

## Datasheet

### RS 75.6W, 1 Output, Embedded Switch Mode Power Supply (SMPS), 24V dc, 3.15A

RS Stock number 721-1752

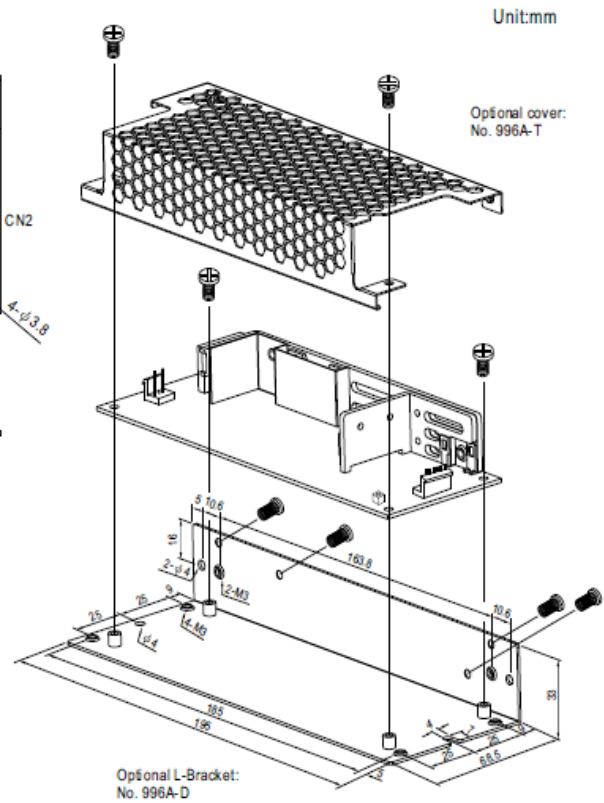
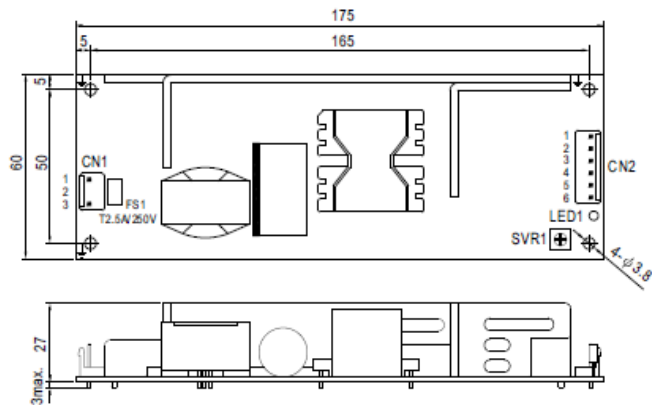


#### ■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- High efficiency up to 90%
- **Optional L-Bracket and cover (ELP-75-x-C, x=3.3,5,12,15,24,36,48)**
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 1U low profile
- LED indicator for power on
- No load power consumption<0.5W

| MODEL                 |   | ELP-75-3.3  | ELP-75-5    | ELP-75-12    | ELP-75-15                   | ELP-75-24    | ELP-75-36    | ELP-75-48    |  |
|-----------------------|---|---|-------------|--------------|-----------------------------|--------------|--------------|--------------|--|
| OUTPUT                | DC VOLTAGE                              | 3.3V  | 5V          | 12V          | 15V                         | 24V          | 36V          | 48V          |  |
|                       | RATED CURRENT                           | 15A   | 15A         | 6.25A        | 5A                          | 3.15A        | 2.1A         | 1.6A         |  |
|                       | CURRENT RANGE                           | 0 ~ 15A   | 0 ~ 15A     | 0 ~ 6.25A    | 0 ~ 5A                      | 0 ~ 3.15A    | 0 ~ 2.1A     | 0 ~ 1.6A     |  |
|                       | RATED POWER                             | 49.5W   | 75W         | 75W          | 75W                         | 75.6W        | 75.6W        | 76.8W        |  |
|                       | RIPPLE & NOISE (max.) Note.2            | 80mVp-p   | 80mVp-p     | 120mVp-p     | 150mVp-p                    | 240mVp-p     | 280mVp-p     | 300mVp-p     |  |
|                       | VOLTAGE ADJ. RANGE                      | 3 ~ 3.6V  | 4.75 ~ 5.5V | 10.8 ~ 13.2V | 13.5 ~ 16.5V                | 21.6 ~ 26.4V | 32.4 ~ 39.6V | 43.2 ~ 52.8V |  |
|                       | VOLTAGE TOLERANCE Note.3                | ±3.0%   | ±2.0%       | ±2.0%        | ±2.0%                       | ±1.0%        | ±1.0%        | ±1.0%        |  |
|                       | LINE REGULATION                         | ±0.5%   | ±0.5%       | ±0.5%        | ±0.5%                       | ±0.5%        | ±0.5%        | ±0.5%        |  |
|                       | LOAD REGULATION                         | ±2.0%   | ±1.5%       | ±1.0%        | ±1.0%                       | ±1.0%        | ±1.0%        | ±1.0%        |  |
|                       | SETUP, RISE TIME                        | 2500ms, 50ms/230VAC    2500ms, 50ms/115VAC at full load   |             |              |                             |              |              |              |  |
| HOLD UP TIME (Typ.)   | 20ms/230VAC    20ms/115VAC at full load |   |             |              |                             |              |              |              |  |
| INPUT                 | VOLTAGE RANGE Note.6                    | 90 ~ 264VAC   |             | 127 ~ 370VDC |                             |              |              |              |  |
|                       | FREQUENCY RANGE                         | 47 ~ 63Hz   |             |              |                             |              |              |              |  |
|                       | POWER FACTOR (Typ.) Note.5              | PF>0.95/230VAC  |             |              | PF>0.98/115VAC at full load |              |              |              |  |
|                       | EFFICIENCY (Typ.)                       | 80%   | 82%         | 89%          | 90%                         | 90%          | 90%          | 90%          |  |
|                       | AC CURRENT (Typ.)                       | 1.8A/115VAC   |             | 1A/230VAC    |                             |              |              |              |  |
|                       | INRUSH CURRENT (Typ.)                   | COLD START 60A/230VAC   |             |              |                             |              |              |              |  |
|                       | LEAKAGE CURRENT                         | <1mA/240VAC   |             |              |                             |              |              |              |  |
| PROTECTION            | OVER LOAD                               | 105 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |             |              |                             |              |              |              |  |
|                       | OVER VOLTAGE                            | 3.7 ~ 4.45V   | 5.6 ~ 6.75V | 13.8 ~ 16.2V | 17.25 ~ 20.25V              | 27.6 ~ 32.4V | 39.7 ~ 46.8V | 53.3 ~ 64.8V |  |
| ENVIRONMENT           | WORKING TEMP.                           | -30 ~ +70°C (Refer to output load 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, 2G 10min./1cycle, period for 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    IP-FG:1.5KVAC    O/P-FG:0.5KVAC  |             |              |                             |              |              |              |  |
|                       | ISOLATION RESISTANCE                    | I/P-O/P, IP-FG, O/P-FG:100M Ohms / 500VDC / 500VDC / 25°C / 70% RH  |             |              |                             |              |              |              |  |
|                       | EMICONDUCTION & RADIATION               | Compliance to EN55022 (CISPR22) Class B   |             |              |                             |              |              |              |  |
|                       | HARMONIC CURRENT                        | Compliance to EN61000-3-2,-3  |             |              |                             |              |              |              |  |
|                       | EMS IMMUNITY                            | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, heavy industry level, criteria A                             |             |              |                             |              |              |              |  |
| OTHERS                | MTBF                                    | 345.3Khrs min.    MIL-HDBK-217F (25°C)  |             |              |                             |              |              |              |  |
|                       | DIMENSION                               | PCB:175*60*27mm (L*W*H) with optional CASE:195*68.5*33mm (L*W*H)  |             |              |                             |              |              |              |  |
|                       | PACKING                                 | PCB:0.25Kg; 48pcs/13Kg/0.85CUFT with optional CASE:0.54Kg; 25pcs/14.5Kg/0.59CUFT  |             |              |                             |              |              |              |  |

**Mechanical Specification**



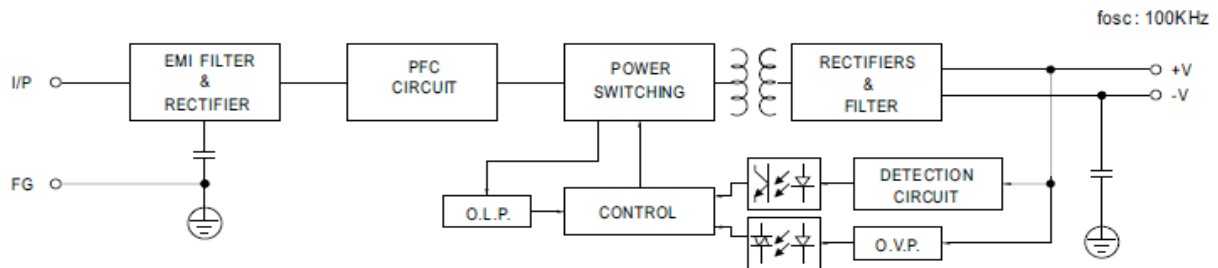
AC Input Connector (CN1) : JST B3P-VH or equivalent

| Pin No. | Assignment | Mating Housing       | Terminal                       |
|---------|------------|----------------------|--------------------------------|
| 1       | AC/L       | JSTVHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 2       | No Pin     |                      |                                |
| 3       | AC/N       |                      |                                |

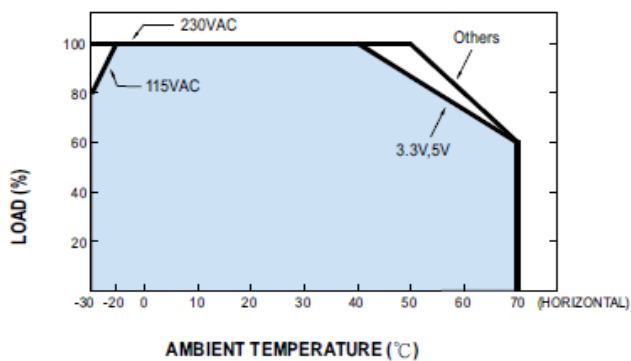
DC Output Connector (CN2) : JST B6P-VH or equivalent

| Pin No. | Assignment | Mating Housing       | Terminal                       |
|---------|------------|----------------------|--------------------------------|
| 1,2,3   | -V         | JSTVHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 4,5,6   | +V         |                      |                                |

**Block Diagram**



**Output Derating**



**Output Derating VS Input Voltage**

