

EnviroStart™

SINGLE PHASE MOTOR ENERGY CONTROL TECHNICAL SPECIFICATION



High Specification Electronic Motor Energy Control for Single Phase Motors up to 15A

- Compact and efficient design
- Adjustable backstop pedestal voltage
- High frequency micro processor with dynamic control loop
- Full system status LED display
- 220V and 110V versions available
- 50Hz and 60Hz units available
- IP43 rated enclosure
- Integrated soft start
- Integrated two minute delay timer for refrigeration applications



SINGLE PHASE MOTOR ENERGY CONTROL

Technical Data for EnviroStart Motor Energy Control Units

220V Models

MODEL	CONTINUOUS CURRENT @+20°C	kW @ 220V ¹	WEIGHT gramme	FANS	REPETITIVE STARTS Per Hour ²	POWER DISSIPATION Watts ³	HEIGHT/ WIDTH/ DEPTH mm
220-SPMEC-4A	4	1	500	Not fitted	30	6	120/140/145
220-SPMEC-10A	10	2	500	Not fitted	30	12	120/140/145
220-SPMEC-15A	15	3	600	Not fitted	30	19	175/140/145

110V Models

MODEL	CONTINUOUS CURRENT @+20°C	kW @ 110V ¹	WEIGHT gramme	FANS	REPETITIVE STARTS Per Hour ²	POWER DISSIPATION Watts ³	HEIGHT/ WIDTH/ DEPTH mm
110-SPMEC-4A	4	1	500	Not fitted	30	6	120/140/145
110-SPMEC-10A	10	1.5	500	Not fitted	30	14	120/140/145
110-SPMEC-15A	15	2	600	Not fitted	30	23	175/140/145

1. The kW ratings given are all derived from calculations based on a standard four pole motor operating at a nominal ambient of +20°C at sea level. All units should be selected based on the current rating of the motor to which it is to be fitted.

2. The indicated maximum repetitive start count is calculated based on maximum valid ambient of +40°C and with the motor running at full load current. Reducing either of these conditions will increase the start repetition capability of the unit.

3. Power dissipation is calculated for when the unit is running at full power output as defined by maximum continuous current at +20°C.



Saving energy through the control of power

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ELECTRICAL SPECIFICATION

SUPPLY VOLTAGE	220V or 110V -20% - +20%
FREQUENCY	50 or 60Hz
START DUTY AT 12 STARTS PER HOUR	4x unit rating in Amps for 3s 3x unit rating in Amps for 5s 2x unit rating in Amps for 10s
STARTS PER HOUR	30 evenly spaced starts per hour (typical)

CONTROL SPECIFICATION

PEDESTAL RANGE	25 -100% of supply voltage (6% - 100% DOL Torque)
RAMP UP TIME	DOL 1.5s (Individual lines) 0.5 - 3.0s
KICK START SETTING	Switchable
KICK START LEVEL	70% Volts
KICK START TIME	2s
POWER SWITCHING	Fully base-isolated triac
CONTROL CIRCUITRY	High frequency MPU with full internal watch keeping and protocol management systems
CONTROL BOARD	Multi layer PCB with high voltage tracking and optional high RH environmental protection
CONTROL SUPPLY	Derived from input
FAULT DETECTION	Shut Down and Lockout on: Supply Loss, Motor Fault Triac Fault
RESET	Through power off to ensure safe fault condition shut down
LED INDICATIONS	Power On, Energy Save Enabled, Current Limit



ENVIRONMENTAL SPECIFICATION

OPERATING TEMP	0°C - +40°C @ < 95%RH. (De-rate 20%/10°C above +40°C).
STORAGE TEMP	-10°C - +60°C
ALTITUDE	Nominal 2000m above sea level. De-rate Amps by 1%/100m above 2000m
EU DIRECTIVES	Meets all EMC and Low Voltage Directives. (including G5/4)
UL LISTING	Listed for US and Canadian use File E192379

COOLING

COOLING	Naturally cooled isolated heatsink
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All details relate to units operating with a 220V synchronous single phase sinusoidal supply.



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