



■ Features

- DIP24 package with industry standard pinout
- 2:1 wide input range
- Operating temperature range -40 ~ +90°C
- No minimum load required
- Comply to EN55032 radiated Class A without additional components
- High efficiency up to 87%
- Protections: Short circuit (Continuous) / Overload / Input under voltage
- 3KVDC I/O isolation
- 3 years warranty

■ Applications

- Telecom/datacom system
- Wireless network
- Industrial control facility
- Instrument
- Analyzer
- Detector
- Data switch

■ Description

SCWN03 and DCWN03 series are 3W isolated and regulated module type DC-DC converter with DIP24 package. It features international standard pins, a high efficiency up to 87%, wide working temperature range -40~+90°C, 3KVDC I/P-O/P isolation voltage, Compliance to EN55032 radiated Class A without additional components, continuous-mode short circuit protection, etc. The additional components, models account for different input voltage 4.5~9V, 9~18V, 18~36V and 36~72V 2:1 wide input range, and various output voltage, 3.3V/5V/12V/15V for single output and $\pm 5V/\pm 12V/\pm 15V$ for dual outputs, which are suitable for all kinds of systems, Such as industrial control, telecommunication field, distributed power architecture, and so on.

■ Model Encoding

S **CWN03** **E** - **12**

Output voltage (3.3/5/12/15Vdc , $\pm 5/\pm 12/\pm 15Vdc$)

Input voltage (E: 4.5~9Vdc , A: 9~18Vdc , B: 18~36Vdc , C: 36~72Vdc)

Rated wattage

Series name { S:Single output
D: Dual output

File Name: SCWN03, DCWN03-SPEC 2017-03-06

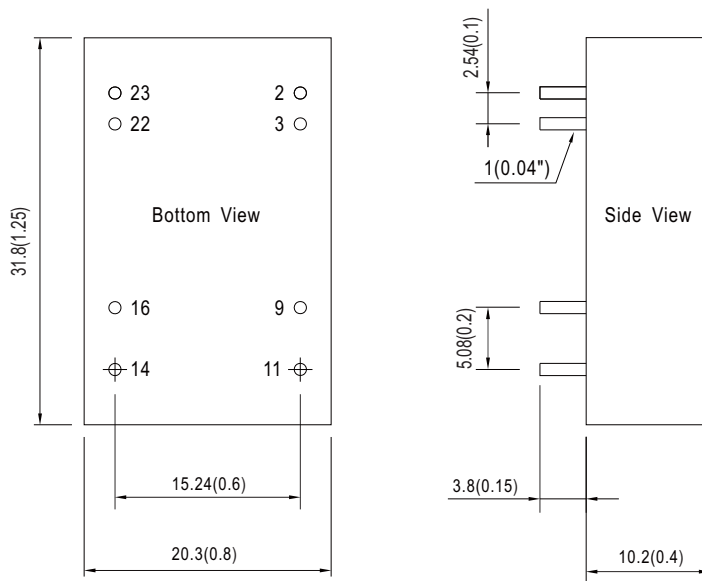
| MODEL SELECTION TABLE | | | | | | | |
|-----------------------|-----------------------|-------------------|-----------|----------------|-----------------|-------------------|-----------------------|
| ORDER NO. | INPUT | | | OUTPUT | | EFFICIENCY (TYP.) | CAPACITOR LOAD (MAX.) |
| | INPUT VOLTAGE (RANGE) | INPUT CURRENT | | OUTPUT VOLTAGE | OUTPUT CURRENT | | |
| | | NO LOAD | FULL LOAD | | | | |
| SCWN03E-03 | 5V (4.5 ~ 9V) | 15mA | 550mA | 3.3V | 600mA | 73% | 2200 μ F |
| SCWN03E-05 | | 15mA | 779mA | 5V | 600mA | 78% | 2200 μ F |
| SCWN03E-12 | | 18mA | 750mA | 12V | 250mA | 80% | 2200 μ F |
| SCWN03E-15 | | 18mA | 750mA | 15V | 200mA | 81% | 2200 μ F |
| DCWN03E-05 | | 25mA | 779mA | \pm 5V | \pm 0 ~ 300mA | 77% | *1000 μ F |
| DCWN03E-12 | | 25mA | 750mA | \pm 12V | \pm 0 ~ 125mA | 80% | *1000 μ F |
| DCWN03E-15 | | 25mA | 750mA | \pm 15V | \pm 0 ~ 100mA | 80% | *1000 μ F |
| SCWN03A-03 | | 12V (9 ~ 18V) | 5mA | 212mA | 3.3V | 600mA | 78% |
| SCWN03A-05 | 5mA | | 309mA | 5V | 600mA | 82% | 2200 μ F |
| SCWN03A-12 | 10mA | | 298mA | 12V | 250mA | 84% | 2200 μ F |
| SCWN03A-15 | 10mA | | 294mA | 15V | 200mA | 85% | 2200 μ F |
| DCWN03A-05 | 10mA | | 305mA | \pm 5V | \pm 0 ~ 300mA | 82% | *1000 μ F |
| DCWN03A-12 | 12mA | | 298mA | \pm 12V | \pm 0 ~ 125mA | 84% | *1000 μ F |
| DCWN03A-15 | 15mA | | 294mA | \pm 15V | \pm 0 ~ 100mA | 85% | *1000 μ F |
| SCWN03B-03 | 24V (18 ~ 36V) | | 5mA | 106mA | 3.3V | 600mA | 78% |
| SCWN03B-05 | | 5mA | 152mA | 5V | 600mA | 82% | 2200 μ F |
| SCWN03B-12 | | 7.5mA | 145mA | 12V | 250mA | 86% | 2200 μ F |
| SCWN03B-15 | | 7.5mA | 145mA | 15V | 200mA | 86% | 2200 μ F |
| DCWN03B-05 | | 7.5mA | 152mA | \pm 5V | \pm 0 ~ 300mA | 82% | *1000 μ F |
| DCWN03B-12 | | 10mA | 147mA | \pm 12V | \pm 0 ~ 125mA | 87% | *1000 μ F |
| DCWN03B-15 | | 10mA | 145mA | \pm 15V | \pm 0 ~ 100mA | 87% | *1000 μ F |
| SCWN03C-03 | | 48V (36 ~ 72V) | 3mA | 52mA | 3.3V | 600mA | 80% |
| SCWN03C-05 | 3mA | | 74mA | 5V | 600mA | 84% | 2200 μ F |
| SCWN03C-12 | 3mA | | 73mA | 12V | 250mA | 86% | 2200 μ F |
| SCWN03C-15 | 5mA | | 73mA | 15V | 200mA | 87% | 2200 μ F |
| DCWN03C-05 | 5mA | | 73mA | \pm 5V | \pm 0 ~ 300mA | 85% | *1000 μ F |
| DCWN03C-12 | 5mA | | 73mA | \pm 12V | \pm 0 ~ 125mA | 87% | *1000 μ F |
| DCWN03C-15 | 5mA | | 74mA | \pm 15V | \pm 0 ~ 100mA | 87% | *1000 μ F |

* For each output

| SPECIFICATION | | | | |
|---|--|--|---|-----------------------------------|
| INPUT | VOLTAGE RANGE | E: 4.5~9Vdc , A: 9~18Vdc , B: 18~36Vdc , C: 36~72Vdc | | |
| | SURGE VOLTAGE (100ms max.) | 5Vin models : 10Vdc ; 12Vin models : 25Vdc ; 24Vin models : 50Vdc ; 48Vin models : 100Vdc | | |
| | FILTER | Pi type | | |
| | PROTECTION | Fuse recommended. 5Vin models: 1.5A Fast-Acting Type, 12Vin models: 0.8A Fast-Acting Type, 24Vin models: 0.5A Fast-Acting Type, 48Vin models: 250mA Fast-Acting Type | | |
| | INTERNAL POWER DISSIPATION | 500mW | | |
| OUTPUT | VOLTAGE ACCURACY | ± 1.5% | | |
| | RATED POWER | 3W | | |
| | RIPPLE & NOISE <small>Note.2</small> | 50mVp-p | | |
| | LINE REGULATION <small>Note.3</small> | ± 0.5% | | |
| | LOAD REGULATION <small>Note.4</small> | Single output models: ± 0.5%, Dual output models: ± 1% | | |
| | SWITCHING FREQUENCY (Min.) | 100KHz | | |
| PROTECTION | SHORT CIRCUIT | Protection type : Continuous, automatic recovery | | |
| | OVERLOAD | 120 ~ 250% rated output power | | |
| | | Protection type : Recovers automatically after fault condition is removed | | |
| | UNDER VOLTAGE LOCKOUT | Start-up voltage | 5Vin: 4.4Vdc, 12Vin: 8.8Vdc, 24Vin: 17Vdc, 48Vin: 34Vdc | |
| Shutdown voltage | | 5Vin: 4.2Vdc, 12Vin: 8Vdc, 24Vin: 16Vdc, 48Vin: 31Vdc | | |
| ENVIRONMENT | COOLING | Free-air convection | | |
| | WORKING TEMP. | -40 ~ +90°C (Refer to "Derating Curve") | | |
| | CASE TEMPERATURE | +100°C max. | | |
| | WORKING HUMIDITY | 20% ~ 90% RH non-condensing | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +105°C, 10 ~ 95% RH non-condensing | | |
| | TEMP. COEFFICIENT | 0.03% / °C (0 ~ 85°C) | | |
| | SOLDERING TEMPERATURE | 1.5mm from case of 1 ~ 3sec./260°C max. | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | |
| SAFETY & EMC (<small>Note.5</small>) | WITHSTAND VOLTAGE | I/P-O/P:3KVDC | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH | | |
| | ISOLATION CAPACITANCE (Typ.) | 250pF | | |
| | EMC EMISSION | Parameter | Standard | Test Level / Note |
| | | Conducted | EN55032(CISPR32) | N/A |
| | | Radiated | EN55032(CISPR32) | Class A |
| | EMC IMMUNITY | Parameter | Standard | Test Level / Note |
| | | ESD | EN61000-4-2 | Level 2, ± 8KV air, ± 4KV contact |
| | | Radiated Susceptibility | EN61000-4-3 | Level 2, 3V/m |
| | | EFT/Burest | EN61000-4-4 | Level 1, 0.5KV |
| | | Surge | EN61000-4-5 | Level 1, 0.5KV Line-Line |
| Conducted | | EN61000-4-6 | Level 2, 3V(e.m.f.) | |
| Magnetic Field | | EN61000-4-8 | Level 2, 3A/m | |
| OTHERS | MTBF | 2500Khrs MIL-HDBK-217F(25°C) | | |
| | DIMENSION (L*W*H) | 31.8*20.3*10.2mm (1.25*0.8*0.4 inch) | | |
| | CASE MATERIAL | Non-Conductive black plastic (UL 94V-0 rated) | | |
| | PACKING | 12.5g | | |
| NOTE | <p>1.All parameters are specified at normal input(E:5Vdc, A:12Vdc, B:24Vdc, C:48Vdc), rated load, 25°C 70% RH ambient. 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf & 47µf capacitor. 3.Line regulation is measured from low line to high line at rated load. 4.Load regulation is measured from 10% to 100% rated load for SCWN03, 25% to 100% rated load for DCWN03. 5.The final equipment must be re-confirm that it still meet EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."(as available on http://www.meanwell.com)</p> | | | |

■ Mechanical Specification

- All dimensions in mm(inch)
- Tolerance: $x.x \pm 0.5\text{mm}$ ($x.xx \pm 0.02''$)
 $x.xx \pm 0.25\text{mm}$ ($x.xxx \pm 0.010''$)
- Pin size is: $0.5 \pm 0.05\text{mm}$ ($0.02'' \pm 0.002''$)



■ Plug Assignment

| Pin-Out | | |
|---------|---------------------------|-------------------------|
| Pin No. | SCWN03 (Single output) | DCWN03 (Dual output) |
| 2,3 | -Vin | -Vin |
| 9 | N.C. | Common |
| 11 | N.C. | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

■ Derating Curve

