

FEATURES

- 3 Year Warranty
- 100% Full Load Burn-In Tested
- Universal AC Input / Full Range
- Built-In Remote Sense Function
- Built-In Remote ON/OFF Control
- Current Sharing up to 2000W (3+1)
- Forced Air Cooling by Built-In DC Fan
- Built-In Active PFC Function, PF > 0.95
- With Power Good and Fail Signal Output
- Open Frame Models Available ("P" Suffix)
- Short Circuit, Overload, Over Voltage, and Over Temperature Protected



SPECIFICATIONS: PSPSP500 Series

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
 We reserve the right to change specifications based on technological advances.

INPUT SPECIFICATIONS

Input Voltage Range (See Note 6)	90 ~ 264VAC (127 ~ 370VDC)
Input Frequency	47 to 63Hz
AC Current (typical)	7A @ 115VAC 3.5A @ 230VAC
Inrush Current (typical)	20A @ 115VAC 40A @ 230VAC
Leakage Current	< 1mA @ 240VAC
Power Factor (typical)	0.95 @ 230VAC 0.98 @ 100VAC and full load
Remote ON/OFF Control	RC+/RC-: 0 ~ 0.8V = power on; 4 ~ 10V = power off sink current < 4 ~ 10mA

OUTPUT SPECIFICATIONS

Output Voltage	See Table
Output Power	See Table
Voltage Tolerance (See Note 3)	5V output: 2.0%, 12V - 48V outputs: 1.0%
Voltage Adjustment Range	See Table
Line Regulation	5V output: 0.5%, 12V - 15V outputs: 0.3%, 24V - 48V outputs: 0.2%
Load Regulation	5V output: 2.0%, 12V - 48V outputs: 0.5%
Output Current	See Table
Ripple & Noise (max) (See Note 2)	5V output: 100mVp-p; 12V - 27V outputs: 150mVp-p; 48V output: 200mVp-p
Setup, Rise Time	1500ms, 50ms at full load
Hold Up Time (typical)	24ms at full load
Temperature Coefficient	±0.03%/°C (0 ~ 50°C)

PROTECTION

Overload Protection	110 ~ 125% rated output power Protection Type: Constant current limiting; recovers automatically after fault condition is removed
Over Voltage Protection	See Table Protection Type: Shutdown output voltage; re-power on to recover
Over Temperature Protection	RTH2 ≥ 95°C detect on heatsink of Q1, Q7 power transistor & L3 output choke Protection Type: Shutdown output voltage; recovers automatically after temperature goes down

GENERAL SPECIFICATIONS

Efficiency (typical)	See Table
Withstand Voltage	3000VAC (Input to Output), 1500VAC (Input to FG), 500VAC (Output to FG)
Isolation Resistance	100MΩ/500DC (Input to Output, Input to FG, and Output to FG)

ENVIRONMENTAL SPECIFICATIONS

Working Temperature	-10°C to +60°C (refer to output load derating curve)
Storage Temperature	-20°C to +85°C
Working Humidity	20 ~ 90% RH non-condensing
Storage Humidity	10 ~ 95% RH
Vibration	10 ~ 500Hz, 2G 10min./1 cycle, 60min each along X, Y, Z axes.
MTBF	130,100 hours min. @ 25°C (MIL-HDBK-217F)

PHYSICAL SPECIFICATIONS

Weight	PSPSP500 Models: 2500 grams; PSPSP500-P: 1300 grams
Dimensions	PSPSP500 Models: 278(L) x 127(W) x 63.5(H) mm PSPSP500-P Models: 250(L) x 123(W) x 55(H) mm
Warranty	3 years

SAFETY & EMC

Safety Standards	UL60950-1, TUV EN60950-1 approved
EMI Conduction & Radiation	Compliance to EN55022 (CISPR22) Class B
Harmonic Current	Compliance to EN61000-3-2,-3
EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A

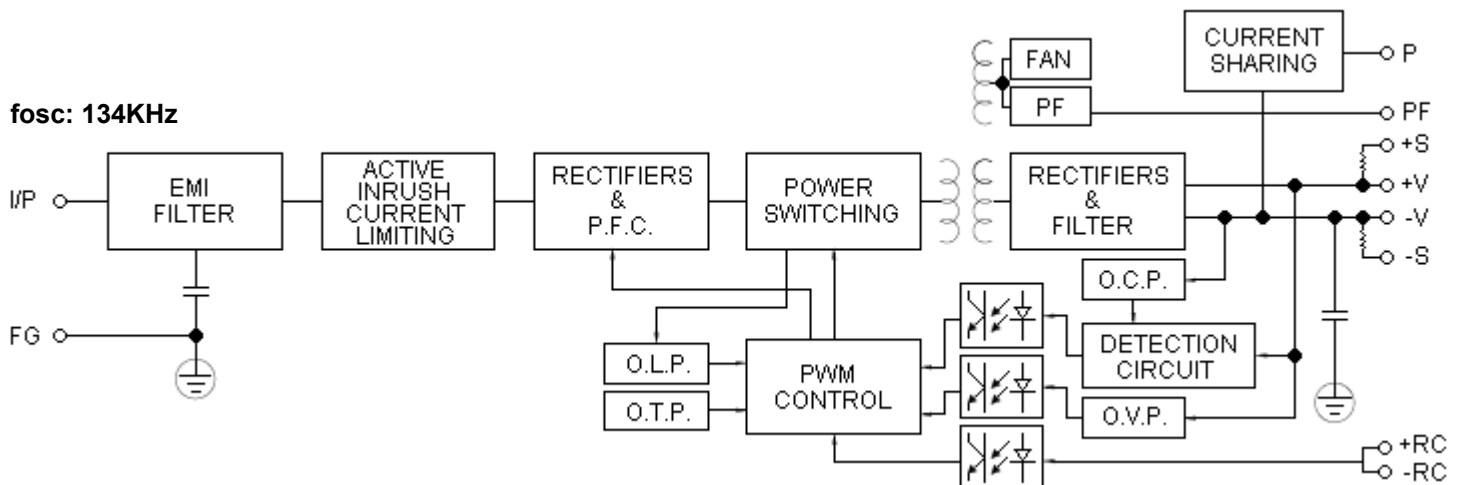
OUTPUT VOLTAGE / CURRENT RATING CHART

Model Number	Input Voltage	Output Voltage	Voltage Adjust. Range	Over Voltage Protection	Output Current	Rated Output Power	Efficiency
PSPSP500-5	90 ~ 264 VAC (127 ~ 370 VDC)	5 VDC	4.75 ~ 5.5V	5.75 ~ 6.75V	80A	400W	76%
PSPSP500-12		12 VDC	10 ~ 13.2V	13.8 ~ 16.2V	41.5A	498W	82%
PSPSP500-13.5		13.5 VDC	12 ~ 15V	15.5 ~ 18.2V	37A	499.5W	82%
PSPSP500-15		15 VDC	13.5 ~ 18V	18 ~ 21V	33A	495W	82%
PSPSP500-24		24 VDC	20 ~ 26.4V	27.6 ~ 32.4V	20.8A	499.2W	84%
PSPSP500-27		27 VDC	24 ~ 30V	31 ~ 36.5V	18.5A	499.5W	84%
PSPSP500-48		48 VDC	41 ~ 56V	57.6 ~ 67.2V	10.5A	504W	86%
PSPSP500-5P	90 ~ 264 VAC (127 ~ 370 VDC)	5 VDC	4.75 ~ 5.5V	5.75 ~ 6.75V	80A	400W	76%
PSPSP500-12P		12 VDC	10 ~ 13.2V	13.8 ~ 16.2V	41.5A	498W	82%
PSPSP500-13.5P		13.5 VDC	12 ~ 15V	15.5 ~ 18.2V	37A	499.5W	82%
PSPSP500-15P		15 VDC	13.5 ~ 18V	18 ~ 21V	33A	495W	82%
PSPSP500-24P		24 VDC	20 ~ 26.4V	27.6 ~ 32.4V	20.8A	499.2W	84%
PSPSP500-27P		27 VDC	24 ~ 30V	31 ~ 36.5V	18.5A	499.5W	84%
PSPSP500-48P		48 VDC	41 ~ 56V	57.6 ~ 67.2V	10.5A	504W	86%

NOTES

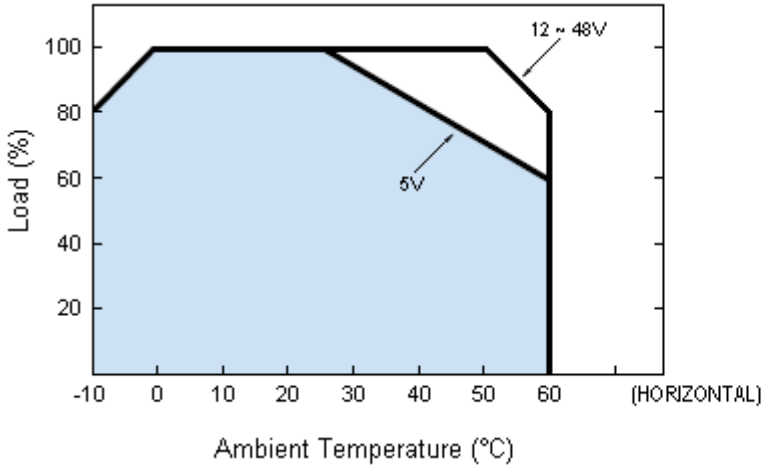
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerances include set up tolerance, line regulation, and load regulation.
4. The power supply is considered a component, which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
5. When in parallel connection only one unit may operate if the total output load is less than 5% of rated load condition.
6. Derating may be needed under low input voltages. Please check the derating curve for more details.
7. The "P" suffix indicates models that are open frame.

BLOCK DIAGRAM

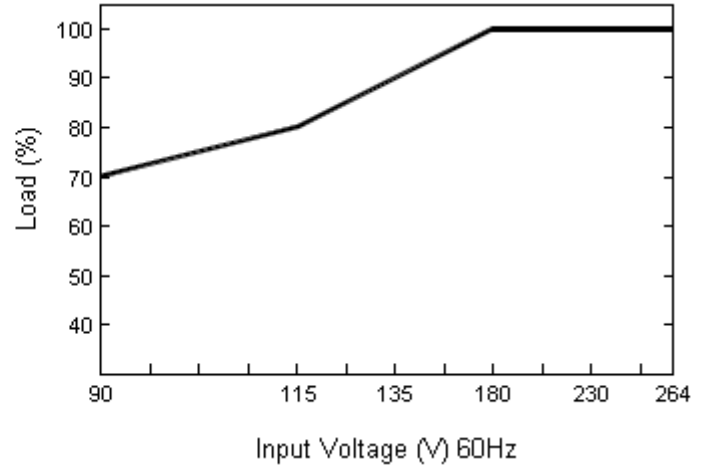


PSPSP500 MODELS

DERATING CURVE

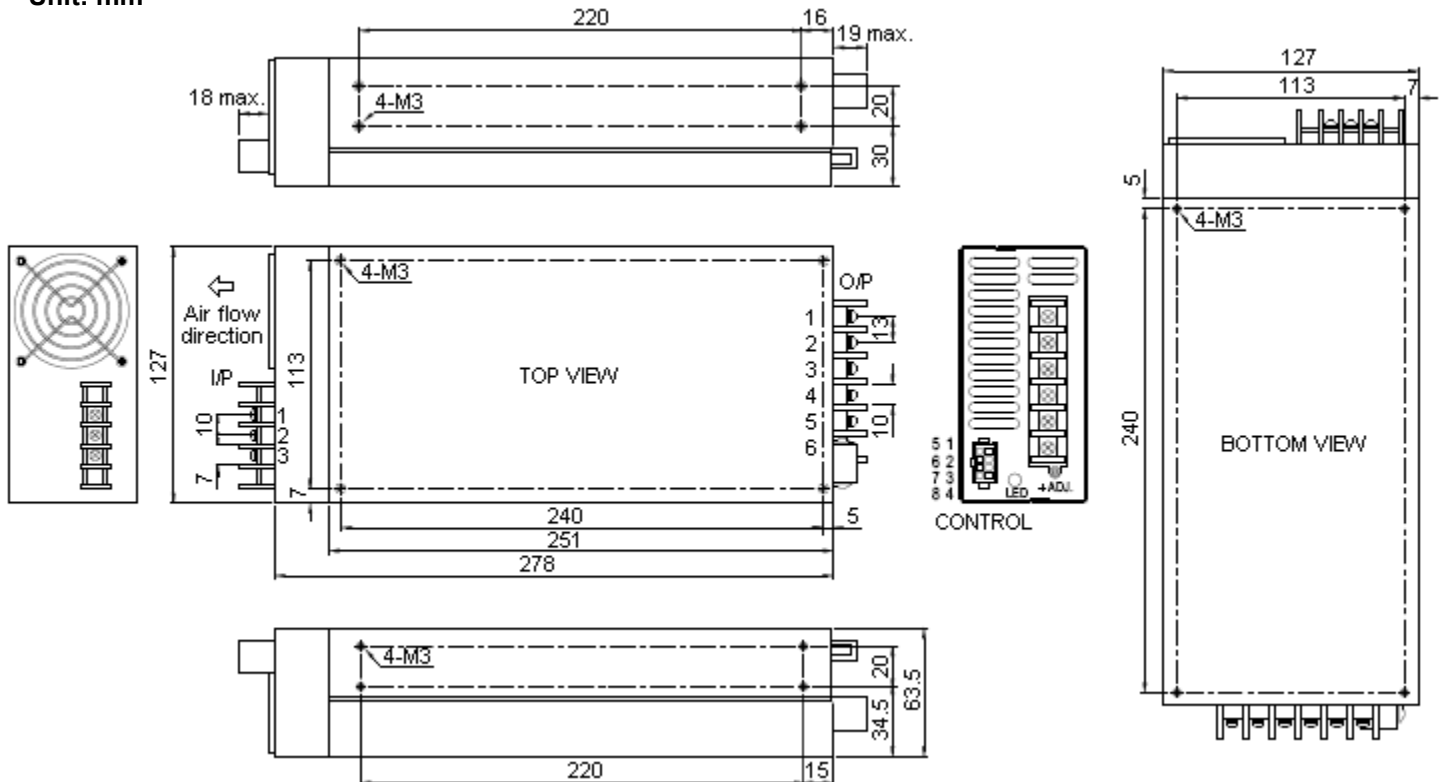


OUTPUT DERATING VS INPUT VOLTAGE



MECHANICAL DRAWING

Unit: mm



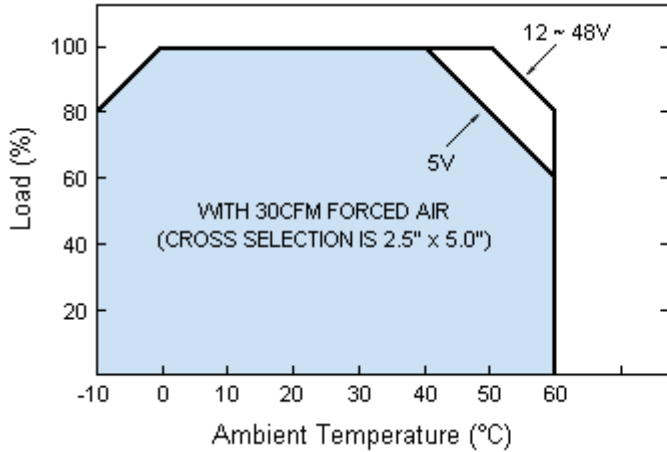
AC INPUT TERMINAL PIN NO. ASSIGNMENT	
Pin No.	Assignment
1	AC/L
2	AC/N
3	FG

DC OUTPUT TERMINAL PIN NO. ASSIGNMENT	
Pin No.	Assignment
1,2,3	DC OUTPUT +V
4,5,6	DC OUTPUT -V

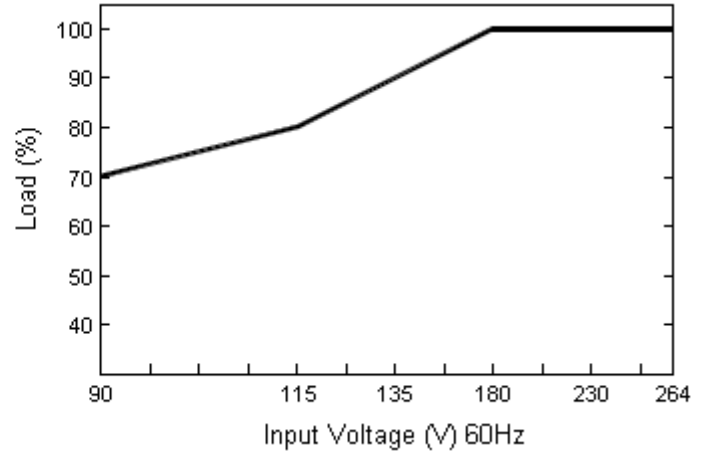
CONTROL PIN NO. ASSIGNMENT			
Pin No.	Assignment	Pin No.	Assignment
1	P (Current Share)	5	NC
2	-S	6	PF (Power Fail Signal)
3	G	7	+S
4	RC-	8	RC+

PSPSP500-P MODELS

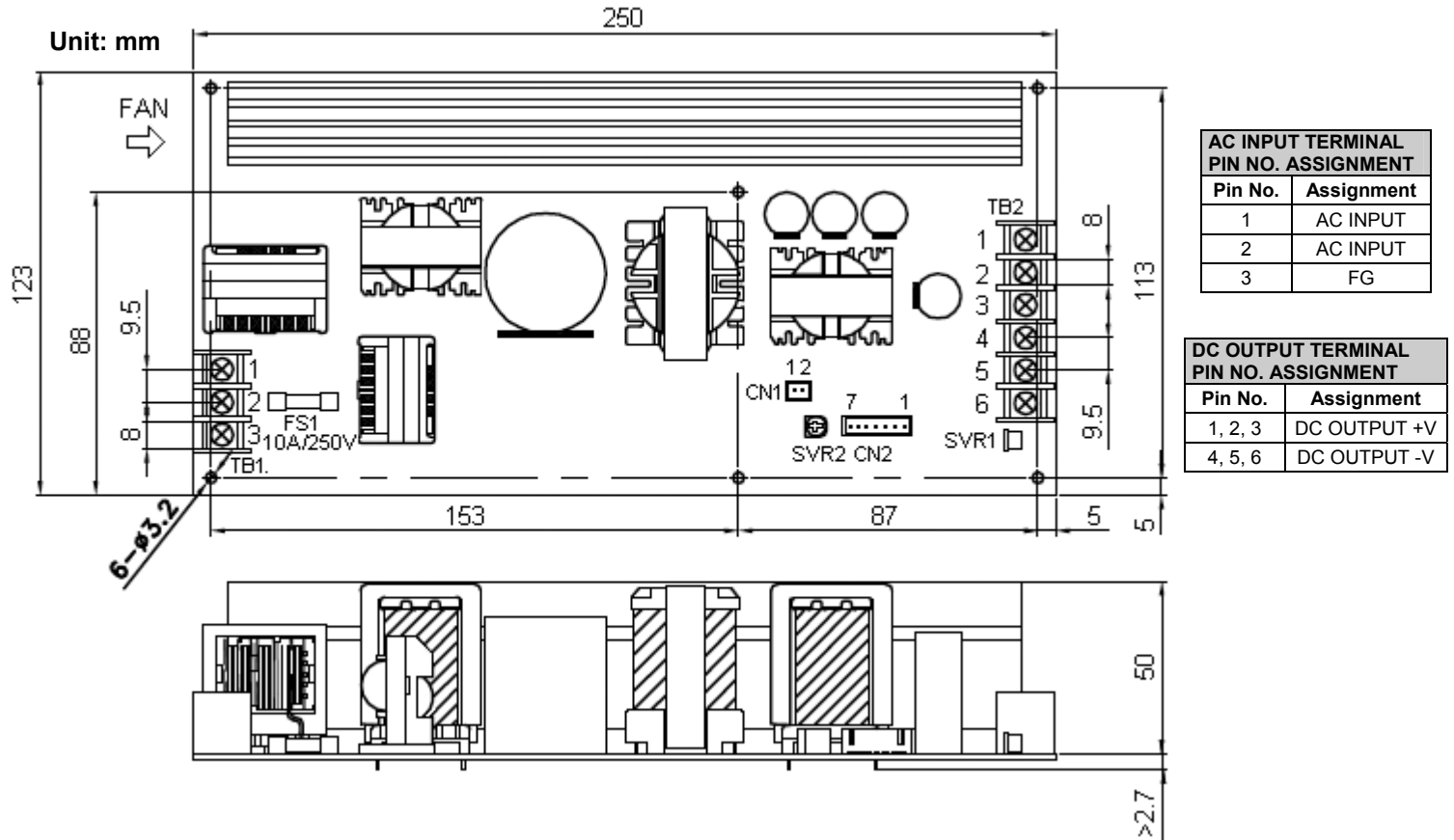
DERATING CURVE



OUTPUT DERATING VS INPUT VOLTAGE



MECHANICAL DRAWING



AC INPUT TERMINAL PIN NO. ASSIGNMENT	
Pin No.	Assignment
1	AC INPUT
2	AC INPUT
3	FG

DC OUTPUT TERMINAL PIN NO. ASSIGNMENT	
Pin No.	Assignment
1, 2, 3	DC OUTPUT +V
4, 5, 6	DC OUTPUT -V

CONTROL PIN NO. ASSIGNMENT	
CN1	
Pin No.	Assignment
1	GND
2	+12V

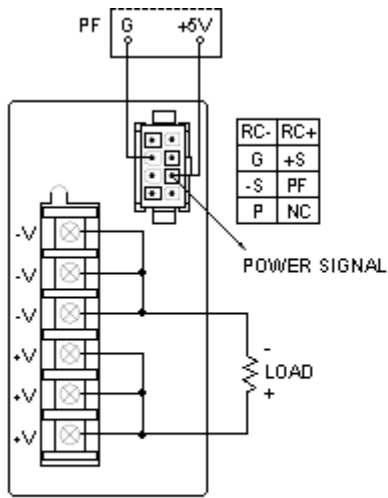
CONTROL PIN NO. ASSIGNMENT			
CN2			
Pin No.	Assignment	Pin No.	Assignment
1	P (Current Share)	5	PF (Power Fail Signal)
2	+S	6	RC+
3	-S	7	RC-
4	GND		

Fan Power Source: 0.3A max.

SVR1: VO ADJ.

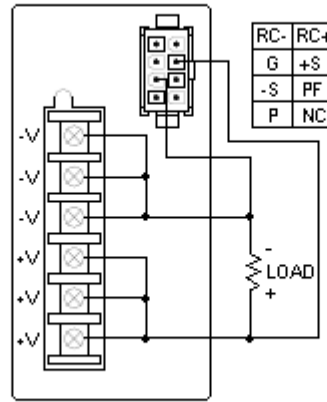
SVR2: IO ADJ.

CONTROL TERMINAL INSTRUCTION MANUAL

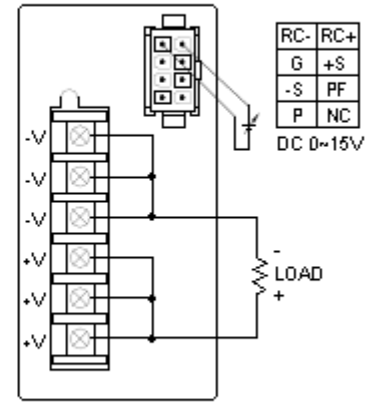


Power Fail Signal

PF Signal is the voltage difference between "G" and "PF" pin output



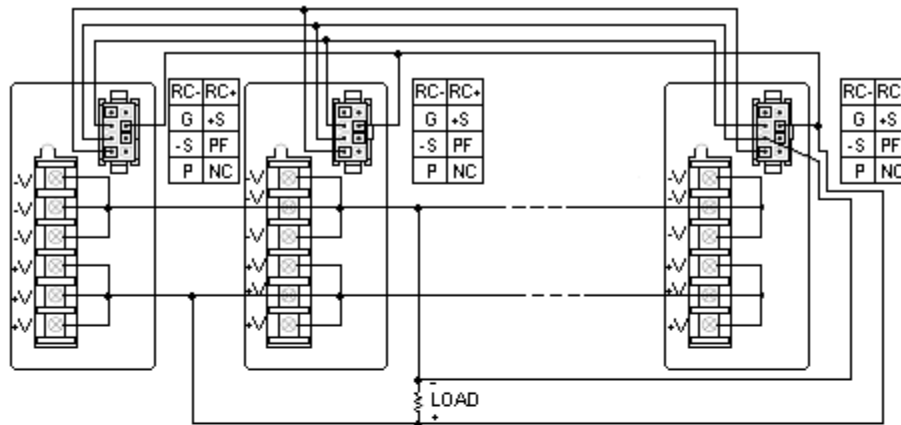
Remote Sensing



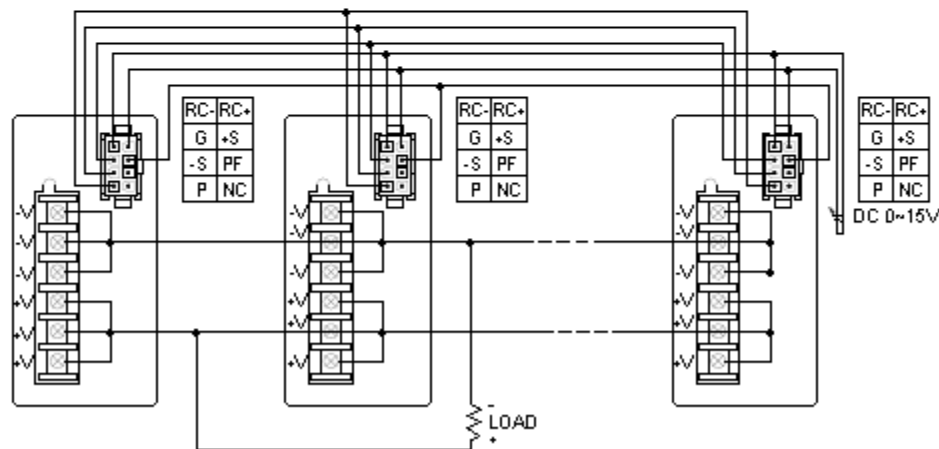
Remote Control

Power ON: When VRC+, RC- = 0~0.8V or Open
 Power OFF: When VRC+, RC- = 4~10V

PARALLEL OPERATION



Parallel Operation with Remote Sensing



Parallel Operation with Remote Control