



## 75W Single Output with PFC Function

## HRP-75 series



### ■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage
- Protections: Over temperature (optional)
- Cooling by free air convection
- 1U low profile 38mm
- Built-in remote ON-OFF control
- No load power consumption<0.5W
- All using 105°C long life electrolytic capacitors
- 5 years warranty



UL62368-1 EN62368-1 TPTC004 IEC62368-1

### SPECIFICATION

| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | HRP-75-3.3                                                                                                                                                                               | HRP-75-5   | HRP-75-7.5  | HRP-75-12    | HRP-75-15    | HRP-75-24    | HRP-75-36    | HRP-75-48    |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|--------------|--------------|--------------|--------------|--------------|
| OUTPUT                   | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.3V                                                                                                                                                                                     | 5V         | 7.5V        | 12V          | 15V          | 24V          | 36V          | 48V          |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 15A                                                                                                                                                                                      | 15A        | 10A         | 6.3A         | 5A           | 3.2A         | 2.1A         | 1.6A         |
|                          | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0 ~ 15A                                                                                                                                                                                  | 0 ~ 15A    | 0 ~ 10A     | 0 ~ 6.3A     | 0 ~ 5A       | 0 ~ 3.2A     | 0 ~ 2.1A     | 0 ~ 1.6A     |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 49.5W                                                                                                                                                                                    | 75W        | 75W         | 75.6W        | 75W          | 76.8W        | 75.6W        | 76.8W        |
|                          | RIPPLE & NOISE (max.) Note.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 80mVp-p                                                                                                                                                                                  | 80mVp-p    | 100mVp-p    | 120mVp-p     | 150mVp-p     | 150mVp-p     | 200mVp-p     | 240mVp-p     |
|                          | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3.1 ~ 3.8V                                                                                                                                                                               | 4.7 ~ 5.8V | 7.1 ~ 9V    | 11 ~ 13.8V   | 14.2 ~ 18V   | 21.6 ~ 28.8V | 32 ~ 39.6V   | 45 ~ 55.2V   |
|                          | VOLTAGE TOLERANCE Note.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ± 2.5%                                                                                                                                                                                   | ± 2.5%     | ± 2.5%      | ± 1.5%       | ± 1.5%       | ± 1.5%       | ± 1.5%       | ± 1.5%       |
|                          | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ± 1.0%                                                                                                                                                                                   | ± 1.0%     | ± 1.0%      | ± 0.3%       | ± 0.3%       | ± 0.2%       | ± 0.2%       | ± 0.2%       |
|                          | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ± 2.0%                                                                                                                                                                                   | ± 2.0%     | ± 1.5%      | ± 1.0%       | ± 0.5%       | ± 0.5%       | ± 0.5%       | ± 0.5%       |
|                          | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1800ms, 25ms/230VAC      1800ms, 25ms/115VAC at full load                                                                                                                                |            |             |              |              |              |              |              |
| HOLD UP TIME (Typ.)      | 50ms/230VAC      20ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                          |            |             |              |              |              |              |              |
| INPUT                    | VOLTAGE RANGE Note.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 85 ~ 264VAC      120 ~ 370VDC                                                                                                                                                            |            |             |              |              |              |              |              |
|                          | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 47 ~ 63Hz                                                                                                                                                                                |            |             |              |              |              |              |              |
|                          | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PF>0.9/230VAC      PF>0.95/115VAC at full load                                                                                                                                           |            |             |              |              |              |              |              |
|                          | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 77%                                                                                                                                                                                      | 82.5%      | 84%         | 87%          | 88%          | 88.5%        | 89%          | 89%          |
|                          | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.9A/115VAC      0.5A/230VAC                                                                                                                                                             |            |             |              |              |              |              |              |
|                          | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 35A/115VAC      65A/230VAC                                                                                                                                                               |            |             |              |              |              |              |              |
|                          | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <1mA / 240VAC                                                                                                                                                                            |            |             |              |              |              |              |              |
| PROTECTION               | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 105 ~ 135% rated output power<br>Protection type : Constant current limiting, switch to hiccup mode for Vo<50% of rated voltage, recovers automatically after fault condition is removed |            |             |              |              |              |              |              |
|                          | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3.96 ~ 4.62V                                                                                                                                                                             | 6 ~ 7V     | 9.4 ~ 10.9V | 14.4 ~ 16.8V | 18.8 ~ 21.8V | 30 ~ 34.8V   | 41.4 ~ 48.6V | 57.6 ~ 67.2V |
|                          | OVER TEMPERATURE (OPTIONAL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Shut down o/p voltage, recovers automatically after temperature goes down                                                                                                                |            |             |              |              |              |              |              |
| FUNCTION                 | REMOTE CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RC+ / RC-: 0 ~ 0.8V = power on ; 4 ~ 10V = power off                                                                                                                                     |            |             |              |              |              |              |              |
| ENVIRONMENT              | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -40 ~ +70°C (Refer to "Derating Curve")                                                                                                                                                  |            |             |              |              |              |              |              |
|                          | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20 ~ 90% RH non-condensing                                                                                                                                                               |            |             |              |              |              |              |              |
|                          | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -40 ~ +85°C, 10 ~ 95% RH                                                                                                                                                                 |            |             |              |              |              |              |              |
|                          | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±0.03%/°C (0 ~ 50°C )                                                                                                                                                                    |            |             |              |              |              |              |              |
|                          | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                                             |            |             |              |              |              |              |              |
| SAFETY & EMC<br>(Note 4) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | UL62368-1, TUV EN62368-1, AS/NZS62368.1, EAC TP TC 004 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 EN55032 (CISPR32) Class B, EN61000-3-2, -3, EAC TP TC 020                                                                                                                  |            |             |              |              |              |              |              |
|                          | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2, heavy industry level, criteria A, EAC TP TC 020                                                                      |            |             |              |              |              |              |              |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 394.8K hrs min.      MIL-HDBK-217F (25°C)                                                                                                                                                |            |             |              |              |              |              |              |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 129*98*38mm (L*W*H)                                                                                                                                                                      |            |             |              |              |              |              |              |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.47Kg; 30pcs/ 15Kg/ 0.97CUFT                                                                                                                                                            |            |             |              |              |              |              |              |
| NOTE                     | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> )<br>5. Derating may be needed under low input voltages. Please check the derating curve for more details.<br>6. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.<br>7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). |                                                                                                                                                                                          |            |             |              |              |              |              |              |

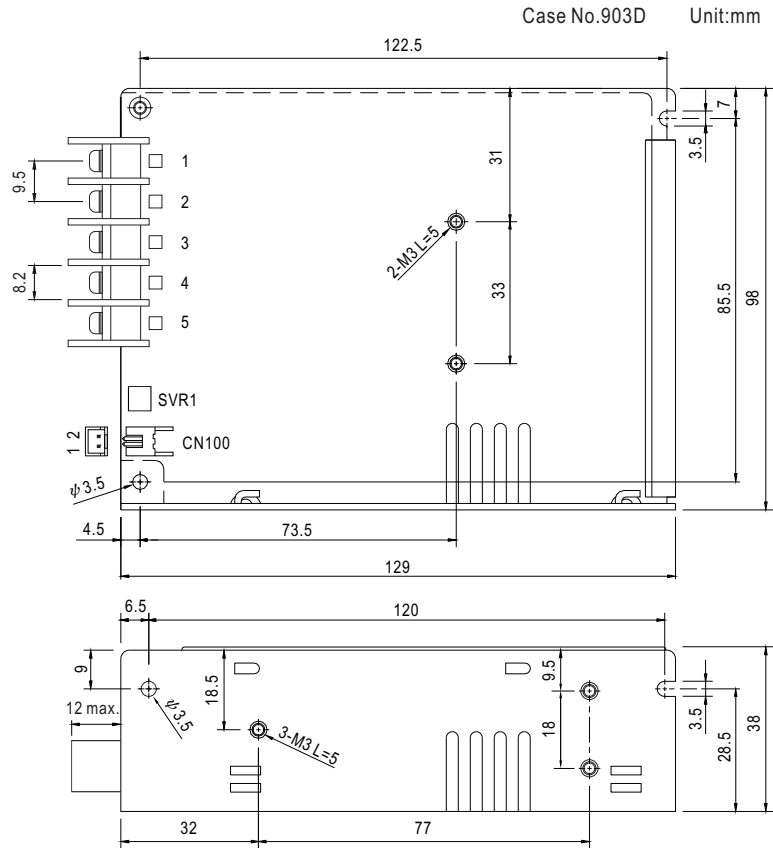
## Mechanical Specification

Terminal Pin No. Assignment

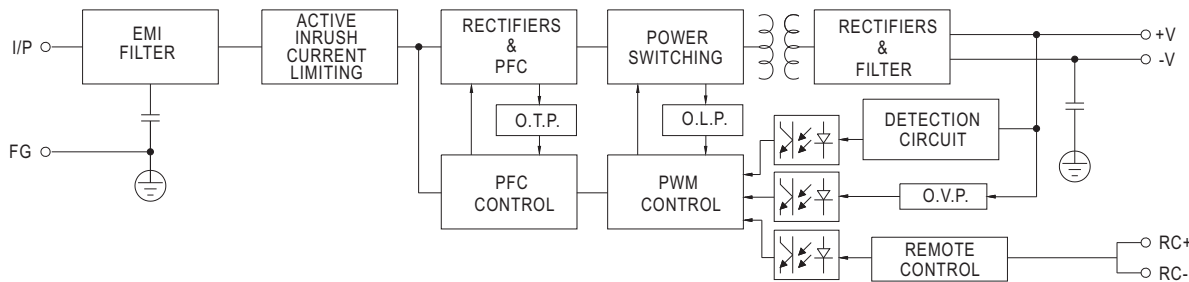
| Pin No. | Assignment | Pin No. | Assignment   |
|---------|------------|---------|--------------|
| 1       | AC/L       | 4       | DC OUTPUT -V |
| 2       | AC/N       | 5       | DC OUTPUT +V |
| 3       | FG         |         |              |

Remote ON/OFF (CN100) : JST B-XH or equivalent

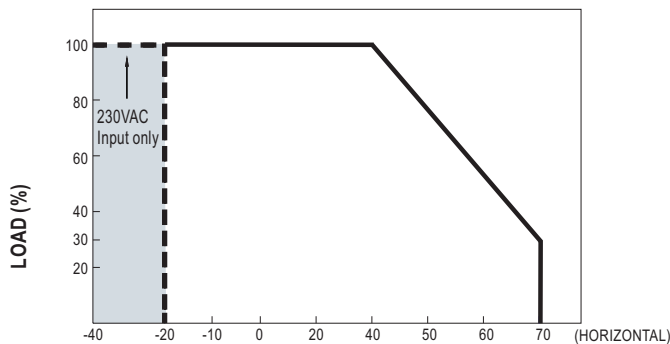
| Pin No. | Assignment | Mating Housing        | Terminal                   |
|---------|------------|-----------------------|----------------------------|
| 1       | RC-        | JST XHP or equivalent | JST SXH-001T or equivalent |
| 2       | RC+        |                       |                            |



## Block Diagram



## Derating Curve



AMBIENT TEMPERATURE (°C)  
※-40°C start up possible for 230VAC input

## Output Derating VS Input Voltage

