



Marine & Offshore

Certificate number: 61266/A1 BV

File number: ACE4/440/12

Product code: 2572H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

Nidec Leroy Somer EPG Angoulême

ANGOULEME cedex 9 - FRANCE

for the type of product

ALTERNATING CURRENT GENERATORS (Power below 100kW)

LSAM series.

Requirements:

Bureau Veritas Rules for the Classification of steel ships, offshore units, naval ships and yachts.

IEC 60034-1 (2017)

FOR information only

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 12 Jan 2026

For Bureau Veritas Marine & Offshore,

At BV BORDEAUX, on 15 Nov 2021

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Series LSAM ...Low voltage alternator for generator set – 4 poles

Cooling:	Air
Degree of protection :	IP 23 and IP 44
Ambient temperature:	40°C to 50°C
Frequency:	50 Hz and 60 Hz
Speed:	1500 RPM and 1800 RPM
Excitation system:	AREP with AVR type R... AREP+ with AVR type R... or PMG with AVR type R...or, AVR D510C, D350, D550 or D700
Winding:	3 phase winding 6 wires or 12 wires 2/3 pitch
Voltage 50 Hz:	220 V to 690 V
Voltage 60 Hz:	208 V to 690 V
Insulation class:	H
Thermal class:	B or F or H
Duty:	S1 and S2
Power factor:	0,8
Mounting:	Single bearing or two bearing arrangement
Prime mover:	Diesel or gas engine or turbine

Rated power at S1 with degree of protection IP 23 and ambient temperature 45°C *

*The power indicated in these tables can be modified according to ambient temperature and duty type

1.1 Type LSAM 40

TYPE	POWER at 50 Hz Thermal class F kVA 380/400/415V	POWER at 50 Hz Thermal class H kVA 380/400/415V	POWER at 60 Hz Thermal class F kVA 440/450V	POWER at 60 Hz Thermal class H kVA 440/450V
	LSAM 40 VS1	9	10	10,5
LSAM 40 VS2	11,5	12,5	13	14,5
LSAM 40 S3	14	15	16,5	17,5
LSAM 40 S4	16	17,5	19	20
LSAM 40 M5	18,5	20	21,5	23
LSAM 40 M7	20	23	24	25,5

1.2 Type LSAM 42.3

TYPE	POWER 50 Hz Thermal class F/H kVA 380/400/415V	POWER 60 Hz Thermal class F/H kVA 440/450V	POWER 50 Hz Thermal class F/H kVA 690V	POWER 60 Hz Thermal class F/H kVA 690V
	LSAM 42.3 VS1	23/25	28,5/30	19,5 / 21,5
LSAM 42.3 VS2	25 / 27	30 / 32,5	21 / 23	25 / 28
LSAM 42.3 VS3	28,5 / 31	34 / 37	25 / 27	29 / 32,5
LSAM 42.3 S4	32 / 35	39 / 43	27 / 28	34 / 35,5
LSAM 42.3 S5	36,5 / 39,5	43,5 / 47	30 / 31	37,5 / 41,5
LSAM 42.3 M7	40 / 43	47,5 / 51,5	35 / 38,5	40,5 / 45
LSAM 42.3 M8	44 / 48	52 / 56,5	38,5 / 42,5	43,5 / 49
LSAM 42.3 L9	50,5 / 55	54,5 / 60	44 / 49	51,5 / 57,5

1.3 Type LSAM 44.3

TYPE	POWER at 50 Hz Thermal class F/H kVA 380/400/415V	POWER at 60 Hz Thermal class F/H kVA 440/450/480	POWER at 50Hz Thermal class F/H kVA 690V	Power at 60Hz Thermal class F/H kVA 690V
LSAM 44.3S2	64/70	80/88	65/76	75/85
LSAM 44.3S3	73/80	91/100	70/80	80/91
LSAM 44.3S4	82/90	102/113	75/85	90/100
LSAM 44.3S5	91/100	114/124.99	80/90	95/110
LSAM 44.3M6	113/123	124.9/124.9	90/95	105/124
LSAM 44.3M8	123/124.99	124.9/124.9	101/111	115/124.99
LSAM 44.3L10	/	/	117/124.9	/
LSAM 44.3VL13	/	/	124.9/124.9	/

Options:

Filters on air inlet and air outlet (IP 44).

Winding protections for harsh environments and relative humidity greater than 95%.

Space heaters.

Thermal protection for winding.

Possible inclusion of accessories for paralleling, protection and measurement.

4. APPLICATION / LIMITATION:**4.1 Application / limit of use**

According to BV Rules for the classification of steel ships, offshore units, naval ships, yachts and IEC 60092 series

- Power decrease of 10% from table in item I when degree of protection IP 44.

- Power decrease of 5% from table in item I when degree of protection IP 23 with air inlet filter.

4.2 - On board installation & Maintenance requirements:

According to BV Rules for the classification of steel ships, offshore units, naval ships, yachts and IEC 60092 series.

4.3 - According to BV Rules for the Classification of Naval Ships (NR483), all machines of 50 kW and over, intended for essential services are to be surveyed by the Society during testing and, if appropriate, during manufacturing.

*** END OF CERTIFICATE ***

For information only