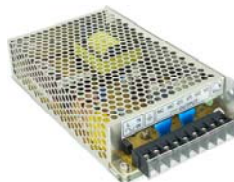




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# SPS-N080-IDx Series

## Dual Output



159 x 95 x 38 mm  
6.26 x 3.74 x 1.50 inch



### Features:

- \* V1 & V2 output are isolated , V2 polarity option (+ or -)
- \* 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

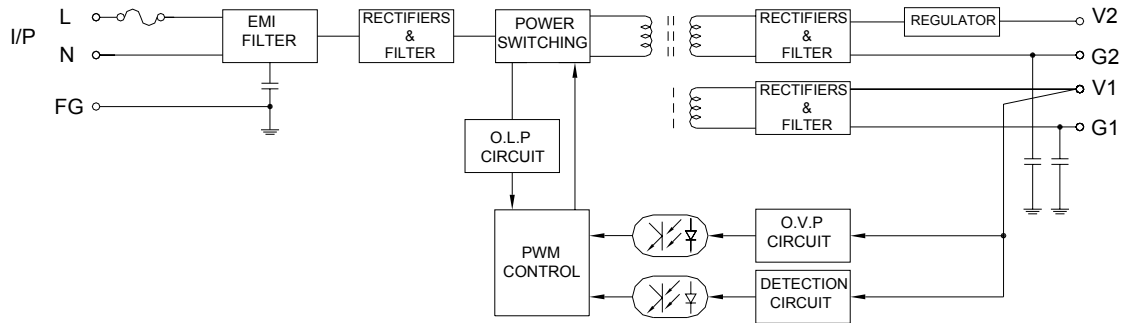
### Specification:

|                                |                           |                                                                                                                                                                                                                                       |       |               |       |              |       |                                                                           |       |                                         |       |
|--------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------|-------|--------------|-------|---------------------------------------------------------------------------|-------|-----------------------------------------|-------|
| 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-ID1                                                                                                                                                                                                                          |       | SPS-N080-ID2  |       | SPS-N080-ID3 |       | SPS-N080-ID4                                                              |       | SPS-N080-ID8                            |       |
|                                | Output                    | V1                                                                                                                                                                                                                                    | V2    | V1            | V2    | V1           | V2    | V1                                                                        | V2    | V1                                      | V2    |
|                                | Voltage                   | 5V                                                                                                                                                                                                                                    | ±12V  | 5V            | ±24V  | 12V          | ±12V  | 15V                                                                       | ±15V  | 12V                                     | ±24V  |
|                                | Min Load                  | 0.5A                                                                                                                                                                                                                                  | 0A    | 0.5A          | 0A    | 0.3A         | 0A    | 0.3A                                                                      | 0A    | 0.3A                                    | 0A    |
|                                | Max Load                  | 9A                                                                                                                                                                                                                                    | 4A    | 9A            | 2A    | 6.5A         | 3.4A  | 5A                                                                        | 2.6A  | 6.5A                                    | 2A    |
|                                | Output Tolerance ②        | ±3%                                                                                                                                                                                                                                   | ±5%   | ±3%           | ±5%   | ±3%          | ±5%   | ±3%                                                                       | ±5%   | ±3%                                     | ±5%   |
|                                | Ripple Noise MAX. ③       | 80mV                                                                                                                                                                                                                                  | 120mV | 80mV          | 200mV | 120mV        | 120mV | 150mV                                                                     | 150mV | 120mV                                   | 200mV |
|                                | Efficiency (TYP.)         | 80%                                                                                                                                                                                                                                   |       | 81%           |       | 82%          |       | 83%                                                                       |       | 84%                                     |       |
|                                | Output MAX.               | 80W                                                                                                                                                                                                                                   |       | 80W           |       | 80W          |       | 80W                                                                       |       | 80W                                     |       |
| PROTECTION                     | Over Voltage              | 5.8~7V                                                                                                                                                                                                                                | ----- | 5.8~7V        | ----- | 13.8~16.8V   | ----- | 17.3~21.0V                                                                | ----- | 13.8~16.8V                              | ----- |
|                                | Over Load & Short Circuit | Shutdown and latch off, recover after re-start up or Auto Recovery.<br>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                                                                                                                                                                                            |       |               |       |              |       |                                                                           |       |                                         |       |
| ENVIRONMENT                    | Setup time                | <1 Sec@100 ~ 240V AC                                                                                                                                                                                                                  |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | 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.                  | 265.4K hours                                                                                                                                                                                                                          |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Dimension                 | 159 x 95 x 38 mm (L*W*H)                                                                                                                                                                                                              |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Packing                   | N.W.: 0.516Kg / 1pc : 30pcs / 1.2 CUFT / 1 CTN                                                                                                                                                                                        |       |               |       |              |       |                                                                           |       |                                         |       |

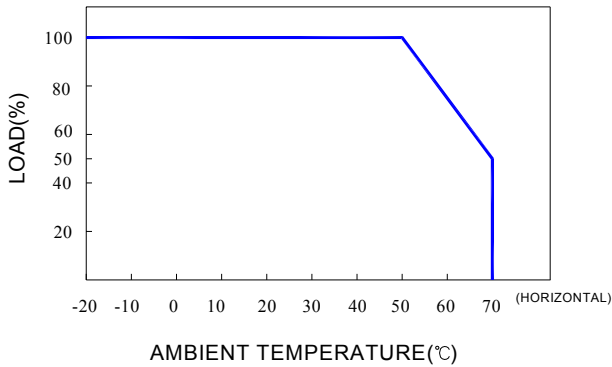
- NOTE
- ① All measurements which not mentioned are based on 230VAC input, **output Max** at ambient 25℃ / 70%RH
  - ② Output tolerance included set up voltage, line regulation and load regulation.  
The regulation is measured at the condition : when any of output is with 20% ~ 100% **max load** and the rest of each outputs are with 60% **max load**, Each output could work within **max load** but must under total **output max**.
  - 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  
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.

# SPS-N080-IDx Series

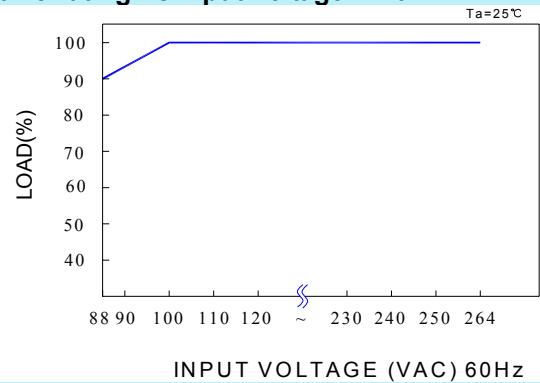
## Block Diagram : UD5-1



## De-rating Curve : E3

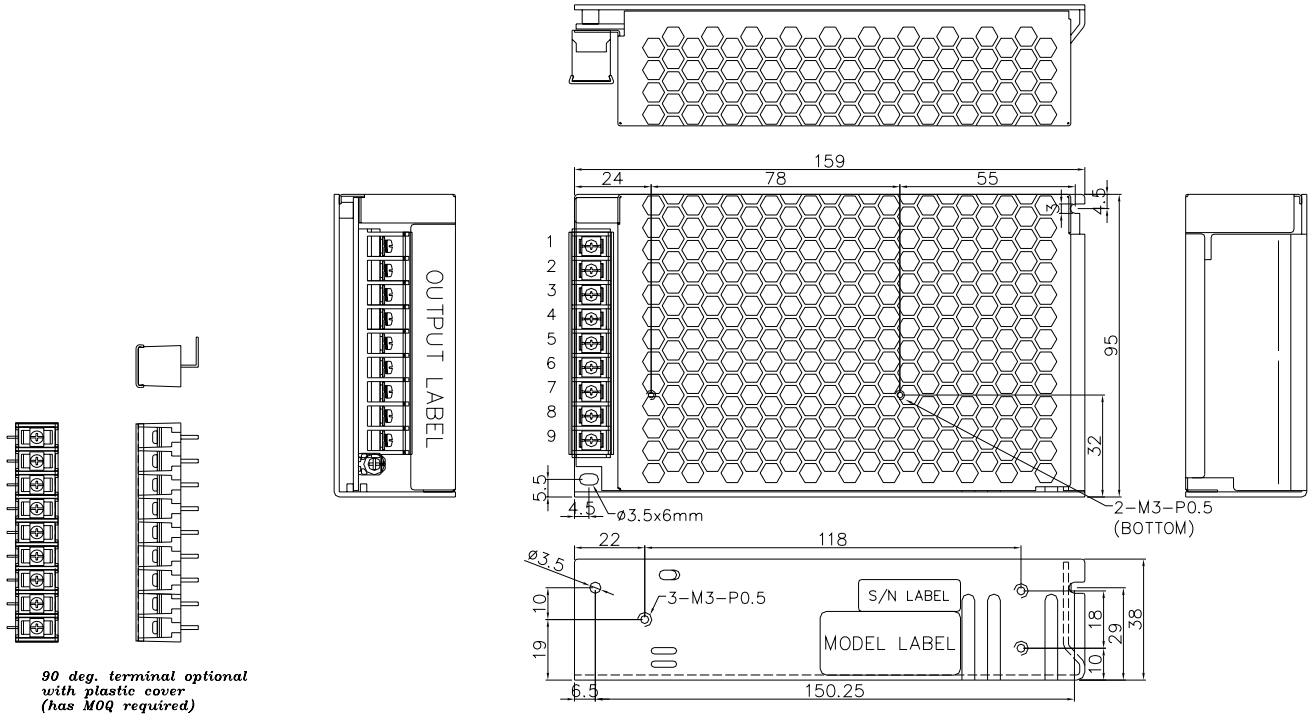


## Output De-rating Vs Input Voltage : M6



## 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-ID1/ID2/ID8 | L | N | FG | N/C | N/C | G1 | V1 | G2 | V2 |
| SPS-N080-ID3/ID4     | L | N | FG | N/C | N/C | G1 | V1 | V2 | G2 |