



Series LPCV

Linear Proportional Load Controller

- **Precise Proportional Load Control**
- **Optically Isolated**
- **0-5 Vdc, 0-10 Vdc, 4-20mA Input Control Models**
- **Control Circuit Requires no Adjustment or Calibration**

The LPCV Linear Proportional Controllers control loads up to 110 Amps. Changes in the input signal linearly vary the firing angle of the thyristor load control device. Control circuitry and power switch are in the same package. The PS-120 (120V) and PS-240 (240V) power supplies are designed for use with the LPCV controller to provide the 20Vac required in addition to the control voltage.

MODEL NUMBERS	0-5 Vdc CONTROL 0-10 Vdc CONTROL 4-20 mA CONTROL	5LPCV2415 10LPCV2415 20LPCV2415	5LPCV2425 10LPCV2425 20LPCV2425	5LPCV2440 10LPCV2440 20LPCV2440	5LPCV2475 10LPCV2475 20LPCV2475	5LPCV24110 10LPCV24110 20LPCV24110
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OUTPUT SPECIFICATIONS

	5LPCV2415	5LPCV2425	5LPCV2440	5LPCV2475	5LPCV24110
Operating Voltage (60 Hz) [Vrms]	20-300	20-300	20-300	20-300	20-300
Load Current Range [Arms]	.10-15	.10-25	.10-40	.15-75	.20-110
Transient Overvoltage [Vpk]	600	600	600	600	600
Max. Surge Current, (16.6ms) [Apk]	150	250	625	1000	1500
Max. Off-State Leakage Current @ Rated Voltage [mArms]	10	15	20	30	50
Thermal Resistance Junction to Case (R _{JC}) [°C/W]	1.48	1.02	0.63	0.31	0.28
Maximum I ² t for Fusing, (8.3 msec.) [A ² sec]	94	260	1620	4150	9340
Maximum Voltage Drop (100% On) [Vpk]	1.6	1.6	1.6	1.6	1.6
Minimum Off-State dv/dt [V/μsec]	200	200	200	200	200
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5	0.5

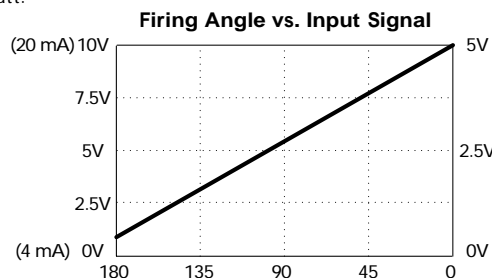
INPUT SPECIFICATIONS

	0-5 Vdc	0-10 Vdc	4-20 mA
Control Range (Nominal)	0-5 Vdc	0-10 Vdc	4-20 mA
Control Range Limits (Min/Max)	-0.5/10 Vdc	-1.0/20 Vdc	-0.5/25 mA
Turn-On Threshold	.25 Vdc	0.5 Vdc	4.5 mA
Min. Input Impedance	12.7K Ohms	25K Ohms	460 Ohms

GENERAL NOTES

- ① All parameters at 25°C unless otherwise specified.
- ② Linear taper potentiometer 1-10K Ohm, 1/2 Watt.
- ③ 50Hz models available.
- ④ 20Vac must be in phase with load.

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TYPICAL APPLICATIONS

- Infrared and Quartz Heaters
- Resistive Heating Elements
- Transformers
- Rectified DC Motors
- Thermal Forming Equipment
- Blow Molding Equipment
- Industrial Temperature Controllers
- Conveyor Speed Control
- Printing Applications

For recommended applications and more information contact:

USA: Sales Support (877) 502-5500 Tech Support (877) 702-7700 FAX (619) 710-8540

Crydom Corp, 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154

Email: sales@crydom.com WEB SITE: http://www.crydom.com

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Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, Email: intsales@crydom.com.

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Series LPCV

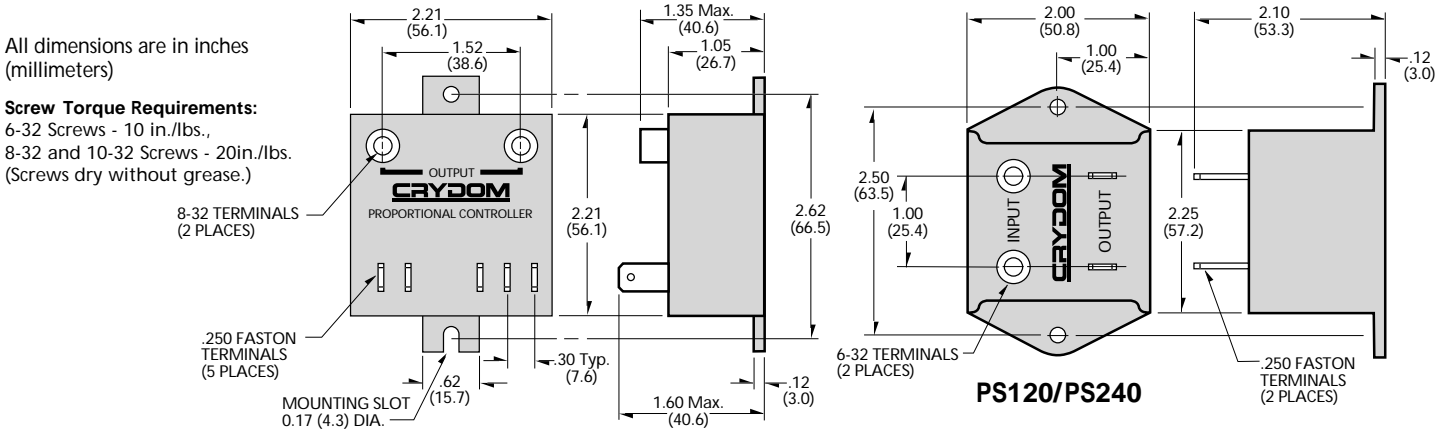
Linear Proportional Load Controller

GENERAL SPECIFICATIONS

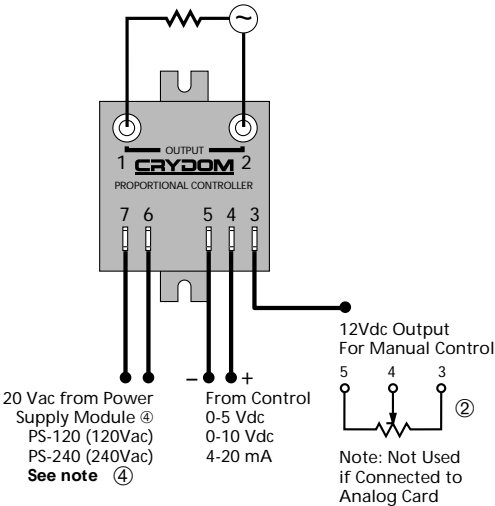
Dielectric Strength, Signal to Load	2500 Vrms
Dielectric Strength, Signal to Base	2500 Vrms
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-40 to 125°C

MECHANICAL SPECIFICATIONS

Weight: (typical)	6.0 oz. (175g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	8-32 Screws, .25 Inch Fastons



WIRING DIAGRAM



POWER SUPPLY SPECIFICATIONS ④

	PS120	PS240
Input Voltage 50/60Hz	120 Vac	240 Vac
Output Voltage 50/60Hz	20 Vac/100mA	20 Vac/100mA
Ambient Operating Temperature Range	-30 to 80°C	
Ambient Storage Temperature Range	-40 to 125°C	

MECHANICAL SPECIFICATIONS

Weight: (typical)	8.6 oz. (245g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	6-32 Screws, .25 Inch Fastons

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NOTE: UNSUITABLE APPLICATIONS

The LPCV is not suitable for some load control applications including, but not limited to the following:

- AC Motor Control
- Three Phase Motors
- Transformers requiring pure sine wave input
- Applications which cannot withstand thyristor noise
- Zero Crossing Applications

Please contact Crydom's application engineering department for additional information and specific application questions.

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UK: +44 (0)1202 365070 • FAX +44 (0)1202 365090 Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, Email: intsales@crydom.com.

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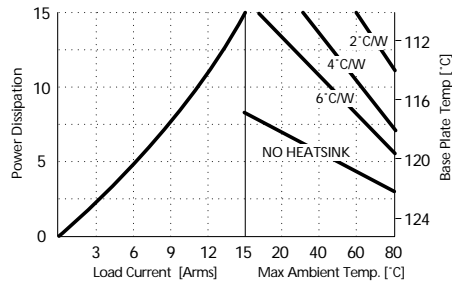




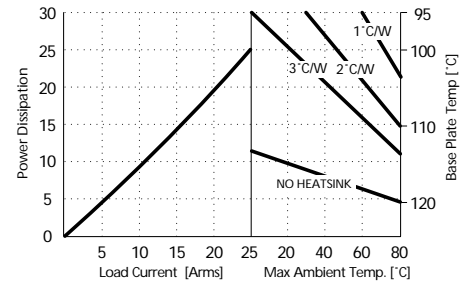
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Linear Proportional Load Controller

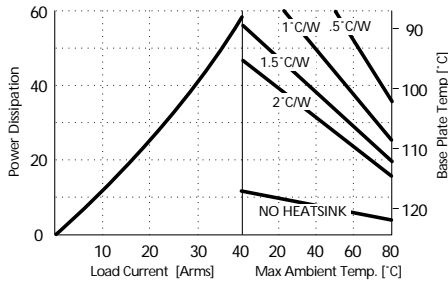
15A CURRENT DERATING CURVES



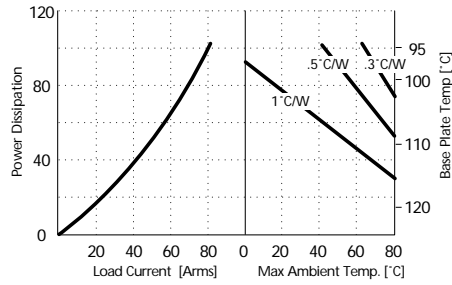
25A



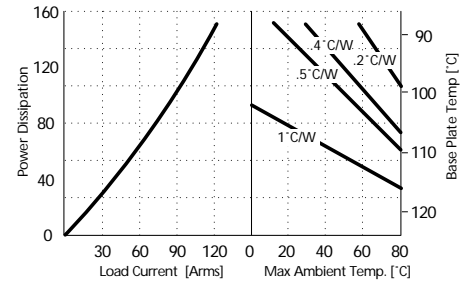
40A



75A

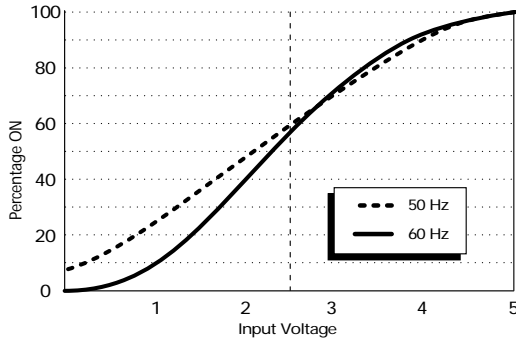


110A

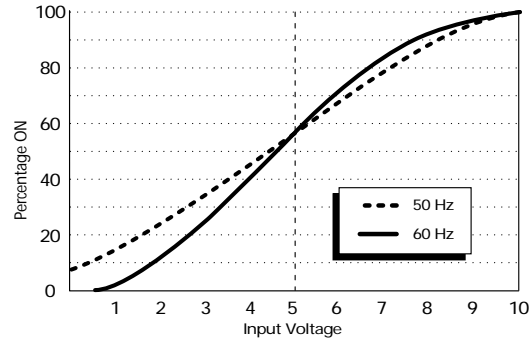


PERCENTAGE ON vs. INPUT VOLTAGE

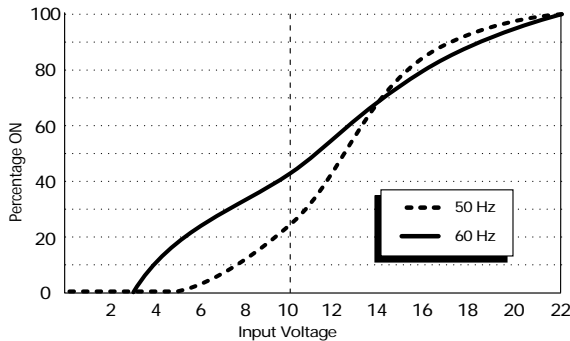
0-5 Vdc Control



0-10 Vdc Control



4-20 mA Control



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