

ELECTROZEP



FREQUENCY INVERTER

E 2000

0,4 – 400 kW

- ▶ PROCESS-AUTOMATION ▶ MACHINE-TOOLS ▶ FAN AND PUMPS ▶ BUILDING-AUTOMATION
- ▶ PULP AND PAPER ▶ MATERIALHANDLING ▶ AUTOMOTIVE ▶ TEXTILE ▶ DYEING ▶ PRINTING ▶ PACKAGING
- ▶ ROBOTICS ▶ CENTRIFUGAL ▶ WOODPROCESSING ▶ FOOD AND BEVERAGE ▶ CEMICAL-INDUSTRY
- ▶ OIL AND GAS ▶ PUBLIC- COMMUNITY ▶ STEEL-MILL ▶ MINING ▶ RETROFIT

www.electrozep.ro

ELECTROZEP

E2000 – The Worldclass inverter

FREQUENCY INVERTER E 2000

E2000: The newest generation of inverters : general purpose, for wide range applications, from the simplest speed control to the most complex process automation system.

Modular concept, easy configurable, and a lot of different setup parameters make this inverter series suitable for the high volume OEM-market and single applications as well

Assembled on modern high speed lines, using high quality components from first class vendors. This is the guarantee for cost efficiency, reliability and absolute quality

Green production: through environmentally friendly operating processes, a must, for a product which final destination is protecting the environment by saving energy and resources

All products are compliant with international standards.CE,UL individual approvals, performed and certified by independent bodies, give the customer the trust in a world class product

Best trained drive's experts on site guarantee professional support and service for the customers

**Full power range available:
from 0,4 to 400 kW**



ELECTROZEP

E 2000 – Product-highlights:

FREQUENCY INVERTER E 2000

E2000, the result of years of worldwide experience in developing inverters for extreme environmental conditions.

Intelligent protection functions and conformal coating of all boards make this inverter rugged and reliable, even under extreme working conditions

High-tech motor control concept, based on advanced DSP technology

- Drive optimization by smart, build in AUTOTUNING-functions, precise sensorless vector control algorithm, closed loop vector control.
- High starting torque at low speed, high precision and torque performance, adjustable to all different kind of load characteristics
- Speed / torque control modes
- Kinds of torque compensation mode in VVVF control mode.
- Sensorless vector control for PMSM
- Closed loop vector control

Compact size and modular concept: The flexible base for quick and easy adaption to various high volume OEM applications

- **Flexible I/O handling:** All hardware I/O channels are programmable, and can be assigned to various functions
- Two 12BIT analogue input channels:** Independent, with possibility to concatenate each other via programmable mathematical functions
- Display:** configurable, to show operating parameters, program parameter values and fault codes
- **Serial communication link: RS485 (MODBUS)** for inverter control, I/O channel control, inverter parameter setting and saving, diagnosis and remote control via PC-software
- **Smart software functions:** Build in **PID** controller, multi pump control (Master/Slave), multiple parameter set, selectable Acc./Decel. ramp set's, **S**-ramp function, Read/Set of all I/O hardware channels via **MODBUS**, autocycling multifrequency control, intelligent overload and fault handling, including fault memory, fan and PWM-frequency controlled by temperature, programmable autoreset/autorestart options, catch on the fly function and I/O diagnosis, immunity to transient power failure, optimize DC braking mode, Fire mode, two pumps drive, inhibit of current oscillation at low frequency, quick and smooth rotation direction switchover, PID dormancy function. Smart current-limit or voltage-limit at starting status, stalling function to avoid overcurrent.
- Useful options available:** Remote panel, different brake resistors for all different kind of load conditions, fieldbus interface modules, **clone module (parameters copy box)** **four pluggable communication terminal.** EtherCAT and CANopen option.

International standards, approved and certified by independent bodies

- **CE- compliant EMC filter:** build in for second environment, additional filter components for first environments available as an option



ELECTROZEP

E 2000 – Technical product data

Line input	Rated input voltage	3-Phase 380 - 460V +/- 15% 1-Phase 230V +/- 15%
	Input frequency	44...67 Hz
	EMC Filter	Integrated for 2. environment - industrial area (optional for residential area)
Motor output	Output voltage	0.....V-input
	Output frequency	0.....650 Hz (1500HZ OPITION)
	Frequency resolution	0,01 Hz
	Overload capability	150% - 60 sec. / 10 min
Control Mode	Motor control algorithm	V/Hz -SpaceVector, SLV-SENSORLESS Vector control, Torque/Speed control mode VC -Closed loop vector control,Permanent Magnet Synchronous Motor PMSM SENSORLESS
	Chopper frequency	0.8...16 kHz (fix / random)
	V/Hz curve	Linear, exponential,and user-programmable curve
	Starting torque	150% rated torque at 0,5 Hz (in SLV Mode)
	Torque compensation	Automatic / Manual
	Motor data input	Manualfrom nameplate / AUTOTUNING
	Control range	1:100 in SLV mode, 1:1000in VC mode, 1:20 in PMSM SLV mode
	Speed precision	+/- 0,5% (SLV), +/- 0.02% (VC)
	Torque precision	+/- 5% (SLV)
	DC-Brake	User programmable
	Brake chopper	Chopper transistor integrated
Display	7 segment, 4 characters	Config-Parameters and -value, programmable to display various working parameters
I/O Channels, control functions	Inverter control	Via terminals / Keypad / Serial link (or combination of all)
	Digital inputs	6 (8) Dig. inputs (NPN-PNP selectable) pulstrain-input
	Speed ref. input	Potentiometer (on keypad unit, external), analogue signal (terminals), keypad, internal programmable value, pulsetrain, serial link
	Analogue channels	2 analogue channels - 12 BIT : 0...10V, 0...5V, -10V...0...10V, 0...(4)20 mA, all free scalable in gain and offset, and mathematically concatenable
	Analogue outputs	2 analogue outputs, programmable in gain and function (0...10V, 0(4)..20 mA)
	Digital outputs	2 digital outputs (free assignement to different functions)
	Relais output	1 dual NO, NC contact 5 A 230 V (programmable assignment)
	Data link	Serial link RS 485 (MODBUS)
	Special functions	12V / 50 mA auxiliary power supply on terminals, 10V potentiometer power supply, 5V/100 mA power supply on modbus connector Simple PTC / KLIXON motor protection
Electronic protections with fault history	Electrical	Overvoltage, undervoltage Overcurrent, overload, motor-overload, output short-circuit Input phaseloss, motor phaseloss, all protection OFF in Fire mode
	Thermal	Heatsink overtemperature, I²xt motorprotection
	Display	Remotable display / keypad units
Options	Brake chopper	Braking resistors for different load caracteristics
	PC-software	Configuration-, control- an diagnosis-tool, parameter saving and duplicating
	Protection class	IP20/IP21
Environment	Working temperature	-10.....+50 °C
	Humidity	0 to 95% RH, non-condensing, non-corrosive
	Altitude	1000 m, above 1% derating / 100m
	Vibration	Max. 0,5 g
Power range	0,4.....400 kW	
Standards	Electromagnetic compatibility	EN61800-3(2004)
	Safety	EN61800-5-1 (2003)

ELECTROZEP

E2000 – Products and Framesizes

Frequency inverter 230V (220...240V +/-15%) - EMC filter OPTION

Model	Rated current	Frame	Dimensions (WxHxD-mm)	Brake resistor min.value
E2000-0004 S2	0,4 kW - 2.5 A	E1	80x138x135	80 Ohm/200W
E2000-0007 S2	0.75 kW - 4.5 A	E1	80x138x135	
E2000-0015 S2	1.5 kW - 7 A	E2	106x180x150	
E2000-0022 S2	2.2 kW - 10 A	E2	106x180x150	

Frequency inverter 400V (380...460V +/-15%) - EMC filter OPTION

Model	Rated current	Frame	Dimensions (WxHxD-mm)	Brake resistor min.value
E2000-0007 T3	0,75 kW - 2 A	E2	106x180x150	145 Ohm/800W
E2000-0015 T3	1,5 kW - 4 A	E2		95 Ohm/150W
E2000-0022 T3	2,2 kW - 6,5 A	E2		95 Ohm/250W
E2000-0030 T3	3,0 kW - 7 A	E3	106x180x170	95 Ohm/300W
E2000-0040 T3	4,0 kW - 9 A	E4	138x235x152	95 Ohm/400W
E2000-0055 T3	5,5 kW - 12 A	E4		95 Ohm/550W
E2000-0075 T3	7,5 kW - 17 A	E5	156x265x170	95 Ohm/750W
E2000-0110 T3	11 kW - 23 A	E5		60 Ohm/1.1kW
E2000-0150 T3	15 kW - 32 A	E6	205x340x196	35 Ohm/1.5kW
E2000-0185 T3	18,5 kW - 38 A	E6		35 Ohm/2.0kW
E2000-0220 T3	22 kW - 44 A	E6		30 Ohm/2.2kW
E2000-0300 T3	30 kW - 60 A	C3	265x435x235	25 Ohm/3.0kW
E2000-0370 T3	37 kW - 75 A	C4	314x480x285	25 Ohm/4.0kW
E2000-0450 T3	45 kW - 90 A	C4		15 Ohm/4.5kW
E2000-0550 T3	55 kW - 110 A	C5	360x555x265	15 Ohm/5.5kW
E2000-0750 T3	75 kW - 150 A	C5		12 Ohm/7.5kW
E2000-0900 T3	90 kW - 180 A	C6	410x630x300	8 Ohm/9.0kW
E2000-1100 T3	110 kW - 220 A	C6		
E2000-1320 T3	132 kW - 265 A	C7	516x760x326	
E2000-1600 T3	160 kW - 320 A	C8	560x1000x326	
E2000-1800 T3	180 kW - 360 A	C8		
E2000-2000 T3	200 kW - 400 A	C9	400x1300x385	
E2000-2200 T3	220 kW - 440A	CA	535x1330x380	
E2000-2500 T3	250 kW - 480 A	CA		
E2000-2800 T3	280 kW - 530 A	CB0	600x1450x380	
E2000-3150T3	315 kW - 580 A	CB0		
E2000-3550 T3	355 kW - 640 A	CB0		
E2000-4000 T3	400 kW - 690 A	CB	600x1580x380	