Tayseer Power Co.

Trade, Maintenance & Rental Of Elect. Generators

Perkins | LS | ComAp | Cummins

LINZ ELECTRIC | LEROY SOMER | DSE

PERKINS GENERATOR

STANDBY POWER

750 KVA (600 KW)

PRIME POWER

681 KVA (544 KW) (UK)

2800 Series 2806A-E18TAG3 Diesel Engine – ElectropaK

565 kWm at 1500 rpm
652 kWm at 1800 rpm

The Perkins 2800 Series is a family of well-proven 6 cylinder 16 and 18 litre in-line diesel engines, designed to address today's uncompromising demands within the power generation industry with particular aim at the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806A-E18TAG3 is a turbocharged and air-to-air charge cooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation, low gaseous emissions and advanced overall performance and reliability.

Economic power

- Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy
- Low emissions result from electronic control of fuel injected

Reliable power

- Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates
- High compression ratios also ensure clean rapid starting in all conditions
- Perkins global product support is designed to enhance the customer experience of owning a Perkins powered machine. We deliver this through the quality of our distribution network, extensive global coverage and a range of Perkins supported OEM partnership options. So whether you are an end-user or an equipment manufacturer our engine expertise is essential to your success

Compact, clean and efficient power

- Exceptional power to weight ratio and compact size give optimum power density with easier installation and cost effective transportation
- Designed to provide excellent service access for ease of maintenance

Product support

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory – strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world

This engine does not comply with harmonized international regulated emissions limits

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	600	480	540	724	522	700
	Standby Power	650	520	584	783	565	758
1800	Prime Power	681	545	618	828	592	794
	Standby Power	750	600	678	909	652	874

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1. **Derating may be required for conditions outside these; consult Perkins Engines Company Limited.**

Generator powers are typical and are based on an average alternator efficiency and a power factor (cos. θ) of 0.8. **Fuel specification:** BS 2869: Part 2 1998 Class A2 or ASTM D975 D2. **Lubricating oil:** 15W40 to API CG4.

Rating Definitions
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours' operation.
Standby Power: Power available in the event of a main power network failure up to a maximum of 500 hours per year of which up to 300 hours may be run continuously. Load factor may be up to 100% of standby power. No overload is permitted.

Perkins®
THE HEART OF EVERY GREAT MACHINE

Publication No. PN1872/09/12 Produced in England

2800 Series 2806A-E18TAG3 Diesel Engine – ElectropaK

565 kWm at 1500 rpm
652 kWm at 1800 rpm

Standard ElectropaK specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G2 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

Cooling system
- Gear-driven circulating pump
- Mounted belt-driven pusher fan
- Radiator incorporating air-to-air charge cooler, (supplied loose)
- System designed for ambients up to 50ºC
- Low coolant level switch

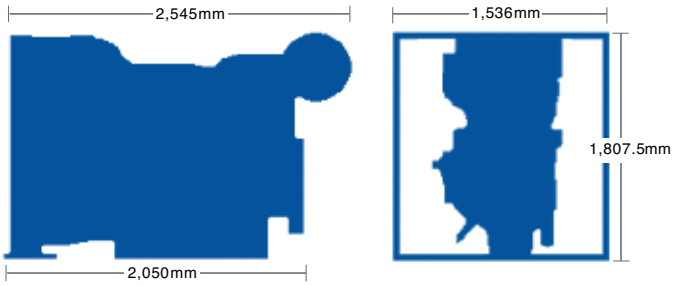
Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 size 18
- SAE '0' flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook

Optional equipment
- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
Standby	197	129	208	157
Prime Power	198	120	209	144
Baseload Power	–	–	203	114
75% of Prime Power	204	93	202	104
50% of Prime Power	204	62	210	72

General data

Number of cylinders 6
Cylinder arrangement ..... Vertical in-line
Cycle ..... 4 stroke
Induction system ..... Turbocharged and air-to-air charge cooled
Combustion system ..... Direct injection
Cooling system ..... Water-cooled
Bore and stroke ..... 145 mm x 183 mm
Displacement ..... 18.1 litres
Compression ratio 14.5:1
Direction of rotation ..... Anti-clockwise, viewed on flywheel
Total lubrication system capacity ..... 62 litres
Total coolant capacity ..... 61 litres
Total dry weight ..... 2050 kg
Dimensions – Length ..... 2545 mm
Width ..... 1536 mm
Height ..... 1808 mm

Final weight and dimensions will depend on completed specification

Publication No. PN1872/09/12 Produced in England

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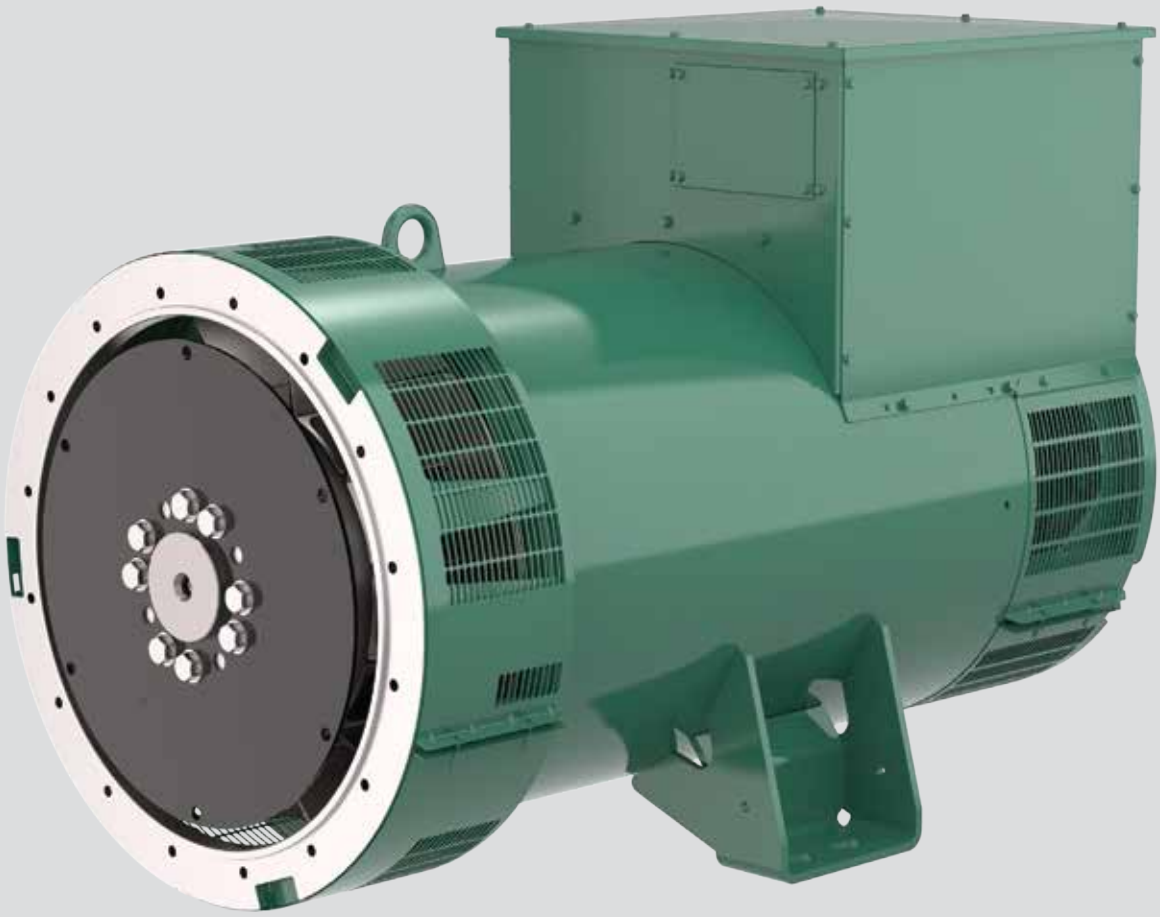
THE HEART OF EVERY GREAT MACHINE



LSA 49.3

Low Voltage Alternator - 4 pole

660 to 1000 kVA - 50 Hz / 825 to 1250 kVA - 60 Hz
Electrical and mechanical data

LEROY-SOMER™

Nidec
All for dreams

Specially adapted to applications

The LSA 49.3 alternator is designed to be suitable for typical generator applications, such as: backup, prime power, cogeneration, marine applications, rental, telecommunications, etc.

Compliant with international standards

The LSA 49.3 alternator conforms to the main international standards and regulations:
- IEC 60034, NEMA MG 1.32-33, ISO 8528-3, CSA C22.2 n°100-14, UL 1446 (UL 1004 on request), marine regulations, etc.

It can be integrated into a EC marked generator.
The LSA 49.3 is designed, manufactured and marketed in an ISO 9001 and ISO 14001 environment.

Top of the range electrical performance

- Class H insulation
- Standard 6 wire re-connectable winding, 2/3 pitch, type no. 6S (12 wire on request)
- Voltage range 50 Hz: 380V - 400V - 415V and 220V - 230V - 240V
- Voltage range 60 Hz: 380V - 416V - 440V - 480V and 220V - 240V
- High efficiency and motor starting capacity
- Other voltages are possible with optional adapted windings:
  - 50 Hz : 440 V (n° 7), 500 V (n° 9), 600 V (n° 22 or 23), 690 V (n° 10 or 52)
  - 60 Hz : 380 V and 416 V (n° 8), 600 V (n° 9)
- R 791 interference suppression conforming to standard EN 61000-6-3, EN 61000-6-2, EN 55011 group 1 class B standard for European zone (EC marking)

Excitation and regulation system suited to the application

Excitation system			Regulation options			
Volage regulator	**AREP**	**PMG** (option)	**C.T.** Current transformer for paralleling	Mains paralleling	3-phase sensing	Remote voltage potentiometer
D350	**Standard**	**Standard**	√	-	√	√
D550	**Option**	**Option**	√	√	√	√

√ : Possible option

Protection system suited to the environment

- The LSA 49.3 is IP 23
- Standard winding protection for clean environments with relative humidity ≤ 95 %, including indoor marine environments

Options :
- Filters on air inlet : derating 5%
- Filters on air inlet and air outlet (IP 44) : derating 10%
- Winding protections for harsh environments and relative humidity greater than 95%
- Space heaters
- Thermal protection for winding and shields

Reinforced mechanical structure using finite element modelling

- Compact and rigid assembly to better withstand generator vibrations
- Steel frame
- Cast iron flanges and shields
- Twin-bearing and single-bearing versions designed to be suitable for engines on the market
- Half-key balancing
- Sealed for life ball bearings, regreasable bearings (optional)
- Standard direction of rotation: clockwise when looking at the drive end view (for anti-clockwise, derate the machine by 5%)

Accessible terminal box proportioned for optional equipment

- Easy access to the voltage regulator and to the connections
- Possible inclusion of accessories for paralleling, protection and measurement
- Connection bar for reconnecting voltage

General characteristics

Insulation class	H	Excitation system	AREP / PMG
Winding pitch	2/3 (winding 6S)	AVR type	D350
Number of wires	6 (12 option)	Voltage regulation (*)	± 0.25%
Protection	IP 23	Short-circuit current	300% (3 IN) : 10s
Altitude	≤ 1000 m	Total Harmonic distortion THD (**)	at no load < 4% - on load < 4%
Overspeed	2250 min^{-1}	Waveform: NEMA = TIF (**)	< 50
Air flow	1 m^3/s (50Hz) / 1.2 m^3/s (60Hz)	Waveform: IEC = THF (**)	< 2%

(*) Steady state. (**) Total harmonic distortion between phases, no-load or on-load (non-distorting)

Ratings 50 Hz - 1500 R.P.M.

kVA / kW - P.F. = 0.8

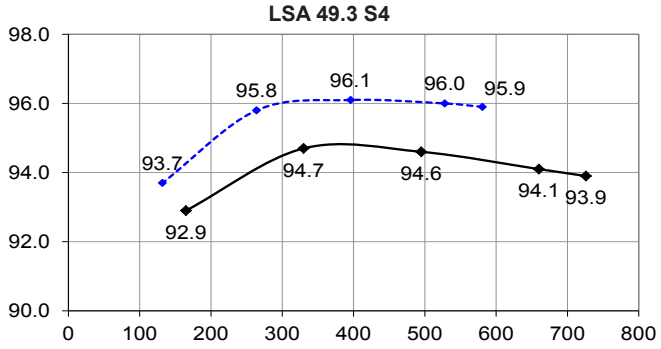
Duty/T°C		Continuous duty/40°C				Continuous duty/40°C				Stand-by/40°C				Stand-by/27°C			
Class/T°K		H/125°K				F/105°K				H/150°K				H/163°K			
Phase		**3 ph.**				**3 ph.**				**3 ph.**				**3 ph.**			
Y		380V	400V	415V	440V	380V	400V	415V	440V	380V	400V	415V	440V	380V	400V	415V	440V
Δ		220V	230V	240V		220V	230V	240V		220V	230V	240V		220V	230V	240V	
YY					220V				220V				220V				220V
49.3 S4	kVA	-	**660**	-	620	-	**595**	-	560	-	**725**	-	685	-	**745**	-	715
	kW	-	*528*	-	*496*	-	*476*	-	*448*	-	*580*	-	*548*	-	*596*	-	*572*
49.3 M6	kVA	-	**730**	-	665	-	**660**	-	600	-	**780**	-	730	-	**810**	-	765
	kW	-	*584*	-	*532*	-	*528*	-	*480*	-	*624*	-	*584*	-	*648*	-	*612*
49.3 M8	kVA	-	**820**	-	810	-	**760**	-	710	-	**910**	-	885	-	**945**	-	925
	kW	-	*656*	-	*648*	-	*608*	-	*568*	-	*728*	-	*708*	-	*756*	-	*740*
49.3 L9	kVA	-	**910**	-	820	-	**820**	-	740	-	**1000**	-	920	-	**1020**	-	965
	kW	-	*728*	-	*656*	-	*656*	-	*592*	-	*800*	-	*736*	-	*816*	-	*772*
49.3 L10	kVA	-	**1000**	-	950	-	**900**	-	840	-	**1085**	-	1030	-	**1130**	-	1080
	kW	-	*800*	-	*760*	-	*720*	-	*672*	-	*868*	-	*824*	-	*904*	-	*864*

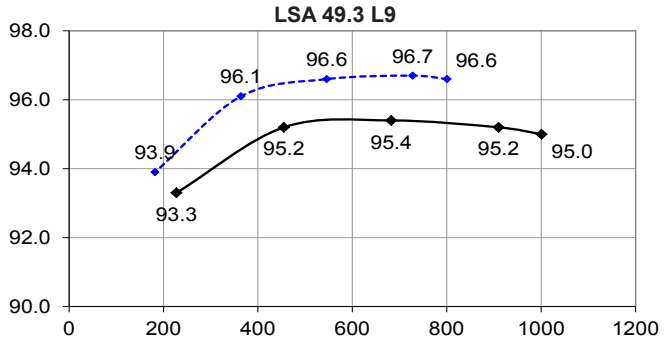
Ratings 60 Hz - 1800 R.P.M.

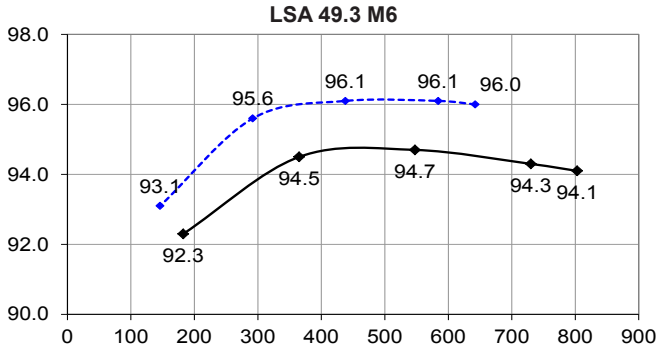
kVA / kW - P.F. = 0.8

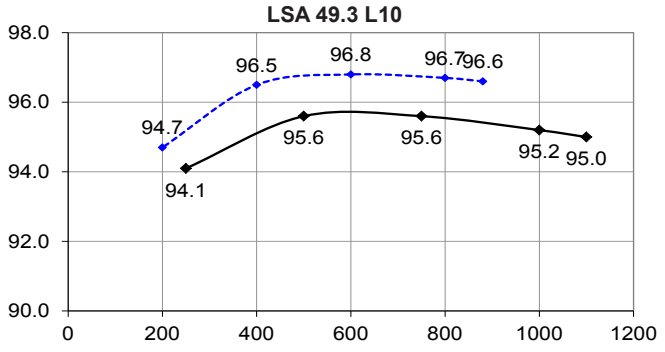
Duty/T°C		Continuous duty/40°C				Continuous duty/40°C				Stand-by/40°C				Stand-by/27°C			
Class/T°K		H/125°K				F/105°K				H/150°K				H/163°K			
Phase		**3 ph.**				**3 ph.**				**3 ph.**				**3 ph.**			
Y		380V	416V	440V	480V	380V	416V	440V	480V	380V	416V	440V	480V	380V	416V	440V	480V
Δ		220V	240V			220V	240V			220V	240V			220V	240V		
YY			208V	220V	240V		208V	220V	240V		208V	220V	240V		208V	220V	240V
49.3 S4	kVA	653	715	756	**825**	588	644	681	**743**	693	758	802	**875**	718	787	832	**908**
	kW	*522*	*572*	*605*	*660*	*470*	*515*	*545*	*594*	*554*	*606*	*642*	*700*	*574*	*630*	*666*	*726*
49.3 M6	kVA	725	795	840	**915**	655	715	760	**825**	770	845	890	**970**	800	875	925	**1005**
	kW	*580*	*636*	*672*	*732*	*524*	*572*	*608*	*660*	*616*	*676*	*712*	*776*	*640*	*700*	*740*	*804*
49.3 M8	kVA	815	890	940	**1025**	735	805	850	**925**	865	945	1000	**1090**	895	980	1040	**1130**
	kW	*652*	*712*	*752*	*820*	*588*	*644*	*680*	*740*	*692*	*756*	*800*	*872*	*716*	*784*	*832*	*904*
49.3 L9	kVA	905	990	1045	**1140**	815	895	940	**1025**	960	1050	1110	**1210**	1000	1090	1155	**1255**
	kW	*724*	*792*	*836*	*912*	*652*	*716*	*752*	*820*	*768*	*840*	*888*	*968*	*800*	*872*	*924*	*1004*
49.3 L10	kVA	990	1083	1146	**1250**	891	975	1031	**1125**	1049	1148	1215	**1325**	1089	1192	1260	**1375**
	kW	*792*	*866*	*917*	*1000*	*713*	*780*	*825*	*900*	*839*	*918*	*972*	*1060*	*871*	*954*	*1008*	*1100*

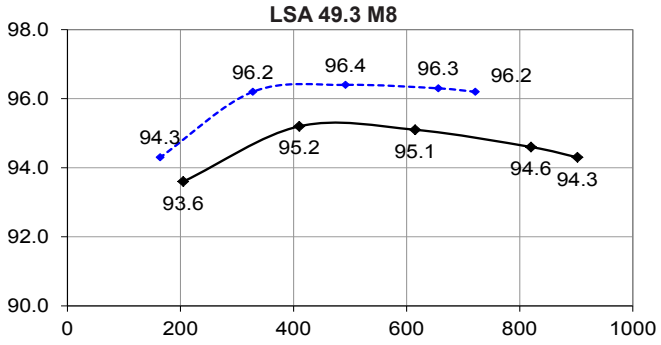
Efficiencies 400V - 50 Hz (····· P.F.: 1) (— P.F.: 0.8)







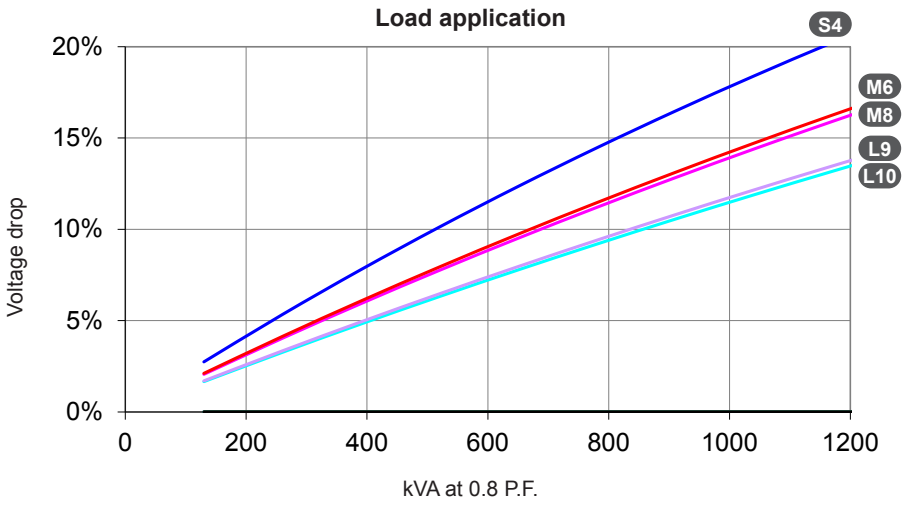


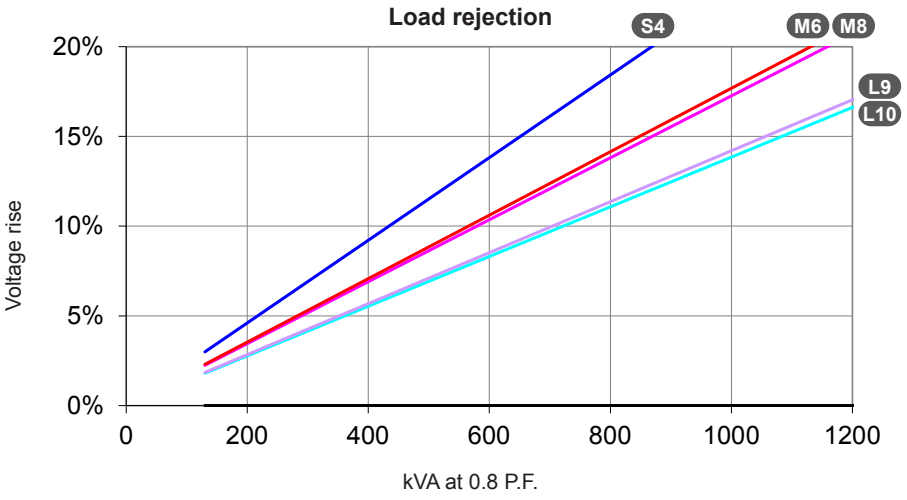


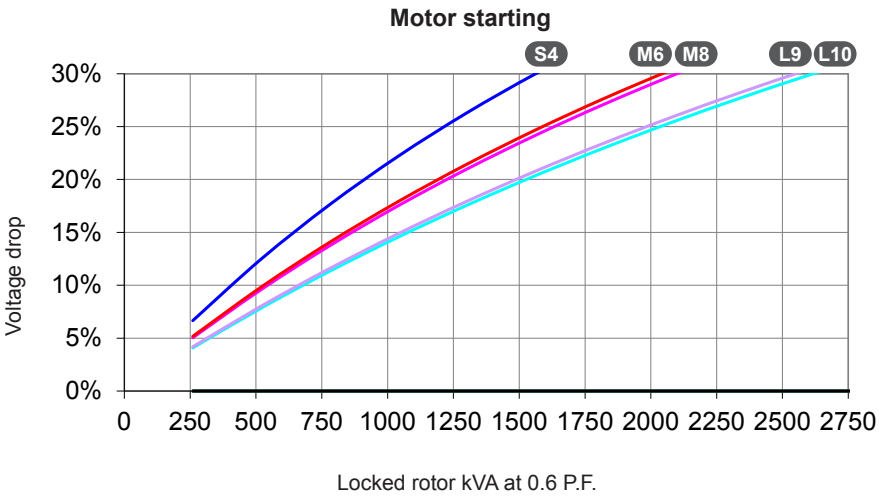
Reactances (%). Time constants (ms) - Class H / 400 V

		S4	M6	M8	L9	L10
Kcc	Short-circuit ratio	0.36	0.42	0.34	0.47	0.38
Xd	Direct-axis synchro. reactance unsaturated	350	294	348	303	348
Xq	Quadrature-axis synchro. reactance unsaturated	210	176	209	182	209
T'do	No-load transient time constant	2002	2074	2094	2138	2153
X'd	Direct-axis transient reactance saturated	17.5	14.2	16.6	14.1	16.1
T'd	Short-circuit transient time constant	100	100	100	100	100
X"d	Direct-axis subtransient reactance saturated	14.0	11.3	13.3	11.3	12.9
T"d	Subtransient time constant	10	10	10	10	10
X"q	Quadrature-axis subtransient reactance saturated	16.3	12.8	14.9	12.4	14.1
Xo	Zero sequence reactance unsaturated	0.72	0.59	0.69	0.59	0.67
X2	Negative sequence reactance saturated	15.2	12.1	14.1	11.9	13.5
Ta	Armature time constant	15	15	15	15	15
Other class H / 400 V data						
io (A)	No-load excitation current	1.1	1	1	1	1
ic (A)	On-load excitation current	4.2	4.1	3.8	3.7	3.8
uc (V)	On-load excitation voltage	57	55	51	49	51
ms	Response time (ΔU = 20% transient)	500	500	500	500	500
kVA	Start (ΔU = 20% cont. or 30% trans.)	1560	2050	2050	2600	2600
%	Transient ΔU (on-load 4/4) - P.F.: 0.8 $_{LAG}$	13	11	12	11	12
W	No-load losses	8233	10288	9226	11189	10343
W	Heat dissipation	32519	34995	37082	36425	39772

Transient voltage variation 400V - 50 Hz
AREP or PMG system

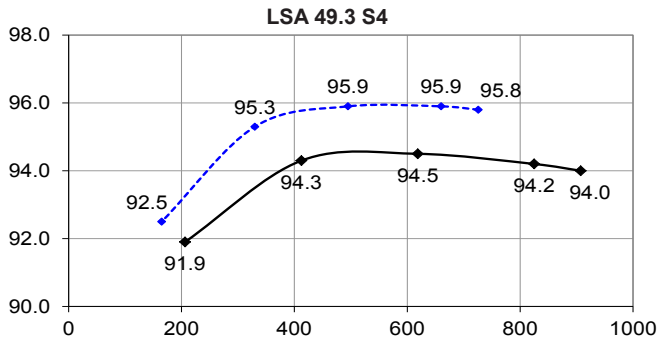


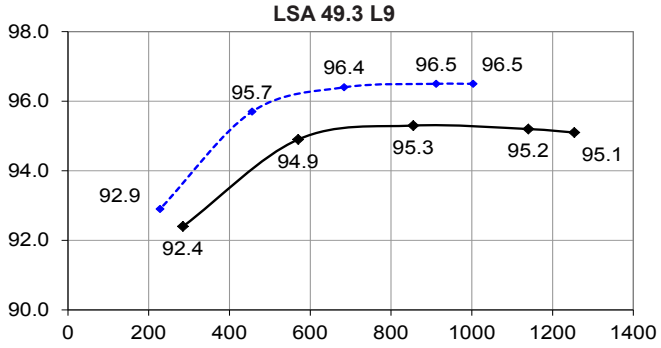


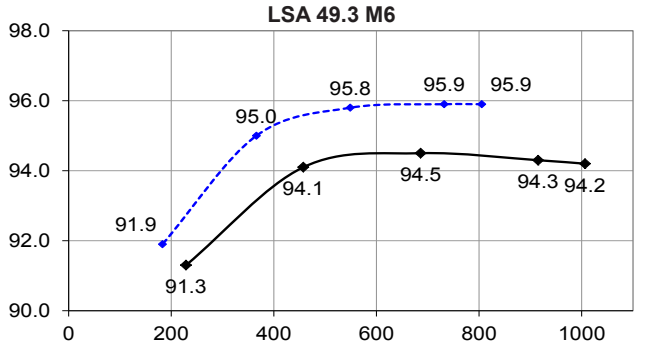


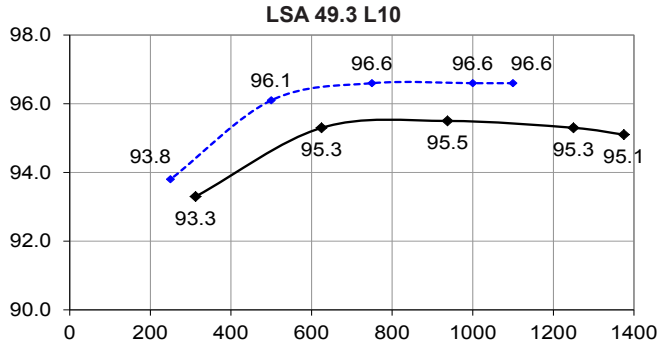
1) For a starting P.F. other than 0.6, the starting kVA must be multiplied by K = Sine P.F. / 0.8
2) For voltages other than 400V (Y), 230V(Δ) at 50 Hz, then kVA must be multiplied by $(400/U)^2$ or $(230/U)^2$.

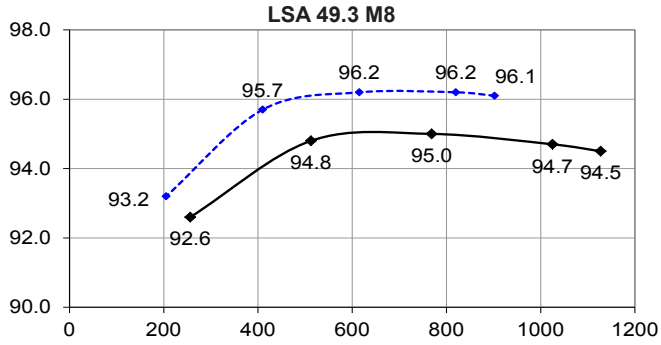
Efficiencies 480V - 60 Hz (····· P.F.: 1) (— P.F.: 0.8)







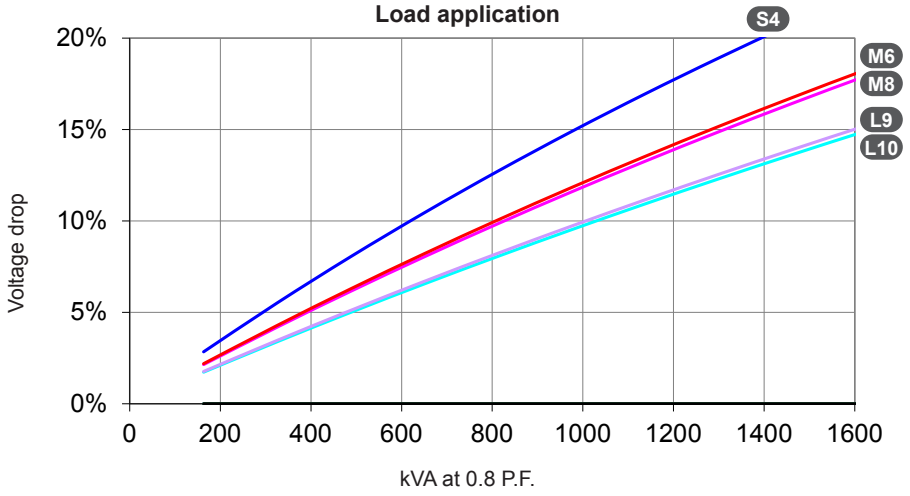


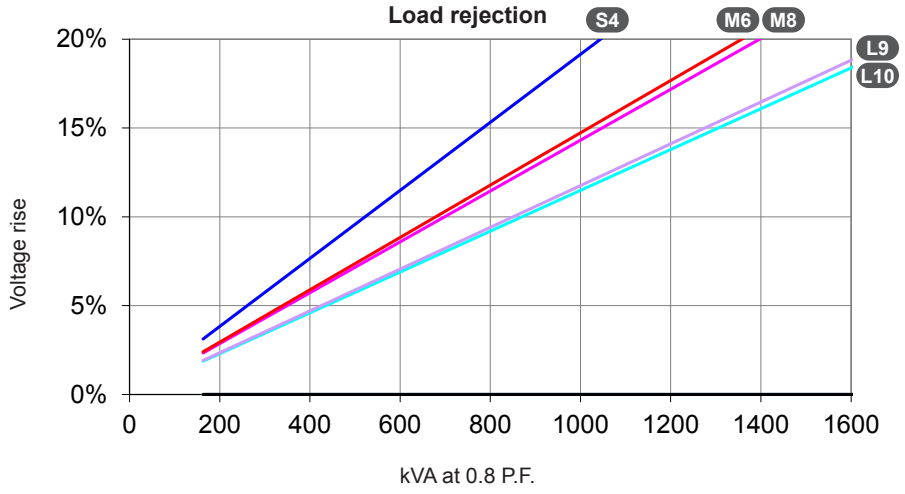


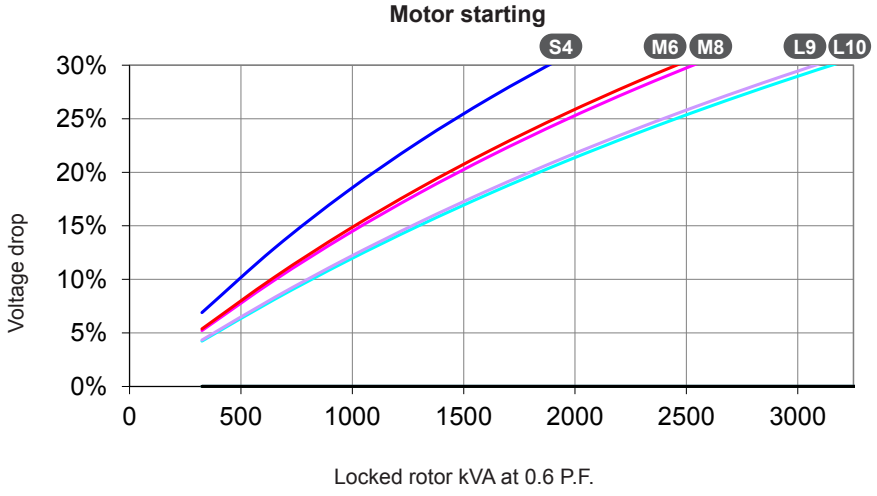
Reactances (%). Time constants (ms) - Class H / 480 V

		S4	M6	M8	L9	L10
Kcc	Short-circuit ratio	0.35	0.40	0.32	0.45	0.36
Xd	Direct-axis synchro. reactance unsaturated	365	307	362	317	363
Xq	Quadrature-axis synchro. reactance unsaturated	219	184	217	190	217
T'do	No-load transient time constant	2002	2074	2094	2138	2153
X'd	Direct-axis transient reactance saturated	18.2	14.8	17.3	14.8	16.8
T'd	Short-circuit transient time constant	100	100	100	100	100
X"d	Direct-axis subtransient reactance saturated	14.5	11.8	13.8	11.8	13.4
T"d	Subtransient time constant	10	10	10	10	10
X"q	Quadrature-axis subtransient reactance saturated	17.0	13.4	15.5	13.0	14.7
Xo	Zero sequence reactance unsaturated	0.76	0.61	0.72	0.61	0.70
X2	Negative sequence reactance saturated	15.8	12.6	14.7	12.4	14.1
Ta	Armature time constant	15	15	15	15	15
Other class H / 480 V data						
io (A)	No-load excitation current	1.1	1	1	1	1
ic (A)	On-load excitation current	4.3	4.2	3.8	3.8	3.9
uc (V)	On-load excitation voltage	67	65	60	58	59
ms	Response time (ΔU = 20% transient)	500	500	500	500	500
kVA	Start (ΔU = 20% cont. or 30% trans.)	1950	2565	2565	3250	3250
%	Transient ΔU (on-load 4/4) - P.F.: 0.8 $_{LAG}$	13	11	12	11	12
W	No-load losses	12720	15710	14270	16873	15726
W	Heat dissipation	40028	43671	45867	45528	49172

Transient voltage variation 480V - 60 Hz
AREP or PMG system



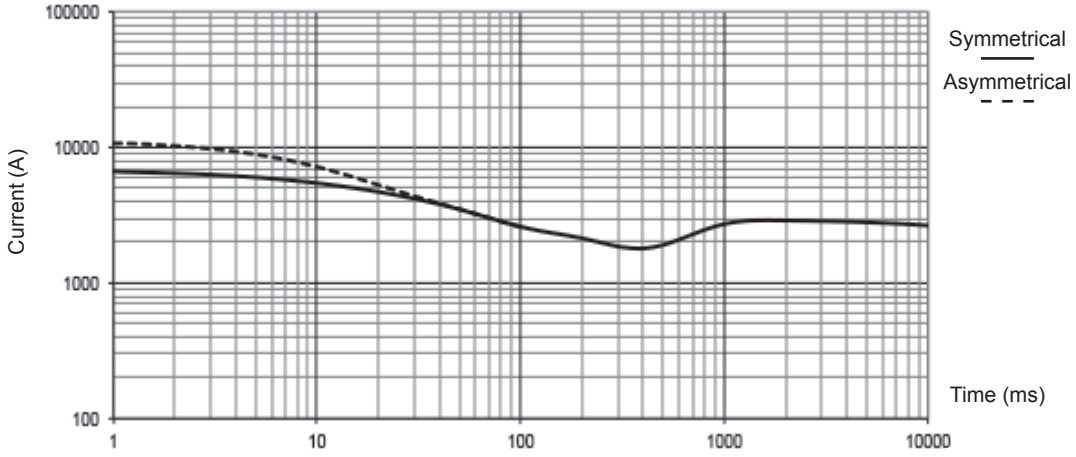




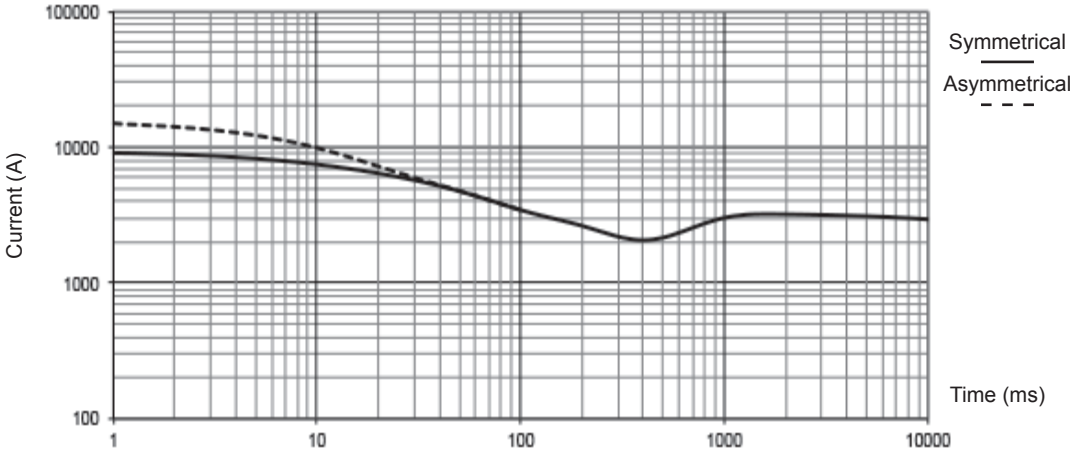
1) For a starting P.F. other than 0.6, the starting kVA must be multiplied by K = Sine P.F. / 0.8
2) For voltages other than 480V (Y), 277V (Δ), 240V (YY) at 60 Hz, then kVA must be multiplied by $(480/U)^2$ or $(277/U)^2$ or $(240/U)^2$.

3-phase short-circuit curves at no load and rated speed (star connection Y)

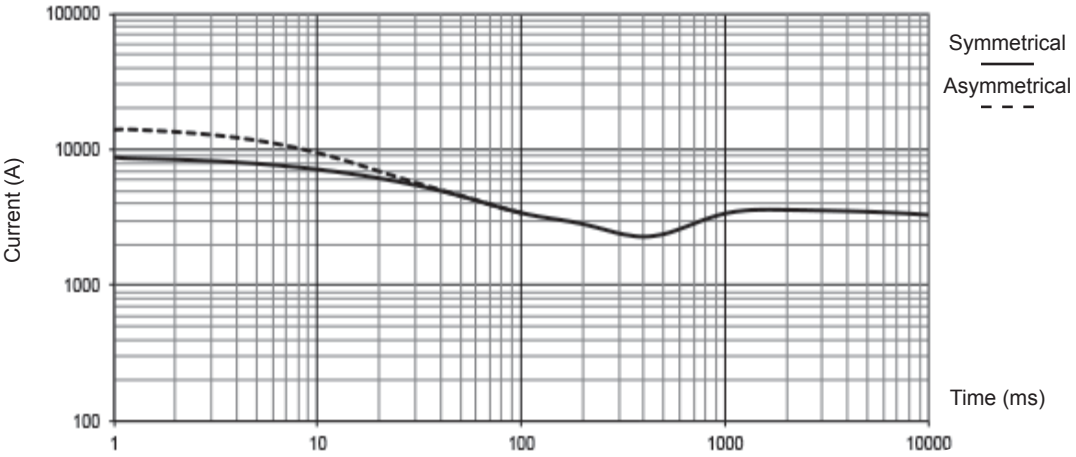
LSA 49.3 S4



LSA 49.3 M6



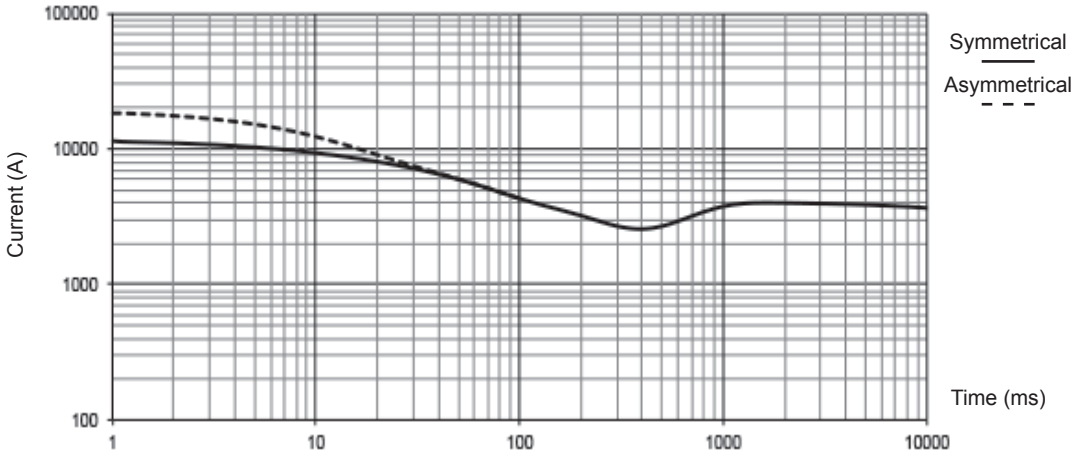
LSA 49.3 M8



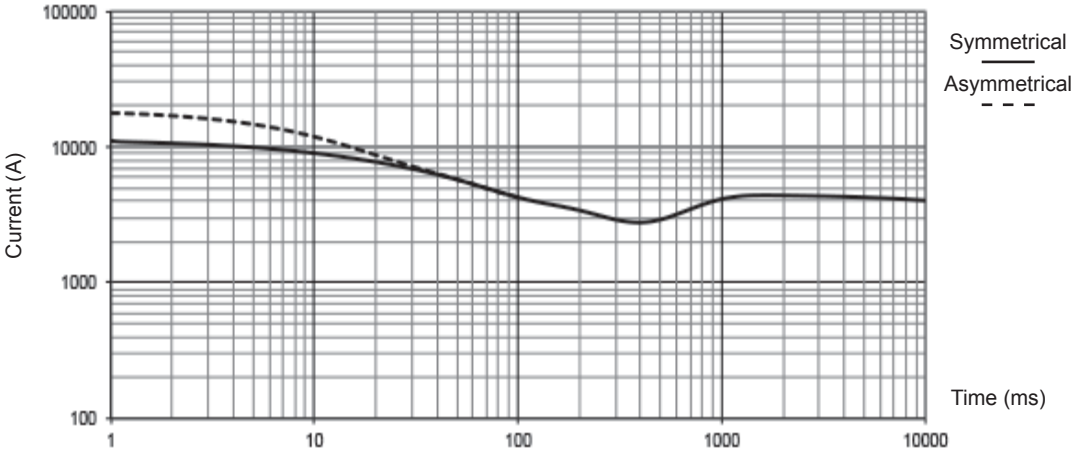
Influence due to connection
Curves shown are for star (Y) connection.
For other connections, use the following multiplication factors:
- Series delta : current value x 1.732 - Parallel star : current value x 2

3-phase short-circuit curves at no load and rated speed (star connection Y)

LSA 49.3 L9



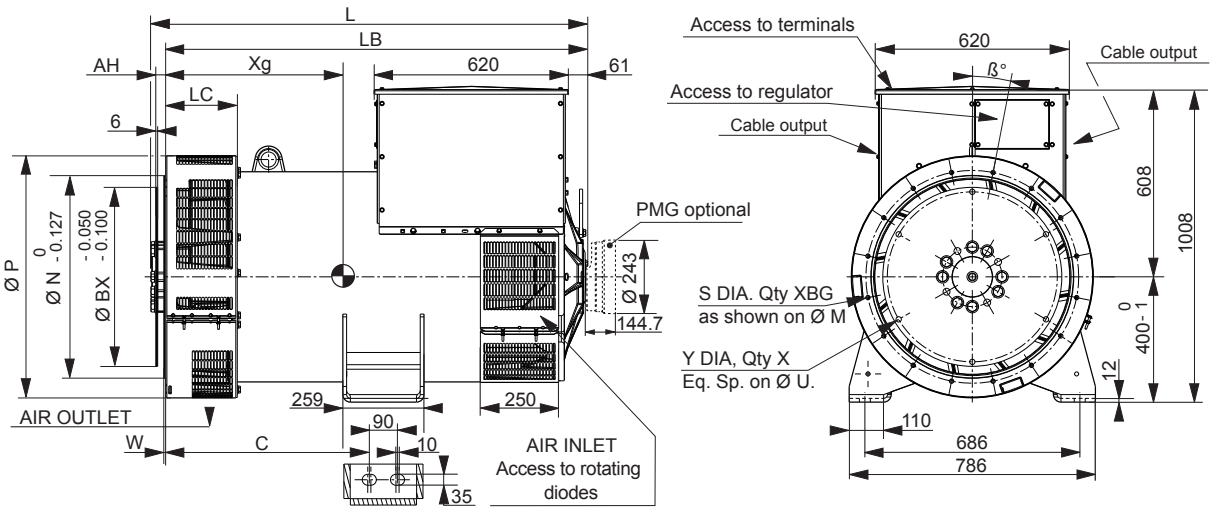
LSA 49.3 L10



Influence due to short-circuit
Curves are based on a three-phase short-circuit.
For other types of short-circuit, use the following multiplication factors.

	3-phase	2-phase L/L	1-phase L/N
Instantaneous (max.)	1	0.87	1.3
Continuous	1	1.5	2.2
Maximum duration (AREP/PMG)	10 sec.	5 sec.	2 sec.

Single bearing dimensions



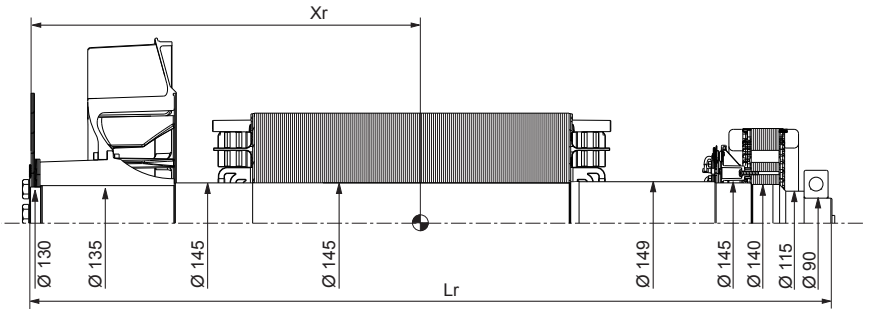
Dimensions (mm) and weight					
Type	L without PMG	LB	C	Xg	Weight (kg)
LSA 49.3 S4	1282	1256.5	560	590	1476
LSA 49.3 M6	1372	1346.5	650	629	1623
LSA 49.3 M8	1372	1346.5	650	636	1685
LSA 49.3 L9	1462	1436.5	650	673	1837
LSA 49.3 L10	1462	1436.5	650	681	1886

Coupling		
Flex plate	14	18
Flange S.A.E 1	X	
Flange S.A.E 1/2	X	
Flange S.A.E 0	X	X
Flange S.A.E 00		X

Flange (mm)								
S.A.E.	P	N	M	LC	XBG	S	W	ß°
1	773	511.175	530.225	228.5	12	12	6	15°
1/2	773	584.2	619.125	228.5	12	14	6	15°
0	773	647.7	679.45	228.5	16	14	6	11° 15'
00	883	787.4	850.9	245	16	14	7	11°15'

Flex plate (mm)					
S.A.E.	BX	U	X	Y	AH
14	466.7	438.15	8	14	25.4
18	571.5	542.92	6	17	15.7

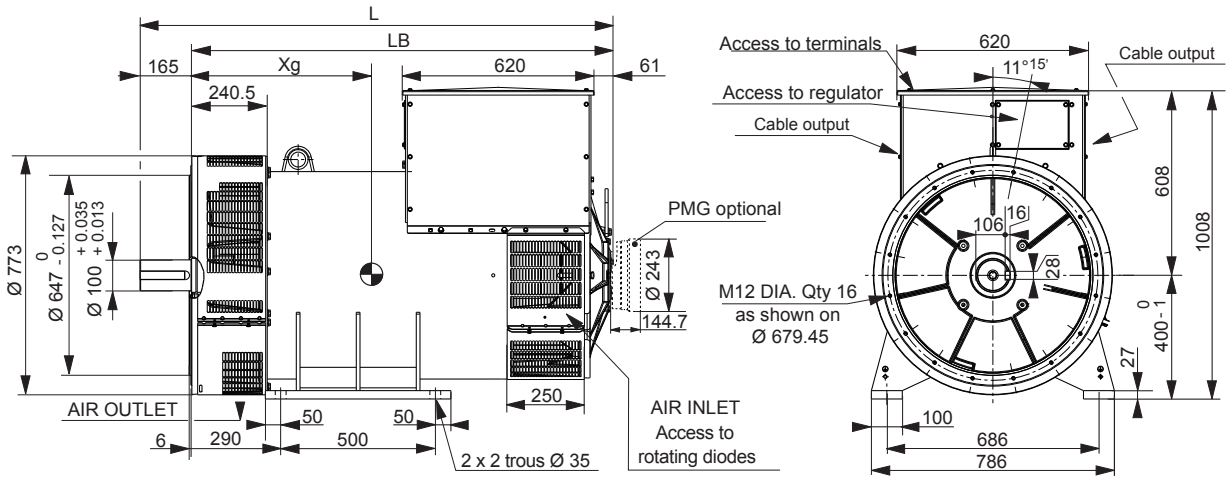
Torsional analysis data



Centre of gravity: Xr (mm), Rotor length: Lr (mm), Weight: M (kg), Moment of inertia: J (kgm²): (4J = MD²)								
Flange	S.A.E. 14				S.A.E. 18			
Type	Xr	Lr	M	J	Xr	Lr	M	J
LSA 49.3 S4	584	1255	539	8.51	572	1255	541	8.77
LSA 49.3 M6	626	1345	602	9.61	614	1345	604	9.87
LSA 49.3 M8	634	1345	628	10.16	622	1345	630	10.42
LSA 49.3 L9	671	1435	684	11.12	659	1435	686	11.38
LSA 49.3 L10	681	1435	701	11.48	669	1435	703	11.74

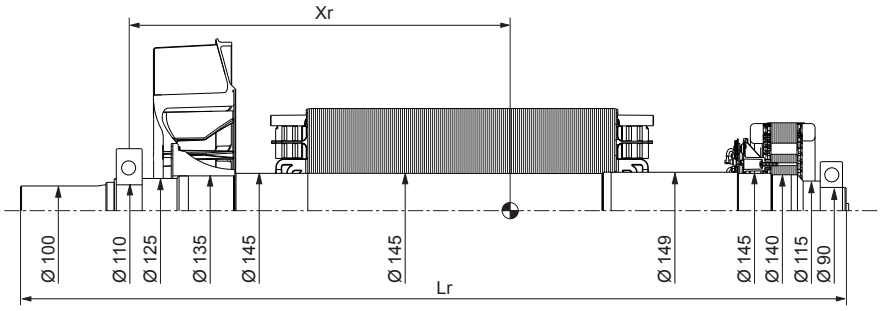
NOTE : Dimensions are for information only and may be subject to modifications. Contractual 2D drawings can be downloaded from the Leroy-Somer site, 3D drawing files are available upon request.
The torsional analysis of the transmission is imperative. All values are available upon request.

Two bearing dimensions



Dimensions (mm) and weight				
Type	L without PMG	LB	Xg	Weight (kg)
LSA 49.3 S4	1439.5	1274.5	596	1480
LSA 49.3 M6	1529.5	1364.5	636	1622
LSA 49.3 M8	1529.5	1364.5	643	1683
LSA 49.3 L9	1619.5	1454.5	682	1835
LSA 49.3 L10	1619.5	1454.5	688	1884

Torsional analysis data



Centre of gravity: Xr (mm), Rotor length: Lr (mm), Weight: M (kg), Moment of inertia: J (kgm²): (4J = MD²)				
Type	Xr	Lr	M	J
LSA 49.3 S4	545	1409	512	8.07
LSA 49.3 M6	584	1499	574	9.18
LSA 49.3 M8	590	1499	600	9.73
LSA 49.3 L9	627	1589	656	10.69
LSA 49.3 L10	634	1589	673	11.05

NOTE : Dimensions are for information only and may be subject to modifications. Contractual 2D drawings can be downloaded from the Leroy-Somer site, 3D drawing files are available upon request.
The torsional analysis of the transmission is imperative. All values are available upon request.

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Capital social : 65 800 512 €, RCS Angoulême 338 567 258.

5279 en - 2019.09 / h

DSEGenset

DSE

DSE7310/20

AUTO START & AUTO MAINS FAILURE CONTROL MODULES

FEATURES

The DSE7310 is an Auto Start Control Module and the DSE7320 is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem).

The DSE7320 will also monitor the mains (utility) supply. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion.

Both modules are compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications, PLC functionality and dual mutual standby (DSE7310 only) to reduce engine wear.

The modules can be easily configured using the DSE Configuration Suite PC software. Selected front panel editing is also available.

ENVIRONMENTAL TESTING STANDARDS

ELECTRO-MAGNETIC COMPATIBILITY
BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

ELECTRICAL SAFETY
BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

TEMPERATURE
BS EN 60068-2-1
Ab/Ae Cold Test -30 °C
BS EN 60068-2-2
Bb/Be Dry Heat +70 °C

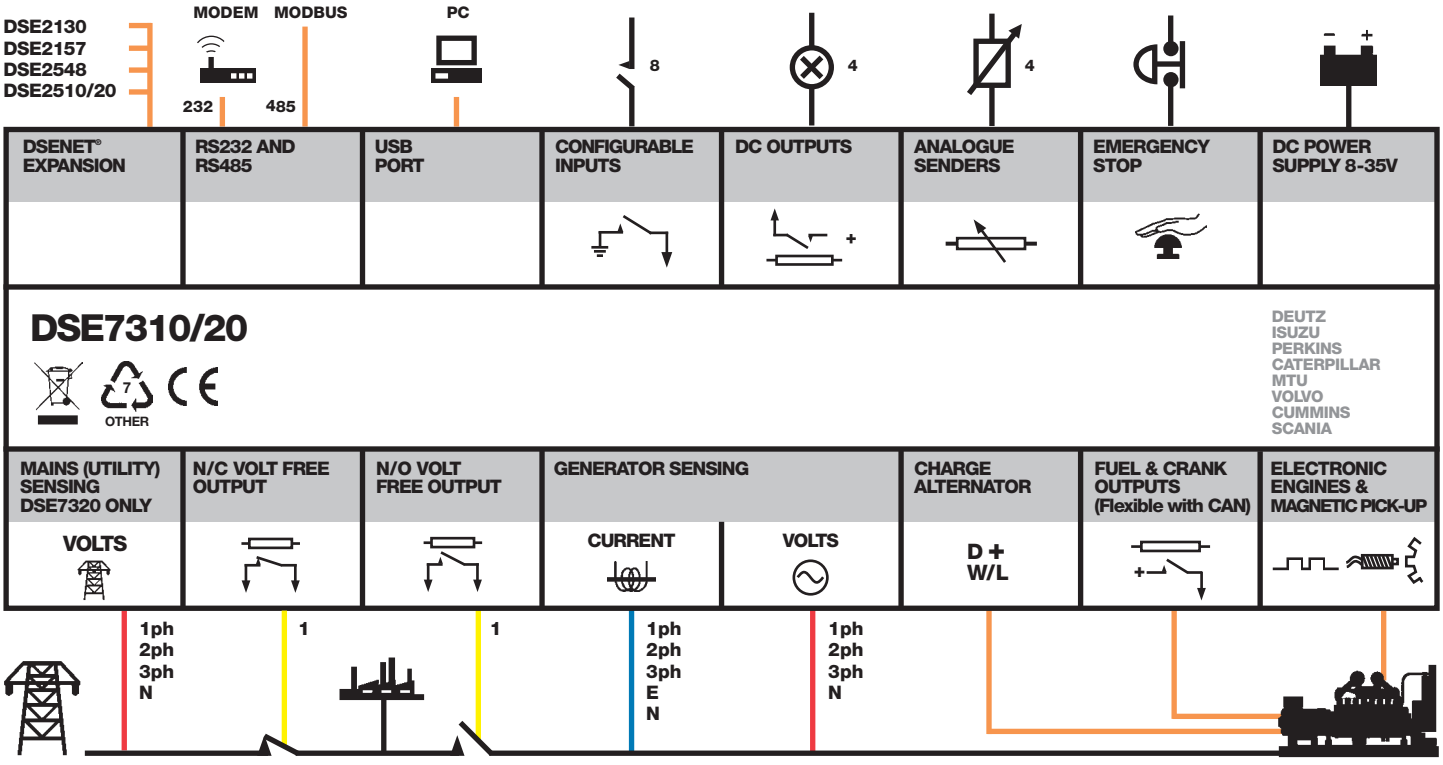
VIBRATION
BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz @ +/-7.5 mm,
8 Hz to 500 Hz @ 2 gn

HUMIDITY
BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 °C @ 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 °C @ 93% RH 48 Hours

SHOCK
BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 mS

DEGREES OF PROTECTION PROVIDED BY ENCLOSURES
BS EN 60529
IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF GEN-SET APPLICATIONS



ISSUE 6

DSEGenset

DSE7310/20

AUTO START & AUTO MAINS FAILURE CONTROL MODULES

FEATURES

DSE7310

DSE7320

KEY FEATURES

- 4-Line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Power save mode
- Support for up to three remote display units
- 9 configurable inputs
- 8 configurable outputs
- Flexible sender inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time scheduler
- Configurable event log (250)
- Tier 4 CAN engine support
- Integral PLC editor
- Easy access diagnostic page
- CAN and Magnetic Pick-up/Alt. sensing
- Fuel usage monitor and low fuel alarms
- Charge alternator failure alarm
- Manual speed control (on compatible CAN engines)
- Manual fuel pump control
- Engine exerciser
- “Protections disabled” feature
- kW & kV Ar protection
- Reverse power (kW & kV Ar) protection
- LED and LCD alarm indication
- Power monitoring (kW h, kV Ar, kV A h, kV Ar h)
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer (DSE7320)
- Unbalanced load protection
- Independent Earth Fault trip
- True dual mutual standby with load balancing timer (DSE7310 only)
- USB connectivity
- Backed up real time clock
- Fully configurable via DSE Configuration Suite PC software
- Configurable display languages
- Remote SCADA monitoring via DSE Configuration Suite PC software
- User selectable RS232 and RS485 communications
- Configurable Gencomm pages
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging
- Additional display screens to help with modem diagnostics
- Idle control for starting & stopping.
- DSENet® expansion compatible

KEY BENEFITS

- 132 x 64 pixel ratio display for clarity
- Real-time clock provides accurate event logging
- Multiple date and time scheduler
- Set maintenance periods can be configured to maintain optimum engine performance
- Ethernet communications (via DSE860/865 modules), provides advanced remote monitoring at low cost
- Modules can be integrated into building management systems (BMS)
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- PLC editor allows user configurable functions to meet specific application requirements

SPECIFICATION

DC SUPPLY
CONTINUOUS VOLTAGE RATING
8 V to 35 V Continuous

CRANKING DROPOUTS
Able to survive 0 V for 50 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

MAXIMUM OPERATING CURRENT
340 mA at 12 V, 160 mA at 24 V

MAXIMUM STANDBY CURRENT
160 mA at 12 V, 80 mA at 24 V

CHARGE FAIL/EXCITATION RANGE
0 V to 35 V

MAINS (UTILITY) DSE7320 ONLY
VOLTAGE RANGE
15 V - 333 V AC (L-N)

FREQUENCY RANGE
3.5 Hz to 75 Hz

OUTPUTS
OUTPUT A (FUEL)
15 A DC at supply voltage

OUTPUT B (START)
15 A DC at supply voltage

OUTPUTS C & D
8 A 250 V (Volt free)

AUXILIARY OUTPUTS E,F,G,H
2 A DC at supply voltage

GENERATOR
VOLTAGE RANGE
15 V - 333 V AC (L-N)

FREQUENCY RANGE
3.5 Hz to 75 Hz

MAGNETIC PICK UP
VOLTAGE RANGE
+/- 0.5 V to 70 V

FREQUENCY RANGE
10,000 Hz (max)

DIMENSIONS
OVERALL
240 mm x 181 mm x 42 mm
9.4” x 7.1” x 1.6”

PANEL CUT-OUT
220 mm x 160 mm
8.7” x 6.3”

MAXIMUM PANEL THICKNESS
8 mm
0.3”

RELATED MATERIALS

TITLE	PART NO’S
DSE7310 Installation Instructions	053-028
DSE7320 Installation Instructions	053-029
DSE7200/7300 Quick Start Guide	057-101
DSE7200/7300 Operator Manual	057-074
DSE7200/7300 Configuration Suite PC Manual	057-077

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