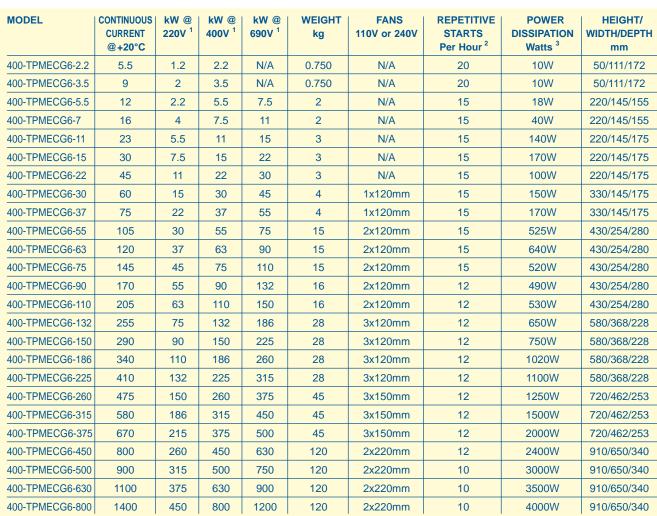
EnviroStart™

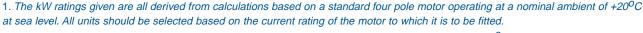
THREE PHASE MOTOR ENERGY CONTROL TECHNICAL SPECIFICATION

High Specification Electronic Soft Start with Motor Energy Control for Motors from 2.2kW to 800kW at 400V.

- Compact and efficient design
- Adjustable initial pedestal voltage
- Kick start capability with adjustable time and level for stall-load, (high torque), starting
- Ramp-start time adjustable from 0.5s to 240s
- Soft-stop for reducing water-hammer in pumping applications 5s to 192s
- System Ready, Run / Fault and Top-of-Ramp relays fitted
- Full system status LED display
- 220V, 400V, 570V & 690V units available
- IP43 rated enclosure
- Savings up to 20% possible







^{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.

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ELECTRICAL SPECIFICATION		
SUPPLY VOLTAGE	220V or 400V selected on PCB (570V & 690V Units Available) -10% - +15%	
FREQUENCY	50 or 60Hz selected on PCB.	
START DUTY AT	2.2kW to 37kW units	
12 STARTS PER HOUR	4x unit rating in Amps for 5s	
	3x unit rating in Amps for 20s	
	2x unit rating in Amps for 40s	
	55kW to 800kW units	
	5x unit rating in Amps for 5s	
	4x unit rating in Amps for 30s	
	3x unit rating in Amps for 60s	
STARTS PER HOUR	12 evenly spaced starts per hour	
	(average)	

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 (55KW to 800kW units)	

CONTROL SPECIFICATION		
PEDESTAL RANGE	25 -100% of supply voltage	
	(6% -100% DOL Torque)	
RAMP UP TIME	0.5 - 240s	
RAMP DOWN TIME	5s to 192s	
CURRENT LIMIT RANGE	1.5 - 5.5 x FLC	
	(Normal ramp hold time 30s)	
CURRENT LIMIT TIME	30s	
KICK START	Switchable	
KICK START LEVEL	70% to 90% Volts	
KICK START TIME	0.25 to 2s	
POWER SWITCHING	Fully base-isolated thyristor	
	Paks or independent Puks	
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 three phase input or	
	external supply, (user selectable)	
STALLED ROTOR	Fault trip in case of detected	
PROTECTION	extended asynchronous rotor	
	speed	
FAULT DETECTION	Shut Down and Lockout on:	
	Phase Loss, Supply Loss, Motor	
	Fault, Thyristor or PCB	
	Fault, Asynchronous Motor	
	Rotation	
RESET	Onboard switch or through	
	power off to ensure safe fault	
	condition shut down	
LED INDICATIONS	Ramp-up, Energy Save / Power	
	On / Run / In Current Limit / Top	
	of Ramp	
ON PCB RELAYS	System Ready, Fault Condition /	
	Run, and Top of Ramp (All 2 pole	
	changeover with two N/O and	
	two N/C contacts)	
RELAY CONTACT RATING	2.2kVA, 250V AC maximum	
MECHANICAL	IP43, NEMA 1 Sheet Metal	
PROTECTION	Enclosure or High Impact ABS	
	cover on Heatsink Backplane	

COOLING	
COOLING	Naturally cooled isolated heatsink up to 22kW Fan cooled for 30kW and above (240/110V supply required for fans)
THERMAL CUT OUT	Automatically cuts out in event of over-temperature on heatsink (55kW - 800kW)

All details relate to units operating with a 400V synchronous three phase sinusoidal supply.







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www.**EnviroStart**.com

Manufactured & Distributed Worldwide by EMS European Ltd.

(Dependant on kW rating)