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# EM30

FREQUENCY INVERTER

0.4 kW - 7,5 kW







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## HIGHLIGHTS

High-tech motor control concept, based on advanced DSP-technology V/Hz, SENSORLESS VECTOR, PMM synchronous motor mode - SPEED/TORQUE control Intelligent AUTOTUNING functions for easy set-up

Rugged construction, all metal enclosure, thermally decoupled from motor, IP67/NEMA4, shock proof (4G)

Flexible configurable man/machine interface - fieldbus capability

Numerous functions, to make it suitable for all kind of industrial and residential applications, and for retrofit as well

Optional C1 class EMC filter build in

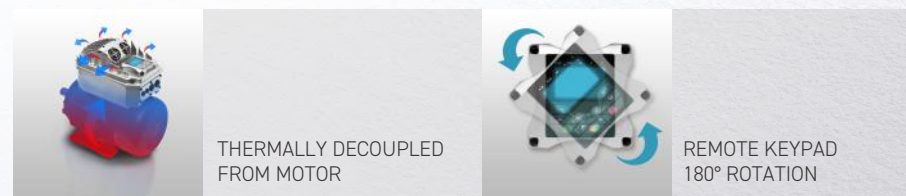
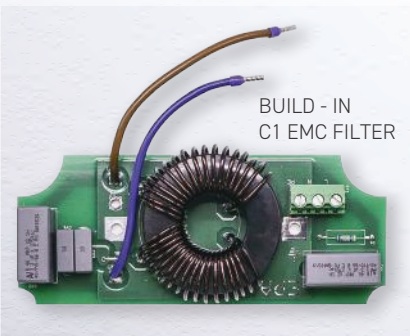
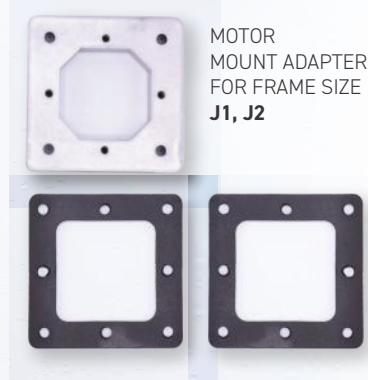
Smart PC-tools, for inverter control, parametrization and troubleshooting. Parameter-duplication stick

Approved for worldwide standards by independent bodies



## FRAMESIZE

Model	Motor power (kW)	Frame-size	Dimensions (WxHxD-mm)	Remarks
EM30-0004 S2	0,4 kW - 2,5 A			
EM30-0007 S2	0,75 kW - 4,5 A			1-phase 220V
EM30-0015 S2	1,5 kW - 7 A			
EM30-0022 S2	2,2 kW - 10 A			
EM30-0004 T2	0,4 kW - 2,5A			
EM30-0007 T2	0,75 kW - 4,5 A	J1	186x266x180	3-phase 220V
EM30-0015 T2	1,5 kW - 7 A			
EM30-0022 T2	2,2 kW - 10 A			
EM30-0007 T3	0,75 kW - 2A			
EM30-0015 T3	1,5 kW - 4A			
EM30-0022 T3	2,2 kW - 6,5A			
EM30-0030 T3	3,0 kW - 7 A			
EM30-0040 T3	4,0 kW - 9 A			3-phase 380V
EM30-0055 T3	5,5 kW - 12 A	J2	215x325x190	
EM30-0075 T3	7,5 kW - 17 A			
★ EM30-0110 T3	11 kW - 23 A	J3	280x380x220	
★ EM30-0150 T3	15 kW - 32 A			
★ under development				



LCD REMOTE KEYPAD



PARAMETER COPY STICK



## TECHNICAL DATA

Power input	Rated input voltage	3-Phase 380V-460V (+/-15%) 1-Phase 220V ~ 240V ( ±15% ) 3-Phase 220V ~ 240V ( ±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,Torque/Speed control mode CLV-Closed loop vector,Permanent Magnet Synchronous Motor PMSM SENSORLESS control
	Chopper frequency	0.8...16 kHz (fixed / 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	Manual, from nameplate / AUTOTUNING
	Control range	1:100 in SLV mode,1:1000 in CLV mode,1:20 in PMSM mode
	Speed precision	+/- 0,5% (SLV),+/- 0,02% (CLV)
	Torque precision	+/- 5% (SLV)
	DC-Brake	User programmable functions
	Brake chopper	Chopper transistor integrated (up to 22 kW)
Display	4 Line Character display	Config-Parameters and -value, programmable to display various working parameters
I/O Channels	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 relais with switchover contacts 5A 230V capability
	Data link	Serial link RS 485 (MODBUS)
Special functions	Special functions	24V / 200 mA auxiliary power supply on terminals, 10V potentiometer power supply, 5V/100 mA power supply on modbus connector PTC / KLIXON motor protection
Electronic protections with fault history	Electrical	Overvoltage, undervoltage Overcurrent, overload, motor-overload, output short-circuit Input phaseloss, motor phase unbalance
	Thermal	Heatsink overtemperature, I <sup>2</sup> t motorprotection
Options	Display	Removable display / keypad units
	Brake chopper	Braking resistors for different load characteristics
	PC-software Parameter copy stick	Configuration-, control- an diagnosis-tool, parameter copy/duplicating stick
Environmental and operating conditions	Protection class	IP66 / NEMA4 motor/wall mountable
	Operating temperature	-10.....+40 °C - -40°C with automatic antifreeze control function (option)
	Humidity	0 to 95% RH, non-condensing, non-corrosive
	Altitude	1000 m, above 1% derating / 100m