 210	1 255
LSA 49.3 L10	-	C6/4	Option	12	<b>1 146</b>	1 031	1 215	1 260	<b>1 250</b>	1 125	1 325	1 375

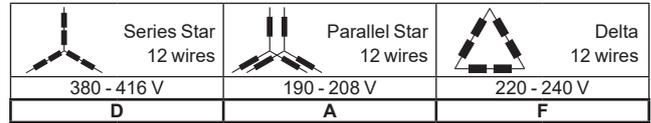
 Series Star 12 wires	 Parallel Star 12 wires
440 - 480 V	220 - 240 V
<b>D</b>	<b>A</b>

1 800 R.P.M. - 3-phase - P.F. 0.8

Excitation					kVA				kVA			
Type	SHUNT	AREP	PMG	wires	D: 440 V / A: 220 V				D: 480 V / A: 240 V			
<b>6 winding / 12 wires OPTION</b>					<b>1 145</b>	1 030	1 145	1 145	<b>1 250</b>	1 125	1 250	1 250
LSA 50.2 S4	-	C6/4	Option	12	<b>1 145</b>	1 030	1 145	1 145	<b>1 250</b>	1 125	1 250	1 250
LSA 50.2 M6	-	C6/4	Option	12	<b>1 400</b>	1 260	1 400	1 400	<b>1 525</b>	1 372	1 525	1 525
LSA 50.2 L8	-	C6/4	Option	12	<b>1 655</b>	1 490	1 655	1 655	<b>1 800</b>	1 620	1 800	1 800

# Power ratings at 60 Hz

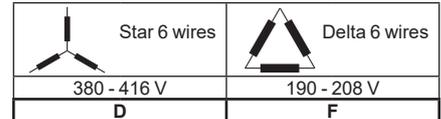
## 9.5 - Specific 8 winding



### 1 800 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
8 winding / 12 wires					kVA D: 380 V / A: 190 V / F: 220 V				kVA D: 416 V / A: 208 V / F: 240 V			
LSA 40 VS1	J8/4	C8/4	-	12	11.5	10.5	12	12.7	12.5	11.5	13.5	14
LSA 40 VS2 *	J8/4	C8/4	-	12	14.5	13.2	15.5	16	15.5	14	16.5	17
LSA 40 S3 *	J8/4	C8/4	-	12	17.5	16	18.5	19.5	19	17.5	20	21
LSA 40 S4	J8/4	C8/4	-	12	20	18	21	22	22	20	23.5	24
LSA 40 M5	J8/4	C8/4	-	12	23	21	24.5	25.5	25	23	26.5	27.5
LSA 42.3 VS1	J8/4	C8/4	Option	12	30	27.5	32	33	30	27.5	32	33
LSA 42.3 VS2	J8/4	C8/4	Option	12	32	29	34	35	32	29	34	35
LSA 42.3 VS3	J8/4	C8/4	Option	12	38	34.5	40.5	42	38	34.5	40.5	42
LSA 42.3 S4	J8/4	C8/4	Option	12	41	37.5	43.5	45	41.5	38	44	45.5
LSA 42.3 S5	J8/4	C8/4	Option	12	46.5	42.5	49.5	51	47.5	43	50	52
LSA 42.3 M7	J8/4	C8/4	Option	12	51	46.5	54	56	54	49	57	59
LSA 42.3 M8	J8/4	C8/4	Option	12	56.5	51	60	62	59	54	63	65
LSA 42.3 L9	J8/4	C8/4	Option	12	65.5	60	69	72	71	65	75	78
LSA 44.3 S2	J8/4	C8/4	Option	12	80	73	85	88	88	80	93	97
LSA 44.3 S3	J8/4	C8/4	Option	12	90	82	95	99	100	91	106	110
LSA 44.3 S4 *	J8/4	C8/4	Option	12	103	94	109	113	113	103	120	124
LSA 44.3 S5 *	J8/4	C8/4	Option	12	115	105	122	127	125	114	133	138
LSA 44.3 M6	J8/4	C8/4	Option	12	140	127	148	154	159	139	162	168
LSA 44.3 M8 *	J8/4	C8/4	Option	12	155	141	164	171	169	154	179	186
LSA 44.3 L10	J8/4	C8/4	Option	12	172	157	182	189	188	171	199	207
LSA 44.3 L12	J8/4	C8/4	Option	12	185	168	196	204	200	182	212	220
LSA 44.3 VL13 *	J8/4	C8/4	Option	12	210	191	223	231	225	205	239	248
LSA 44.3 VL14 *	J8/4	C8/4	Option	12	228	207	242	251	245	223	260	270
LSA 46.3 S4 *	J8/4	C8/4	Option	12	265	241	281	292	290	264	307	319
LSA 46.3 S5 *	J8/4	C8/4	Option	12	285	259	302	314	315	287	334	347
LSA 46.3 M7	J8/4	C8/4	Option	12	320	291	339	352	330	300	350	363
LSA 46.3 M8	J8/4	C8/4	Option	12	355	323	376	391	360	328	382	396
LSA 46.3 L10 *	J8T/4	C8T/4	Option	12	375	341	398	413	-	-	-	-
LSA 46.3 L11 *	J8T/4	C8T/4	Option	12	440	400	466	484	-	-	-	-
LSA 47.3 S4	-	C8T/4	Option	12	500	455	530	550	-	-	-	-
LSA 47.3 S5 *	-	C8T/4	Option	12	530	482	562	583	-	-	-	-
LSA 47.3 M7 *	-	C8T/4	Option	12	575	523	610	633	-	-	-	-
LSA 47.3 M8 *	-	C8T/4	Option	12	600	546	636	660	-	-	-	-
LSA 47.3 L9 *	-	C8/4	Option	12	625	569	663	688	675	614	716	743
LSA 47.3 L10 *	-	C8/4	Option	12	655	596	694	721	715	651	758	787

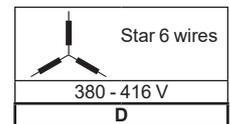
\* Paralleling with the grid or between alternators, select the 6 wires configuration.



### 1 800 R.P.M. - 3-phase - P.F. 0.8

8S winding / 6 wires					kVA D: 380 V / F: 190 V				kVA D: 416 V / F: 208 V			
LSA 49.3 S4	-	C8S/4	Option	6	715	651	758	787	775	705	822	853
LSA 49.3 M6	-	C8S/4	Option	6	840	764	890	924	915	833	970	1 007
LSA 49.3 M8	-	C8S/4	Option	6	940	855	996	1 034	1 025	933	1 087	1 128
LSA 49.3 L9 **	-	C8S/4	Option	6	1 045	951	1 108	1 150	1 140	1 037	1 208	1 254
LSA 49.3 L10 **	-	C8S/4	Option	6	1 120	1 019	1 187	1 232	1 210	1 101	1 283	1 331

\*\* Paralleling with the grid or between alternators, contact us.

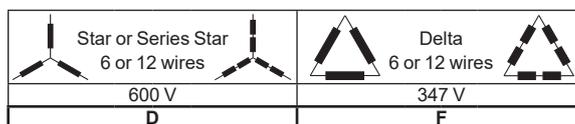


### 1 800 R.P.M. - 3-phase - P.F. 0.8

8S winding / 6 wires					kVA D: 380 V				kVA D: 416 V			
LSA 50.2 S4	-	C8S/4	Option	6	1 200	1 080	1 260	1 320	1 260	1 135	1 325	1 390
LSA 50.2 M6	-	C8TS/4	Option	6	1 450	1 305	1 520	1 595	1 450	1 305	1 520	1 595
LSA 50.2 L7	-	C8TS/4	Option	6	1 550	1 400	1 628	1 705	1 550	1 400	1 628	1 705
LSA 50.2 L8	-	C8S/4	Option	6	1 640	1 475	1 725	1 805	1 750	1 575	1 840	1 925
LSA 50.2 VL10	-	C8S/4	Option	6	1 800	1 620	1 890	1 980	1 900	1 710	1 995	2 090
LSA 52.3 S6	-	C8S/4	Option	6	2 300	2 098	2 415	2 530	2 300	2 098	2 415	2 530
LSA 52.3 S7	-	C8S/4	Option	6	2 500	2 280	2 625	2 750	2 500	2 280	2 625	2 750
LSA 52.3 L9	-	C8S/4	Option	6	2 700	2 462	2 835	2 970	2 700	2 462	2 835	2 970
LSA 52.3 L12	-	C8S/4	Option	6	3 000	2 736	3 150	3 300	3 000	2 736	3 150	3 300
LSA 52.3 UL16	-	C8TS/4	Option	6	3 200	2 918	3 360	3 520	-	-	-	-
LSA 53.2 M9	-	C8S/4	Option	6	3 400	3 101	3 570	3 740	3 400	3 101	3 570	3 740
LSA 53.2 M12	-	C8S/4	Option	6	3 750	3 420	3 938	4 125	3 750	3 420	3 938	4 125
LSA 54.2 M10	-	C8TS/4	Option	6	3 800	3 466	3 990	4 180	-	-	-	-
LSA 55.5 VS7	-	C8S/4	Option	6	4 200	3 830	4 410	4 620	4 200	3 830	4 410	4 620
LSA 55.3 S9	-	C8TS/4	Option	6	4 750	4 332	4 988	5 225	-	-	-	-

# Power ratings at 60 Hz

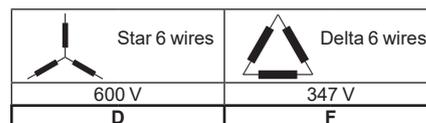
## 9.6 - Specific 9 winding



### 1 800 R.P.M. - 3-phase - P.F. 0.8

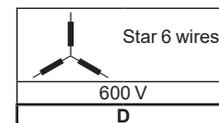
Excitation					40 °C cont.		40 °C	27 °C
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	St.by H: 150 K	St.by H: 163 K
9 or 9S winding / 12 or 6 wires					kVA D: 600 V / F: 347 V			
LSA 40 VS1	-	C9/4	-	12	12.5	11.4	13.5	14
LSA 40 VS2	-	C9/4	-	12	15.5	14	16.5	17
LSA 40 S3	-	C9/4	-	12	19	17.5	20	21
LSA 40 S4	-	C9/4	-	12	22	20	23.5	25
LSA 40 M5 *	-	C9/4	-	12	25	23	26.5	27.5
LSA 42.3 VS1	-	C9/4	Option	12	30	27.5	32	33
LSA 42.3 VS2	-	C9/4	Option	12	32	29	34	35
LSA 42.3 VS3	-	C9/4	Option	12	38	34.5	40.5	42
LSA 42.3 S4	-	C9/4	Option	12	41.5	38	44	45.5
LSA 42.3 S5	-	C9/4	Option	12	47.5	43	50	52
LSA 42.3 M7	-	C9/4	Option	12	54	49	57	59
LSA 42.3 M8	-	C9/4	Option	12	59.5	54	63	65
LSA 42.3 L9	-	C9/4	Option	12	71	65	75	78
LSA 44.3 S2 *	-	C9/4	Option	12	88	80	93	97
LSA 44.3 S3 *	-	C9/4	Option	12	100	91	106	110
LSA 44.3 S4 *	-	C9/4	Option	12	113	103	120	124
LSA 44.3 S5 *	-	C9/4	Option	12	125	114	133	138
LSA 44.3 M6	-	C9/4	Option	12	156	142	165	172
LSA 44.3 M8	-	C9/4	Option	12	169	154	179	186
LSA 44.3 L10 *	-	C9/4	Option	12	188	171	199	207
LSA 44.3 L12 *	-	C9/4	Option	12	205	187	217	226
LSA 44.3 VL13	-	C9+/4	Option	12	225	205	239	248
LSA 44.3 VL14	-	C9+/4	Option	12	232	211	246	255
LSA 46.3 S4	-	C9S/4	Option	6	273	248	289	300
LSA 46.3 S5	-	C9S/4	Option	6	290	264	307	319
LSA 46.3 M7	-	C9/4	Option	12	342	311	363	376
LSA 46.3 M8	-	C9/4	Option	12	372	339	394	409
LSA 46.3 L10	-	C9S/4	Option	6	390	355	413	429
LSA 46.3 L11	-	C9S/4	Option	6	425	387	451	468
LSA 47.3 S4	-	C9T/4	Option	12	512	466	543	563
LSA 47.3 S5 *	-	C9/4	Option	12	570	519	604	627
LSA 47.3 M7 *	-	C9T/4	Option	12	625	569	663	688
LSA 47.3 M8 *	-	C9T/4	Option	12	675	614	716	743
LSA 47.3 L9	-	C9+/4	Option	12	725	660	769	798
LSA 47.3 L10	-	C9+/4	Option	12	760	692	806	836

\* Paralleling with the grid or between alternators, select the 6 wires configuration.



### 1 800 R.P.M. - 3-phase - P.F. 0.8

9S winding / 6 wires					kVA D: 600 V / F: 347 V			
LSA 49.3 M6	-	C9S/4	Option	6	875	796	928	963
LSA 49.3 M8	-	C9S/4	Option	6	955	869	1 012	1 051
LSA 49.3 L9	-	C9S/4	Option	6	1 000	910	1 060	1 100
LSA 49.3 L10	-	C9S/4	Option	6	1 100	1 001	1 166	1 210



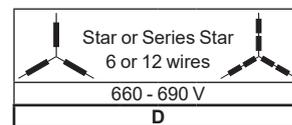
### 1 800 R.P.M. - 3-phase - P.F. 0.8

9S winding / 6 wires					kVA D: 600 V			
LSA 50.2 M6	-	C9TS/4	Option	6	1 420	1 278	1 490	1 562
LSA 50.2 L8	-	C9S/4	Option	6	1 600	1 440	1 680	1 760
LSA 50.2 VL10 **	-	C9S/4	Option	6	1 765	1 590	1 853	1 940
LSA 52.3 S6	-	C9S/4	Option	6	2 100	1 915	2 205	2 310
LSA 52.3 S7	-	C9S/4	Option	6	2 250	2 052	2 363	2 475
LSA 52.3 L9	-	C9S/4	Option	6	2 355	2 148	2 473	2 591
LSA 52.3 L11	-	C9S/4	Option	6	2 500	2 280	2 625	2 750
LSA 52.3 UL16	-	C9S/4	Option	6	3 050	2 782	3 203	3 355
LSA 53.2 M12	-	C9S/4	Option	6	3 300	3 010	3 465	3 630
LSA 54.2 M10	-	C9S/4	Option	6	3 350	3 055	3 518	3 685
LSA 54.2 L14	-	C9S/4	Option	6	4 100	3 739	4 305	4 510
LSA 55.3 S10	-	C9S/4	Option	6	5 000	4 560	5 250	5 500
LSA 55.3 L14	-	C9S/4	Option	6	5 800	5 290	6 090	6 380

\*\* Paralleling with the grid or between alternators, contact us.

# Power ratings at 60 Hz

## 9.7 - Specific 22 or 23 winding



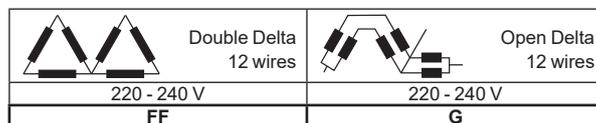
1 800 R.P.M. - 3-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by	40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K	H: 125 K	F: 105 K	H: 150 K	H: 163 K
22/23 or 22S/23S winding / 12 or 6 wires					kVA D: 660 V				kVA D: 690 V			
LSA 42.3 VS1	-	C22T/4	Option	12	27	24.5	28.5	30	28	25.5	29.5	31
LSA 42.3 VS2	-	C22T/4	Option	12	28	25.5	29.5	31	30	27.5	32	33
LSA 42.3 VS3	-	C22T/4	Option	12	34	31	36	37.5	35	32	37	39
LSA 42.3 S4	-	C22T/4	Option	12	40	36.5	42.5	44	40	36.5	42.5	44
LSA 42.3 S5	-	C22T/4	Option	12	42	38	45	46	45	41	48	50
LSA 42.3 M7	-	C22T/4	Option	12	45	41	48	50	48	44	51	53
LSA 42.3 M8	-	C22T/4	Option	12	51	46.5	54	56	53	48	56	58
LSA 42.3 L9	-	C22T/4	Option	12	60	55	64	66	61	56	65	67
LSA 44.3 S2	-	C22TS/4	Option	6	74	67	78	81	75	68	80	83
LSA 44.3 S3	-	C22TS/4	Option	6	88	80	93	97	94	86	100	103
LSA 44.3 S4	-	C22T/4	Option	12	95	86	101	105	98	89	104	108
LSA 44.3 S5	-	C22T/4	Option	12	110	100	117	121	115	105	122	127
LSA 44.3 M6	-	C22T/4	Option	12	120	109	127	132	130	118	138	143
LSA 44.3 M8	-	C22TS/4	Option	6	130	118	138	143	135	123	143	150
LSA 44.3 L10	-	C22T/4	Option	12	150	137	159	165	160	146	170	176
LSA 44.3 L12	-	C22T/4	Option	12	165	150	175	182	170	155	180	187
LSA 44.3 VL13	-	C22T/4	Option	12	190	173	201	209	195	177	207	215
LSA 44.3 VL14	-	C22T/4	Option	12	215	196	228	237	225	205	239	248
LSA 46.3 S4	-	C22T/4	Option	12	255	232	270	281	263	239	279	289
LSA 46.3 S5	-	C22T/4	Option	12	270	246	286	297	278	253	295	306
LSA 46.3 M7	-	C22TS/4	Option	6	280	255	297	308	290	264	307	319
LSA 46.3 M8	-	C22TS/4	Option	6	305	278	323	336	315	287	334	347
LSA 46.3 L10	-	C22T/4	Option	12	325	296	345	358	330	300	350	363
LSA 46.3 L11	-	C22T/4	Option	12	345	314	366	380	360	328	382	396
LSA 47.3 S4 *	-	C22T/4	Option	12	400	364	424	440	450	410	477	495
LSA 47.3 S5	-	C23/4	Option	12	450	410	477	495	500	455	530	550
LSA 47.3 M7	-	C23/4	Option	12	500	455	530	550	550	501	583	605
LSA 47.3 M8	-	C23/4	Option	12	544	495	577	598	575	523	610	633
LSA 47.3 L9	-	C22T/4	Option	12	600	546	636	660	625	569	663	688
LSA 47.3 L10	-	C22T/4	Option	12	685	623	726	754	690	628	731	759
LSA 49.3 S4	-	C22TS/4	Option	6	740	673	784	814	770	701	816	847
LSA 49.3 M6	-	C22TS/4	Option	6	800	728	848	880	850	774	901	935
LSA 49.3 M8	-	C22TS/4	Option	6	885	805	938	974	940	855	996	1 034
LSA 49.3 L9	-	C22TS/4	Option	6	1 045	951	1 108	1 150	1 045	951	1 108	1 150
LSA 50.2 M6	-	C22S/4	Option	6	1 200	1 092	1 272	1 320	1 300	1 183	1 378	1 430
LSA 50.2 L8	-	C23S/4	Option	6	1 400	1 274	1 484	1 540	1 500	1 365	1 590	1 650
LSA 50.2 VL10	-	C22S/4	Option	6	1 600	1 456	1 696	1 760	1 700	1 547	1 802	1 870
LSA 52.3 S6	-	C22S/4	Option	6	1 940	1 769	2 037	2 134	1 940	1 769	2 037	2 134
LSA 52.3 S7	-	C22S/4	Option	6	2 250	2 052	2 363	2 475	2 250	2 052	2 363	2 475
LSA 52.3 L9	-	C22S/4	Option	6	2 300	2 098	2 415	2 530	2 300	2 098	2 415	2 530
LSA 52.3 L12	-	C22S/4	Option	6	2 500	2 280	2 625	2 750	2 500	2 280	2 625	2 750
LSA 52.3 UL16	-	C22S/4	Option	6	2 900	2 645	3 045	3 190	2 900	2 645	3 045	3 190
LSA 53.2 M9	-	C22S/4	Option	6	3 000	2 736	3 150	3 300	3 000	2 736	3 150	3 300
LSA 53.2 M11	-	C22S/4	Option	6	3 400	3 101	3 570	3 740	3 400	3 101	3 570	3 740
LSA 54.2 M11	-	C22S/4	Option	6	3 875	3 534	4 069	4 263	3 875	3 534	4 069	4 263
LSA 54.2 L14	-	C22S/4	Option	6	4 320	3 940	4 536	4 752	4 320	3 940	4 536	4 752
LSA 55.3 M12	-	C22S/4	Option	6	5 400	4 925	5 670	5 940	5 400	4 925	5 670	5 940
LSA 55.3 VL16	-	C22S/4	Option	6	6 000	5 472	6 300	6 600	6 000	5 472	6 300	6 600

\* Paralleling with the grid or between alternators, select the 6 wires configuration.

# Power ratings at 60 Hz

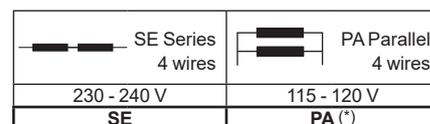
## 9.8 - Standard 6 winding



1 800 R.P.M. - 1-phase - P.F. 0.8

Excitation					40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K
6 winding / 12 wires					kVA FF / G: 220 - 240 V			
LSA 40 VS1	J6/4	C6/4	-	12	9	8.5	9.5	10
LSA 40 VS2	J6/4	C6/4	-	12	11.5	10.5	12	12.5
LSA 40 S3	J6/4	C6/4	-	12	13	12	14	14.5
LSA 40 S4	J6/4	C6/4	-	12	14.5	13	15.5	16
LSA 40 M5	J6/4	C6/4	-	12	16	15	17	17.5
LSA 42.3 VS1	J6/4	C6/4	Option	12	18.9	17	20	20.8
LSA 42.3 VS2	J6/4	C6/4	Option	12	19.2	17.5	20.5	21.1
LSA 42.3 VS3	J6/4	C6/4	Option	12	23	21	24.5	25.5
LSA 42.3 S4	J6/4	C6/4	Option	12	24	22	25.5	26.5
LSA 42.3 S5	J6/4	C6/4	Option	12	27.5	25	29	30.5
LSA 42.3 M7	J6/4	C6/4	Option	12	30	27.5	32	33
LSA 42.3 M8	J6/4	C6/4	Option	12	34	31	36	37.5
LSA 42.3 L9	J6/4	C6/4	Option	12	39	35.5	41.5	43
LSA 44.3 S2	J6/4	C6/4	Option	12	46	42	49	51
LSA 44.3 S3	J6/4	C6/4	Option	12	52	47	55	57
LSA 44.3 S4	J6/4	C6/4	Option	12	59	54	63	65
LSA 44.3 S5	J6/4	C6/4	Option	12	65	59	69	72
LSA 44.3 M6	J6/4	C6/4	Option	12	76	69	81	84
LSA 44.3 M8	J6/4	C6/4	Option	12	81	74	86	89
LSA 44.3 L10	J6/4	C6/4	Option	12	95	86	101	105
LSA 44.3 L12	J6/4	C6/4	Option	12	105	96	111	116
LSA 44.3 VL13	J6/4	C6/4	Option	12	113	102	119	124
LSA 44.3 VL14	J6/4	C6/4	Option	12	125	114	133	136
LSA 46.3 S4	J6/4	C6/4	Option	12	152	138	161	167
LSA 46.3 S5	J6/4	C6/4	Option	12	165	150	175	182
LSA 46.3 M7	J6/4	C6/4	Option	12	182	165	192	200
LSA 46.3 M8	J6/4	C6/4	Option	12	200	180	210	218
LSA 46.3 L10	J6/4	C6/4	Option	12	215	195	227	236
LSA 46.3 L11	J6/4	C6/4	Option	12	231	210	250	254

## 9.9 - Dedicated 1-phase M or M1 winding



1 800 R.P.M. - Dedicated 1-phase - P.F. 1

(\*) LSA 44.3 not possible

Excitation					40 °C cont.		40 °C St.by	27 °C St.by
Type	SHUNT	AREP	PMG	wires	H: 125 K	F: 105 K	H: 150 K	H: 163 K
M or M1 winding / 4 wires					kVA SE: 230 - 240 V / PA: 115 - 120 V			
LSA 40 VS1	JM/4	-	-	4	11.5	10.5	12	13
LSA 40 VS2	JM/4	-	-	4	13.5	12.5	14.5	15
LSA 40 S3	JM/4	-	-	4	14.5	13	15.5	16
LSA 40 S4	JM/4	-	-	4	16	14.5	17	17.5
LSA 40 M5	JM/4	-	-	4	17.5	16	19	19.5
LSA 42.3 VS1	JM1/4	-	-	4	23	20.9	24.4	25.3
LSA 42.3 VS2	JM1/4	-	-	4	26	23.7	27.6	28.6
LSA 42.3 VS3	JM1/4	-	-	4	28.8	26.2	30.5	31.6
LSA 42.3 S4	JM1/4	-	-	4	31.5	28.7	33.4	34.7
LSA 42.3 S5	JM1/4	-	-	4	36	32.8	38.2	39.6
LSA 42.3 M7	JM1/4	-	-	4	40	36.4	42.4	44
LSA 42.3 M8	JM1/4	-	-	4	47.2	43	50	51.9
LSA 42.3 L9	JM1/4	-	-	4	53	48.2	56.2	58.3
LSA 44.3 S3	JM1/4	-	-	4	80	73	85	88
LSA 44.3 S5	JM1/4	-	-	4	100	91	106	110
LSA 44.3 M6	JM1/4	-	-	4	115	105	122	127
LSA 44.3 L10	JM1/4	-	-	4	125	114	133	138

kVA at P.F. 0.8 = kVA/kW at P.F. 1 x 0.85



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