



MEAN WELL

SWITCHING POWER SUPPLY
ISO-9001 CERTIFIED MANUFACTURER

QP-375 SERIES

- .LOW COST, HIGH RELIABILITY
- .105°C OUTPUT CAPACITOR
- .INTERNATIONAL AC INPUT RANGE
- .HIGH EFFICIENCY, LOW WORKING TEMPERATURE
- .SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT
- .SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE PROTECTED
- .ISOLATE CH3 & CH4 DC OUTPUT
- .MAIN OUTPUT REMOTE SENSE
- .POWER GOOD AND FAIL SIGNAL

MODEL	QP-375-5A				QP-375-5B				QP-375-5C			
	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
SPECIFICATION												
DC OUTPUT VOLTAGE	+5V	+12V	12V	12V	+5V	+12V	12V	5V	+5V	+12V	15V	15V
OUTPUT V. TOLERANCE	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
OUTPUT RATED CURRENT	30A	10A	6A	3A	30A	10A	6A	3A	30A	9A	4A	4A
OUTPUT CURRENT RANGE	3.5-40A	0-10A	0-6A	0-3A	3.5-40A	0-10A	0-6A	0-3A	3.5-40A	0-9A	0-4A	0-4A
PEAK CURRENT	40A	16A	6A	3A	40A	16A	6A	3A	40A	16A	4A	4A
RIPPLE & NOISE (p-p)	100mV	150mV	150mV	50mV	100mV	120mV	120mV	50mV	100mV	150mV	150mV	240mV
LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±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%	±0.8%	±0.8%	±0.8%	±0.8%
DC OUTPUT POWER	378W (max.)				357W (max.)				378W (max.)			
EFFICIENCY	77%				77%				77%			
DC VOLTAGE ADJ.	CH1,2,3,4:+10,-5%				CH1,2,3:+10,-5%				CH1,2,3,4:+10,-5%			
INPUT VOLTAGE RANGE	85-264VAC 47-63Hz: 120-370VDC											
AC CURRENT	6A/115V 3A/230V											
POWER FACTOR	PF>0.95/230VAC, PF>0.98/115VAC											
OUTPUT GOOD/INPUT POWER FAIL	10ms/1ms											
INRUSH CURRENT	COLD START 45A											
LEAKAGE CURRENT	<2mA/240VAC											
OVERLOAD PROTECTION	105%~135% TYPE: PULSE BY PULSE RESET: AUTO RECOVERY											
OVER VOLTAGE PROTECTION	CH1:5.75~6.75V TYPE:SHUTDOWN											
OVER TEMP. PROTECTION	80°C±5°C (TSW1)TYPE:SHUTDOWN RESET:AUTO RECOVERY											
REMOTE CONTROL	RC+/RC:-0-0.8V POWER ON ; 4V-10V POWER OFF											
TEMP. COEFFICIENT	±0.03% / °C (0-50°C)											
SETUP, RISE, HOLD UP TIME	800ms, 50ms, 20ms											
VIBRATION	10-500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES											
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:500VDC / 100M Ohms											
WORKING TEMP., HUMIDITY	-10°C~+60°C(REFER TO OUTPUT DERATING CURVE), 20%-90% RH											
STORAGE TEMP., HUMIDITY	-20°C~+85°C, 10%-95% RH											
DIMENSION	278*127*63.5mm											
WEIGHT	2.3Kgs											
SAFETY STANDARDS	UL1950, TUV EN60950 APPROVED											
EMC STANDARDS	CISPR22(EN55022) CLASS B, EN61000-4-2,3,4,5,6,8,11; ENV50204; EN61000-3-2,3 VERIFICATION											

- NOTE :
1. ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25°C 70% RH. AMBIENT.
 2. TOLERANCE : INCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION.
 3. RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR.
 4. LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD.
 5. LOAD REGULATION IS MEASURED FROM 20% TO 100% RATED LOAD, AND OTHER OUTPUT AT 60% RATED LOAD.
 6. PEAK CURRENT CAN NOT EXCEED 60 SEC.
 7. EACH OUTPUT PROVIDE UP TO MAXIMUM CURRENT, BUT TATAL LOAD CAN NOT EXCEED MAX. OUTPUT POWER.
 8. ISOLATED CH3 & CH4 MAYBE SERIES CONNECTED OR CAN BE USED AS POSITIVE OR NEGATIVE OUTPUTS.

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.MAIN OUTPUT REMOTE SENSE
.POWER GOOD AND FAIL SIGNAL

MODEL	QP-375-5D				QP-375-5E			
	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
DC OUTPUT VOLTAGE	+5V	+12V	12V	24V	+5V	+12V	24V	24V
OUTPUT V. TOLERANCE	± 1%	± 1%	± 1%	± 1%	± 1%	± 1%	± 1%	± 1%
OUTPUT RATED CURRENT	30A	9A	4A	3A	30A	9A	3A	2A
OUTPUT CURRENT RANGE	3.5-40A	0-9A	0-4A	0-3A	3.5-40A	0-9A	0-3A	0-2A
PEAK CURRENT	40A	16A	6A	3A	40A	16A	4A	3A
RIPPLE & NOISE	100mVp-p	120mVp-p	120mVp-p	240mVp-p	100mVp-p	120mVp-p	120mVp-p	240mVp-p
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%
DC OUTPUT POWER	378W (max.)				378W (max.)			
EFFICIENCY	78%				78%			
DC VOLTAGE ADJ.	CH1,2,3,4:±10,-5%				CH1,2,3,4:±10,-5%			
INPUT VOLTAGE RANGE	85-264VAC 47-63Hz; 120-370VDC							
AC CURRENT	6A/115V 3A/230V							
POWER FACTOR	PF>0.95/230VAC, PF>0.98/115VAC							
OUTPUT GOOD/INPUT POWER FAIL	10ms/1ms							
INRUSH CURRENT	COLD START 45A							
LEAKAGE CURRENT	<2mA/240VAC							
OVERLOAD PROTECTION	105%-135% TYPE: PULSE BY PULSE RESET: AUTO RECOVERY							
OVER VOLTAGE PROTECTION	CH1:5.75-6.75V TYPE:SHUTDOWN							
OVER TEMP. PROTECTION	80℃-±5℃ (TSW1)TYPE:SHUTDOWN RESET:AUTO RECOVERY							
REMOTE CONTROL	RC+/RC:-0-0.8V POWER ON : 4V-10V POWER OFF							
TEMP. COEFFICIENT	±0.03% / ℃(0-50-℃)							
SETUP, RISE, HOLD UP TIME	800ms, 50ms, 20ms							
VIBRATION	10-500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES							
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:500VDC / 100M Ohms							
WORKING TEMP., HUMIDITY	-10℃-+60℃(REFER TO OUTPUT DERATING CURVE), 20%-90% RH							
STORAGE TEMP., HUMIDITY	-20℃-+85℃, 10%-95% RH							
DIMENSION	278*127*63.5mm							
WEIGHT	2.3Kgs							
SAFETY STANDARDS	UL1950, TUV EN60950 APPROVED							
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3. RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR.
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6. PEAK CURRENT CAN NOT EXCEED 60 SEC.
7. EACH OUTPUT PROVIDE UP TO MAXIMUM CURRENT, BUT TATAL LOAD CAN NOT EXCEED MAX. OUTPUT POWER.
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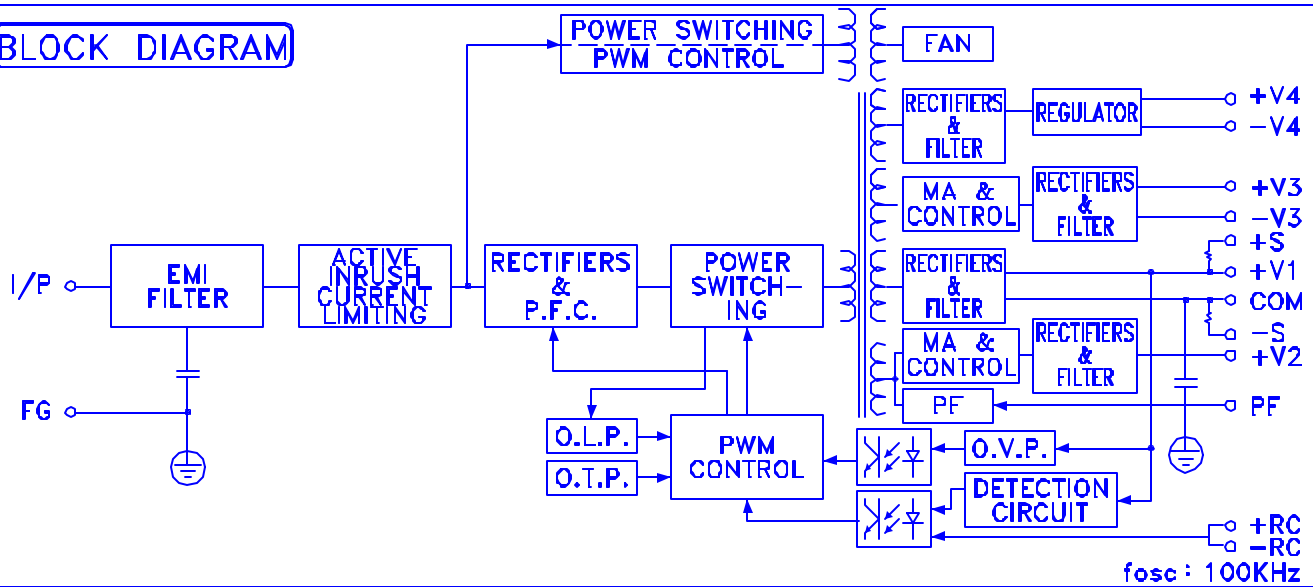
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MODEL	QP-375-24B				QP-375-24C			
	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
DC OUTPUT VOLTAGE	+24V	+5V	12V	12V	+24V	+5V	15V	15V
OUTPUT V. TOLERANCE	± 1%	± 1%	± 1%	± 1%	± 1%	± 1%	± 1%	± 1%
OUTPUT RATED CURRENT	10A	10A	4A	4A	10A	10A	4A	4A
OUTPUT CURRENT RANGE	1-10A	0-10A	0-4A	0-4A	1-10A	0-10A	0-4A	0-4A
PEAK CURRENT	10A	16A	4A	4A	10A	16A	4A	4A
RIPPLE & NOISE (p-p)	240mV	50mV	120mV	120mV	240mV	50mV	150mV	150mV
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%
MAX. DC OUTPUT POWER	386W				410W			
EFFICIENCY	78%				80%			
DC VOLTAGE ADJ.	CH1,2,3,4: ± 10%				CH1,2,3,4: ± 10%			
INPUT VOLTAGE RANGE	85~264VAC 47~63Hz; 120~370VDC							
AC CURRENT	6A/115V 3A/230V							
INRUSH CURRENT	COLD START 45A							
LEAKAGE CURRENT	<2mA/240VAC							
OVERLOAD PROTECTION	105%~135% TYPE:PULSE BY PULSE RESET:AUTO RECOVERY							
OVER VOLTAGE PROTECTION	CH1:27.6~32.4V TYPE:SHUTDOWN							
OVER TEMP. PROTECTION	80°C~ ± 5°C (TSW1)TYPE:SHUTDOWN RESET:AUTO RECOVERY							
TEMP. COEFFICIENT	± 0.03% /°C (0~50°C)							
SETUP, RISE, HOLD UP TIME	800ms, 50ms, 20ms							
POWER FACTOR	PF>0.95/230VAC, PF>0.98/115VAC							
REMOTE CONTROL	RC+/RC-:0~0.8V POWER ON ; 4V~10V POWER OFF							
OUTPUT GOOD/INPUT POWER FAIL	10ms/1ms							
VIBRATION	10~500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES							
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:500VDC / 100M Ohms							
WORKING TEMP., HUMIDITY	-10°C~+60°C(REFER TO OUTPUT DERATING CURVE), 20%~90% RH							
STORAGE TEMP., HUMIDITY	-20°C~+85°C, 10%~95% RH							
DIMENSION	278*127*63.5mm							
WEIGHT	2.3Kgs							
SAFETY STANDARDS	UL1950, TUV EN60950 APPROVED							
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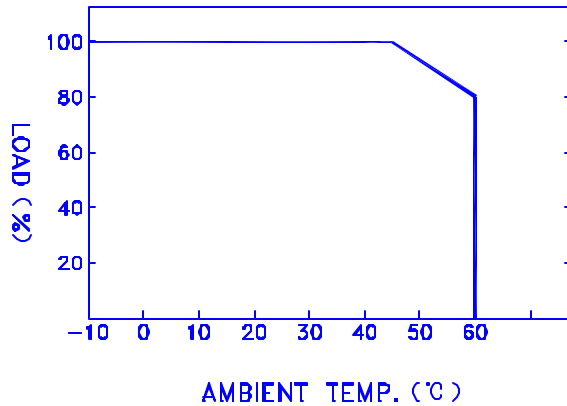
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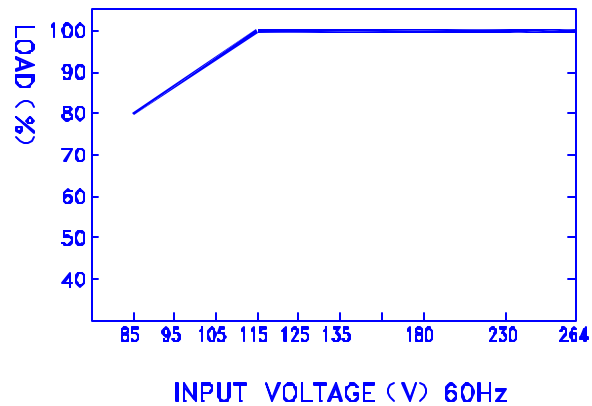
BLOCK DIAGRAM



OUTPUT DERATING VS T_a



OUTPUT DERATING VS INPUT VOLTAGE



DIMENSION (mm)

☒ CASE : 919C

☒ I/P TERMINAL TB1 PIN NO. ASSIGNMENT

☒ PIN 1,2 : AC INPUT

☒ PIN 3 : FG \perp

☒ O/P TERMINAL TB2 PIN NO. ASSIGNMENT

☒ PIN 1,2 : +V1

☒ PIN 3,4,5 : COM(V1 AND V2)

☒ PIN 6 : +V2

☒ PIN 7 : +V3

☒ PIN 8 : -V3

☒ PIN 9 : +V4

☒ PIN 10 : -V4

☒ CONNECTOR CN62 PIN NO. ASSIGNMENT

☒ JST S6B-XH Uses XHP-6 Housing

☒ PIN 1 : PF(POWER GOOD/FAIL SIGNAL)

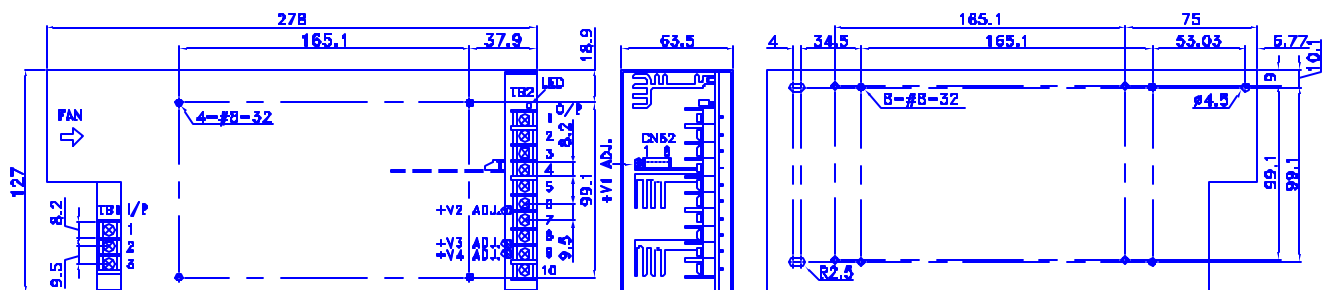
☒ PIN 2 : GND

☒ PIN 3 : RS-

☒ PIN 4 : RS+

☒ PIN 5 : RC-

☒ PIN 6 : RC+



BLOCK DIAGRAM

I/P → EMI FILTER → ACTIVE INRUSH CURRENT LIMITING → RECTIFIERS & P.F.C. → POWER SWITCHING → FAN

FG → EMI FILTER

POWER SWITCHING → PWM CONTROL

PWM CONTROL → O.L.P. → O.T.P.

O.L.P. → O.T.P. → PWM CONTROL

RECTIFIERS & P.F.C. → RECTIFIERS & FILTER → REGULATOR → +V4, -V4

MA & CONTROL → RECTIFIERS & FILTER → +V3, -V3, +S, +V1, COM, -S, +V2

PF → DETECTION CIRCUIT → O.V.P. → PWM CONTROL

+RC, -RC

fosc : 100KHz

OUTPUT DERATING VS T_a

Ambient Temp. (°C)	Load (%)
-10	100
0	100
10	100
20	100
30	100
40	100
50	100
60	0

OUTPUT DERATING VS INPUT VOLTAGE

Input Voltage (V) 60Hz	Load (%)
85	80
95	90
105	95
115	100
125	100
135	100
180	100
230	100
264	100

DIMENSION (mm)

- ☒ CASE : 919C
- ☒ I/P TERMINAL TB1 PIN NO. ASSIGNMENT
 - ☒ PIN 1,2 : AC INPUT
 - ☒ PIN 3 : FG ⚡
- ☒ O/P TERMINAL TB2 PIN NO. ASSIGNMENT
 - ☒ PIN 1,2 : +V1
 - ☒ PIN 3,4,5 : COM(V1 AND V2)
 - ☒ PIN 6 : +V2
 - ☒ PIN 7 : +V3
 - ☒ PIN 8 : -V3
 - ☒ PIN 9 : +V4
 - ☒ PIN 10 : -V4
- ☒ CONNECTOR CN62 PIN NO. ASSIGNMENT
 - ☒ JST S6B-XH Uses XHP-6 Housing
 - ☒ PIN 1 : PF(Power Good/Fail Signal)
 - ☒ PIN 2 : GND
 - ☒ PIN 3 : RS-
 - ☒ PIN 4 : RS+
 - ☒ PIN 5 : RC-
 - ☒ PIN 6 : RC+

Dimensions (mm): 127, 9.5, 8.2, 278, 185.1, 37.9, 165.1, 18.9, 99.1, 63.5, 165.1, 75, 53.03, 6.77, 38.1, 99.1, 10.1, 34.5, 8.2, 4.5, 2.5, 1.2, 1.0, 0.5, 0.2, 0.1, 0.05, 0.02, 0.01.

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