

## SWX Series



- Low Profile (8 mm max)
- Wide Operating Temperature
- Remote On/Off
- Parallel Operation
- High Reliability
- International Safety Approvals

## Specification

### Input

|                     |  |
|---------------------|--|
| Input Voltage Range | • 18-36 VDC (for SWX15 & SWX30)<br>36-76 VDC     |
| Start Up Voltage    | • 16-18 VDC for 24 Vnom<br>32-36 VDC for 48 Vnom |
| Hysteresis Voltage  | • 1 VDC min for 24 Vnom<br>2 VDC min for 48 Vnom |

### Output

|                        |   |
|------------------------|---|
| Output Voltage         | • See table   |
| Minimum Load           | • No minimum load required  |
| Start Up Delay         | • 200 ms max (Vnom, Io 100%)  |
| Initial Set Accuracy   | • Vnom +2/-1% measured at Vnom in 100% load and +25 °C                          |
| Total Regulation       | • +5/-3%  |
| Output Ripple          | • 25 mV max pk-pk, 1.2 to 5 V models<br>120 mV max 12 & 15 V models             |
| Ripple & Noise         | • 50 mV pk-pk, 1.2 to 5 V models<br>150 mV max 12 & 15 V models                 |
| Overvoltage Protection | • 120-140% of Vnom recycle input to reset                                       |
| Low Voltage Protection | • Works 200 ms after an overload when the output voltage drops to 90% of rating |
| Remote On/Off          | • Standard  |
| Parallel Operation     | • It is possible to parallel a maximum of 10 units                              |

### General

|                   |   |
|-------------------|---|
| Efficiency        | • See table   |
| Isolation Voltage | • Input to Output 1500 VDC  |
| Alarms            | • If over or under voltage protection is activated the ALM pin becomes the same level as the -Vin pin |

### Environmental

|                       |   |
|-----------------------|---|
| Operating Temperature | • -40 °C to +85 °C (for derating curves - contact sales for application note) |
| Storage Temperature   | • -40 °C to +100 °C   |
| Operating Humidity    | • 20-90%, RH non-condensing   |
| Shock                 | • 20 G, 11 ms once each X, Y & Z axis   |
| Vibration             | • 5 G 10-55 Hz 3 min period, 60 min each along X, Y & Z axis                  |

### EMC & Safety

|                   |   |
|-------------------|---|
| Emissions         | • EN55022, level A conducted external filter required<br>EN55022, level A radiated (contact sales for application note) |
| ESD Immunity      | • EN61000-4-2, level 4  |
| Radiated Immunity | • EN61000-4-3, level 3  |
| EFT/Burst         | • EN61000-4-4, level 4  |
| Surge             | • EN61000-4-5, level 3  |
| Safety Approvals  | • EN60950, UL60950, C-UL  |

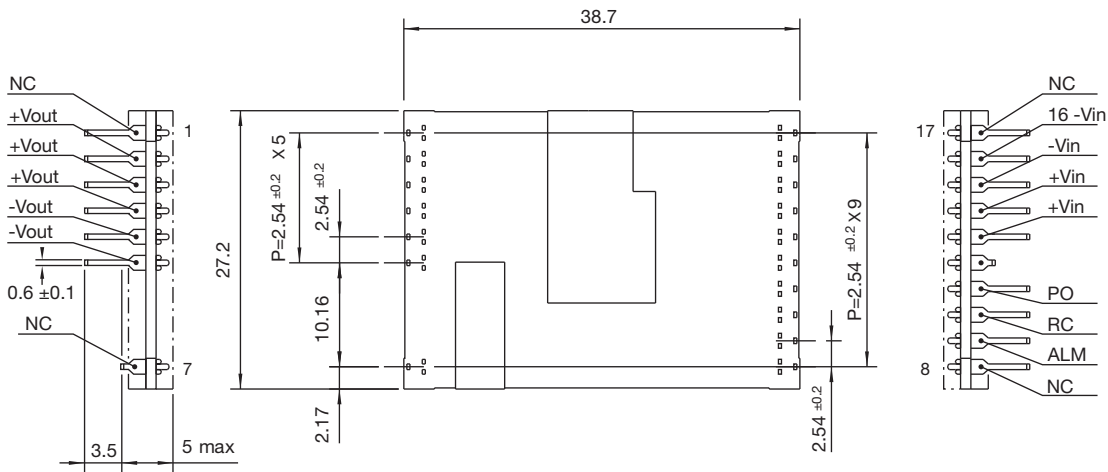
## Models and Ratings

| Input Voltage | Output Power | Output Voltage | Output Current | Efficiency <sup>(1)</sup> | Model Number <sup>(2)</sup> |
|---------------|--------------|----------------|----------------|---------------------------|-----------------------------|
| 36-72 VDC     | 4.20 W       | 1.2 V          | 3.50 A         | 80%                       | SWX1048S1V2                 |
|               | 5.25 W       | 1.5 V          | 3.50 A         | 82%                       | SWX1048S1V5                 |
|               | 5.40 W       | 1.8 V          | 3.00 A         | 84%                       | SWX1048S1V8                 |
|               | 6.00 W       | 2.0 V          | 3.00 A         | 85%                       | SWX1048S2V0                 |
|               | 7.50 W       | 2.5 V          | 3.00 A         | 86%                       | SWX1048S2V5                 |
|               | 9.90 W       | 3.3 V          | 3.00 A         | 88%                       | SWX1048S3V3                 |
|               | 10.00 W      | 5.0 V          | 2.00 A         | 89%                       | SWX1048S5V0                 |
|               | 10.80 W      | 12.0 V         | 0.90 A         | 88%                       | SWX1048S12                  |
| 10.50 W       | 15.0 V       | 0.70 A         | 88%            | SWX1048S15                |                             |
| 18-36 VDC     | 7.80 W       | 1.5 V          | 5.20 A         | 82%                       | SWX1524S1V5                 |
|               | 8.10 W       | 1.8 V          | 4.50 A         | 85%                       | SWX1524S1V8                 |
|               | 11.25 W      | 2.5 V          | 4.50 A         | 87%                       | SWX1524S2V5                 |
|               | 14.85 W      | 3.3 V          | 4.50 A         | 89%                       | SWX1524S3V3                 |
|               | 15.00 W      | 5.0 V          | 3.00 A         | 90%                       | SWX1524S5V0                 |
|               | 15.00 W      | 12.0 V         | 1.25 A         | 89%                       | SWX1524S12                  |
|               | 15.00 W      | 15.0 V         | 1.00 A         | 89%                       | SWX1524S15                  |
| 36-76 VDC     | 6.24 W       | 1.2 V          | 5.20 A         | 80%                       | SWX1548S1V2                 |
|               | 7.80 W       | 1.5 V          | 5.20 A         | 82%                       | SWX1548S1V5                 |
|               | 8.10 W       | 1.8 V          | 4.50 A         | 85%                       | SWX1548S1V8                 |
|               | 9.00 W       | 2.0 V          | 4.50 A         | 86%                       | SWX1548S2V0                 |
|               | 11.25 W      | 2.5 V          | 4.50 A         | 87%                       | SWX1548S2V5                 |
|               | 14.85 W      | 3.3 V          | 4.50 A         | 89%                       | SWX1548S3V3                 |
|               | 15.00 W      | 5.0 V          | 3.00 A         | 90%                       | SWX1548S5V0                 |
|               | 15.00 W      | 12.0 V         | 1.25 A         | 89%                       | SWX1548S12                  |
| 15.00 W       | 15.0 V       | 1.00 A         | 89%            | SWX1548S15                |                             |
| 36-76 VDC     | 13.50 W      | 1.5 V          | 9.00 A         | 86%                       | SWX2048S1V5                 |
|               | 14.40 W      | 1.8 V          | 8.00 A         | 85%                       | SWX2048S1V8                 |
|               | 17.50 W      | 2.5 V          | 7.00 A         | 88%                       | SWX2048S2V5                 |
|               | 19.80 W      | 3.3 V          | 6.00 A         | 90%                       | SWX2048S3V3                 |
|               | 20.00 W      | 5.0 V          | 4.00 A         | 90%                       | SWX2048S5V0                 |
| 18-36 VDC     | 12.50 W      | 1.2 V          | 10.40 A        | 81%                       | SWX3024S1V2                 |
|               | 15.60 W      | 1.5 V          | 10.40 A        | 83%                       | SWX3024S1V5                 |
|               | 16.20 W      | 1.8 V          | 9.00 A         | 86%                       | SWX3024S1V8                 |
|               | 22.50 W      | 2.5 V          | 9.00 A         | 88%                       | SWX3024S2V5                 |
|               | 29.70 W      | 3.3 V          | 9.00 A         | 90%                       | SWX3024S3V3                 |
|               | 30.00 W      | 5.0 V          | 6.00 A         | 90%                       | SWX3024S5V0                 |
|               | 30.00 W      | 12.0 V         | 2.50 A         | 89%                       | SWX3024S12                  |
|               | 30.00 W      | 15.0 V         | 2.00 A         | 89%                       | SWX3024S15                  |
| 36-76 VDC     | 12.50 W      | 1.2 V          | 10.40 A        | 81%                       | SWX3048S1V2                 |
|               | 15.60 W      | 1.5 V          | 10.40 A        | 83%                       | SWX3048S1V5                 |
|               | 16.20 W      | 1.8 V          | 9.00 A         | 86%                       | SWX3048S1V8                 |
|               | 18.00 W      | 2.0 V          | 9.00 A         | 87%                       | SWX3048S2V0                 |
|               | 22.50 W      | 2.5 V          | 9.00 A         | 88%                       | SWX3048S2V5                 |
|               | 29.70 W      | 3.3 V          | 9.00 A         | 90%                       | SWX3048S3V3                 |
|               | 30.00 W      | 5.0 V          | 6.00 A         | 90%                       | SWX3048S5V0                 |
|               | 30.00 W      | 10.0 V         | 3.00 A         | 90%                       | SWX3048S10                  |
|               | 30.00 W      | 12.0 V         | 2.50 A         | 89%                       | SWX3048S12                  |
|               | 30.00 W      | 15.0 V         | 2.00 A         | 89%                       | SWX3048S15                  |

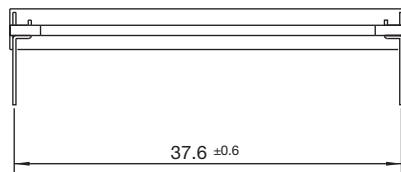
### Notes

1. Measured at Vnom input, rated load and +25 °C.
2. For SWX10 and SWX15 models, a 1 A fast blow fuse and 10 µF capacitor are recommended across the input pins.  
For SWX30 models, a 2 A fast blow fuse and 20 µF capacitor are recommended across the input pins.
3. For surface mount package add suffix '-SMB' to model number.
4. Contact sales for full application notes or visit [www.xppower.com](http://www.xppower.com).

10, 15 & 20 Watt Model - Through Hole

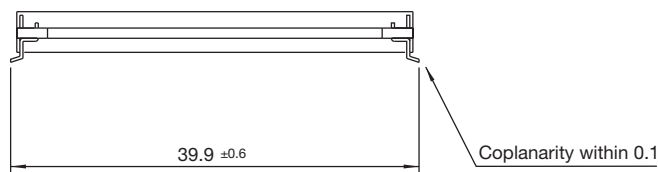
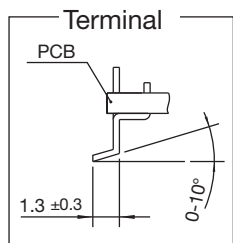
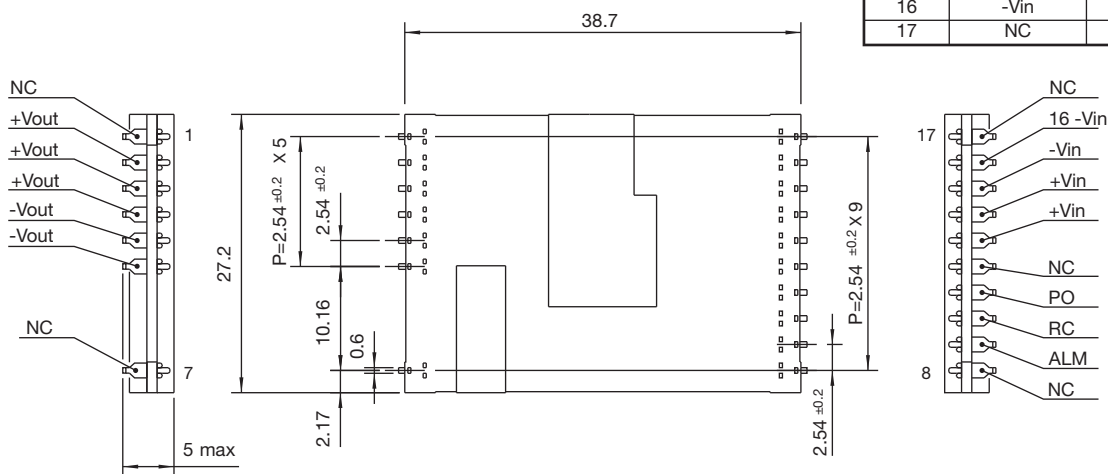


Dimensions in mm  
Tolerance : ±0.5  
Weight : 12g



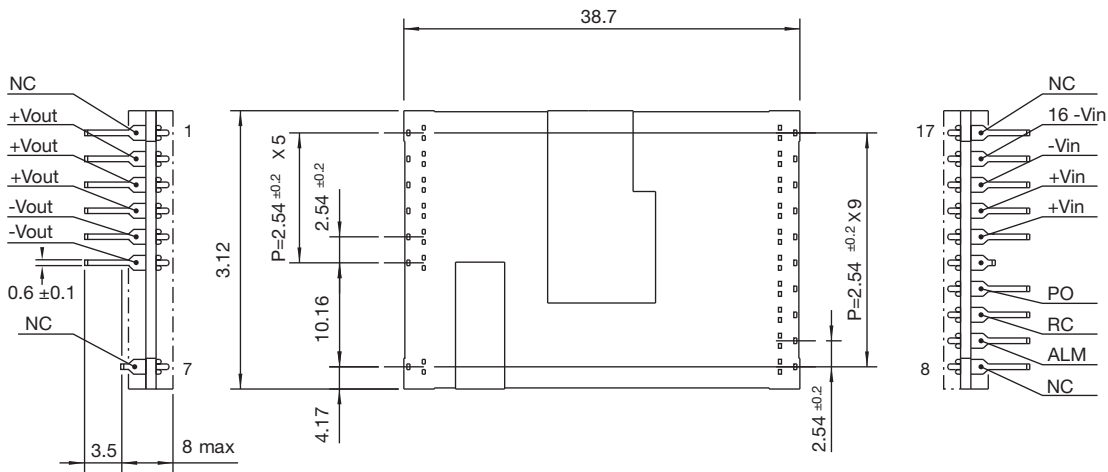
| Pin | Pin Name | Function                 |
|-----|----------|--------------------------|
| 1   | NC       | Position for SM Adhesive |
| 2   | +Vout    | +DC Output               |
| 3   | +Vout    | +DC Output               |
| 4   | +Vout    | +DC Output               |
| 5   | -Vout    | -DC Output               |
| 6   | -Vout    | -DC Output               |
| 7   | NC       | Position for SM Adhesive |
| 8   | NC       | Position for SM Adhesive |
| 9   | ALM      | Alarm                    |
| 10  | RC       | Remote On/Off            |
| 11  | PO       | Start In/Out             |
| 12  | NC       | -                        |
| 13  | +Vin     | +DC Input                |
| 14  | +Vin     | +DC Input                |
| 15  | -Vin     | -DC Input                |
| 16  | -Vin     | -DC Input                |
| 17  | NC       | Position for SM Adhesive |

10, 15 & 20 Watt Model - Surface Mount

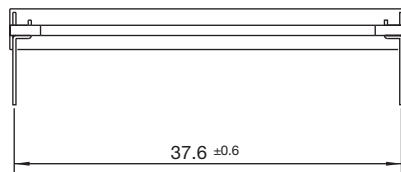


Dimensions in mm  
Tolerance : ±0.5  
Weight : 12g

30 Watt Model - Through Hole

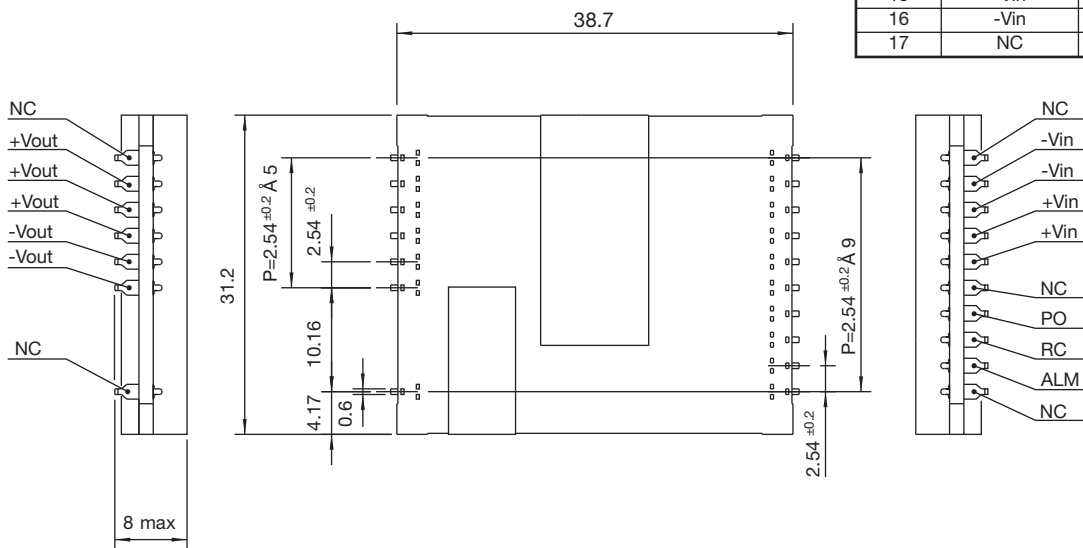


Dimensions in mm  
Tolerance : ±0.5  
Weight : 20g

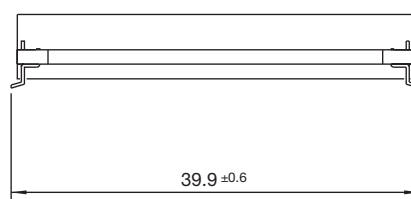
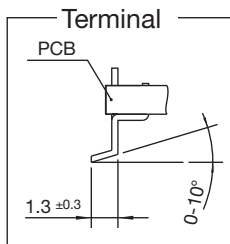


| Pin | Pin Name | Function                 |
|-----|----------|--------------------------|
| 1   | NC       | Position for SM Adhesive |
| 2   | +Vout    | +DC Output               |
| 3   | +Vout    | +DC Output               |
| 4   | +Vout    | +DC Output               |
| 5   | -Vout    | -DC Output               |
| 6   | -Vout    | -DC Output               |
| 7   | NC       | Position for SM Adhesive |
| 8   | NC       | Position for SM Adhesive |
| 9   | ALM      | Alarm                    |
| 10  | RC       | Remote On/Off            |
| 11  | PO       | Start In/Out             |
| 12  | NC       | -                        |
| 13  | +Vin     | +DC Input                |
| 14  | +Vin     | +DC Input                |
| 15  | -Vin     | -DC Input                |
| 16  | -Vin     | -DC Input                |
| 17  | NC       | Position for SM Adhesive |

30 Watt Model - Surface Mount



Dimensions in mm  
Tolerance : ±0.5  
Weight : 20g



Coplanarity within 0.1