

# EnviroStart™

## THREE PHASE DIGITAL AND VOLTAGE POWER REGULATOR



High Specification Electronic Digital Voltage Regulator and Digital Power Regulator

- Compact and efficient design
- Wide range of input control signals catered for
- DVR for Phase Angle control of low inertia loads (including speed control of high slip motors)
- DPR for Burst Fire control of resistive loads (including temperature control of heating elements)
- Eliminates unreliable electro-mechanical control systems
- Full system status LED display
- PCB selectable 220V & 400V
- IP43 rated enclosure



DVR/DPR SPECIFICATION

### Technical Data for EnviroStart DVR and DPR Units

MODEL <sup>1</sup>	Continuous Current @ +20°C	kW Rating Resistive loads			kW Rating Inductive loads			Weight kg	Fans 110V or 240V	Height/Width Depth mm
		220V <sup>2</sup>	400V <sup>2</sup>	690V <sup>2</sup>	220V <sup>3</sup>	400V <sup>3</sup>	690V <sup>3</sup>			
400-TPDVPRG6-12	12	5	8	N/A	3.2	5.5	N/A	2	N/A	220/145/155
400-TPDVPRG6-16	16	6.5	11	N/A	4.5	7.5	N/A	2	N/A	220/145/155
400-TPDVPRG6-23	23	10	15	N/A	6.5	11	N/A	3	N/A	220/145/175
400-TPDVPRG6-30	30	12	22	N/A	8.5	15	N/A	3	N/A	220/145/175
400-TPDVPRG6-45	45	18	30	N/A	11	22	N/A	3	N/A	220/145/175
400-TPDVPRG6-60	60	25	40	N/A	15	30	N/A	4	1x120mm	330/145/175
400-TPDVPRG6-75	75	30	50	N/A	22	37	N/A	4	1x120mm	330/145/175
400-TPDVPRG6-120	120	45	80	140	37	55	110	15	2x120mm	430/254/280
400-TPDVPRG6-145	45	55	100	175	45	75	132	15	2x120mm	430/254/280
400-TPDVPRG6-170	170	70	120	200	55	90	150	15	2x120mm	430/254/280
400-TPDVPRG6-205	205	80	140	250	63	110	186	16	2x120mm	430/254/280
400-TPDVPRG6-255	255	100	175	300	75	132	225	16	2x120mm	430/254/280
400-TPDVPRG6-290	290	115	200	350	90	150	260	28	3x120mm	580/368/228
400-TPDVPRG6-340	340	135	240	400	110	186	315	28	3x120mm	580/368/228
400-TPDVPRG6-410	410	165	280	500	132	225	375	28	3x120mm	580/368/228
400-TPDVPRG6-475	475	190	330	570	150	260	450	28	3x120mm	580/368/228
400-TPDVPRG6-580	580	230	400	700	186	315	550	45	3x150mm	720/462/253
400-TPDVPRG6-670	670	270	460	800	225	375	630	45	3x150mm	720/462/253
400-TPDVPRG6-800	800	320	550	950	260	450	800	45	3x150mm	720/462/253
400-TPDVPRG6-900	900	360	630	1100	315	500	950	120	2x220mm	910/650/340
400-TPDVPRG6-1100	1100	440	760	1300	375	630	1100	120	2x220mm	910/650/340
400-TPDVPRG6-1400	1400	550	970	1670	460	800	1400	120	2x220mm	910/650/340

2. The kW ratings given are all derived from calculations based on a purely resistive load at a normal ambient of +20°C at sea level. All units should be selected based on the current rating of the load to which it is fitted.

3. 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.

Saving energy through the control of power

[www.EnviroStart.com](http://www.EnviroStart.com)

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## ELECTRICAL SPECIFICATION

<b>SUPPLY VOLTAGE</b>	220V or 400V selected on PCB -10% - +15%
<b>FREQUENCY</b>	50 or 60Hz selected on PCB
<b>SIGNAL CONDITIONING</b>	Zero and span control setting by potentiometers mounted on PCB

## CONTROL SPECIFICATION

<b>MINIMUM AND MAXIMUM SPAN SETTINGS</b>	On board Potentiometers set between 1 and 100%. (Fault indication given if minimum setting exceeds maximum setting)
<b>FAULT DETECTION</b>	Thyristor fault, Logic fault, Phase failure
<b>LED INDICATIONS</b>	Power On, Run, Current Limit, End of Ramp, Fault
<b>POWER SWITCHING</b>	Fully base-isolated thyristor Paks or independent Puks
<b>CONTROL CIRCUITRY</b>	High frequency MPU with full internal watch keeping and protocol management systems
<b>CONTROL BOARD</b>	Multi layer PCB with high voltage tracking and optional high RH environmental protection
<b>CONTROL SUPPLY</b>	Derived from three phase input or external supply, (user selectable)
<b>CONTROL VOLTAGE</b>	Derived internally
<b>INPUT SIGNAL</b>	1. 5K0 potentiometer 2. 0V - 10V DC 3. 4mA - 20mA
<b>RELAY OUTPUT</b>	System Ready, Run/Fault, End of Ramp
<b>RELAY CONTACT RATING</b>	250V, AC maximum 2.2kVA
<b>MECHANICAL PROTECTION</b>	IP43, NEMA 1 sheet metal enclosure or High Impact ABS cover on Heatsink Backplane (Dependant on kW rating)



## ENVIRONMENTAL SPECIFICATION

<b>OPERATING TEMP</b>	0°C - +40°C @ < 95%RH. (De-rate 20%/10°C above +40°C)
<b>STORAGE TEMP</b>	-10°C - +60°C
<b>ALTITUDE</b>	Nominal 2000m above sea level De-rate Amps by 1%/100m above 2000m
<b>EU DIRECTIVES</b>	Meets all EMC and Low Voltage Directives (including G5/4)
<b>UL LISTING</b>	Listed for US and Canadian use File E192379 (60A to 1400A units)

## COOLING

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

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



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