

Product Description

The microprocessor based 1P SCR Power Controller is a compact panel mount package that provides linear phase angle control of the load. The output power is proportional to the command input which can be dip switch selected from seven different industry standard inputs. Specially designed external snubber networks allow reliable control of inductive loads.

Ordering Codes

1P-X XXX X DN-10-M-S-XXX

- Single Pole
- Phase Angle
- (6) 660 VAC Line (Omit for 240/480)
- (50) 45A @ 40C
- (90) 70A @ 40C
- (125) 80A @ 40C
- (H) 480VAC Line (Omit for 240)
- (DN) Internal#s (specifies heatsink / input)
- (10) Internal#s (specifies SSR firing)
- (M) External MOV
- (S) External Snubber, (M) MOV Required
- Special Options:
- VL (Voltage Limit)
- 135 (135 Ohm Input)
- FR (Fast Response Option, 10mS)
- XSS (Softstart Time, default is 20 seconds)
- XSC (Soft Change Time, seconds)
- X% Starting Power (1% default)

Dip Switch Selections

Command Input	1	2	3	5
0-5V (Default)	OFF	OFF	OFF	OFF
Potentiometer	OFF	OFF	OFF	OFF
0-10V	OFF	OFF	ON	OFF
4-20mA	OFF	ON	OFF	ON
1-5V	OFF	OFF	OFF	ON
2-10V	OFF	OFF	ON	ON
0-135Ohm*	ON	OFF	OFF	OFF
PWM**	OFF	OFF	OFF	OFF

Feature to Enable	4	6
Line Voltage Comp Enabled (default)	OFF	OFF
None	OFF	ON
Soft Start Only Enabled	ON	ON
Soft Start & Line Voltage Comp Enabled	ON	OFF

Input Specifications

Control Card Power Supply	24VAC +/-15%, 65mA max
Frequency Range	47-63Hz
Command Inputs	4-20mA, 0-20mA, 0-5V, 1-5V, 0-10V, 2-10V, 0-135Ohm, Pot, PWM
Command Input Impedance	10K (0-10V), 250 Ohms (4-20mA), 100K (0-5V)
0-135Ohm Excitation Current	13mA
PWM Input Freq Range	10Hz - 100Khz
External Potentiometer Resistance	1-25KOhm

Output Specifications

MODEL	1P-50DN	1P-50HDN	1P-90HDN	1P-125HDN
Operating Voltage (47-63 Hz) [Vrms]	24-280	48-530	48-530	48-530
Load Current Range [Arms]	.04-45	.04-45	.04-70	.04-80
Transient Overvoltage [Vpk]	600	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	625	625	1200	1750
Max. On-State Voltage Drop [Vpk]	1.6	1.7	1.7	1.7
Max.I²t for fusing (8.3mS) [A²sec]	1620	1620	6000	12,700
Max. Off-State Leakage Current [mArms]	10	10	10	10 (without snubber)
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5
Response Time	100mS or 10mS (for FR)			
Linearity	2%			
Default Softstart Period	20 seconds to reach 100%, Other SS times available			
Voltage Limit Adjustment Range	5-100% of max. Output voltage			
Line Voltage Compensation Range	+/-15% up to 100% output power			
Regulation	+/-3%			

Thermal Specifications

Operating Temperature Range	0 to 50 degC, all Current Ratings are for 40C
Storage Temperature Range	-40 to 100 degC



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WARNING: FIRE HAZARD!! Even quality electronic components CAN FAIL KEEPING FULL POWER ON! Provide a SEPARATE (redundant) OVER TEMPERATURE SHUTDOWN DEVICE (HIGH LIMIT) to switch the power off if safe temperatures are exceeded.



WARNING: HIGH VOLTAGE!! This control must be installed in a GROUNDED enclosure by a qualified electrician in accordance with applicable local and national codes including NEC and other applicable codes. Provide a safety interlock on the door to remove power before gaining access to the device.

