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# SPS-N080-Tx Series

## Triple Output



159 x 95 x 38 mm

6.26 x 3.74 x 1.50 inch



### Features:

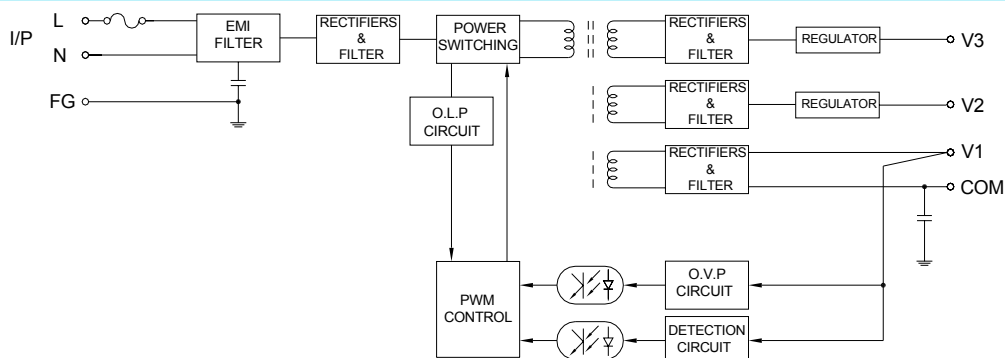
|                                                       |  |
|-------------------------------------------------------|--|
| * Altitude during operation up to 9843ft ( 3000m )    |  |
| * Power ON with LED indicator                         |  |
| * Built in EMI filter, low ripple noise               |  |
| * Over voltage 、 over load & short circuit protection |  |
| * 100% full load burn-in test                         |  |
| * -20℃~70℃ Operating temperature                      |  |
| * UL, cUL, CB, CE approved                            |  |
| * 3 years warranty                                    |  |

### Specification:

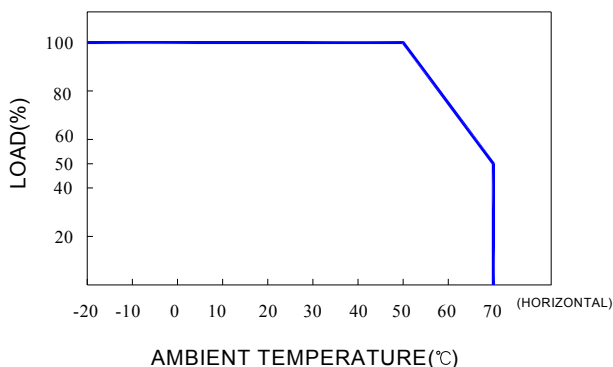
|                                |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                |               |       |              |                                                                           |       |                                         |       |       |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------|--------------|---------------------------------------------------------------------------|-------|-----------------------------------------|-------|-------|
| INPUT                          | Voltage                                                                                                                                                                                                                                                                                                                                    | 88V ~ 264VAC universal full range or 125V ~ 375VDC.                                                                                                            |               |       |              |                                                                           |       |                                         |       |       |
|                                | Frequency                                                                                                                                                                                                                                                                                                                                  | 47 ----- 63 Hz                                                                                                                                                 |               |       |              |                                                                           |       |                                         |       |       |
|                                | Current                                                                                                                                                                                                                                                                                                                                    | <2.5A@100V AC input, full load condition                                                                                                                       |               |       |              |                                                                           |       |                                         |       |       |
|                                | Inrush Current (TYP.)                                                                                                                                                                                                                                                                                                                      | 35A@115V , 70A@230V AC input, Cold start at 25℃ ambient                                                                                                        |               |       |              |                                                                           |       |                                         |       |       |
|                                | Leakage Current                                                                                                                                                                                                                                                                                                                            | <1.0mA @264V AC input                                                                                                                                          |               |       |              |                                                                           |       |                                         |       |       |
| OUTPUT                         | MODEL No.                                                                                                                                                                                                                                                                                                                                  | SPS-N080-T2                                                                                                                                                    |               |       | SPS-N080-T3  |                                                                           |       | SPS-N080-T4                             |       |       |
|                                | Output                                                                                                                                                                                                                                                                                                                                     | V1                                                                                                                                                             | V2            | V3    | V1           | V2                                                                        | V3    | V1                                      | V2    | V3    |
|                                | Voltage                                                                                                                                                                                                                                                                                                                                    | 5V                                                                                                                                                             | 12V           | -12V  | 5V           | 15V                                                                       | -15V  | 5V                                      | 12V   | 24V   |
|                                | Min Load                                                                                                                                                                                                                                                                                                                                   | 0.5A                                                                                                                                                           | 0A            | 0A    | 0.5A         | 0A                                                                        | 0A    | 0.5A                                    | 0A    | 0A    |
|                                | Max Load                                                                                                                                                                                                                                                                                                                                   | 8A                                                                                                                                                             | 4A            | 1A    | 8A           | 3.5A                                                                      | 1A    | 8A                                      | 3.5A  | 1.5A  |
|                                | Output Tolerance ②                                                                                                                                                                                                                                                                                                                         | ±3%                                                                                                                                                            | ±6%           | ±5%   | ±3%          | ±6%                                                                       | ±5%   | ±3%                                     | ±6%   | ±6%   |
|                                | Ripple Noise MAX. ③                                                                                                                                                                                                                                                                                                                        | 80mV                                                                                                                                                           | 120mV         | 150mV | 80mV         | 150mV                                                                     | 200mV | 80mV                                    | 120mV | 240mV |
|                                | Efficiency (TYP.)                                                                                                                                                                                                                                                                                                                          | 79%                                                                                                                                                            |               |       | 80%          |                                                                           |       | 82%                                     |       |       |
|                                | Output MAX.                                                                                                                                                                                                                                                                                                                                | 80W                                                                                                                                                            |               |       | 80W          |                                                                           |       | 82W                                     |       |       |
| PROTECTION                     | Over Voltage                                                                                                                                                                                                                                                                                                                               | V1 : 5.8 ~ 7.0V : Shutdown and latch off, recover after re-start up or Auto Recovery.                                                                          |               |       |              |                                                                           |       |                                         |       |       |
|                                | Over Load & Short Circuit                                                                                                                                                                                                                                                                                                                  | When power supply over 105%~ 150% max load or short circuit acted, power supply will go into hiccup mode and recover automatically after the fault is removed. |               |       |              |                                                                           |       |                                         |       |       |
| ELEC. CHAR.                    | Rise time                                                                                                                                                                                                                                                                                                                                  | <30mS                                                                                                                                                          |               |       |              |                                                                           |       |                                         |       |       |
|                                | Hold up time (TYP.)                                                                                                                                                                                                                                                                                                                        | >50mS@230V, >10mS@115V full load condition                                                                                                                     |               |       |              |                                                                           |       |                                         |       |       |
|                                | Setup time                                                                                                                                                                                                                                                                                                                                 | <1 Sec@100 ~ 240V AC                                                                                                                                           |               |       |              |                                                                           |       |                                         |       |       |
| ENVIRONMENT                    | Temperature ④                                                                                                                                                                                                                                                                                                                              | Operating: -20 ~ +70℃ ; De-rating: 50 ~ 70℃: 2.5%/℃ ; Storage: -40 ~ +85℃                                                                                      |               |       |              |                                                                           |       |                                         |       |       |
|                                | Humidity                                                                                                                                                                                                                                                                                                                                   | Operating: 20% ~ 90% RH (non condensing) ; Storage: 10% ~ 95% RH (non condensing)                                                                              |               |       |              |                                                                           |       |                                         |       |       |
|                                | Altitude                                                                                                                                                                                                                                                                                                                                   | 9843 ft ( ≐ 3000 m ) operating                                                                                                                                 |               |       |              |                                                                           |       |                                         |       |       |
| SAFETY                         | Withstand voltage                                                                                                                                                                                                                                                                                                                          | I/P-O/P:3KVAC, I/P-FG:1.8KVAC, O/P-FG:0.5KVAC, 1minute                                                                                                         |               |       |              |                                                                           |       |                                         |       |       |
|                                | Isolation resistance                                                                                                                                                                                                                                                                                                                       | I/P-O/P, I/P-FG, O/P-FG >100MΩ/500VDC at 25℃/ 70% RH                                                                                                           |               |       |              |                                                                           |       |                                         |       |       |
|                                | Safety standard                                                                                                                                                                                                                                                                                                                            | UL 62368-1 2 <sup>nd</sup> Ed, 2014-12-01, CAN/CSA C22.2 No. 62368-1-14, 2 <sup>nd</sup> Ed, Issued: 2014-12-01, IEC 62368-1:2014                              |               |       |              |                                                                           |       |                                         |       |       |
| EMC                            | EMI                                                                                                                                                                                                                                                                                                                                        | Test Items                                                                                                                                                     |               |       | Standard     |                                                                           |       | Test Level                              |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Conducted                                                                                                                                                      |               |       | EN 55032     |                                                                           |       | Class B                                 |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Radiated                                                                                                                                                       |               |       | EN 55032     |                                                                           |       | Class B                                 |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Harmonic                                                                                                                                                       |               |       | EN 61000-3-2 |                                                                           |       | Class A                                 |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Voltage Flicker                                                                                                                                                |               |       | EN 61000-3-3 |                                                                           |       | ---                                     |       |       |
|                                | EMS                                                                                                                                                                                                                                                                                                                                        | Test Items                                                                                                                                                     |               |       | Standard     |                                                                           |       | Test Level                              |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | ESD                                                                                                                                                            |               |       | EN 61000-4-2 |                                                                           |       | Level 3, 8KV air ; Level 2, 4KV contact |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Radiated                                                                                                                                                       |               |       | EN 61000-4-3 |                                                                           |       | Level 2                                 |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | EFT / Burst                                                                                                                                                    |               |       | EN 61000-4-4 |                                                                           |       | Level 2                                 |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Surge                                                                                                                                                          |               |       | EN 61000-4-5 |                                                                           |       | Level 3, 1KV/Line-Line , 2KV/Line-Earth |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Conducted                                                                                                                                                      |               |       | EN 61000-4-6 |                                                                           |       | Level 2                                 |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Magnetic Field                                                                                                                                                 |               |       | EN 61000-4-8 |                                                                           |       | Level 2                                 |       |       |
| Voltage Dips and Interruptions |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                | EN 61000-4-11 |       |              | >95% dip 0.5 period, 30% dip 25 periods<br>>95% interruptions 250 periods |       |                                         |       |       |
| OTHERS                         | Cooling                                                                                                                                                                                                                                                                                                                                    | Natural cooling.                                                                                                                                               |               |       |              |                                                                           |       |                                         |       |       |
|                                | M.T.B.F.                                                                                                                                                                                                                                                                                                                                   | 227.2K hours                                                                                                                                                   |               |       |              |                                                                           |       |                                         |       |       |
|                                | Dimension                                                                                                                                                                                                                                                                                                                                  | 159 x 95 x 38 mm (L*W*H)                                                                                                                                       |               |       |              |                                                                           |       |                                         |       |       |
|                                | Packing                                                                                                                                                                                                                                                                                                                                    | N.W.: 0.524Kg / 1pc ; 30pcs / 1.2 CUFT / 1 CTN                                                                                                                 |               |       |              |                                                                           |       |                                         |       |       |
| NOTE                           | ① All measurements which not mentioned are based on 230VAC input, <b>output Max</b> at ambient 25℃ / 70%RH                                                                                                                                                                                                                                 |                                                                                                                                                                |               |       |              |                                                                           |       |                                         |       |       |
|                                | ② Output tolerance included set up voltage, line regulation and load regulation.<br>The regulation is measured at the condition : when any of output is with 20% ~ 100% <b>max load</b> and the rest of each outputs are with 60% <b>max load</b> , Each output could work within <b>max load</b> but must under total <b>output max</b> . |                                                                                                                                                                |               |       |              |                                                                           |       |                                         |       |       |
|                                | ③ Ripple & noise are measured at 100~254VAC input with 10~50℃ condition and 20MHz of bandwidth by using a 10" ~15" twisted pair-wire terminated with a 0.1uF & a 47uF parallel capacitor.                                                                                                                                                  |                                                                                                                                                                |               |       |              |                                                                           |       |                                         |       |       |
|                                | ④ The operating temperature shall follow the de-rating curve in spec<br>The output load may be requested for decreasing as de-rating curve in spec when low input voltage is under 100VAC.                                                                                                                                                 |                                                                                                                                                                |               |       |              |                                                                           |       |                                         |       |       |
|                                | ⑤ The power supply is considered a component of end-equipment. The end-equipment must be re-confirmed whether comply with EMC directives.                                                                                                                                                                                                  |                                                                                                                                                                |               |       |              |                                                                           |       |                                         |       |       |
|                                |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                |               |       |              |                                                                           |       |                                         |       |       |

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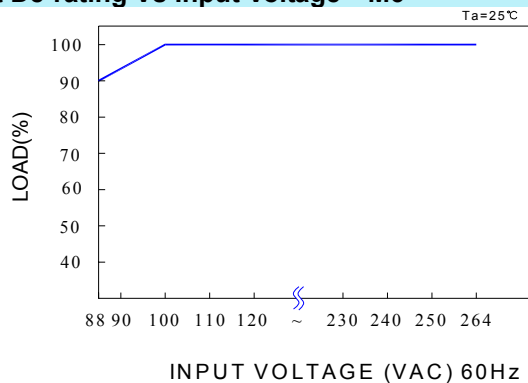
### Block Diagram : UT3-1



### De-rating Curve : E3

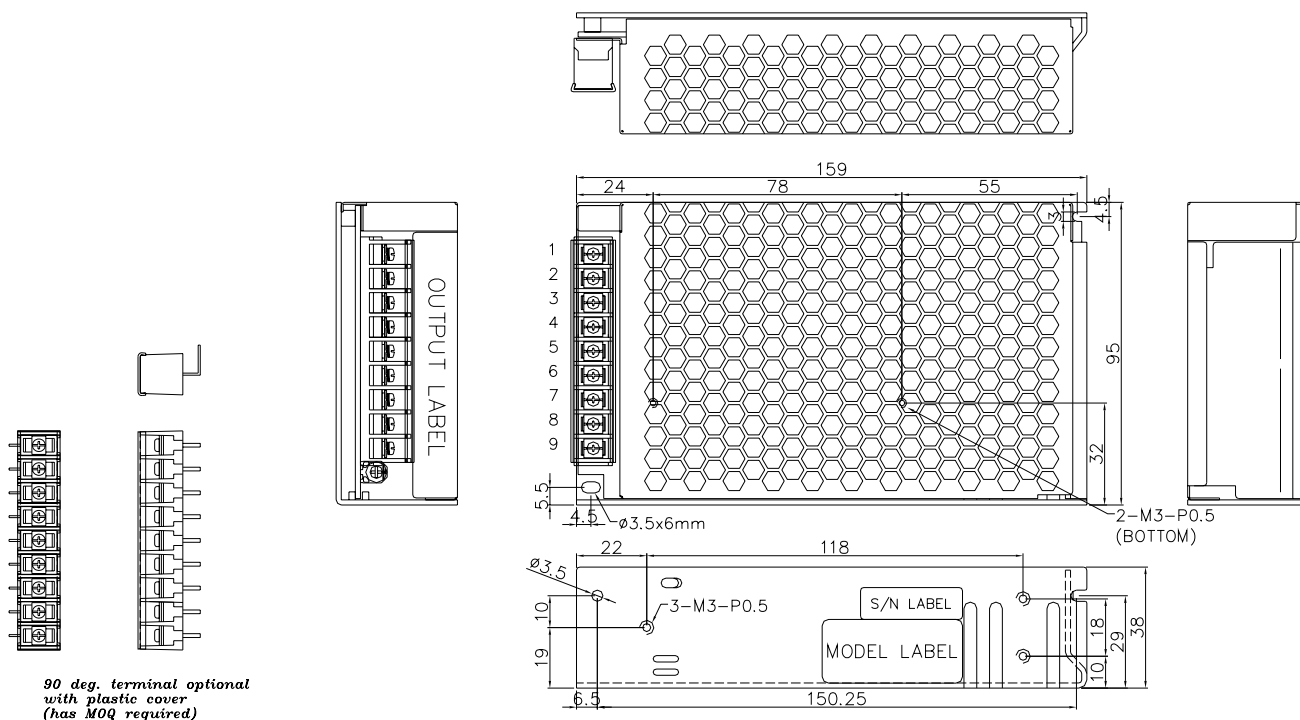


### Output De-rating Vs Input Voltage : M6



**Dimension:**

(Unit: mm)



## NOTES

TERMINAL BLOCK: 9P, PITCH 7.62 mm WITH PC COVER

|                |   |   |    |     |     |     |    |     |    |
|----------------|---|---|----|-----|-----|-----|----|-----|----|
| Model No.      | 1 | 2 | 3  | 4   | 5   | 6   | 7  | 8   | 9  |
| SPS-N080-T2/T3 | L | N | FG | V3  | GND | GND | V1 | GND | V2 |
| SPS-N080-T4    | L | N | FG | GND | V3  | GND | V1 | GND | V2 |