375W Quad Output with PFC Function

QP-375-24 series

Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- CH3,4 are isolated from other outputs and the polarity can be reversed
- No minimum load requirement for CH2,3,4
- All output can be adjustable from -5~+10%
- With power good and fail signal output
- Built-in remote ON-OFF control
- Fixed switching frequency at 100KHz

SPECIFICATION

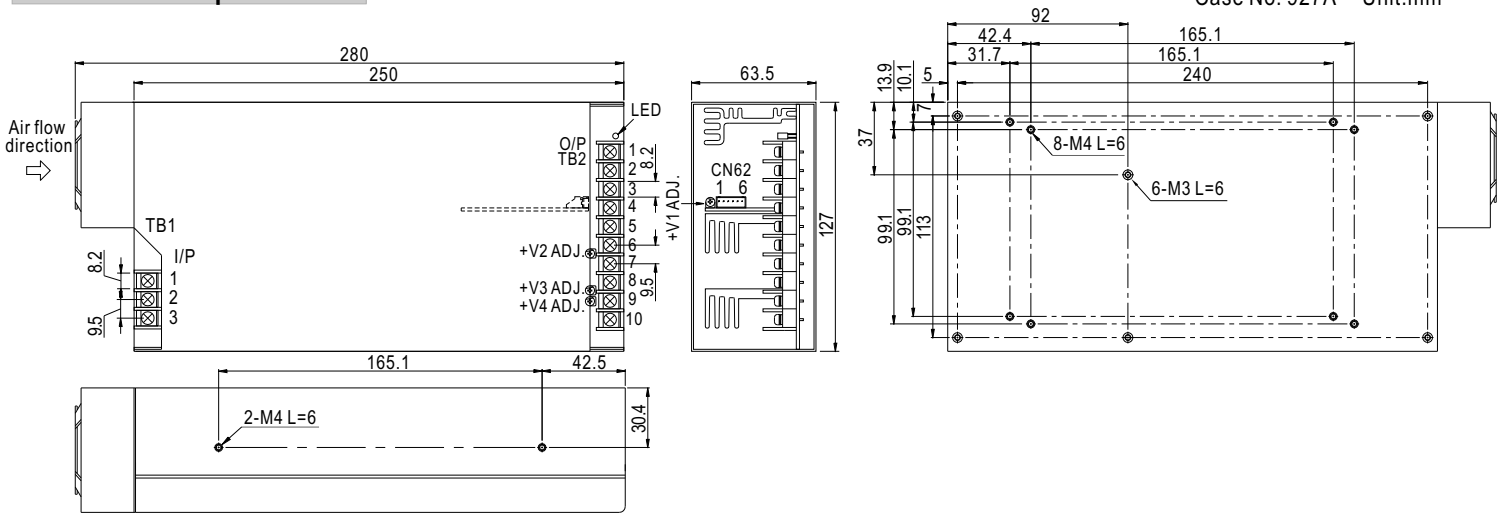
MODEL		QP-375-24B				QP-375-24C			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	+24V	+5V	12V	12V	+24V	+5V	15V	15V
	RATED CURRENT	10A	10A	4A	4A	10A	10A	4A	4A
	CURRENT RANGE	1 ~ 10A	0 ~ 16A	0 ~ 4A	0 ~ 4A	1 ~ 10A	0 ~ 10A	0 ~ 4A	0 ~ 4A
	RATED POWER(max.)	386W				410W			
	RIPPLE & NOISE (max.) Note.2	240mVp-p	50mVp-p	120mVp-p	120mVp-p	240mVp-p	50mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	21.6 ~ 26.4V	4.5 ~ 5.5V	10.8 ~ 13.2V	10.8 ~ 13.2V	21.6 ~ 26.4V	4.5 ~ 5.5V	13.5 ~ 16.5V	13.5 ~ 16.5V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±0.8%	±0.8%	±0.8%	±0.8%	±0.8%	±0.8%	±0.8%	±0.8%
	SETUP, RISE TIME	800ms, 50ms at full load							
	HOLD UP TIME (Typ.)	36ms at full load							
INPUT	VOLTAGE RANGE Note.7	85 ~ 264VAC 120 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF>0.95/230VAC PF>0.98/115VAC at full load							
	EFFICIENCY (Typ.)	78%				80%			
	AC CURRENT (Typ.)	6A/115VAC 3A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 45A							
	LEAKAGE CURRENT	<2mA / 240VAC							
PROTECTION	OVERLOAD	105 ~ 135% rated output power							
		Protection type : Hiccup mode, recovers automatically after condition is removed							
	OVER VOLTAGE	CH1:27.6 ~ 32.4V							
		Protection type : Shut down o/p voltage, re-power on to recover							
	OVER TEMPERATURE	80℃ ±5℃ (TSW1) Detect on heatsink of Q1,Q2 power transistor)							
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down							
FUNCTION	POWER GOOD / POWER FAIL(OPTIONAL)	10ms/1ms							
	REMOTE CONTROL	RC+/RC-:0 ~ 0.8V POWER ON; 4V ~ 10V POWER OFF							
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved							
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH							
	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A							
OTHERS	MTBF	75.9K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	280*127*63.5mm (L*W*H)							
	PACKING	2.4Kg; 6pcs/14.8Kg/0.89CUFT							

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.” (as available on http://www.meanwell.com)
5. Peak current can not exceed 60 sec.
6. Isolated CH3 & CH4 maybe series connected or can be used as positive or negative outputs.
7. Derating may be needed under low input voltages. Please check the derating curve for more details.

■ Mechanical Specification

Case No. 927A 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

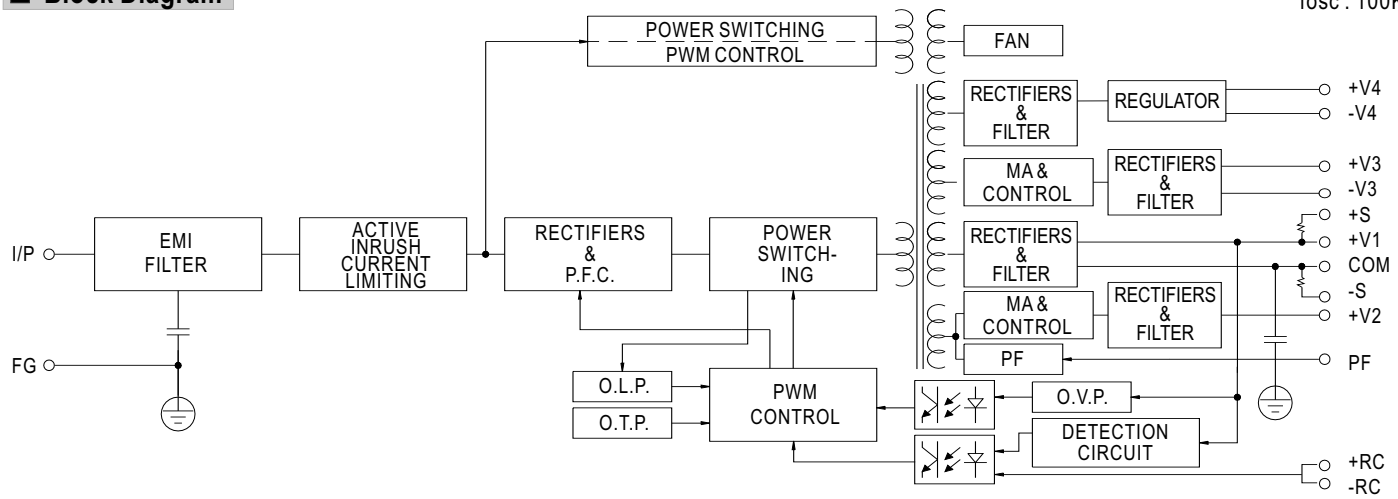
Pin No.	Assignment	Pin No.	Assignment
1,2	+V1	8	-V3
3,4,5	COM(V1 and V2)	9	+V4
6	+V2	10	-V4
7	+V3		

CN62 Pin No. Assignment : JST S6B-XH or equivalent

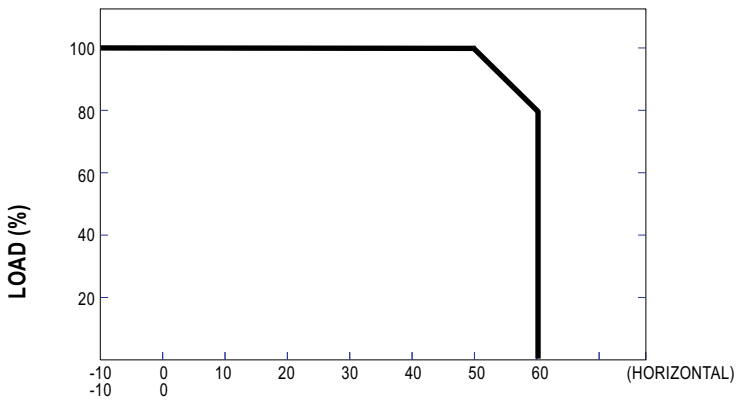
Pin No.	Assignment	Mating Housing	Terminal
1	PF(Power good / Fail signal)	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	GND		
3	RS-		
4	RS+		
5	RC-		
6	RC+		

■ Block Diagram

fosc : 100KHz

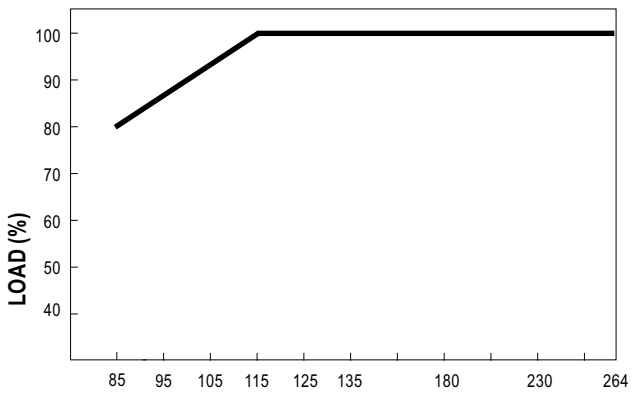


■ Derating Curve



AMBIENT TEMPERATURE (℃)

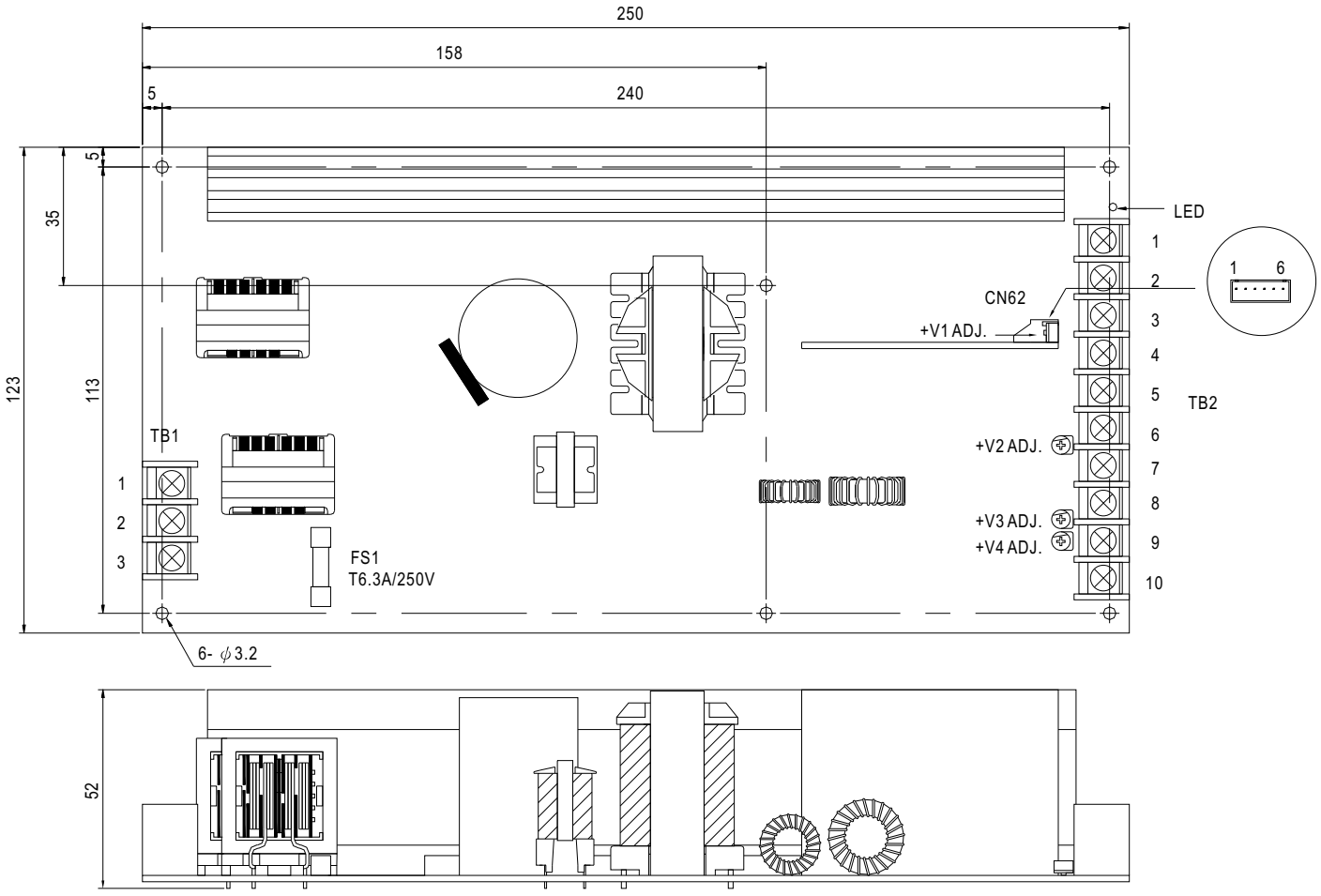
■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz

■ Mechanical Specification

Unit:mm



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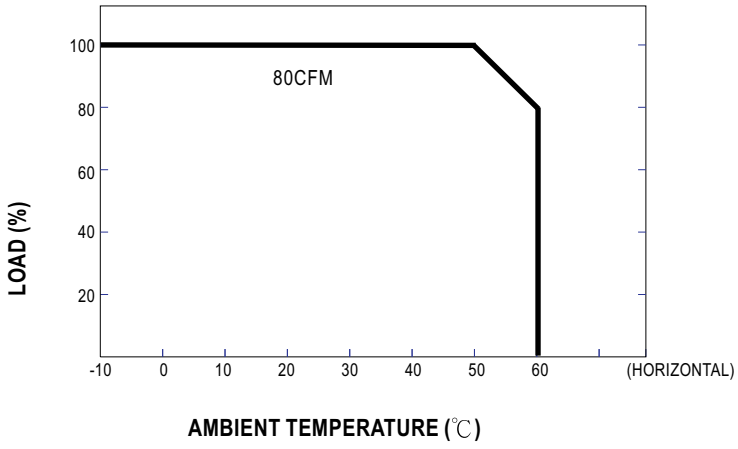
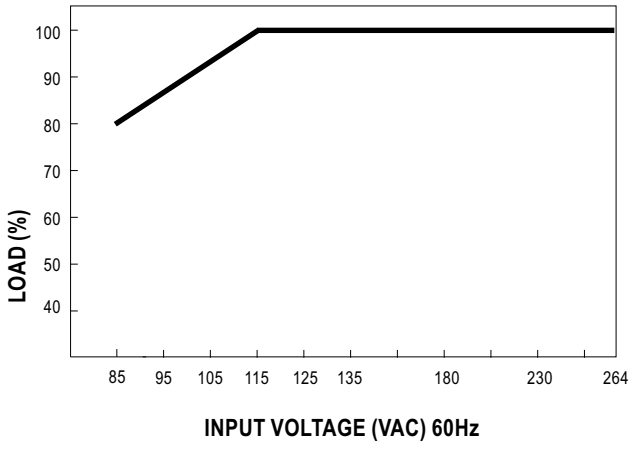
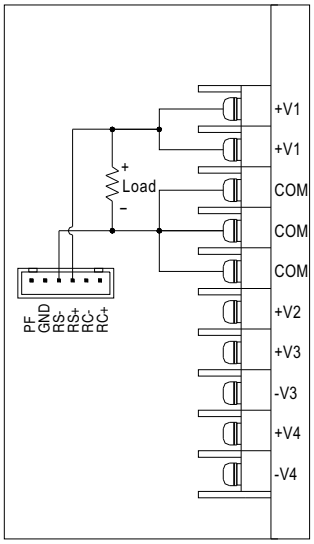
■ Derating Curve



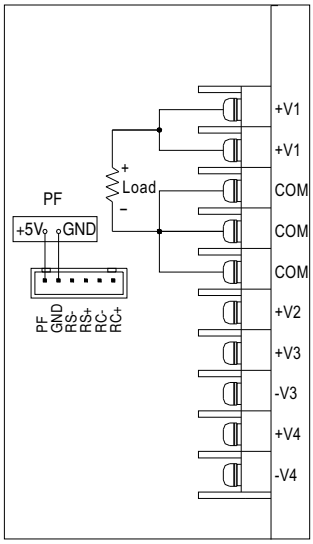
■ Output Derating VS Input Voltage



■ Control terminal instruction manual

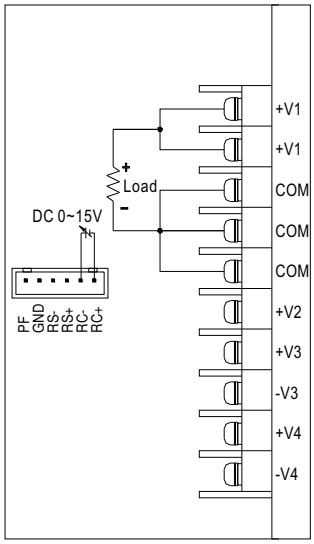


Remote Sensing



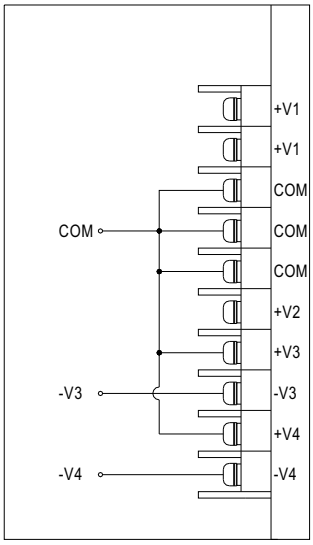
Power Fail Signal

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

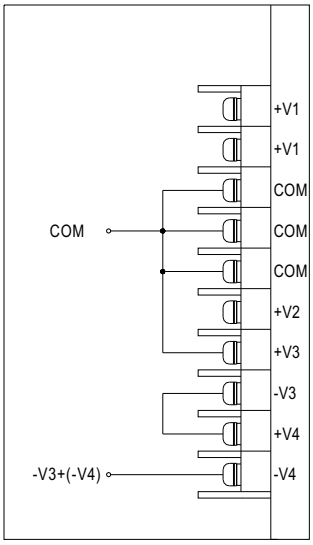


Power Fail Signal

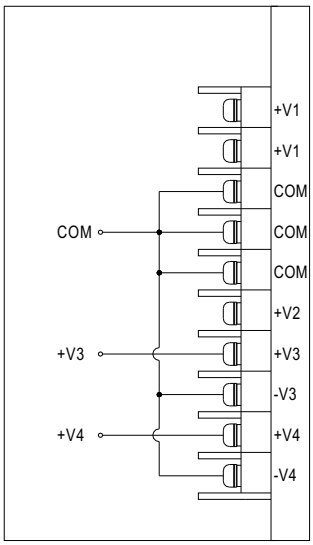
Power ON: When $V_{RC+,RC-}$=0 ~ 0.8V or Open
Power OFF: When $V_{RC+,RC-}$=4 ~ 10V



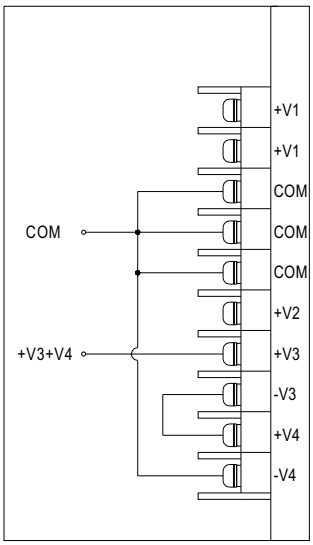
V3,V4 All Negative(-)



V3 Puls Negative(-)



V3,V4 All Positive(+)



V3 Plus V4 Positive(+)