GE VERNOVA

FACT SHEET

LV7 PLATFORM

Variable speed AC drives — Engineered drive solutions for coordinated drive and complex control applications

Drives are an integral part of maintaining plant output. Selecting a good variable speed AC drive is important. Just as important is the engineering and coordinating of your drives to realize their full potential.

At Power Conversion & Storage, we take a complete system approach, combining field engineering expertise with our exceptional drives and control products. Our fully engineered drive solutions for coordinated drive and complex control applications can substantially improve the quality and efficiency of your processes. For new installations and upgrades, we support you from start to finish with project management, application engineering, hardware and software engineering, system testing, technical direction of installation, commissioning, and spare parts.

The breadth of our experience spans the paper, oil and gas, crane, mining, and metal industries. From hot strip mills, cold mills, winders, paper machines, hoists, and cranes and more, we know your application, understand your challenges, and can help get the highest performance possible from your drive system.

LV7 Platform - modular, high performance variable speed drives

The LV7 Platform is our drive product of choice. Why? Because it does all the things you need well. It's air-cooled, compact, modular, user friendly, and efficient. LV7 drives can save up to 50% in energy consumption. These drives operate in the entire power range from 1 to 2000 kW at 240VAC to 690VAC. Other benefits include minimizing downtime, increasing system reliability, improved process control and minimizing total installed project costs.

Featured applications

- **Pulps and paper, paper machines, winders**
- **Metal lines e.g., roller table systems, process lines, mills**
- **Conveyors**
- **Crane systems e.g., main hoists, gantry & trolley drives**
- **Coordinated process lines**
- **Winders and unwinders**

THE ECONOMICAL SOLUTION TO OPTIMIZE YOUR PROCESSES

The LV7 Platform allows the use of the same software tools, the same control option cards, thus allowing the maximum utilization of LV7 Platform features over a wide power range - no additional modules are required to use different LV7 models; option cards are compact and easy to install at any time.

Optimized drive configurations will minimize your overall investment cost and excessive braking energy can be fed back to live AC, for additional saving of energy costs. Optimized module design reduces need for additional engineering and saves cabinet space, reducing overall costs.

Our experts fully understand your industry match our drive features to meet your specific requirements. Phased upgrades and uprates that fit your operating budget, improved process control resulting in lower operating expenses

CONSISTENT AND COST-EFFECTIVE PROJECT EXECUTION.

FROM START TO FINISH.

MODEL	DESCRIPTION
LV7000-3	Covers a number of frames for AC fed applications. Typical applications include pumps, fans, and compressors
LV7000-4	Pre-engineered drives in a robust cabinet based on basic LV7000-3 power modules
LV7000-5 INU	Covers a number of inverter frames for common DC bus. Used where very high precision speed and torque are required under all circumstances. Typical applications requiring high performance are master- slave drives, positioning applications, winder tension control, and synchronization
LV7000-6 AFE	Bidirectional (regenerative) power converter for front- end of a common DC bus. An external LCL filter is used at the input. Used where low mains harmonics are required
LV7000-8 NFE	Unidirectional (motoring) power converter and operates as a diode bridge using diode/thyristor components. A dedicated external choke is used at the input. Used as a rectifying device when a normal level of harmonics is accepted and no regeneration to the mains is required
LV7000-9 BCU	The brake-chopper unit (BCU) is a uni-directional power converter for the supply of excessive energy from a common DC-bus to resistors, where the electrical energy is getting converted in heat

Key features

- Full power (1 to 2000 kW) and voltage (208V to 690V) range for both induction and permanent magnet motors
- Five built-in expansion slots for additional I/O, fieldbus and functional safety boards
- Low harmonic, regenerative front end
- Cost-effective non-regenerative front-end
- Compact drive modules and easy integration into cabinets
- Phased upgrades and uprates that fit your operating budget
- Improved process control resulting in lower operating expenses

ENGINEERED FOR COMPLETE SYSTEM APPROACH

Modular design
Software and hardware modularity make the LV7 Platform highly versatile and widely applicable. Two types of control are available:

- Standard sensor-less vector control
- Closed loop flux vector control for more demanding applications

Easy-to-use
The drives are simple to program and operate via a removable keypad that can be hand-held or door mounted. Additionally, the keypad can be used to copy-paste parameters between different drives and store active parameters for future use.

Pre-engineered drive enclosures and line-ups
A range of enclosure options are ready for use to meet most basic drive systems requirements.

LV7000 frames & modules

FR4
4.3 -12A Cont.
@ 380-500V

FR6
16 -46A Cont.
@ 380-500V
4.5 -34A Cont.
@ 525-690V

FR7
72 -105A Cont.
@ 380-500V
41 -52A Cont.
@ 525-690V

FR8
140A Cont.
@ 380-500V
62-100A Cont.
@ 525-690V

FI9
170-300A Cont.
@ 380-500V
125-208A Cont.
@ 525-690V

FI10
385-520A Cont.
@ 380-500V
261-416A Cont.
@ 525-690V

FI12
385-520A Cont.
@ 380-500V
261-416A Cont.
@ 525-690V

FI13
1150-1450A Cont.
@ 380-500V
920-1180A Cont.
@ 525-690V

FI14
1770-2700A Cont.
@ 380-500V
1500-2250A Cont.
@ 525-690V

Compact and flexible
A free-standing enclosure is available in a wide range of pre-designed options. It's compact and well tested, fully utilizing the LV7 Platform modular approach. Designed for flexibility, robustness, compactness, and ease-of-service, making it suitable for any application.

Fully tested
All enclosures designed based on our long experience with enclosed high-power drives. Special care has been taken with temperature management, ensuring a long life for the enclosed drive. EMC performance verified, helping to ensure trouble-free operation in industrial environments.

Service-friendly
Designed by field engineers with service in mind. Power modules designed for replacement in 30 min. or less.

Easy ordering
A variety of options such as input fuses, breakers, contactors, switches, and a selection of output filters (sine or dv/dt) available.

OUR SELF CAPABILITIES FOR LV SOLUTIUONS

Most production processes must run continuously without interruptions 24 hours a day, 7 days a week. We're there when and where you need us.

Local presence backed by a global GE Vernova organization

Our strategic distribution centers and authorized distributors carry extensive inventory for GE Vernova drives. We support your genuine replacement part needs any time or any place.

Single-source provider for start-up and commissioning of your GE Vernova equipment

Proper start-up and commissioning of power distribution and control equipment is vital to the long-term health of an electrical system. Our start-up and commissioning services provide the people and knowledge to complete the job right and on schedule - you can be assured that your equipment has been installed properly and meets the factory standards for operation.

Phased upgrades – low risk, cost-effective

For customers with legacy drives, our engineering drive solution enables a phased upgrade to next generation technology, without having to replace complete systems and large subsystems. You benefit by:

- Mitigating control obsolescence through phased installation and spare parts availability
- Minimizing total installed cost by saving the expense of purchasing, installing and commissioning an entirely new drive system
- Reducing operating expense and increasing process equipment reliability with improved process control

Field engineering services

We offer a complete line of engineering services for:

- Planned and on-demand engineering
- Modifications and upgrades
- Appraisals and studies (see auditing below)
- Project engineering
- GE Vernova onsite remote diagnostics

Performance auditing

Understanding the health of your drive system lets you plan maintenance, and equipment upgrades to meet productivity objectives. A GE Vernova drives performance audit is a comprehensive review of the system and its ability to maintain performance levels. Benefits include:

- Improving system operation and reliability
- Maximizing equipment capacity
- Prolonging equipment life
- Identifying opportunities to optimize equipment performance and spare parts inventory

Parts repair/replacement

Our flexible program lets you choose the solution that best fits your schedule and budget:

- Test and certification – affordable option to verify inventory
- Repair/return – most cost effective
- Exchange - fastest method to receive reconditioned parts
- Remanufactured - Lower cost alternative to new parts
- New - Genuine OEM parts
- Life-cycle solutions - To extend the life of your GE Vernova drives with: Scheduled GE Vernova drive part/service reviews
- Proactive refurbishment programs
- Whole drive services

A global network of service engineers and technicians, positioned to provide you with the knowledge, experience, and skills for the full range of your industrial service needs.

From system design to maintenance and outage support - we have the resources and capabilities to assure that you are maximizing your equipment's performance and reliability.

GENERAL DATA

Mains connection	Input voltage U_{in}	208…240 V; 380…500 V; 525…690 V; –10%…+10%
	Input frequency	45…66 Hz
	Connection to mains	Once per minute or less (normal case)
Motor connection	Output voltage	0 – Uin
	Continuous output current	High overloadability: IH, ambient temperature max. 50 °C (≥FR10 + 40 °C) Low overloadability: IL, ambient temperature max. +40 °C
	Overloadability	High: 1.5 x IH (1 min/10 min), Low: 1.1 x IL (1 min/10 min)
	Max. starting current	Is for 2 s every 20 s
	Output frequency	0…320 Hz
Ambient conditions	Ambient operating temperature	–10 °C (no frost)…+50 °C: IH (≥FR10 + 40 °C) –10 °C (no frost)…+40 °C: IL
	Storage temperature	–40 °C…+70 °C
	Relative humidity	0 to 95% RH, non-condensing, non-corrosive, no dripping water
	Air quality: chemical vapours/ mechanical particles	IEC 60721-3-3, unit in operation, class 3C2 (tested in accordance with IEC60068-2-60, Method I C CH2 and SO2) IEC 60721-3-3, unit in operation, class 3S2
	Altitude	100% load capacity (no derating) up to 1000 m 1% derating for each 100 m above 1000 m; max. 3000 m (690 V max. 2000 m)
	Vibration EN 50178/EN 60068-2-6	5…150 Hz: Displacement amplitude 1 mm (peak) at 5…15.8 Hz (≥FR10: 0.25 mm (peak) at 5…31 Hz) Max acceleration amplitude 1 G at 15.8…150 Hz (≥FR10: 1 G at 31…150 Hz)
	Shock EN 50178, EN 60068-2-27	UPS Drop Test (for applicable UPS weights) Storage and shipping: max 15 G, 11 ms (in package)
EMS	Immunity	Fulfils all EMC immunity requirements
	Emissions	EMC level C: EN 61800-3, cat. C1; EMC level H: EN 61800-3, cat. C2; EMC level L: EN 61800-3, cat. C3; EMC level T: Low earth-current solution is suitable for IT networks, (can be modified from L/H-level units)
Safety		EN 50178, EN 60204-1, IEC 61800-5-1, CE, UL, CUL; (see unit nameplate for more details)
Functional safety *	STO	EN/IEC 61800-5-2 safe torque off (STO) SIL2, EN ISO 13849-1 PL"d" cat. 3, EN 62061: SILCL2, IEC 61508: SIL2
	SS1	EN /IEC 61800-5-2 safe stop 1 (SS1) SIL2, EN ISO 13849-1 PL"d" cat. 3, EN /IEC62061: SILCL2, IEC 61508: SIL2
	ATEX thermistor input	94/9/EC, CE 0537 Ex 11 (2) GD
	Advance safety option	STO (+SBC), SS1, SS2, SOS, SLS, SMS, SSM, SSR
Control connections (OPT -A1, -A2 or OPT -A1, -A3)	Analogue input voltage	0…+10 V (–10 V…+10 V joystick control), Ri = 200 kΩ, resolution 0.1%, accuracy ±1%
	Analogue input current	0(4)…20 mA, Ri = 250 Ω differential, resolution 0.1%, accuracy ±1%
	Digital inputs	6, positive or negative logic; 18…30 VDC
	Auxiliary voltage	+24 V, ±15%, max. 250 mA
	Output reference voltage	+10 V, +3%, max. load 10 mA
	Analogue output	0 (4)…20 mA; RL max. 500 Ω, resolution 10-bit, accuracy ±2%
	Digital output	Open collector output, 50 mA/48 V
	Relay outputs	2 programmable change-over (NO/NC) relay outputs (OPT-A3: NO/NC+NO) Switching capacity: 24 VDC/8 A, 250 VAC/8 A, 125 VDC/0.4 A. Min. switching load: 5 V/10 mA
	Thermistor input (OPT-A3)	Galvanically isolated, Rtrip = 4.7 kΩ
Supply connections	Input voltage U_{in} (AC) Front-end modules	380-500 VAC / 525-690 VAC -10%…+10% (according to EN60204-1)
	Input voltage U_{in} (DC) Inverter and brake chopper modules	465…800 VDC / 640…1100 VDC. The voltage ripple of the inverter supply voltage, formed in rectification of the electric network's alternating voltage in basic frequency, must be less than 50 V peak-to-peak
	Output voltage U_{out} (AC) Inverter	3~ 0…Uin / 1.4
	Output voltage U_{out} (DC) Active front-end module	1.10 × 1.35 x Uin (Factory default)
	Output voltage U_{out} (DC) non-regenerative front-end module	1.35 x Uin
Control characteris-tics	Control performance	Open loop vector control (5-150% of base speed): speed control 0.5%, dynamic 0.3%sec, torque lin. <2%, torque rise time ~5 ms Closed loop vector control (entire speed range): speed control 0.01%, dynamic 0.2% sec, torque lin. <2%, torque rise time ~2 ms
	Switching frequency	380-500V: 1…16 kHz; Factory default 10 kHz // From LV7000-3_0072: 1…6 kHz; Factory default 3.6 kHz 525-690V: 1…6 kHz; Factory default 1.5 kHz
	Field weakening point	8…320 Hz
	Acceleration time	0…3000 sec
	Deceleration time	0…3000 sec
	Braking	DC brake: 30% of TN (without brake resistor), flux braking
Protections	Overvoltage protection	380-500V: 911 VDC; LV7000-3_6: 1200 VDC
	Undervoltage protection	525-690V: 333 VDC; LV7000-3_6: 460 VDC
	Earth fault protection	Yes
	Motor phase supervision	Trips if any of the output phases is missing
	Overcurrent protection	Yes
	Unit overtemperature protection	Yes
	Motor overload protection	Yes
	Motor stall protection	Yes
	Motor underload protection	Yes
	Short-circuit protection of +24 V and +10 V reference voltages	Yes

LV7000-3 — 208–240V — IP21 — EMC-level H/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0003 2-A2H1SSS-A1A2000000	3.7	4.1	2.4	3.6	0.55	0.37	FR4	128 × 292 × 190	5
LV7000-3 0004 2-A2H1SSS-A1A2000000	4.8	5.3	3.7	5.6	0.75	0.55		144 × 391 × 214	8.1
LV7000-3 0007 2-A2H1SSS-A1A2000000	6.6	7.3	4.8	7.2	1.1	0.75		195 × 519 × 237	18.5
LV7000-3 0008 2-A2H1SSS-A1A2000000	7.8	8.6	6.6	9.9	1.5	1.1		237 × 591 × 257	35
LV7000-3 0011 2-A2H1SSS-A1A2000000	11	12.1	7.8	11.7	2.2	1.5		291 × 758 × 344	58
LV7000-3 0012 2-A2H1SSS-A1A2000000	12.5	13.8	11	16.5	3	2.2		480 × 1150 × 362	146
LV7000-3 0017 2-A2H1SSS-A1A2000000	17.5	19.3	12.5	18.8	4	3	FR5	144 × 391 × 214	8.1
LV7000-3 0025 2-A2H1SSS-A1A2000000	25	27.5	17.5	26.3	5.5	4		144 × 391 × 214	8.1
LV7000-3 0031 2-A2H1SSS-A1A2000000	31	34.1	25	37.5	7.5	5.5		144 × 391 × 214	8.1
LV7000-3 0048 2-A2H1SSS-A1A2000000	48	52.8	31	46.5	11	7.5	FR6	195 × 519 × 237	18.5
LV7000-3 0061 2-A2H1SSS-A1A2000000	61	67.1	48	72.0	15	11		195 × 519 × 237	18.5
LV7000-3 0075 2-A2H0SSS-A1A2000000	75	83	61	92	18.5	15	FR7	237 × 591 × 257	35
LV7000-3 0088 2-A2H0SSS-A1A2000000	88	97	75	113	22	18.5		237 × 591 × 257	35
LV7000-3 0114 2-A2H0SSS-A1A2000000	114	125	88	132	30	22		237 × 591 × 257	35
LV7000-3 0140 2-A2H0SSS-A1A2000000	140	154	105	158	37	30	FR8	291 × 758 × 344	58
LV7000-3 0170 2-A2H0SSS-A1A2000000	170	187	140	210	45	37		291 × 758 × 344	58
LV7000-3 0205 2-A2H0SSS-A1A2000000	205	226	170	255	55	45		291 × 758 × 344	58
LV7000-3 0261 2-A2H0SSF-A1A2000000	261	287	205	308	75	55	FR9	480 × 1150 × 362	146
LV7000-3 0300 2-A2H0SSF-A1A2000000	300	330	245	368	90	75		480 × 1150 × 362	146

LV7000-3 — 208–ww240V — IP54 — EMC-level H/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0003 2-A2H1SSS-A1A2000000	3.7	4.1	2.4	3.6	0.55	0.37	FR4	128 × 292 × 190	5
LV7000-3 0004 2-A2H1SSS-A1A2000000	4.8	7.3	3.7	5.6	0.75	0.55		144 × 391 × 214	8.1
LV7000-3 0007 2-A2H1SSS-A1A2000000	6.6	6.6	4.8	7.2	1.1	0.75		195 × 519 × 237	18.5
LV7000-3 0008 2-A2H1SSS-A1A2000000	7.8	7,8	6.6	9.9	1.5	1.1		237 × 591 × 257	35
LV7000-3 0011 2-A2H1SSS-A1A2000000	11	11	7.8	11.7	2.2	1.5		291 × 758 × 344	58
LV7000-3 0012 2-A2H1SSS-A1A2000000	12.5	12.5	11	16.5	3	2.2		480 × 1150 × 362	146
LV7000-3 0017 2-A2H1SSS-A1A2000000	17.5	17.5	12.5	18.8	4	3	FR5	144 × 391 × 214	8.1
LV7000-3 0025 2-A2H1SSS-A1A2000000	25	25	17.5	26.3	5.5	4		144 × 391 × 214	8.1
LV7000-3 0031 2-A2H1SSS-A1A2000000	31	31	25	37.5	7.5	5.5		144 × 391 × 214	8.1
LV7000-3 0048 2-A2H1SSS-A1A2000000	48	48	31	46.5	11	7.5	FR6	195 × 519 × 237	18.5
LV7000-3 0061 2-A2H1SSS-A1A2000000	61	61	48	72.0	15	11		195 × 519 × 237	18.5
LV7000-3 0075 2-A2H0SSS-A1A2000000	75	75	61	92	18.5	15	FR7	237 × 591 × 257	35
LV7000-3 0088 2-A2H0SSS-A1A2000000	88	88	75	113	22	18.5		237 × 591 × 257	35
LV7000-3 0114 2-A2H0SSS-A1A2000000	114	114	88	132	30	22		237 × 591 × 257	35
LV7000-3 0140 2-A2H0SSS-A1A2000000	140	140	105	158	37	30	FR8	291 × 758 × 344	58
LV7000-3 0170 2-A2H0SSS-A1A2000000	170	170	140	210	45	37		291 × 758 × 344	58
LV7000-3 0205 2-A2H0SSS-A1A2000000	205	205	170	255	55	45		291 × 758 × 344	58
LV7000-3 0261 2-A2H0SSF-A1A2000000	261	261	205	308	75	55	FR9	480 × 1150 × 362	146
LV7000-3 0300 2-A2H0SSF-A1A2000000	300	300	245	368	90	75		480 × 1150 × 362	146

List above consider standard hardware (SSS) (Exception FR9 Standard = SSF). For varnished option (SSV) (exception FR9 varnished = SSG), it must be included in the varnished adder in the options. **All drives are 3-phase supply:** I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature); I (overload) = maximum 1 min/10 min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-3 — 380–500 — IP21 — EMC-level H/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0003 5-A2H1SSS-A1A2000000	3.3	3.6	2.2	3.3	1.1	0.75	FR4	128 × 292 × 190	5
LV7000-3 0004 5-A2H1SSS-A1A2000000	4.3	4.7	3.3	5	1.5	1.1		128 × 292 × 190	5
LV7000-3 0005 5-A2H1SSS-A1A2000000	5.6	6.2	4.3	6.5	2.2	1.5		128 × 292 × 190	5
LV7000-3 0007 5-A2H1SSS-A1A2000000	7.6	8.4	5.6	8.4	3	2.2		128 × 292 × 190	5
LV7000-3 0009 5-A2H1SSS-A1A2000000	9	9.9	7.6	11.4	4	3		128 × 292 × 190	5
LV7000-3 0012 5-A2H1SSS-A1A2000000	12	13.2	9	13.5	5.5	4		128 × 292 × 190	5
LV7000-3 0016 5-A2H1SSS-A1A2000000	16	17.6	12	18	7.5	5.5	FR5	144 × 391 × 214	8.1
LV7000-3 0022 5-A2H1SSS-A1A2000000	23	25.3	16	24	11	7.5		144 × 391 × 214	8.1
LV7000-3 0031 5-A2H1SSS-A1A2000000	31	34	23	35	15	11		144 × 391 × 214	8.1
LV7000-3 0038 5-A2H1SSS-A1A2000000	38	42	31	47	18.5	15	FR6	195 × 519 × 237	18.5
LV7000-3 0045 5-A2H1SSS-A1A2000000	46	51	38	57	22	18.5		195 × 519 × 237	18.5
LV7000-3 0061 5-A2H1SSS-A1A2000000	61	67	46	69	30	22		195 × 519 × 237	18.5
LV7000-3 0072 5-A2H0SSS-A1A2000000	72	79	61	92	37	30	FR7	237 × 591 × 257	35
LV7000-3 0087 5-A2H0SSS-A1A2000000	87	96	72	108	45	37		237 × 591 × 257	35
LV7000-3 0105 5-A2H0SSS-A1A2000000	105	116	87	131	55	45		237 × 591 × 257	38
LV7000-3 0140 5-A2H0SSS-A1A2000000	140	154	105	158	75	55	FR8	291 × 758 × 344	58
LV7000-3 0168 5-A2H0SSS-A1A2000000	170	187	140	210	90	75		291 × 758 × 344	58
LV7000-3 0205 5-A2H0SSS-A1A2000000	205	226	170	255	110	90		291 × 758 × 344	58
LV7000-3 0261 5-A2H0SSF-A1A2000000	261	287	205	308	132	110	FR9	480 × 1150 × 362	146
LV7000-3 0300 5-A2H0SSF-A1A2000000	300	330	245	368	160	132		480 × 1150 × 362	146

LV7000-3 — 208–240V — IP54 — EMC-level H/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0003 5-A5H1SSS-A1A2000000	3.3	3.6	2.2	3.3	1.1	0.75	FR4	128 × 292 × 190	5
LV7000-3 0004 5-A5H1SSS-A1A2000000	4.3	4.7	3.3	5	1.5	1.1		128 × 292 × 190	5
LV7000-3 0005 5-A5H1SSS-A1A2000000	5.6	6.2	4.3	6.5	2.2	1.5		128 × 292 × 190	5
LV7000-3 0007 5-A5H1SSS-A1A2000000	7.6	8.4	5.6	8.4	3	2.2		128 × 292 × 190	5
LV7000-3 0009 5-A5H1SSS-A1A2000000	9	9.9	7.6	11.4	4	3		128 × 292 × 190	5
LV7000-3 0012 5-A5H1SSS-A1A2000000	12	13.2	9	13.5	5.5	4		128 × 292 × 190	5
LV7000-3 0016 5-A5H1SSS-A1A2000000	16	17.6	12	18	7.5	5.5	FR5	144 × 391 × 214	8.1
LV7000-3 0022 5-A5H1SSS-A1A2000000	23	25.3	16	24	11	7.5		144 × 391 × 214	8.1
LV7000-3 0031 5-A5H1SSS-A1A2000000	31	34	23	35	15	11		144 × 391 × 214	8.1
LV7000-3 0038 5-A5H1SSS-A1A2000000	38	42	31	47	18.5	15	FR6	195 × 519 × 237	18.5
LV7000-3 0045 5-A5H1SSS-A1A2000000	46	51	38	57	22	18.5		195 × 519 × 237	18.5
LV7000-3 0061 5-A5H1SSS-A1A2000000	61	67	46	69	30	22		195 × 519 × 237	18.5
LV7000-3 0072 5-A5H0SSS-A1A2000000	72	79	61	92	37	30	FR7	237 × 591 × 257	35
LV7000-3 0087 5-A5H0SSS-A1A2000000	87	96	72	108	45	37		237 × 591 × 257	35
LV7000-3 0105 5-A5H0SSS-A1A2000000	105	116	87	131	55	45		237 × 591 × 257	38
LV7000-3 0140 5-A5H0SSS-A1A2000000	140	154	105	158	75	55	FR8	291 × 758 × 344	58
LV7000-3 0168 5-A5H0SSS-A1A2000000	170	187	140	210	90	75		291 × 758 × 344	58
LV7000-3 0205 5-A5H0SSS-A1A2000000	205	226	170	255	110	90		291 × 758 × 344	58
LV7000-3 0261 5-A5H0SSF-A1A2000000	261	287	205	308	132	110	FR9	480 × 1150 × 362	146
LV7000-3 0300 5-A5H0SSF-A1A2000000	300	330	245	368	160	132		480 × 1150 × 362	146

List above consider standard hardware (SSS) (Exception FR9 Standard = SSF). For varnished option (SSV) (exception FR9 varnished = SSG), it must be included in the varnished adder in the options.**All drives are 3-phase supply:** I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature); I (overload) = maximum 1 min/10 min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-3 — 525–690V — IP21 — EMC-level L/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0004 6-A2L0SSS-A1A2000000	4.5	5	3.2	5.0	3	2.2	FR6	195 × 519 × 237	18.5
LV7000-3 0005 6-A2L0SSS-A1A2000000	5.5	6.1	4.5	6.8	4	3		195 × 519 × 237	18.5
LV7000-3 0007 6-A2L0SSS-A1A2000000	7.5	8.3	5.5	8.3	5.5	4		195 × 519 × 237	18.5
LV7000-3 0010 6-A2L0SSS-A1A2000000	10	11	7.5	11.3	7.5	5.5		195 × 519 × 237	18.5
LV7000-3 0013 6-A2L0SSS-A1A2000000	13.5	14.9	10	15	11	7.5		195 × 519 × 237	18.5
LV7000-3 0018 6-A2L0SSS-A1A2000000	18	19.8	13.5	20.3	15	11		195 × 519 × 237	18.5
LV7000-3 0022 6-A2L0SSS-A1A2000000	22	24.2	18	27.0	18.5	15		195 × 519 × 237	18.5
LV7000-3 0027 6-A2L0SSS-A1A2000000	27	29.7	22	33	22	18.5		195 × 519 × 237	18.5
LV7000-3 0034 6-A2L0SSS-A1A2000000	34	37	27	41	30	22		195 × 519 × 237	18.5
LV7000-3 0041 6-A2L0SSS-A1A2000000	41	45	34	51	37	30	FR7	237 × 591 × 257	35
LV7000-3 0052 6-A2L0SSS-A1A2000000	52	57	41	62	45	37		237 × 591 × 257	35
LV7000-3 0062 6-A2L0SSS-A1A2000000	62	68	52	78	55	45	FR8	291 × 758 × 344	58
LV7000-3 0080 6-A2L0SSS-A1A2000000	80	88	62	93	75	55		291 × 758 × 344	58
LV7000-3 0100 6-A2L0SSS-A1A2000000	100	110	80	120	90	75		291 × 758 × 344	58
LV7000-3 0125 6-A2L0SSF-A1A2000000	125	138	100	150	110	90	FR9	480 × 1150 × 362	146
LV7000-3 0144 6-A2L0SSF-A1A2000000	140	154	105	158	75	55		480 × 1150 × 362	146
LV7000-3 0170 6-A2L0SSF-A1A2000000	170	187	140	210	90	75		480 × 1150 × 362	146
LV7000-3 0208 6-A2L0SSF-A1A2000000	205	226	170	255	110	90		480 × 1150 × 362	146

LV7000-3 — 525–690V — IP54 — EMC-level L/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0004 6-A5L0SSS-A1A2000000	4.5	5	3.2	5.0	3	2.2	FR6	195 × 519 × 237	18.5
LV7000-3 0005 6-A5L0SSS-A1A2000000	5.5	6.1	4.5	6.8	4	3		195 × 519 × 237	18.5
LV7000-3 0007 6-A5L0SSS-A1A2000000	7.5	8.3	5.5	8.3	5.5	4		195 × 519 × 237	18.5
LV7000-3 0010 6-A5L0SSS-A1A2000000	10	11	7.5	11.3	7.5	5.5		195 × 519 × 237	18.5
LV7000-3 0013 6-A5L0SSS-A1A2000000	13.5	14.9	10	15	11	7.5		195 × 519 × 237	18.5
LV7000-3 0018 6-A5L0SSS-A1A2000000	18	19.8	13.5	20.3	15	11		195 × 519 × 237	18.5
LV7000-3 0022 6-A5L0SSS-A1A2000000	22	24.2	18	27.0	18.5	15		195 × 519 × 237	18.5
LV7000-3 0027 6-A5L0SSS-A1A2000000	27	29.7	22	33	22	18.5		195 × 519 × 237	18.5
LV7000-3 0034 6-A5L0SSS-A1A2000000	34	37	27	41	30	22		195 × 519 × 237	18.5
LV7000-3 0041 6-A5L0SSS-A1A2000000	41	45	34	51	37	30	FR7	237 × 591 × 257	35
LV7000-3 0052 6-A5L0SSS-A1A2000000	52	57	41	62	45	37		237 × 591 × 257	35
LV7000-3 0062 6-A5L0SSS-A1A2000000	62	68	52	78	55	45	FR8	291 × 758 × 344	58
LV7000-3 0080 6-A5L0SSS-A1A2000000	80	88	62	93	75	55		291 × 758 × 344	58
LV7000-3 0100 6-A5L0SSS-A1A2000000	100	110	80	120	90	75		291 × 758 × 344	58
LV7000-3 0125 6-A5L0SSF-A1A2000000	125	138	100	150	110	90	FR9	480 × 1150 × 362	146
LV7000-3 0144 6-A5L0SSF-A1A2000000	144	158	125	188	132	110		480 × 1150 × 362	146
LV7000-3 0170 6-A5L0SSF-A1A2000000	170	187	144	216	160	132		480 × 1150 × 362	146
LV7000-3 0208 6-A5L0SSF-A1A2000000	208	229	170	255	200	160		480 × 1150 × 362	146

List above consider standard hardware (SSS) (Exception FR9 Standard = SSF). For varnished option (SSV) (exception FR9 varnished = SSG), it must be included in the varnished adder in the options. **All drives are 3-phase supply:** I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature); I (overload) = maximum 1 min/10 min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-3 — 380–500V — IP00 — EMC-level N/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0385 5-A0N0SSA-A1A2000000	385	424	300	450	200	160	FR10	500 × 1165 × 506	207*
LV7000-3 0460 5-A0N0SSA-A1A2000000	460	506	385	578	250	200		500 × 1165 × 506	238*
LV7000-3 0520 5-A0N0SSA-A1A2000000	520	572	460	690	250	250		500 × 1165 × 506	238*
LV7000-3 0590 5-A0N0SSA-A1A2000000	590	649	520	780	315	250	FR11	709 × 1206 × 503	378*
LV7000-3 0650 5-A0N0SSA-A1A2000000	650	715	590	885	355	315		709 × 1206 × 503	378*
LV7000-3 0730 5-A0N0SSA-A1A2000000	730	803	650	975	400	355		709 × 1206 × 503	378*
LV7000-3 0820 5-A0N0SSA-A1A2000000	820	902	730	1095	450	400	FR12	2*(500 × 1165 × 506)	414*
LV7000-3 0920 5-A0N0SSA-A1A2000000	920	1012	820	1230	500	450		2*(500 × 1165 × 506)	476*
LV7000-3 1030 5-A0N0SSA-A1A2000000	1030	1133	920	1380	560	500		2*(500 × 1165 × 506)	476*
LV7000-3 1150 5-A0N0SSF-A1A2000000	1150	1265	1030	1545	630	560	FR13	2*(239 × 1030 × 372) plus 708 × 1032 × 553	700*
LV7000-3 1300 5-A0N0SSF-A1A2000000	1300	1430	1150	1725	710	630		3*(239 × 1030 × 372) plus 708 × 1032 × 553	852*
LV7000-3 1450 5-A0N0SSF-A1A2000000	1450	1595	1300	1950	800	710		3*(239 × 1030 × 372) plus (708 × 1032 × 553)	852*
LV7000-3 1770 5-A0N0SSF-A1A2000000	1770	1947	1600	2400	1000	900	FR14	4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	995*
LV7000-3 2150 5-A0N0SSF-A1A2000000	2150	2365	1940	2910	1200	1100		4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	1010*

LV7000-3 — 525–690V — IP00 — EMC-level N/T — 6-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0261 6-A0N0SSA-A1A2000000	261	287	208	312	250	200	FR10	500 × 1165 × 506	176*
LV7000-3 0325 6-A0N0SSA-A1A2000000	325	358	261	392	315	250		500 × 1165 × 506	207*
LV7000-3 0385 6-A0N0SSA-A1A2000000	385	424	325	488	355	315		500 × 1165 × 506	207*
LV7000-3 0416 6-A0N0SSA-A1A2000000 **	416	458	325	488	400	315		500 × 1165 × 506	207*
LV7000-3 0460 6-A0N0SSA-A1A2000000	460	506	385	578	450	355	FR11	709 × 1206 × 503	325*
LV7000-3 0502 6-A0N0SSA-A1A2000000	502	552	460	690	500	450		709 × 1206 × 503	325*
LV7000-3 0590 6-A0N0SSA-A1A2000000 **	590	649	502	753	560	500		709 × 1206 × 503	378*
LV7000-3 0650 6-A0N0SSA-A1A2000000	650	715	590	885	630	560	FR12	2*(500 × 1165 × 506)	414*
LV7000-3 0750 6-A0N0SSA-A1A2000000	750	825	650	975	710	630		2*(500 × 1165 × 506)	414*
LV7000-3 0820 6-A0N0SSA-A1A2000000 **	820	902	750	975	800	710		2*(500 × 1165 × 506)	414*
LV7000-3 0920 6-A0N0SSF-A1A2000000	920	1012	820	1230	900	800	FR13	2*(239 × 1030 × 372) plus 708 × 1032 × 553	670*
LV7000-3 1030 6-A0N0SSF-A1A2000000	1030	1133	920	1380	1000	900		2*(239 × 1030 × 372) plus (708 × 1032 × 553)	670*
LV7000-3 1180 6-A0N0SSF-A1A2000000 **	1180	1298	1030	1463	1150	1000		2*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	700*
LV7000-3 1500 6-A0N0SSF-A1A2000000	1500	1650	1300	1950	1500	1300	FR14	3*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	925*
LV7000-3 1900 6-A0N0SSF-A1A2000000	1900	2090	1500	2250	1800	1500		4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	995*
LV7000-3 2250 6-A0N0SSF-A1A2000000 **	2250	2475	1900	2782	2000	1800		4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	1010*

List above consider standard hardware (SSS) (Exception FR13-14 Standard = SSF). For varnished option (SSB) (Exception FR13-14 varnished = SSG), it must be included in the varnished adder in the options.

* Includes weight of input choke; ** Max 35C ambient temperature; Input choke delivered a loose components (Not included in total dimensions); I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature); I(overload) = maximum 1 min/10 min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options

LV7000-3 — 380–500V — IP00 — EMC-level N/T — 12-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0385 5-A0N0TSA-A1A2000000	385	424	300	450	200	160	FR10	500 × 1165 × 506	207*
LV7000-3 0460 5-A0N0TSA-A1A2000000	460	506	385	578	250	200		500 × 1165 × 506	238*
LV7000-3 0520 5-A0N0TSA-A1A2000000	520	572	460	690	250	250		500 × 1165 × 506	238*
LV7000-3 0590 5-A0N0TSA-A1A2000000	590	649	520	780	315	250	FR11	709 × 1206 × 503	378*
LV7000-3 0650 5-A0N0TSA-A1A2000000	650	715	590	885	355	315		709 × 1206 × 503	378*
LV7000-3 0730 5-A0N0TSA-A1A2000000	730	803	650	975	400	355		709 × 1206 × 503	378*
LV7000-3 0820 5-A0N0TSA-A1A2000000	820	902	730	1095	450	400	FR12	2*(500 × 1165 × 506)	414*
LV7000-3 0920 5-A0N0TSA-A1A2000000	920	1012	820	1230	500	450		2*(500 × 1165 × 506)	476*
LV7000-3 1030 5-A0N0TSA-A1A2000000	1030	1133	920	1380	560	500		2*(500 × 1165 × 506)	476*
LV7000-3 1150 5-A0N0TSF-A1A2000000	1150	1265	1030	1545	630	560	FR13	2*(239 × 1030 × 372) plus 708 × 1032 × 553	700*
LV7000-3 1300 5-A0N0TSF-A1A2000000	1300	1430	1150	1725	710	630		3*(239 × 1030 × 372) plus 708 × 1032 × 553	852*
LV7000-3 1450 5-A0N0TSF-A1A2000000	1450	1595	1300	1950	800	710		3*(239 × 1030 × 372) plus 708 × 1032 × 553	852*
LV7000-3 1770 5-A0N0TSF-A1A2000000	1770	1947	1600	2400	1000	900	FR14	4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	995*
LV7000-3 2150 5-A0N0TSF-A1A2000000	2150	2365	1940	2910	1200	1100		4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	1010*

LV7000-3 — 525–690V — IP00 — EMC-level N/T — 12-pulse supply

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-3 0261 6-A0N0SSA-A1A2000000	261	287	208	312	250	200	FR10	500 × 1165 × 506	176*
LV7000-3 0325 6-A0N0SSA-A1A2000000	325	358	261	392	315	250		500 × 1165 × 506	207*
LV7000-3 0385 6-A0N0SSA-A1A2000000	385	424	325	488	355	315		500 × 1165 × 506	207*
LV7000-3 0416 6-A0N0SSA-A1A2000000 **	416	458	325	488	400	315		500 × 1165 × 506	207*
LV7000-3 0460 6-A0N0SSA-A1A2000000	460	506	385	578	450	355	FR11	709 × 1206 × 503	325*
LV7000-3 0502 6-A0N0SSA-A1A2000000	502	552	460	690	500	450		709 × 1206 × 503	325*
LV7000-3 0590 6-A0N0SSA-A1A2000000 **	590	649	502	753	560	500		709 × 1206 × 503	378*
LV7000-3 0650 6-A0N0SSA-A1A2000000	650	715	590	885	630	560	FR12	2*(500 × 1165 × 506)	414*
LV7000-3 0750 6-A0N0SSA-A1A2000000	750	825	650	975	710	630		2*(500 × 1165 × 506)	414*
LV7000-3 0820 6-A0N0SSA-A1A2000000 **	820	902	750	975	800	710		2*(500 × 1165 × 506)	414*
LV7000-3 0920 6-A0N0SSF-A1A2000000	920	1012	820	1230	900	800	FR13	2*(239 × 1030 × 372) plus 708 × 1032 × 553	670*
LV7000-3 1030 6-A0N0SSF-A1A2000000	1030	1133	920	1380	1000	900		2*(239 × 1030 × 372) plus (708 × 1032 × 553)	670*
LV7000-3 1180 6-A0N0SSF-A1A2000000 **	1180	1298	1030	1463	1150	1000		2*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	700*
LV7000-3 1500 6-A0N0SSF-A1A2000000	1500	1650	1300	1950	1500	1300	FR14	3*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	925*
LV7000-3 1900 6-A0N0SSF-A1A2000000	1900	2090	1500	2250	1800	1500		4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	995*
LV7000-3 2250 6-A0N0SSF-A1A2000000 **	2250	2475	1900	2782	2000	1800		4*(239 × 1030 × 372) plus 2*(708 × 1032 × 553)	1010*

List above consider standard hardware (SSS) (Exception FR13-14 Standard = SSF). For varnished option (SSB) (Exception FR13-14 varnished = SSG), it must be included in the varnished adder in the options.
* Includes weight of input choke; ** Max 35C ambient temperature; Input choke delivered a loose components (Not included in total dimensions); I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature); I(overload) = maximum 1 min/10 min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options

GENERAL DATA

Mains connection	Input voltage U_{in}	208…240 V; 380…500 V; 525…690 V; –10%…+10%
	Input frequency	45…66 Hz
	Connection to mains	Once per minute or less (normal case)
Motor connection	Output voltage	0 – U_{in}
	Continuous output current	High overloadability: IH, ambient temperature max. 50 °C (≥FR10 + 40 °C) Low overloadability: IL, ambient temperature max. +40 °C
	Overloadability	High: 1.5 x IH (1 min/10 min), Low: 1.1 x IL (1 min/10 min)
	Max. starting current	Is for 2 s every 20 s
	Output frequency	0…320 Hz
Ambient conditions	Ambient operating temperature	–10 °C (no frost)…+50 °C: IH (≥FR10 + 40 °C) –10 °C (no frost)…+40 °C: IL
	Storage temperature	–40 °C…+70 °C
	Relative humidity	0 to 95% RH, non-condensing, non-corrosive, no dripping water
	Air quality: chemical vapours/ mechanical particles	IEC 60721-3-3, unit in operation, class 3C2 (tested in accordance with IEC60068-2-60, Method I C CH2 and SO2) IEC 60721-3-3, unit in operation, class 3S2
	Altitude	100% load capacity (no derating) up to 1000 m 1% derating for each 100 m above 1000 m; max. 3000 m (690 V max. 2000 m)
	Vibration EN 50178/EN 60068-2-6	5…150 Hz: Displacement amplitude 1 mm (peak) at 5…15.8 Hz (≥FR10: 0.25 mm (peak) at 5…31 Hz) Max acceleration amplitude 1 G at 15.8…150 Hz (≥FR10: 1 G at 31…150 Hz)
	Shock EN 50178, EN 60068-2-27	UPS Drop Test (for applicable UPS weights) Storage and shipping: max 15 G, 11 ms (in package)
EMS	Immunity	Fulfils all EMC immunity requirements
	Emissions	EMC level C: EN 61800-3, cat. C1; EMC level H: EN 61800-3, cat. C2; EMC level L: EN 61800-3, cat. C3; EMC level T: Low earth-current solution is suitable for IT networks, (can be modified from L/H-level units)
Safety		EN 50178, EN 60204-1, IEC 61800-5-1, CE, UL, CUL; (see unit nameplate for more details)
Functional safety *	STO	EN/IEC 61800-5-2 safe torque off (STO) SIL2, EN ISO 13849-1 PL"d" cat. 3, EN 62061: SILCL2, IEC 61508: SIL2
	SS1	EN /IEC 61800-5-2 safe stop 1 (SS1) SIL2, EN ISO 13849-1 PL"d" cat. 3, EN /IEC62061: SILCL2, IEC 61508: SIL2.
	ATEX thermistor input	94/9/EC, CE 0537 Ex 11 (2) GD
	Advance safety option	STO (+SBC), SS1, SS2, SOS, SLS, SMS, SSM, SSR
Control connections (OPT -A1, -A2 or OPT -A1, -A3)	Analogue input voltage	0…+10 V (–10 V…+10 V joystick control), Ri = 200 kΩ, resolution 0.1%, accuracy ±1%
	Analogue input current	0(4)…20 mA, Ri = 250 Ω differential, resolution 0.1%, accuracy ±1%
	Digital inputs	6, positive or negative logic; 18…30 VDC
	Auxiliary voltage	+24 V, ±15%, max. 250 mA
	Output reference voltage	+10 V, +3%, max. load 10 mA
	Analogue output	0 (4)…20 mA; RL max. 500 Ω, resolution 10-bit, accuracy ±2%
	Digital output	Open collector output, 50 mA/48 V
	Relay outputs	2 programmable change-over (NO/NC) relay outputs (OPT-A3: NO/NC+NO) Switching capacity: 24 VDC/8 A, 250 VAC/8 A, 125 VDC/0.4 A. Min. switching load: 5 V/10 mA
	Thermistor input (OPT-A3)	Galvanically isolated, Rtrip = 4.7 kΩ
Supply connections	Input voltage U_{in} (AC) Front-end modules	380-500 VAC / 525-690 VAC -10%…+10% (according to EN60204-1)
	Input voltage U_{in} (DC) Inverter and brake chopper modules	465…800 VDC / 640…1100 VDC. The voltage ripple of the inverter supply voltage, formed in rectification of the electric network's alternating voltage in basic frequency, must be less than 50 V peak-to-peak
	Output voltage U_{out} (AC) Inverter	3~ 0…Uin / 1.4
	Output voltage U_{out} (DC) Active front-end module	1.10 × 1.35 x Uin (Factory default)
	Output voltage U_{out} (DC) non-regenerative front-end module	1.35 x Uin
Control characteristics	Control performance	Open loop vector control (5-150% of base speed): speed control 0.5%, dynamic 0.3%sec, torque lin. <2%, torque rise time ~5 ms Closed loop vector control (entire speed range): speed control 0.01%, dynamic 0.2% sec, torque lin. <2%, torque rise time ~2 ms
	Switching frequency	380-500V: 1…6 kHz; Factory default 3.6 kHz 525-690V: 1…6 kHz; Factory default 1.5 kHz
	Field weakening point	8…320 Hz
	Acceleration time	0…3000 sec
	Deceleration time	0…3000 sec
	Braking	DC brake: 30% of TN (without brake resistor), flux braking
Protections	Overvoltage protection	380-500V: 911 VDC; LV7000-4_6: 1200 VDC
	Undervoltage protection	525-690V: 333 VDC; LV7000-4_6: 460 VDC
	Earth fault protection	Yes
	Motor phase supervision	Trips if any of the output phases is missing
	Overcurrent protection	Yes
	Unit overtemperature protection	Yes
	Motor overload protection	Yes
	Motor stall protection	Yes
	Motor underload protection	Yes
	Short-circuit protection of +24 V and +10 V reference voltages	Yes

LV7000-4 — 380–500V — IP21/54 — EMC-level L/T — 6-pulse supply — Low Harmonics (AFE)

GEPC TYPE CODE	Load ability				Motor Shaft Power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-4 0261 5-A2H0SSF-A1A2000000	261	287	205	308	132	110	FR9	606 × 2275 × 605	308
LV7000-4 0300 5-A2H0SSF-A1A2000000	300	330	245	368	160	132		606 × 2275 × 605	308
LV7000-4 0385 5-A2L0SSF-A1A2000000	385	424	300	450	200	160	FR10	606 × 2275 × 605	371
LV7000-4 0460 5-A2L0SSF-A1A2000000	460	506	385	578	250	200		606 × 2275 × 605	403
LV7000-4 0520 5-A2L0SSF-A1A2000000	520	572	460	690	250	250		606 × 2275 × 605	403
LV7000-4 0590 5-A2L0SSF-A1A2000000	590	649	520	780	315	250	FR11	606 × 2275 × 605	577
LV7000-4 0650 5-A2L0SSF-A1A2000000	650	715	590	885	355	315		606 × 2275 × 605	577
LV7000-4 0730 5-A2L0SSF-A1A2000000	730	803	650	975	400	355		606 × 2275 × 605	577
LV7000-4 0820 5-A2L0SSF-A1A2000000	820	902	730	1095	450	400	FR12	606 × 2275 × 605	810
LV7000-4 0920 5-A2L0SSF-A1A2000000	920	1012	820	1230	500	450		606 × 2275 × 605	810
LV7000-4 1030 5-A2L0SSF-A1A2000000	1030	1133	920	1380	560	500		606 × 2275 × 605	810
LV7000-4 1150 5-A2L0SSF-A1A2000000	1150	1265	1030	1545	630	560	FR13	606 × 2275 × 605	1050
LV7000-4 1300 5-A2L0SSF-A1A2000000	1300	1430	1150	1725	710	630		806 × 2275 × 605	1250
LV7000-4 1450 5-A2L0SSF-A1A2000000	1450	1595	1300	1950	800	710		806 × 2405 × 605	1250
LV7000-4 1770 5-A2L0SSF-A1A2000000	1770	1947	1600	2400	1000	900	FR14	806 × 2275 × 605	2250
LV7000-4 2150 5-A2L0SSF-A1A2000000	2150	2365	1940	2910	1200	1100		806 × 2405 × 605	2300

Variants & Options

S=Standard / **O**=Optional / **+ICB**=Circuit Breaker / **+IFD**=Switch Fuse & Fuses / **+IFU**=Input Fuses / **+ILS**=Load Switch / **+OCM**=Common Mode Choke with Output Terminals / **+ODU**=du/dt-Filter **+OSI**=Sine Wave Filter

6-pulse	Enclosure		EMC			Brake chopper	Cabling		Input devices					Output filters		
380-500V	IP21	IP54	L	T	H	+MBU	Bottom	Top +CIT/+COT	+IFU	+ILS	+IFD	+ICO	+ICB	+OCM	+ODU	+OSI
FR9	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O	O
FR10	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR11	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR12	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR13	S	O (H: +170)	S	O	-	O	S	O (W: +400)	-	-	S	-	O	O	O	O
FR14	S	O (H: +170)	S	O	-	O	S	O (W: +400)	-	-	-	-	S	O	S	O

I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
I (overload) = maximum 1 min/10 min overload current (high overload); *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the I/O card options section.

LV7000-4 — 525–690V — IP21/54 — EMC-level L/T — 6-pulse supply — Low Harmonics (AFE)

GEPC TYPE CODE	Load ability				Motor shaft power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-4 0125 6-A2L0SSF-A1A2000000	125	138	100	150	110	90	FR9	606 × 2275 × 605	308
LV7000-4 0144 6-A2L0SSF-A1A2000000	144	158	125	188	132	110		606 × 2275 × 605	308
LV7000-4 0170 6-A2L0SSF-A1A2000000	170	187	144	216	160	132		606 × 2275 × 605	308
LV7000-4 0208 6-A2L0SSF-A1A2000000	208	229	170	255	200	160		606 × 2275 × 605	308
LV7000-4 0261 6-A2L0SSF-A1A2000000	261	287	208	312	250	200	FR10	606 × 2275 × 605	341
LV7000-4 0325 6-A2L0SSF-A1A2000000	325	358	261	392	315	250		606 × 2275 × 605	371
LV7000-4 0385 6-A2L0SSF-A1A2000000	385	424	325	488	355	315		606 × 2275 × 605	371
LV7000-4 0416 6-A2L0SSF-A1A2000000 *1	416	458	325	488	400	315		606 × 2275 × 605	371
LV7000-4 0460 6-A2L0SSF-A1A2000000	460	506	385	578	450	355	FR11	806 × 2275 × 605	577
LV7000-4 0502 6-A2L0SSF-A1A2000000	502	552	460	690	500	450		806 × 2275 × 605	524
LV7000-4 0590 6-A2L0SSF-A1A2000000 *1	590	649	502	753	560	500		806 × 2275 × 605	577
LV7000-4 0650 6-A2L0SSF-A1A2000000	650	715	590	885	630	560	FR12	1206 × 2275 × 605	745
LV7000-4 0750 6-A2L0SSF-A1A2000000	750	825	650	975	710	630		1206 × 2275 × 605	745
LV7000-4 0820 6-A2L0SSF-A1A2000000 *1	820	902	750	975	800	710		1206 × 2405 × 605	745
LV7000-4 0920 6-A2L0SSF-A1A2000000	920	1012	820	1230	900	800	FR13	1406 × 2275 × 605	1050
LV7000-4 1030 6-A2L0SSF-A1A2000000	1030	1133	920	1380	1000	900		1406 × 2405 × 605	1050
LV7000-4 1180 6-A2L0SSF-A1A2000000 *1	1180	1298	1030	1463	1150	1000		1406 × 2275 × 605	1050
LV7000-4 1500 6-A2L0SSF-A1A2000000	1500	1650	1300	1950	1500	1300	FR14	2806 × 2405 × 605	1950
LV7000-4 1900 6-A2L0SSF-A1A2000000	1900	2090	1500	2250	1800	1500		2806 × 2275 × 605	2250
LV7000-4 2250 6-A2L0SSF-A1A2000000 *1	2250	2475	1900	2782	2000	1800		2806 × 2405 × 605	2300

Variants & Options

S=Standard / **O**=Optional / **+ICB**=Circuit Breaker / **+IFD**=Switch Fuse & Fuses / **+IFU**=Input Fuses / **+ILS**=Load Switch / **+OCM**=Common Mode Choke with Output Terminals / **+ODU**=du/dt-Filter **+OSI**=Sine Wave Filter

6-pulse	Enclosure		EMC			Brake chopper	Cabling		Input devices					Output filters		
525-690V	IP21	IP54	L	T	H	+MBU	Bottom	Top +CIT/+COT	+IFU	+ILS	+IFD	+ICO	+ICB	+OCM	+ODU	+OSI
FR9	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O	O
FR10	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR11	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR12	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR13	S	O (H: +170)	S	O	-	O	S	O (W: +400)	-	-	S	-	O	O	O	O
FR14	S	O (H: +170)	S	O	-	O	S	O (W: +400)	-	-	-	-	S	O	S	O

*1 max. 35 C ambient temperature
I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
I (overload) = maximum 1 min/10 min overload current (high overload); *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the I/O card options section.

LV7000-4 — 380–500V — IP21/54 — EMC-level L/T — 12-pulse supply

GEPC TYPE CODE	Load ability				Motor shaft power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-4 0385 5-A2L0TSF-A1A2000000	385	424	300	450	200	160	FR10	606 × 2275 × 605	371
LV7000-4 0460 5-A2L0TSF-A1A2000000	460	506	385	578	250	200		606 × 2275 × 605	403
LV7000-4 0520 5-A2L0TSF-A1A2000000	520	572	460	690	250	250		606 × 2275 × 605	403
LV7000-4 0590 5-A2L0TSF-A1A2000000	590	649	520	780	315	250	FR11	806 × 2275 × 605	577
LV7000-4 0650 5-A2L0TSF-A1A2000000	650	715	590	885	355	315		806 × 2275 × 605	577
LV7000-4 0730 5-A2L0TSF-A1A2000000	730	803	650	975	400	355		806 × 2275 × 605	577
LV7000-4 0820 5-A2L0TSF-A1A2000000	820	902	730	1095	450	400	FR12	1206 × 2275 × 605	810
LV7000-4 0920 5-A2L0TSF-A1A2000000	920	1012	820	1230	500	450		1206 × 2275 × 605	810
LV7000-4 1030 5-A2L0TSF-A1A2000000	1030	1133	920	1380	560	500		1206 × 2275 × 605	810
LV7000-4 1150 5-A2L0TSF-A1A2000000	1150	1265	1030	1545	630	560	FR13	1406 × 2275 × 605	1050
LV7000-4 1300 5-A2L0TSF-A1A2000000	1300	1430	1150	1725	710	630		2006 × 2275 × 605	1700
LV7000-4 1450 5-A2L0TSF-A1A2000000	1450	1595	1300	1950	800	710		2006 × 2275 × 605	1700
LV7000-4 1770 5-A2L0TSF-A1A2000000	1770	1947	1600	2400	1000	900	FR14	2806 × 2275 × 605	2250
LV7000-4 2150 5-A2L0TSF-A1A2000000	2150	2365	1940	2910	1200	1100		2806 × 2405 × 605	2300

Variants & Options

S=Standard / **O**=Optional / **+ICB**=Circuit Breaker / **+IFD**=Switch Fuse & Fuses / **+IFU**=Input Fuses / **+ILS**=Load Switch / **+OCM**=Common Mode Choke with Output Terminals / **+ODU**=du/dt-Filter **+OSI**=Sine Wave Filter

12-pulse	Enclosure		EMC			Brake chopper	Cabling		Input devices					Output filters		
380-500V	IP21	IP54	L	T	H	+MBU	Bottom	Top +CIT/+COT	+IFU	+ILS	+IFD	+ICO	+ICB	+OCM	+ODU	+OSI
FR10	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	-	-	-	O	O	O (W: +400)	O
FR11	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR12	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR13	S	O (H: +170)	S	O	-	1	S	O (W: +400)	-	-	-	-	S	O	O	O
FR14	S	O (H: +170)	S	O	-	1	S	O (W: +400)	-	-	-	-	S	O	O	O
FR14	S	O (H: +170)	S	O	-	O	S	O (W: +400)	-	-	-	-	S	O	S	O

I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
I (overload) = maximum 1 min/10 min overload current (high overload); *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the I/O card options section.

LV7000-4 — 525–690V — IP21/54 — EMC-level L/T — 12-pulse supply

GEPC TYPE CODE	Load ability				Motor shaft power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-4 0261 6-A2L0TSF-A1A2000000	261	287	208	312	250	200	FR10	606 × 2275 × 605	341
LV7000-4 0325 6-A2L0TSF-A1A2000000	325	358	261	392	315	250		606 × 2275 × 605	371
LV7000-4 0385 6-A2L0TSF-A1A2000000	385	424	325	488	355	315		606 × 2275 × 605	371
LV7000-4 0416 6-A2L0TSF-A1A2000000 *1	416	458	325	488	400	315		606 × 2275 × 605	371
LV7000-4 0460 6-A2L0TSF-A1A2000000	460	506	385	578	450	355	FR11	806 × 2275 × 605	524
LV7000-4 0502 6-A2L0TSF-A1A2000000	502	552	460	690	500	450		806 × 2275 × 605	524
LV7000-4 0590 6-A2L0TSF-A1A2000000 *1	590	649	502	753	560	500		806 × 2275 × 605	577
LV7000-4 0650 6-A2L0TSF-A1A2000000	650	715	590	885	630	560	FR12	1206 × 2275 × 605	745
LV7000-4 0750 6-A2L0TSF-A1A2000000	750	825	650	975	710	630		1206 × 2275 × 605	745
LV7000-4 0820 6-A2L0TSF-A1A2000000 *1	820	902	750	975	800	710		1206 × 2275 × 605	745
LV7000-4 0920 6-A2L0TSF-A1A2000000 *	920	1012	820	1230	900	800	FR13	1406 × 2275 × 605	1050
LV7000-4 1030 6-A2L0TSF-A1A2000000 *	1030	1133	920	1380	1000	900		1406 × 2275 × 605	1050
LV7000-4 1180 6-A2L0TSF-A1A2000000 **1	1180	1298	1030	1463	1150	1000		1406 × 2275 × 605	1050
LV7000-4 1500 6-A2L0TSF-A1A2000000 *	1500	1650	1300	1950	1500	1300	FR14	2806 × 2405 × 605	2250
LV7000-4 1900 6-A2L0TSF-A1A2000000 *	1900	2090	1500	2250	1800	1500		2806 × 2275 × 605	2250
LV7000-4 2250 6-A2L0TSF-A1A2000000 **1	2250	2475	1900	2782	2000	1800		2806 × 2405 × 605	2300

Variants & Options

S=Standard / **O**=Optional / **+ICB**=Circuit Breaker / **+IFD**=Switch Fuse & Fuses / **+IFU**=Input Fuses / **+ILS**=Load Switch / **+OCM**=Common Mode Choke with Output Terminals / **+ODU**=du/dt-Filter **+OSI**=Sine Wave Filter

6-pulse	Enclosure		EMC			Brake chopper	Cabling		Input devices					Output filters		
525-690V	IP21	IP54	L	T	H	+MBU	Bottom	Top +CIT/+COT	+IFU	+ILS	+IFD	+ICO	+ICB	+OCM	+ODU	+OSI
FR10	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	-	-	-	O	O	O (W: +400)	O
FR11	S	O (H: +130)	S	O	-	O	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR12	S	O (H: +130)	S	O	-	O	S	O (W: +400)	O	O	O	O	O	O	O (W: +400)	O
FR13	S	O (H: +170)	S	O	-	1	S	O (W: +400)	-	-	O	-	S	O	O	O
FR14	S	O (H: +170)	S	O	-	1	S	O (W: +400)	-	-	-	-	S	O	O	O

*1 max. 35 C ambient temperature
I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
I (overload) = maximum 1 min/10 min overload current (high overload); *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the I/O card options section.

LV7000-4 — 380–500V — IP21/54 — EMC-level L/T

GEPC TYPE CODE	Load ability				Motor shaft power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-4 02615-A2L0RSF-A1A2000000	261	287	205	308	132	110	AF9	1006 × 2275 × 605	680
LV7000-4 03005-A2L0RSF-A1A2000000	300	330	245	368	160	132		1006 × 2275 × 605	680
LV7000-4 03855-A2L0RSF-A1A2000000	385	424	300	450	200	160	AF10	1006 × 2275 × 605	700
LV7000-4 04605-A2L0RSF-A1A2000000	460	506	385	578	250	200		1006 × 2275 × 605	700
LV7000-4 05205-A2L0RSF-A1A2000000	520	572	460	690	250	250		1006 × 2275 × 605	700
LV7000-4 06505-A2L0RSF-A1A2000000	650	715	590	885	355	315	AF12	2006 × 2275 × 605	1400
LV7000-4 07305-A2L0RSF-A1A2000000	730	803	650	975	400	355		2006 × 2275 × 605	1400
LV7000-4 08205-A2L0RSF-A1A2000000	820	902	730	1095	450	400		2006 × 2275 × 605	1400
LV7000-4 09205-A2L0RSF-A1A2000000	920	1012	820	1230	500	450		2006 × 2275 × 605	1400
LV7000-4 10305-A2L0RSF-A1A2000000	1030	1133	920	1380	560	500		2006 × 2275 × 605	1400
LV7000-4 11505-A2L0RSF-A1A2000000	1150	1265	1030	1545	630	560	FR13	2206 × 2275 × 605	1950
LV7000-4 13005-A2L0RSF-A1A2000000	1300	1430	1150	1725	710	630		2206 × 2275 × 605	1950
LV7000-4 14505-A2L0RSF-A1A2000000	1450	1595	1300	1950	800	710		2206 × 2275 × 605	1950
LV7000-4 17705-A2L0RSF-A1A2000000 + ODU	1770	1947	1600	2400	1000	900	FR14	4406 × 2275 × 605	3900
LV7000-4 21505-A2L0RSF-A1A2000000 + ODU	2150	2365	1940	2910	1200	1100		4406 × 2275 × 605	3900
LV7000-4 27005-A2L0RSF-A1A2000000 + ODU	2700	2970	2300	3278	1500	1200		4406 × 2275 × 605	3900

Variants & Options

S=Standard / **O**=Optional / **+ICB**=Circuit Breaker / **+IFD**=Switch Fuse & Fuses / **+IFU**=Input Fuses / **+ILS**=Load Switch / **+OCM**=Common Mode Choke with Output Terminals / **+ODU**=du/dt-Filter **+OSI**=Sine Wave Filter

AFE	Enclosure		EMC			Brake chopper	Cabling		Input devices					Output filters		
380-500V	IP21	IP54	L	T	H	+MBU	Bottom	Top +CIT/+COT	+IFU	+ILS	+IFD	+ICO	+ICB	+OCM	+ODU	+OSI
AF9	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	-	O	S	O	O (W: +400)	O
AF10	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	-	O	S	O	O (W: +400)	O
AF11	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	O	O	S	O	O (W: +400)	O
AF12	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	O	O	S	O	O (W: +400)	O
AF13	S	O (H: +170)	S	O	-	-	S	O (W: +400)	-	S	-	-	S	O	O	O
AF14	S	O (H: +170)	S	O	-	-	S	O (W: +400)	-	S	-	-	S	O	S	O

AFE9-AFE13 incl. +AT2, +ADC, +TUP, +AMO, +DCO, +DRO, +ILS & +ICB as standard; AFE14 incl. +AT3, +ADC, +TUP, +AMO, +DCO, +DRO, +ILS, +ICB & +ODU as standard (+ODU can be changed to +OSI)
I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
I (overload) = maximum 1 min/10 min overload current (high overload); *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the I/O card options section.

LV7000-4 — 525–690V — IP21/54 — EMC-level L/T

GEPC TYPE CODE	Load ability				Motor shaft power		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)						
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	P_L[kW]	P_H[kW]			
LV7000-4 01256-A2L0RSF-A1A2000000	125	138	100	200	110	90	AF9	1006 × 2275 × 605	680
LV7000-4 01446-A2L0RSF-A1A2000000	144	158	125	213	132	110		1006 × 2275 × 605	680
LV7000-4 01706-A2L0RSF-A1A2000000	170	187	144	245	160	132		1006 × 2275 × 605	680
LV7000-4 02086-A2L0RSF-A1A2000000	208	229	170	289	200	160		1006 × 2275 × 605	680
LV7000-4 02616-A2L0RSF-A1A2000000	261	287	208	375	250	200	AF10	1006 × 2275 × 605	700
LV7000-4 03256-A2L0RSF-A1A2000000	325	358	261	470	315	250		1006 × 2275 × 605	700
LV7000-4 03856-A2L0RSF-A1A2000000	385	424	325	585	355	315		1006 × 2275 × 605	700
LV7000-4 04166-A2L0RSF-A1A2000000	416	416	325	585	400	315		1006 × 2275 × 605	700
LV7000-4 04606-A2L0RSF-A1A2000000	460	506	385	693	450	355	AF12	2006 × 2275 × 605	1400
LV7000-4 05026-A2L0RSF-A1A2000000	502	552	460	828	500	450		2006 × 2275 × 605	1400
LV7000-4 05906-A2L0RSF-A1A2000000	590	649	502	904	560	500		2006 × 2275 × 605	1400
LV7000-4 06506-A2L0RSF-A1A2000000	650	715	590	1062	630	560		2006 × 2275 × 605	1400
LV7000-4 07506-A2L0RSF-A1A2000000	750	825	650	1170	710	630		2006 × 2275 × 605	1400
LV7000-4 08206-A2L0RSF-A1A2000000	820	902	650	1170	750	650		2006 × 2405 × 605	1400
LV7000-4 09206-A2L0RSF-A1A2000000	920	1012	820	1476	900	800	AF13	2206 × 2275 × 605	1400
LV7000-4 10306-A2L0RSF-A1A2000000	1030	1133	920	1656	1000	900		2206 × 2405 × 605	1950
LV7000-4 11806-A2L0RSF-A1A2000000	1180	1298	1030	1755	1150	1000		2206 × 2275 × 605	1950
LV7000-4 15006-A2L0RSF-A1A2000000 + ODU	1500	1650	1300	2340	1500	1300	AF14	4406 × 2405 × 605	3900
LV7000-4 19006-A2L0RSF-A1A2000000 + ODU	1900	2090	1500	2700	1800	1500		4406 × 2275 × 605	3900
LV7000-4 22506-A2L0RSF-A1A2000000 + ODU	2250	1475	1900	3335	2000	1800		4406 × 2405 × 605	3900

Variants & Options

S=Standard / **O**=Optional / **+ICB**=Circuit Breaker / **+IFD**=Switch Fuse & Fuses / **+IFU**=Input Fuses / **+ILS**=Load Switch / **+OCM**=Common Mode Choke with Output Terminals / **+ODU**=du/dt-Filter **+OSI**=Sine Wave Filter

AFE	Enclosure		EMC			Brake chopper	Cabling		Input devices					Output filters		
525-690V	IP21	IP54	L	T	H	+MBU	Bottom	Top +CIT/+COT	+IFU	+ILS	+IFD	+ICO	+ICB	+OCM	+ODU	+OSI
AF9	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	-	O	S	O	O (W: +400)	O
AF10	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	-	O	S	O	O (W: +400)	O
AF11	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	O	O	S	O	O (W: +400)	O
AF12	S	O (H: +130)	S	O	-	-	S	O (W: +400)	O	S	O	O	S	O	O (W: +400)	O
AF13	S	O (H: +170)	S	O	-	-	S	O (W: +400)	-	S	-	-	S	O	O	O
AF14	S	O (H: +170)	S	O	-	-	S	O (W: +400)	-	S	-	-	S	O	S	O

AFE9-AFE13 incl. +AT2, +ADC, +TUP, +AMO, +DCO, +DRO, +ILS & +ICB as standard; AFE14 incl. +AT3, +ADC, +TUP, +AMO, +DCO, +DRO, +ILS, +ICB & +ODU as standard (+ODU can be changed to +OSI)
I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
I (overload) = maximum 1 min/10 min overload current (high overload); *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the I/O card options section.

Auxiliary equipment (A-Group)

GEPC TYPE CODE	OPTION
+AAA	Aux. contact (for +ATx supervision)
+AAC	Aux. contact (for +Ixx options)
+AAI	Analog signal isolator
+ACH	Cabinet Heater
+ACL	Cabinet Light
+ACR	Control relay
+ACS	230 VAC customer socket
+ADC	Power supply 24 VDC, 2,5 A
+AMB	Mech. brake control
+AMF	Motor fan control
+AMH	Motor heater feeder
+AMO	ICB Motor Operator
+AT1	Aux. Transformer (200VA)
+AT2	Aux. Transformer (750VA)
+AT3	Aux. Transformer (2500VA)
+AT4	Aux. Transformer (4000VA)

Seaworthy packing (S-Group)

GEPC TYPE CODE	OPTION
+SWP	Seaworthy Packing

Door-mounted (D-Group)

GEPC TYPE CODE	OPTION
+DAM	Analog Meter (AO1)
+DAR	Potentiometer for Reference
+DCM	Analogue Meter & Current Transformer
+DCO	Main Contactor Operation Switch
+DEP	Emergency Stop Push-Button
+DLD	Pilot Light (DO1)
+DLF	Pilot Light (FLT)
+DLR	Pilot Light (RUN)
+DLV	Pilot Light (Control Voltage ON)
+DRO	Local / Remote Operation Switch
+DRP	Reset Push-Button
+DVM	Analog Voltage Meter with Selection Switch

Terminals (T-Group)

GEPC TYPE CODE	OPTION
+TIO	External Terminals (35)
+TID	External Terminals (70)
+TUP	Terminals for 230 VAC Control Voltage

General (G-Group)

GEPC TYPE CODE	OPTION
+G40	400 mm Empty Cabinet
+G60	600 mm Empty Cabinet
+G80	800 mm Empty Cabinet
+GPL	100mm Cabinet Base
+GPH	200mm Cabinet Base G40/G60/G80

General (M-Group)

GEPC TYPE CODE	OPTION
+MDC	Terminals in Cabinet for DC / Brake Chopper

Protection devices (P-Group)

GEPC TYPE CODE	OPTION
+PES	Emergency Stop (cat 0)
+PED	Emergency Stop (cat 1)
+PTR	External Thermistor Relay
+PAP	Arc Protection
+PIF	Insulation Fault Sensor

Basic I/O cards (A)

A1	6DI, 1DO, 2AI(mA/V), 1AO(mA/V), +10Vref, +24V/EXT+24V
A2	2RO (NO/NC)
A3	1RO (NO/NC), 1RO(NC), 1 Thermistor
A4	3DI (Encoder RS422), Out +5V/+15V
A5	3DI (Encoder 10...24V), Out +15V/+24V
A7	Double encoder (Wide Range), 6D1, 2xDO
A8	As NXOPTA1, but analog I/O and +10Vref galv. de-coupled as a group
A9	As NXOPTA1, but 2,5mm² terminals
AE	Encoder board (Wide Range), 3DI (Encoder 10...24V), Out +15V/+24V,2DO (encoder divider and direction)
AF	Protection against unexpected restart + ATEX approved thermistor
AK	SIN/COS encoder interface
AL	6DI (42...240VAC), 2AI, 2AO, 1DO, Out 15 V / 24 V
AN	6DI galv. de-coupled as a group, 2AI and 2AO (Programmable 0 ... 20mA, 4 ... 20mA, 0 ... 10V, 2 ... 10V, -10 ... +10V)

I/O expander cards (B)

B1	6DI/DO (programmable, DI or DO)
B2	1RO(NO/NC), 1RO(NO), Thermistor
B4	1AI (mA, isolated), 2AO (mA, isolated), +24V/EXT+24V
B5	3RO(NO)
B8	3Pt100, +24V/EXT+24V
B9	1RO(NO), 5 pcs of 41...240VAC input
BB	ENDAT encoder card, 2xDO (RS422)
BC	RESOLVER, 3x DO (Wide Range)
BE	SSI and Endat Encoders
BH	3 x Temp sensor inputs (PT100, PT1000, KTY84-130, KTY84-150, KTY84-131, NI1000)

Communication cards (D)

D1	System Bus adapter (2xfiber optic cable)
D2	System Bus (1xfiber optic cable) & CAN-bus (galv. decoupled)
D3	RS232 adapter card (not galvanically decoupled)
D6	CAN-Bus (galv. decoupled)
D7	Line voltage measurement board

Fieldbus cards (C Legacy)

C2	Modbus RTU / N2
C3	Profibus DP
C4	LonWorks
C5	Profibus DP (D9 type connector)
C6	CANopen (slave)
C7	DeviceNet
C8	Modbus RTU / N2 (D9 type connector)
CI	Modbus TCP/IP
CJ	BACnet MS/TP
CP	ProfiNet I/O
CQ	Ethernet/IP

Fieldbus cards (E)

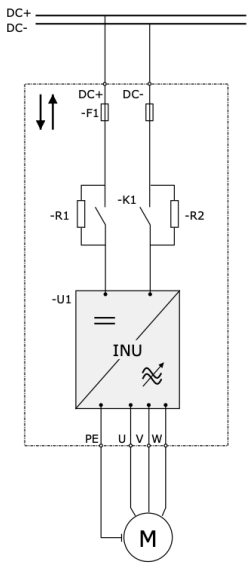
E2	Modbus RTU / N2
E3	Profibus DPV1
E5	Profibus DPV1 (D9)
E6	CANopen
E7	DeviceNet
E8	Modbus RTU / N2 (D9 type connector)
E9	2-Port Ethernet option (Modbus TCP/UDP, PROFINET, EtherNet/IP, RSTP, MRP)
EA	Advanced dual-port Ethernet option
EC	EtherCAT field bus

DI = digital Input
DO = digital Output
AI = analog Input
AO = analog Output
RO = Relay Output
NO/NC = Normally open contact / Normally closed contact
Pt100 = Temperature sensor

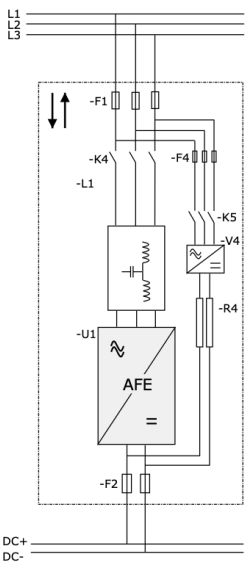
GENERAL DATA

Supply connection	Input voltage U_{in} (AC) Front-end modules	380-500 VAC / 525-690 VAC -10%...+10% (according to EN60204-1)
	Input voltage U_{in} (DC), Inverter and brake chopper modules	465...800 VDC / 640...1100 VDC. The voltage ripple of the inverter supply voltage, formed in rectification of the electric network's alternating voltage in basic frequency, must be less than 50 V peak-to-peak
	Output voltage U_{out} (AC) Inverter	3~ 0...U_{in} / 1.4
	Output voltage U_{out} (DC) Active front-end module	1.10 × 1.35 x U_{in} (Factory default)
	Output voltage U_{out} (DC) non-regenerative front-end module	1.35 x U_{in}
Control characteristics	Control performance	Open loop vector control (5-150% of base speed): speed control 0.5%, dynamic 0.3%sec, torque lin. <2%, torque rise time ~5 ms / Closed loop vector control (entire speed range): speed control 0.01%, dynamic 0.2% sec, torque lin. <2%, torque rise time ~2 ms
	Switching frequency	380-500V: 1 ... 16 kHz; Factory default 10 kHz; From NX_0072: 1 ... 6 kHz; Factory default 3.6 kHz 525-690V: 1 ... 6 kHz; Factory default 1.5 kHz
	Field weakening point	8 ... 320 Hz
	Acceleration time	0 ... 3,000 sec
	Deceleration time	0 ... 3,000 sec
	Braking	DC brake: 30% of TN (without brake resistor), flux braking
Ambient conditions	Ambient operating temperature	–10 °C (no frost) ... +40 °C: I_H; –10 °C (no frost) ... +40 °C: I_L; 1.5% derating for each 1 °C above 40 °C; Max. ambient temperature +50 °C
	Storage temperature	–40 °C ... +70 °C
	Relative humidity	0 to 95% RH, non-condensing, non-corrosive, no dripping water
	Air quality: chemical vapours/mechanical particles	IEC 721-3-3, unit in operation, class 3C2; IEC 721-3-3, unit in operation, class 3S2
	Altitude	100% load capacity (no derating) up to 1000m; 1.5% derating for each 100m above 1,000m Max. altitudes: 380-500V : 3,000m; 525-690V: 2,000m
	Vibration EN 50178/EN 60068-2-6	FR4-FR8: Displacement amplitude 1mm (peak) at 5...15.8Hz; Max. acceleration 1G at 15.8 ... 150Hz FI9-FI13: Displacement amplitude 0.25mm (peak) at 5 ... 31Hz; Max. acceleration 1G at 31 ... 150Hz
	Shock EN 50178, EN 60068-2-27	UPS Drop Test (for applicable UPS weights); Storage and shipping: max 15G, 11ms (in package)
	Cooling capacity required	Approximately 2%
	Cooling air required	FR4: 70 m3/h, FR6: 425 m3/h, FR7: 425 m3/h, FR8: 650 m3/h, FI9: 1,150 m3/h, FI10: 1,400 m3/h, FI12: 2,800 m3/h, FI13: 4,200 m3/h
	Unit enclosure class	FR8, FI9-14 (IP00); FR4-7 (IP21)
EMC (at default settings)	Immunity	Fulfils all EMC immunity requirements, level T
Safety		CE, UL, CUL, EN 61800-5-1 (2003), see unit nameplate for more detailed approvals
Functional safety *	STO	EN/IEC 61800-5-2 safe torque off (STO) SIL2, EN ISO 13849-1 PL"d" cat. 3, EN 62061: SILCL2, IEC 61508: SIL2
	SS1	EN /IEC 61800-5-2 safe stop 1 (SS1) SIL2, EN ISO 13849-1 PL"d" cat. 3, EN /IEC62061: SILCL2, IEC 61508: SIL2
	ATEX thermistor input	94/9/EC, CE 0537 Ex 11 (2) GD
	Advance safety option	STO (+SBC), SS1, SS2, SOS, SLS, SMS, SSM, SSR
Control connections	Analogue input voltage	0 ... +10V, Ri = 200 kΩ, (–10V ... +10V joystick control) Resolution 0.1%, accuracy ±1%
	Analogue input current	0(4)...20mA, Ri = 250 Ω differential, resolution 0.1%, accuracy ±1%
	Digital inputs	6, positive or negative logic; 18...30VDC
	Auxiliary voltage	+24V, ±15%, max. 250 mA
	Output reference voltage	+10V, +3%, max. load 10 mA
	Analogue output	0 (4)...20mA; RL max. 500 Ω, resolution 10-bit, accuracy ±2%
	Digital output	Open collector output, 50mA / 48V
	Relay outputs	2 programmable change-over (NO/NC) relay outputs (OPT-A3: NO/NC+NO) Switching capacity: 24VDC/8A, 250 AC/8A, 125VDC/0.4A, Min. switching load: 5V/10mA
	Thermistor input (OPT-A3)	Galvanically isolated, Rtrip = 4.7kΩ
Protections	Overvoltage protection	380-500V: 911VDC; NX_6: 1,200VDC
	Undervoltage protection	525-690V: 333VDC; NX_6: 460VDC
	Earth fault protection	Yes
	Motor phase supervision	Trips if any of the output phases is missing
	Overcurrent protection	Yes
	Unit overtemperature protection	Yes
	Motor overload protection	Yes
	Motor stall protection	Yes
	Motor underload protection	Yes
	Short-circuit protection of +24 V and +10 V reference voltages	Yes

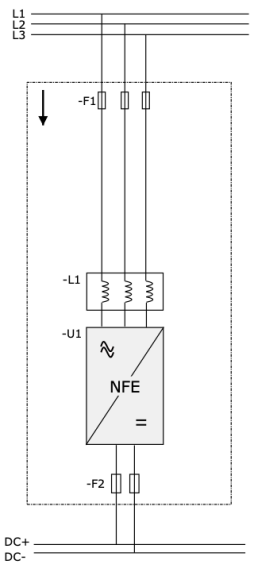
Common DC Bus drive modules



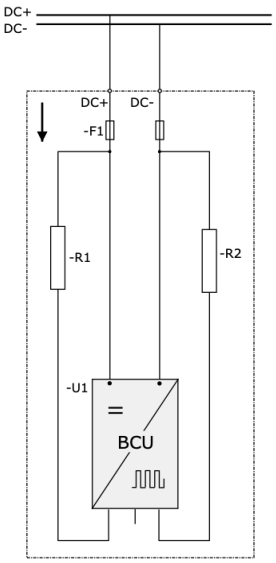
LV7000-5 INU*



LV7000-6 AFE



LV7000-8 NFE



LV7000-9 BCU

Variants & options

S=Standard / **O**=Optional

	AFE	NFE	INU			BCU		
	LV7000-5	LV7000-6	LV7000-8			LV7000-9		
	FI9-FI13	FI9	FR4, 6, 7	FR8	FI9-FI14	FR4,6,7	FR8	FI9-FI13
IP00	S	S		S	S		S	S
IP21			S			S		
IP54	O	O	O	O	O	O	O	O
Standard board	S		S	S	S	S	S	S
Varnished board		S						
Alphanumeric keypad	S		S	S	S	S	S	S
Line reactor, external (required)		O						
LCL filter, external (required)	O							
No integrated charging	S				S			S
Integrated charging (DC side)		S	S	S		S	S	
Diode/thyristor rectifier		S						
IGBT	S		S	S	S	S	S	S

* Charging curcuit is integrated in FR4 – FR8

LV7000-5 — 380–500V — Common DC Bus — INU

GEPC TYPE CODE	Load ability					Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)		I_{MAX} [A]			
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	I_{2s} [A]			
LV7000-5 0004 5-A2T0CSS-A1A2000000	4.3	4.7	3.3	5	6.2	FR4	128 × 292 × 190	5
LV7000-5 0009 5-A2T0CSS-A1A2000000	9	9.9	7.6	11.4	14		128 × 292 × 190	5
LV7000-5 0012 5-A2T0CSS-A1A2000000	12	13.2	9	13.5	18		128 × 292 × 190	5
LV7000-5 0016 5-A2T0CSS-A1A2000000	16	17.6	12	18	24	FR6	195 × 519 × 237	16
LV7000-5 0022 5-A2T0CSS-A1A2000000	23	25.3	16	24	32		195 × 519 × 237	16
LV7000-5 0031 5-A2T0CSS-A1A2000000	31	34	23	35	46		195 × 519 × 237	16
LV7000-5 0038 5-A2T0CSS-A1A2000000	38	42	31	47	62		195 × 519 × 237	16
LV7000-5 0045 5-A2T0CSS-A1A2000000	46	51	38	57	76		195 × 519 × 237	16
LV7000-5 0072 5-A2T0CSS-A1A2000000	72	79	61	92	122	FR7	237 × 519 × 257	29
LV7000-5 0087 5-A2T0CSS-A1A2000000	87	96	72	108	144		237 × 519 × 257	29
LV7000-5 0105 5-A2T0CSS-A1A2000000	105	116	87	131	174		237 × 519 × 257	29
LV7000-5 0140 5-A0T0CSS-A1A2000000	140	154	105	158	210	FR8	289 × 758 × 344	48
LV7000-5 0168 5-A0T0ISF-A1A2000000	168	187	140	210	280	FI9	239 × 1030 × 372	67
LV7000-5 0205 5-A0T0ISF-A1A2000000	205	226	170	255	336		239 × 1030 × 372	67
LV7000-5 0261 5-A0T0ISF-A1A2000000	261	287	205	308	349		239 × 1030 × 372	67
LV7000-5 0300 5-A0T0ISF-A1A2000000	300	330	245	368	444		239 × 1030 × 372	67
LV7000-5 0385 5-A0T0ISF-A1A2000000	385	424	300	450	540	FI10	239 × 1030 × 552	100
LV7000-5 0460 5-A0T0ISF-A1A2000000	460	506	385	578	693		239 × 1030 × 552	100
LV7000-5 0520 5-A0T0ISF-A1A2000000	520	572	460	690	828		239 × 1030 × 552	100
LV7000-5 0590 5-A0T0ISF-A1A2000000	590	649	520	780	936	FI12	(2*239) x 1030 × 552	200
LV7000-5 0650 5-A0T0ISF-A1A2000000	650	715	590	885	1062		(2*239) x 1030 × 552	200
LV7000-5 0730 5-A0T0ISF-A1A2000000	730	803	650	975	1170		(2*239) x 1030 × 552	200
LV7000-5 0820 5-A0T0ISF-A1A2000000	820	902	730	1095	1314		(2*239) x 1030 × 552	200
LV7000-5 0920 5-A0T0ISF-A1A2000000	920	1012	820	1230	1476		(2*239) x 1030 × 552	200
LV7000-5 1030 5-A0T0ISF-A1A2000000	1030	1133	920	1380	1656		(2*239) x 1030 × 552	200
LV7000-5 1150 5-A0T0ISF-A1A2000000	1150	1265	1150	1545	1854	FI13	708 × 1032 × 553	306
LV7000-5 1300 5-A0T0ISF-A1A2000000	1300	1430	1150	1725	2070		708 × 1032 × 553	306
LV7000-5 1450 5-A0T0ISF-A1A2000000	1450	1595	1300	1950	2340		708 × 1032 × 553	306
LV7000-5 1770 5-A0T0ISF-A1A2000000	1770	1947	1600	2400	2880	FI14	(2*708) x 1032 × 553	612
LV7000-5 2150 5-A0T0ISF-A1A2000000	2150	2365	1940	2910	3492		(2*708) x 1032 × 553	612
LV7000-5 2700 5-A0T0ISF-A1A2000000	2700	2970	2300	3278	3933		(2*708) x 1032 × 553	612

I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature). I(overload) = maximum 1min/10min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-5 — 525–690V — Common DC Bus — INU

GEPC TYPE CODE	Load ability					Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	Low (+40°C)		High (+40°C)		I_{MAX} [A]			
	I_L[A]	I_L(overload)	I_H[A]	I_H(overload)	I_{2s} [A]			
LV7000-5 0004 6-A2T0CSS-A1A2000000	4.5	5	3.2	5	6.4	FR6	195 × 519 × 237	16
LV7000-5 0005 6-A2T0CSS-A1A2000000	5.5	6	4.5	7	9		195 × 519 × 237	16
LV7000-5 0007 6-A2T0CSS-A1A2000000	7.5	8	5.5	8	11		195 × 519 × 237	16
LV7000-5 0010 6-A2T0CSS-A1A2000000	10	11	7.5	11	15		195 × 519 × 237	16
LV7000-5 0013 6-A2T0CSS-A1A2000000	13.5	15	10	15	20		195 × 519 × 237	16
LV7000-5 0018 6-A2T0CSS-A1A2000000	18	20	13.5	20	27		195 × 519 × 237	16
LV7000-5 0022 6-A2T0CSS-A1A2000000	22	24	18	27	36		195 × 519 × 237	16
LV7000-5 0027 6-A2T0CSS-A1A2000000	27	30	22	33	44		195 × 519 × 237	16
LV7000-5 0034 6-A2T0CSS-A1A2000000	34	37	27	41	54		195 × 519 × 237	16
LV7000-5 0041 6-A2T0CSS-A1A2000000	41	45	34	51	68	FR7	237 × 519 × 257	29
LV7000-5 0052 6-A2T0CSS-A1A2000000	52	57	41	62	82		237 × 519 × 257	29
LV7000-5 0062 6-A0T0ISF-A1A2000000	62	68	52	78	104	FR8	289 × 758 × 344	48
LV7000-5 0080 6-A0T0ISF-A1A2000000	80	88	62	93	124		289 × 758 × 344	48
LV7000-5 0100 6-A0T0ISF-A1A2000000	100	110	80	120	160		289 × 758 × 344	48
LV7000-5 0125 6-A0T0ISF-A1A2000000	125	138	100	150	200	FI9	239 × 1030 × 372	67
LV7000-5 0144 6-A0T0ISF-A1A2000000	144	158	125	188	213		239 × 1030 × 372	67
LV7000-5 0170 6-A0T0ISF-A1A2000000	170	187	144	216	245		239 × 1030 × 372	67
LV7000-5 0208 6-A0T0ISF-A1A2000000	208	229	170	255	289		239 × 1030 × 372	67
LV7000-5 0261 6-A0T0ISF-A1A2000000	261	287	208	312	375	FI10	239 × 1030 × 552	100
LV7000-5 0325 6-A0T0ISF-A1A2000000	325	358	261	392	470		239 × 1030 × 552	100
LV7000-5 0385 6-A0T0ISF-A1A2000000	385	424	325	488	585		239 × 1030 × 552	100
LV7000-5 0416 6-A0T0ISF-A1A2000000	416	458	325	488	585		239 × 1030 × 552	100
LV7000-5 0460 6-A0T0ISF-A1A2000000	460	506	385	578	693	FI12	(2*239) x 1030 × 552	200
LV7000-5 0502 6-A0T0ISF-A1A2000000	502	552	460	690	828		(2*239) x 1030 × 552	200
LV7000-5 0590 6-A0T0ISF-A1A2000000	590	649	502	753	904		(2*239) x 1030 × 552	200
LV7000-5 0650 6-A0T0ISF-A1A2000000	650	715	590	885	1062		(2*239) x 1030 × 552	200
LV7000-5 0750 6-A0T0ISF-A1A2000000	750	825	650	975	1170		(2*239) x 1030 × 552	200
LV7000-5 0820 6-A0T0ISF-A1A2000000	820	902	650	975	1170		(2*239) x 1030 × 552	200
LV7000-5 0920 6-A0T0ISF-A1A2000000	920	1012	820	1230	1476	FI13	708 × 1032 × 553	306
LV7000-5 1030 6-A0T0ISF-A1A2000000	1030	1133	920	1380	1656		708 × 1032 × 553	306
LV7000-5 1180 6-A0T0ISF-A1A2000000	1180	1298	1030	1464	1755		708 × 1032 × 553	306
LV7000-5 1500 6-A0T0ISF-A1A2000000	1500	1650	1300	1950	2340	FI14	(2*708) x 1032 × 553	612
LV7000-5 1900 6-A0T0ISF-A1A2000000	1900	2090	1500	2250	2700		(2*708) x 1032 × 553	612
LV7000-5 2250 6-A0T0ISF-A1A2000000	2250	2475	1900	2782	3335		(2*708) x 1032 × 553	612

I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature). I(overload) = maximum 1min/10min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-6 — 380–500V — Common DC Bus — AFE

GEPC TYPE CODE	AC current				DC power *1			Dimensions W x H x D [mm]	Weight [kg]
	@ Low overload / 40°C		@ High overload / 40°C		Pn [kW]		Frame		
	I_L-cont [A]	I 1min [A]	I_H-cont [A]	I 1min [A]	400Vac	500Vac	Size		
LV700-6 0261 5-A0T02SF-A1A2000000	261	287	205	308	176	220	FI9	239 × 1030 × 372	67
LV700-6 0460 5-A0T02SF-A1A2000000	460	506	385	578	310	388	FI10	239 × 1030 × 552	100
LV700-6 1300 5-A0T02SF-A1A2000000	875	962	732	1100	587	735	2 x FI10	2*(239 × 1030 × 552)	2*100
LV700-6 1300 5-A0T02SF-A1A2000000	1300	1430	1150	1725	876	1092	FI13	708 × 1032 × 553	306
LV700-6 1300 5-A0T02SF-A1A2000000 *	2470	2717	2185	3278	1660	2075	2 x FI13	2*(708 × 1032 × 553)	2*306
LV700-6 1300 5-A0T02SF-A1A2000000 **	3705	4076	3278	4916	2490	3115	3 x FI13	3*(708 × 1032 × 553)	3*306

LV7000-6 — 525–690V — Common DC Bus — AFE

GEPC TYPE CODE	AC current				DC power *1			Dimensions W x H x D [mm]	Weight [kg]
	@ Low overload / 40°C		@ High overload / 40°C		Pn [kW]		Frame		
	I_L-cont [A]	I 1min [A]	I_H-cont [A]	I 1min [A]	690Vac	-	Size		
LV7000-6 0170 6-A0T02SF-A1A2000000	170	187	144	216	198	-	FI9	239 × 1030 × 372	67
LV7000-6 0325 6-A0T02SF-A1A2000000	325	358	261	392	378	-	FI10	239 × 1030 × 552	100
LV7000-6 0325 6-A0T02SF-A1A2000000 *	634	698	509	764	716	-	2 x FI10	2*(239 × 1030 × 552)	2*100
LV7000-6 1030 6-A0T02SF-A1A2000000	1030	1133	920	1380	1195	-	FI13	708 × 1032 × 553	306
LV7000-6 1030 6-A0T02SF-A1A2000000 *	2008	2209	1794	2691	2270	-	2 x FI13	2*(708 × 1032 × 553)	2*306
LV7000-6 1030 6-A0T02SF-A1A2000000 **	2987	3286	2668	4002	3405	-	3 x FI13	3*(708 × 1032 × 553)	3*306
LV7000-6 1030 6-A0T02SF-A1A2000000 ***	3965	4362	3542	5313	4538	-	4 x FI13	4*(708 × 1032 × 553)	4*306

LV7000-6 — Options for Common DC Bus — AFE

GEPC TYPE CODE	Voltage Range [V]	Description
LCL 0261-1300 5 A0L010T	380-500	LCL Filter 380-500V
LCL 0144-1030 6 A0L010T	525-690	LCL Filter 525-690V
POW-CHARGING-AFE-FFE-FI9-FI13	All	Charging kit for AFE Fi9-FI13

I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
* Qty Units = 2x; ** Qty Units = 3x; *** Qty Units = 4x; I(overload) = maximum 1min/10min overload current (high overload). *No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team.* **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-8 — 380–500V — EMC-level T — Common DC Bus — NFE

GEPC TYPE CODE	AC current				DC power *1			Dimensions W x H x D [mm]	Weight [kg]
	@ Low overload / 40°C		@ High overload / 40°C		Pn [kW]		Frame		
	I_L-cont [A]	I1min [A]	I_H-cont [A]	I1min [A]	400Vac	500Vac	Size		
1 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	650	715	507	793	410	513	1 x FI9	9,4 × 40,6 × 14,6	67
2 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	1235	1359	963	1507	780	975	2 x FI9	2*(9,4 × 40,6 × 14,6)	2*134
3 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	1853	2038	1445	2260	1170	1462	3 x FI9	2*(9,4 × 40,6 × 14,6)	3*134
4 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	2470	1217	1927	3013	1560	1950	4 x FI9	2*(9,4 × 40,6 × 14,6)	4*134
5 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	3088	3396	2408	3767	1950	2437	5 x FI9	2*(9,4 × 40,6 × 14,6)	5*134
6 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	3705	4076	2890	4520	2340	2924	6 x FI9	2*(9,4 × 40,6 × 14,6)	6*134

LV7000-8 — 525–690V — Common DC Bus — NFE

GEPC TYPE CODE	AC current				DC power *1			Dimensions W x H x D [mm]	Weight [kg]
	@ Low overload / 40°C		@ High overload / 40°C		Pn [kW]		Frame		
	I_L-cont [A]	I1min [A]	I_H-cont [A]	I1min [A]	690Vac	-	Size		
1 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	650	715	507	793	708	-	1 x FI9	9,4 × 40,6 × 14,6	67
2 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	1235	1359	963	1507	1345	-	2 x FI9	2*(9,4 × 40,6 × 14,6)	2*134
3 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	1853	2038	1445	2260	2018	-	3 x FI9	2*(9,4 × 40,6 × 14,6)	3*134
4 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	2470	1217	1927	3013	2690	-	4 x FI9	2*(9,4 × 40,6 × 14,6)	4*134
5 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	3088	3396	2408	3767	3363	-	5 x FI9	2*(9,4 × 40,6 × 14,6)	5*134
6 x NXN 0650 6-X0T0SSV-A1A2000000 +BM2P	3705	4076	2890	4520	4036	-	6 x FI9	2*(9,4 × 40,6 × 14,6)	6*134

LV7000-8 — Options for Common DC Bus — NFE

GEPC TYPE CODE	Description
FLU-CHK 0650-6	Line Choke

NFE Modules includes the chokes
I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team. **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-9 — 380–500V — Common DC Bus — BCU

GEPC TYPE CODE	Braking current	Min brakin resistor (per resistor) [Ω]		Pn [kW]		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	I_L-cont [A]	540V_{DC}	675V_{DC}	540V_{DC}	675V_{DC}			
LV7000-9 0004 5-A2T08SS-A1A2000000	8	159.30	199.13	5	6	FR4	128 × 292 × 190	5
LV7000-9 0009 5-A2T08SS-A1A2000000	18	70.80	88.50	11	14		128 × 292 × 190	5
LV7000-9 0012 5-A2T08SS-A1A2000000	24	53.10	66.38	15	19		128 × 292 × 190	5
LV7000-9 0016 5-A2T08SS-A1A2000000	32	39.83	49.78	20	25	FR6	195 × 519 × 237	16
LV7000-9 0022 5-A2T08SS-A1A2000000	44	28.96	36.20	28	35		195 × 519 × 237	16
LV7000-9 0031 5-A2T08SS-A1A2000000	62	20.55	25.69	40	49		195 × 519 × 237	16
LV7000-9 0038 5-A2T08SS-A1A2000000	76	16.77	20.96	48	61		195 × 519 × 237	16
LV7000-9 0045 5-A2T08SS-A1A2000000	90	14.16	17.70	57	72		195 × 519 × 237	16
LV7000-9 0072 5-A2T08SS-A1A2000000	148	8.61	10.76	94	118	FR7	237 × 591 × 257	29
LV7000-9 0087 5-A2T08SS-A1A2000000	174	7.32	9.16	111	139		237 × 591 × 257	29
LV7000-9 0105 5-A2T08SS-A1A2000000	210	6.07	7.59	134	167		237 × 591 × 257	29
LV7000-9 0140 5-A0T08SS-A1A2000000	280	4.55	5.69	178	223	FR8	289 × 591 × 257	48
LV7000-9 0168 5-A0T08SF-A1A2000000	336	3.79	4.74	214	268	FI9	239 × 1030 × 372	67
LV7000-9 0205 5-A0T08SF-A1A2000000	410	3.11	3.89	261	327		239 × 1030 × 372	67
LV7000-9 0261 5-A0T08SF-A1A2000000	522	2.44	3.05	333	416		239 × 1030 × 372	67
LV7000-9 0300 5-A0T08SF-A1A2000000	600	2,12	2.66	382	478		239 × 1030 × 372	67
LV7000-9 0385 5-A0T08SF-A1A2000000	770	1.66	2.07	491	613	FI10	239 × 1032 × 552	100
LV7000-9 0460 5-A0T08SF-A1A2000000	920	1.39	1.73	586	733		239 × 1032 × 552	100
LV7000-9 0520 5-A0T08SF-A1A2000000	1040	1.23	1.53	663	828		239 × 1032 × 552	100
LV7000-9 1150 5-A0T08SF-A1A2000000	2300	0.55	0.69	1466	1832	FI13	708 × 1032 × 553	306
LV7000-9 1300 5-A0T08SF-A1A2000000	2600	0.49	0.61	1657	2071		708 × 1032 × 553	306
LV7000-9 1450 5-A0T08SF-A1A2000000	2900	0.44	0.55	1848	2310		708 × 1032 × 553	306

LV7000-9 — 525–69V — Common DC Bus — BCU

GEPC TYPE CODE	Braking Current	Min brakin resistor (per resistor) [Ω]		Pn [kW]		Frame Size	Dimensions W x H x D [mm]	Weight [kg]
	I_L-cont [A]	540V_{DC}	675V_{DC}	540V_{DC}	675V_{DC}			
LV7000-9 0004 6-A2T08SS-A1A2000000	8	238.36	274.65	7	9	FR6	195 × 519 × 237	16
LV7000-9 0005 6-A2T08SS-A1A2000000	10	190.69	219.72	8	11		195 × 519 × 237	16
LV7000-9 0007 6-A2T08SS-A1A2000000	14	136.21	156.94	12	15		195 × 519 × 237	16
LV7000-9 0010 6-A2T08SS-A1A2000000	20	95.34	109.86	17	22		195 × 519 × 237	16
LV7000-9 0013 6-A2T08SS-A1A2000000	26	73.34	84.51	22	29		195 × 519 × 237	16
LV7000-9 0018 6-A2T08SS-A1A2000000	36	52.97	61.03	30	40		195 × 519 × 237	16
LV7000-9 0022 6-A2T08SS-A1A2000000	44	43.34	49.94	37	48		195 × 519 × 237	16
LV7000-9 0027 6-A2T08SS-A1A2000000	54	35.31	40.69	45	59		195 × 519 × 237	16
LV7000-9 0034 6-A2T08SS-A1A2000000	68	28.04	32.31	57	75		195 × 519 × 237	16
LV7000-9 0041 6-A2T08SS-A1A2000000	82	23.25	26.79	69	90	FR7	237 × 591 × 257	29
LV7000-9 0052 6-A2T08SS-A1A2000000	104	18.34	21.13	87	114		237 × 591 × 257	29
LV7000-9 0062 6-A0T08SF-A1A2000000	124	15.38	17.72	104	136	FR8	289 × 591 × 257	48
LV7000-9 0080 6-A0T08SF-A1A2000000	160	11.92	13.73	134	176		289 × 591 × 257	67
LV7000-9 0100 6-A0T08SF-A1A2000000	200	9.53	10.99	167	220		289 × 591 × 257	67
LV7000-9 0125 6-A0T08SF-A1A2000000	250	7.63	8.79	209	275	FI9	239 × 1030 × 372	67
LV7000-9 0144 6-A0T08SF-A1A2000000	288	6.62	7.63	241	316		239 × 1030 × 372	67
LV7000-9 0170 6-A0T08SF-A1A2000000	340	5.61	6.46	284	374		239 × 1030 × 372	100
LV7000-9 0208 6-A0T08SF-A1A2000000	416	4.58	5.28	348	457		239 × 1030 × 372	100
LV7000-9 0261 6-A0T08SF-A1A2000000	522	3.65	4.21	436	573	FI10	239 × 1032 × 552	100
LV7000-9 0325 6-A0T08SF-A1A2000000	650	2.93	3.38	543	714		239 × 1032 × 552	306
LV7000-9 0385 6-A0T08SF-A1A2000000	770	2.48	2.85	643	846		239 × 1032 × 552	306
LV7000-9 0416 6-A0T08SF-A1A2000000	832	2.29	2.64	695	914		239 × 1032 × 552	306
LV7000-9 0920 6-A0T08SF-A1A2000000	1840	1.04	1.19	1537	2021	FI13	708 × 1032 × 553	306
LV7000-9 1030 6-A0T08SF-A1A2000000	2060	0.93	1.07	1721	2263		708 × 1032 × 553	306
LV7000-9 1180 6-A0T08SF-A1A2000000	2360	0.81	0.93	1972	2593		708 × 1032 × 553	306

I_H = nominal current for 150% overload requirement (at max. 40°C ambient temperature); I_L = nominal current for 110% overload requirement (at max. 40°C ambient temperature).
No marine certificate included. For specific marine certificate adders, please consult the Power Conversion & Storage team. **A1A2000000 on product type code means:** Standard options boards are included in the price. Option board must be added separately according the OPT boards listed in the LV-7000 options.

LV7000-9 — I/O Card Options

Type	Description	Card slot					Common DC Bus drive modules				I/O Signal																				
		A	B	C	D	E	INU	AFE	NFE	BCU	DI	DO	DI DO	AI (mA/V/±V)	AI (mA) isolated (mA) isolated	AO (mA/V)	AO (mA) isolated	RO (NO/NC)	RO (NO)	+10Vref	Thermistor	+24V/ EXT +24 V	pt100	KTY84	42-240 VAC input	DI/DO (RS422)	DI ~ 1Vp-p	Resolver	Out +5 V/+15 V/+24	Out +5 V/+12 V/+15 V
Basis I/O Cards (A)																															
A1	DI/DO/AI/AO/ 10V/ 24V	■					■	■	■	■	6	1		2		1				1		2									
A2	Relay output (NO/NC)		■				■	■	■	■								2													
A3	Relay output + Thermistor input		■				■	■	■	■								1	1		1										
A4	Encoder TTL type			■							2																	3/0		1	
A5	Encoder HTL type			■							2															3/0					1
A7	Double encoder HTL type			■																						6/2					1
A8	"OPTA1 + Analogue signals galvanically isolation	■					■	■	■	■	6	1		2		1				1		2									
A9	OPTA1 + 2,5mm2 connectors	■					■	■	■	■	6	1		2		1				1		2									
AE	Encoder HTL type (Divider + direction)			■								2														3/0					1
AF	STO, ATEX thermistor		■								2							1	1		1										
AK	Sin/Cos encoder interface			■																									3		1
AL	6DI (42...240VAC), 2AI, 2AO, 1DO, Out 15 V / 24 V			■								1	6		2	2														1	
AN	DI/AI/AO	■					■	■	■	■	6			2		2															
I/O expander cards (B)																															
B1	Programmable I/O		■	■	■	■	■	■	■	■			6									1									
B2	Relay output + Thermistor input		■	■	■	■	■	■	■	■								1	1		1										
B4	"Analog input/output Analogue signals		■	■	■	■	■	■	■	■					1		2					1									
B5	Relay output		■	■	■	■	■	■	■	■									3												
B8	"Temperature Measurement option PT100"		■	■	■	■	■	■	■	■												1	3								
B9	DI + Relay output		■	■			■	■	■	■	2								1						5						
BB	EnDat + Sin/Cos 1 Vp-p			■			■				2																	0/2	2		1
BC	Resolver, 3xDO (Wide range)			■			■																			3/3				1	
BE	EnDat/SSI/BiSS C		■	■	■	■	■																								
BH	"Temperature Measurement option pt100"		■	■	■	■	■																3	3							
Fieldbus cards (E)																															
E2	RS485 with screw terminal				■	■	■	■	■	■	RS485 with screw terminal																				
E3	PROFIBUS DP with screw terminal				■	■	■	■	■	■	PROFIBUS DP with screw terminal																				
E5	PROFIBUS DP with D9-connector				■	■	■	■	■	■	PROFIBUS DP with D9-connector																				
E6	CANopen				■	■	■	■	■	■	CANopen																				
E7	DeviceNet				■	■	■	■	■	■																					
E8	RS485 with D9-connector				■	■	■	■	■	■	RS485 with D9-connector																				
E9	Dual-port Ethernet				■	■	■	■	■	■	Dual-port Ethernet																				
EA	Advanced Dual-port Ethernet				■	■	■	■	■	■	Advanced Dual-port Ethernet																				
EC	EtherCAT field bus				■	■	■	■	■	■	EtherCAT field bus																				
Fieldbus cards (C Legacy)																															
C2	RS485 with screw terminal				■	■	■	■	■	■	RS485 with screw terminal																				
C3	PROFIBUS DP with screw terminal				■	■	■	■	■	■	PROFIBUS DP with screw terminal																				
C4	LonWorks				■	■	■	■	■	■	LonWorks																				
C5	PROFIBUS DP with D9-connector					■	■	■	■	■	PROFIBUS DP with D9-connector																				
C6	CANopen				■	■	■	■	■	■	CANopen																				
C7	DeviceNet				■	■	■	■	■	■	DeviceNet																				
C8	RS485 with D9-connector				■	■	■	■	■	■	RS485 with D9-connector																				
CI	Modbus/TCP				■	■	■	■	■	■	Modbus TCP																				
CJ	BACnet MS/TP				■	■	■	■	■	■	BACnet MS/TP																				
CP	PROFINET IO				■	■	■	■	■	■	PROFINET IO																				
CQ	EtherNet/IP				■	■	■	■	■	■	EtherNet/IP																				
Communication cards (D)																															
D1	SystemBus adapt, 2xfibre-optic				■	■	■	■	■	■	System Bus adapter (2 x fiber optic pairs)																				
D2	SystemBus (1xfiber), isol. CAN				■	■	■	■	■	■	System Bus adapter (1 x fiber optic pair) & CAN-bus adapter (galvanically decoupled)																				
D3	RS232 adapter (no galv.isol.)				■	■	■	■	■	■	RS232 adapter card (galvanically decoupled), used mainly for application engineering to connect another keypad																				
D6	CAN-Bus (galv. decoupled)		■		■	■	■	■	■	■	CAN-bus adapter (galvanically decoupled)																				
D7	Line voltage measurement			■			■	■	■		Line voltage measurement																				