



■ Features :

- AC input 180 ~ 264VAC
- AC input active surge current limiting
- High efficiency up to 91%
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature / Fan alarm
- Forced air cooling by built-in DC with fan speed control function
- Output voltage can be trimmed between 20~110% of the rated output voltage
- High power density 12.5W/inch³
- Current sharing up to 3 units
- Alarm signal output (relay contact and TTL signal)
- Built-in 12V/0.1A auxiliary output for remote control
- Built-in remote ON-OFF control
- Built-in remote sense function
- 5 years warranty

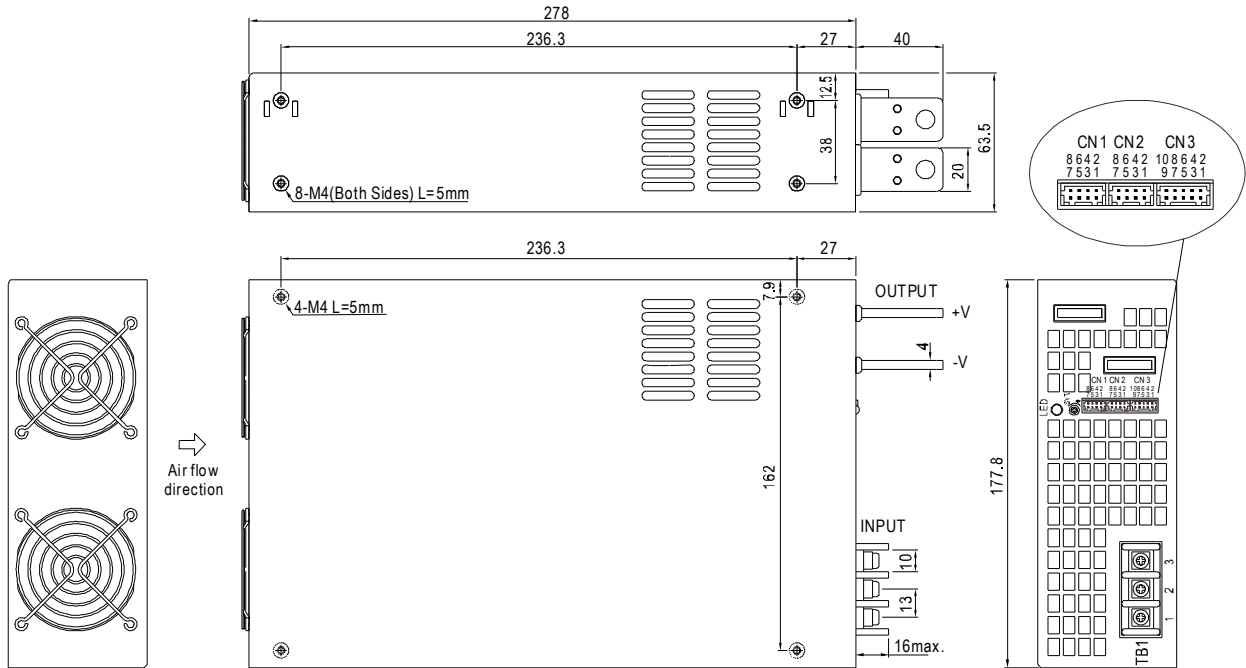


SPECIFICATION

| MODEL | RSP-2400-12 | RSP-2400-24 | RSP-2400-48 | |
|-----------------------|--|--|--------------|--------------|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V |
| | RATED CURRENT | 166.7A | 100A | 50A |
| | CURRENT RANGE | 0 ~ 166.7A | 0 ~ 100A | 0 ~ 50A |
| | RATED POWER | 2000.4W | 2400W | 2400W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE | 10.8 ~ 13.2V | 22 ~ 28V | 43 ~ 56V |
| | VOLTAGE TOLERANCE Note.3 | ± 1.0% | ± 1.0% | ± 1.0% |
| | LINE REGULATION | ± 0.5% | ± 0.5% | ± 0.5% |
| | LOAD REGULATION | ± 0.5% | ± 0.5% | ± 0.5% |
| | SETUP, RISE TIME | 1000ms, 80ms at full load | | |
| HOLD UP TIME (Typ.) | 12ms at full load | | | |
| INPUT | VOLTAGE RANGE | 180 ~ 264VAC | 254 ~ 370VDC | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | 0.95/230VAC at full load | | |
| | EFFICIENCY (Typ.) | 87% | 90% | 91% |
| | AC CURRENT (Typ.) | 15.5A/180VAC | 12A/230VAC | |
| | INRUSH CURRENT (Typ.) | 60A/230VAC | | |
| LEAKAGE CURRENT | <2.0mA / 240VAC | | | |
| PROTECTION | OVERLOAD | 100 ~ 112% rated output power User adjustable continuous constant current limiting or constant current limiting with delay shutdown after 5 seconds, re-power on to recover | | |
| | OVER VOLTAGE | 13.8 ~ 16.8V | 28.8 ~ 33.6V | 57.6 ~ 67.2V |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | |
| FUNCTION | AUXILIARY POWER(AUX) | 12V@0.1A(Only for Remote ON/OFF control) | | |
| | REMOTE ON/OFF CONTROL | Please see the Function Manual | | |
| | ALARM SIGNAL OUTPUT | Please see the Function Manual | | |
| | OUTPUT VOLTAGE TRIM Note.5 | 2.4 ~ 13.2V | 4.8 ~ 28V | 9.6 ~ 56V |
| | CURRENT SHARING | Please see the Function Manual | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +70°C (Refer to "Derating Curve") | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | |
| | TEMP. COEFFICIENT | ± 0.05%/°C (0 ~ 50°C) | | |
| | 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:2KVAC O/P-FG:0.5KVAC | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH | | |
| | EMC EMISSION | Compliance to EN55022 (CISPR22) Conduction Class B, Radiation Class A ; 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 | 106.7K hrs min. MIL-HDBK-217F (25°C) | | |
| | DIMENSION | 278*177.8*63.5mm (L*W*H) | | |
| | PACKING | 3.3Kg; 4pcs/14.2Kg/1.89CUFT | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>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)</p> <p>5. Can't use the PWM signal to control the output voltage.</p> <p>6. PV(PIN3) and PS(PIN4) of CN1 or CN2 must be shorted if "Output Voltage TRIM" function is not used. Otherwise, the power supply unit will have no output.</p> | | | |

Mechanical Specification

Case No.982B Unit:mm



AC Input Terminal Pin No. Assignment

| Pin No. | Assignment |
|---------|------------|
| 1 | AC/L |
| 2 | AC/N |
| 3 | FG \perp |

Control Pin No. Assignment(CN1,CN2) : HRS DF11-8DP-2DS or equivalent

| Pin No. | Assignment | Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|---------|-------------------|----------------------------|-----------------------------|
| 1 | RCG | 5,7 | -S | HRS DF11-8DS or equivalent | HRS DF11-**SC or equivalent |
| 2 | RC | 6 | CS(Current Share) | | |
| 3 | PV | 8 | +S | | |
| 4 | PS | | | | |

RCG: Remote ON/OFF Ground -S: -Remote Sensing
 RC : Remote ON/OFF CS: Load Share
 PV :Output Voltage External Control +S: +Remote Sensing
 PS : Reference Voltage Terminal
 PV and PS are shorted when shipping (Note.6)

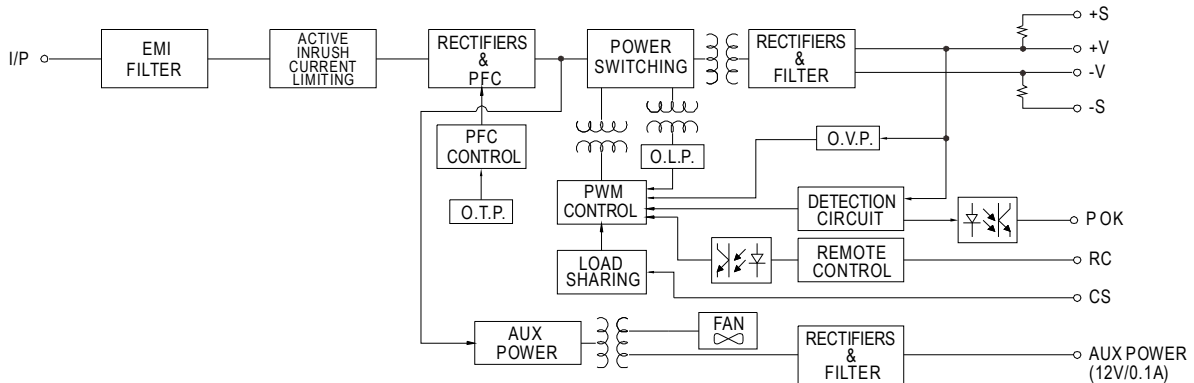
Control Pin No. Assignment(CN3) : HRS DF11-10DP-2DS or equivalent

| Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|---------|------------|---------|------------|---------|------------|-----------------------------|-----------------------------|
| 1 | P OK GND | 4 | P OK2 | 7 | AUXG | 10 | OL-SD | HRS DF11-10DS or equivalent | HRS DF11-**SC or equivalent |
| 2 | P OK | 5 | RCG | 8 | AUX | | | | |
| 3 | P OK GND2 | 6 | RC | 9 | OLP | | | | |

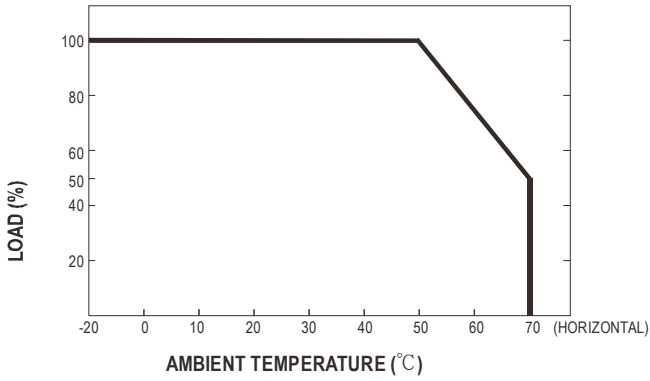
P OK GND: Power OK Ground RCG: Remote ON/OFF Ground AUX: Auxiliary Output
 P OK: Power OK Signal (Relay Contact) RC: Remote ON/OFF OLP: OLP mode select
 P OK2: Power OK Signal (TTL Signal) AUXG: Auxiliary Ground OL-SD: OLP mode select

PFC fosc : 88KHz
 PWM fosc : 100KHz

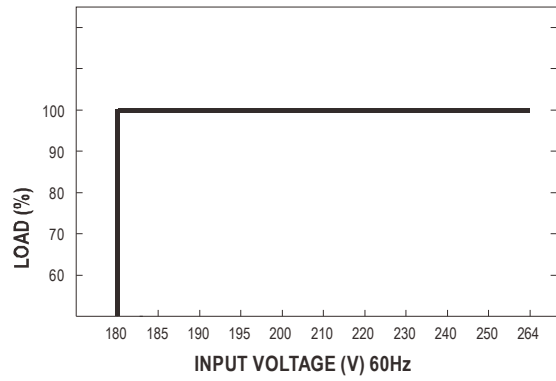
Block Diagram



Derating Curve



Static Characteristics



Function Manual

1.Remote ON/OFF

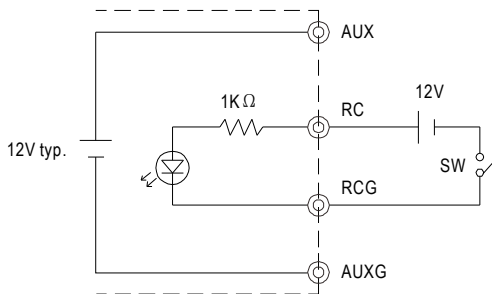
- (1) Remote ON/OFF control becomes available by applying voltage in CN1 & CN2 & CN3.
- (2) Table 1.1 shows the specification of Remote ON/OFF function.
- (3) Fig.1.2 shows the example to connect Remote ON/OFF control function.

Table 1.1 Specification of Remote ON/OFF

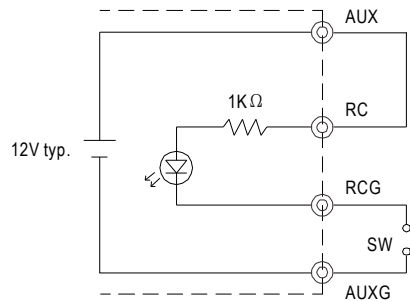
| Connection Method | Fig. 1.2(A) | Fig. 1.2(B) | Fig. 1.2(C) |
|-------------------|-------------|-------------|-------------|
| SW Logic | Output on | SW Open | SW Close |
| | Output off | SW Close | SW Open |

Fig.1.2 Examples of connecting remote ON/OFF

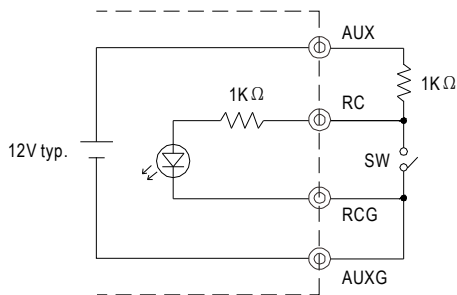
(A) Using external voltage source



(B) Using internal 12V auxiliary output



(C) Using internal 12V auxiliary output



2. Alarm Signal Output

- (1) Alarm signal is sent out through "P OK" & "P OK GND" and P OK2 & P OK GND2 pins.
- (2) An external voltage source is required for this function.
- (3) Table 2.1 explains the alarm function built-in the power supply.

| Function | Description | Output of alarm(P OK, Relay Contact) | Output of alarm(P OK2, TTL Signal) |
|----------|---|--|---|
| P OK | The signal is "Low" when the power supply is above 80% of the rated output voltage-Power OK | Low (0.5V max at 500mA) | Low (0.5V max at 10mA) |
| | The signal turns to be "High" when the power supply is under 80% of the rated output voltage-Power Fail | High or open (External applied voltage, 500mA max.) | High or open (External applied voltage, 10mA max.) |

Table 2.1 Explanation of alarm

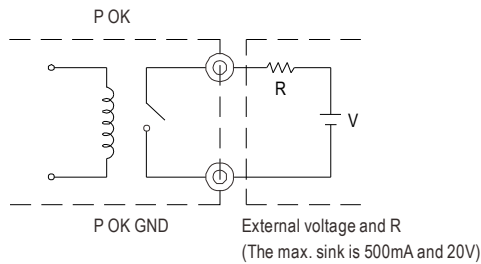


Fig. 2.2 Internal circuit of P OK (Relay, total is 10W)

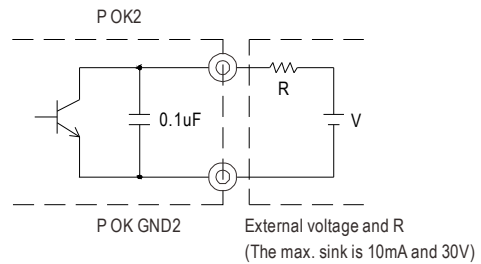


Fig. 2.3 Internal circuit of P OK2 (Open collector method)

3. Output Voltage TRIM

- (1) Connecting an external DC source between PV & -S on CN1 or CN2, and +S & +V, -S & -V also need to be connected that is shown in Fig. 3.1.
- (2) Adjustment of output voltage is possible between 20~110%(Typ.) of the rated output which is shown in Fig. 3.2. Reducing output current is required when the output voltage is trimmed up.

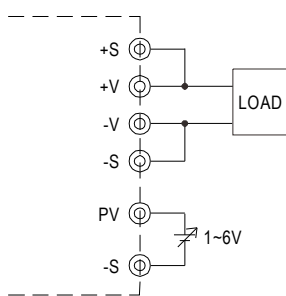


Fig. 3.1 Add on 1-6V external voltage

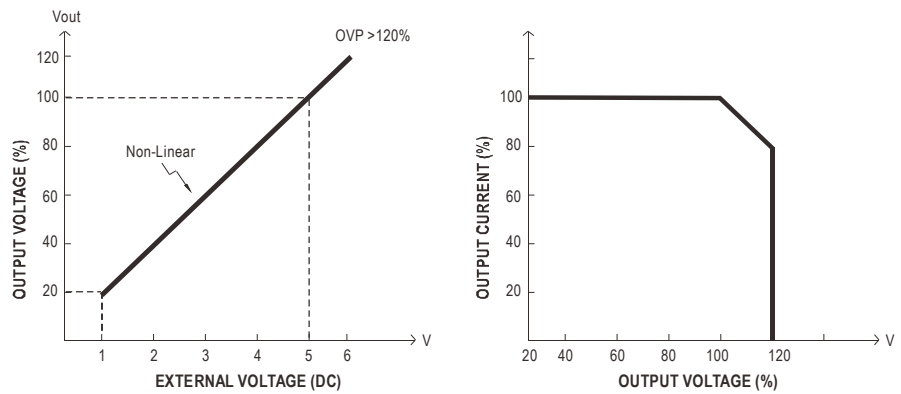
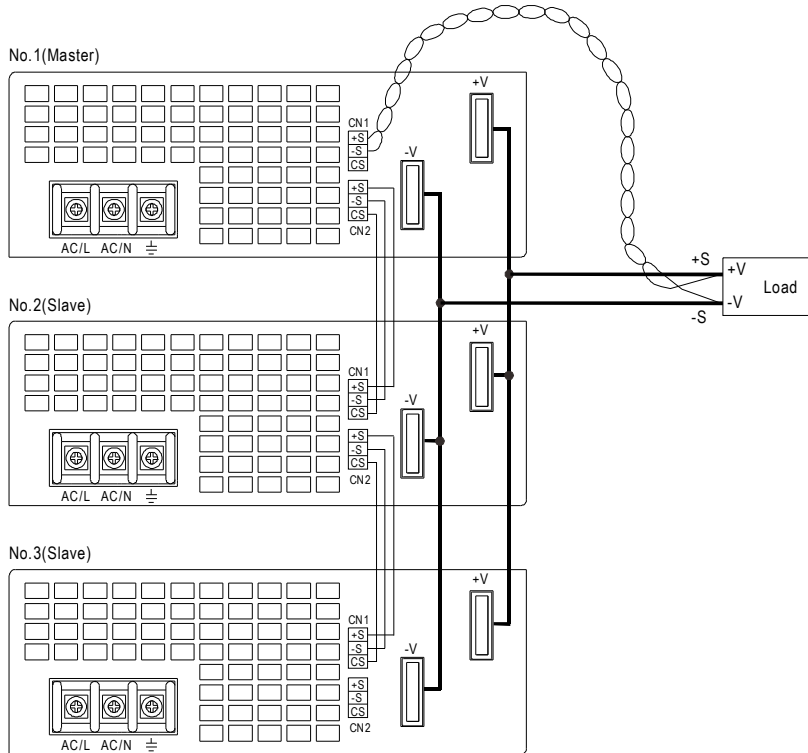


Fig. 3.2 Output voltage trimming

4. Current Sharing

- (1) Parallel operation is available by connecting the units shown as below (+S, -S and CS are connected mutually in parallel):
- (2) The voltage difference among each output should be minimized that less than 0.2V is required.
- (3) The total output current must not exceed the value determined by the following equation.
(Output current at parallel operation) = (The rated current per unit) × (Number of unit) × 0.9
- (4) In parallel operation 3 units is the maximum, please consult the manufacturer for other applications.
- (5) When remote sensing is used in parallel operation, the sensing wire must be connected only to the master unit.
- (6) Wires of remote sensing should be kept at least 10 cm from input wires.



- (7) Under parallel operation, the "output voltage trim" function is not available.
- (8) When in parallel operation, the minimum output load should be greater than 3% of total output load (Min. Load > 3% rated current per unit × number of unit)

5. Select O.L.P mode

- (1) Remove the shorting connector on CN3 that is shown in Fig 5.1, the O.L.P. mode will be "continuous constant current limiting".
- (2) Insert the shorting connector on CN3 that is shown in Fig 5.2, the O.L.P. mode will be "constant current limiting with delay shutdown after 5 seconds, re-power on to recover".

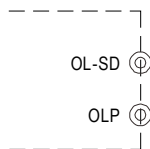


Fig. 5.1 Remove the CN3
OLP Mode : constant current limiting

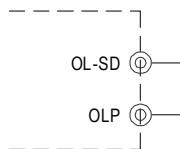
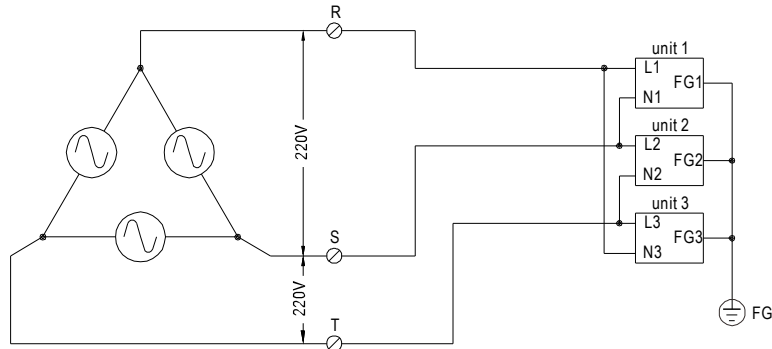


Fig. 5.2 Insert the CN3
OLP Mode : constant current limiting with delay shutdown after 5 seconds

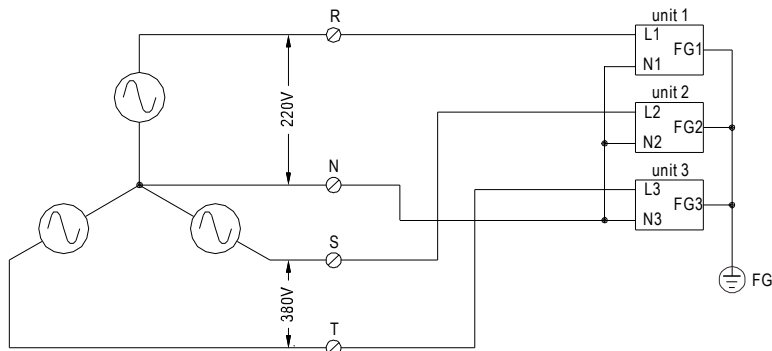
6. Three Phase Connect

Users can exploit three units of RSP-2400(unit 1 ,unit 2,unit 3) to work with 3 ψ power system. Please refer to following diagrams for configuration.

■ FIG. A: 3 ψ 3W 220VAC SYSTEM (STANDARD MODEL FOR STOCK)



■ FIG. B: 3 ψ 4W 220/380VAC SYSTEM



■ FIG. C: 3 ψ 4W 190/110VAC SYSTEM

