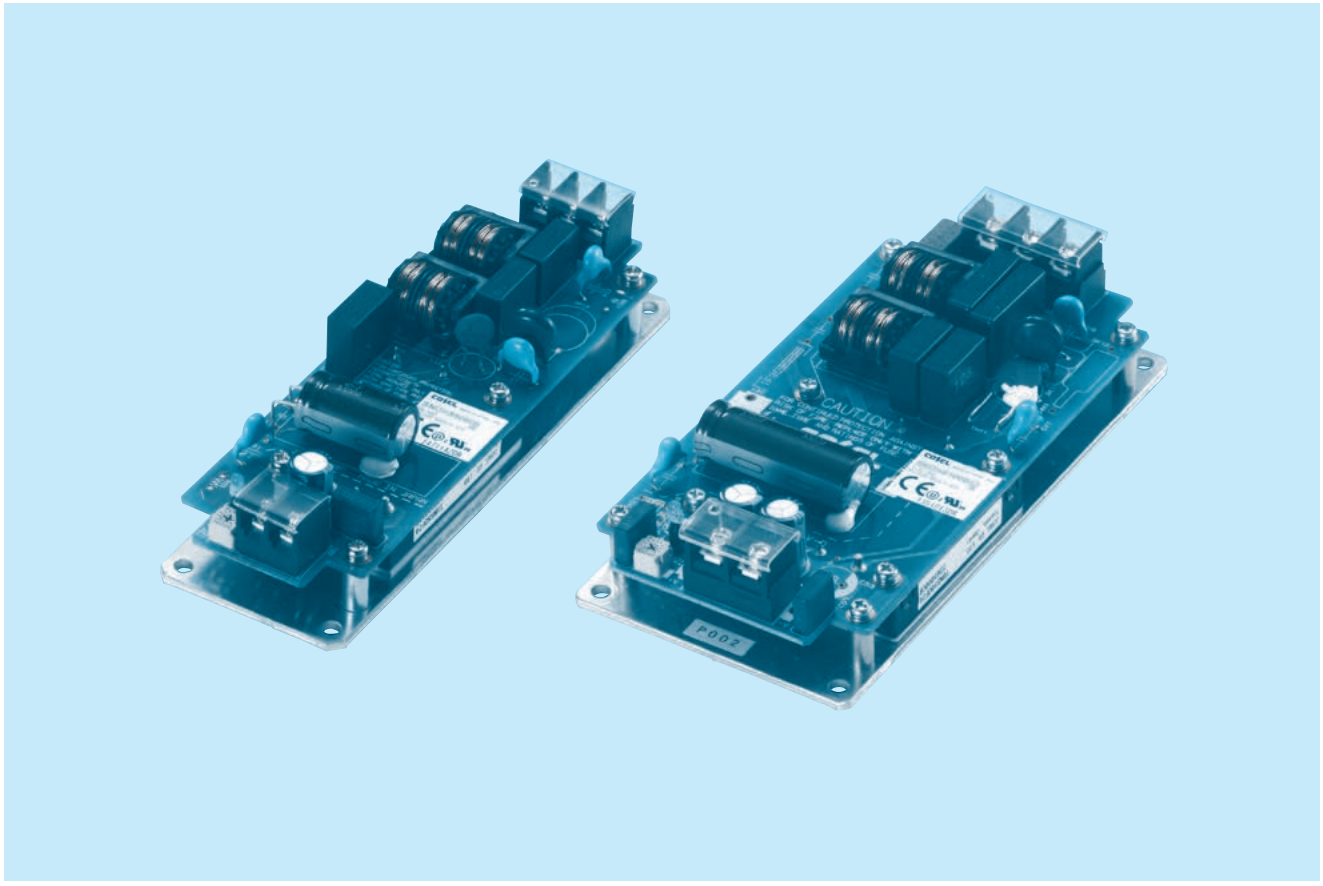
COSEL

Power Factor Correction | World wide | Low Profile | Safety Approvals | Inrush current limiting | Isolated | OCP | OVP

# SNTU-series



## Feature

AC-DC converter, SNTUNS50/100F series includes TUNS50/100F series.
Universal input(AC85-264V)
Power factor correction
Harmonic attenuator (Complies with IEC61000-3-2)
Built-in Inrush current , overcurrent, overvoltage and thermal protection

## Safety agency approvals

UL60950-1, C-UL, EN62368-1
Complies with DEN-AN

## 3-year warranty

## CE marking

Low voltage directive
RoHS Directive

## UKCA marking

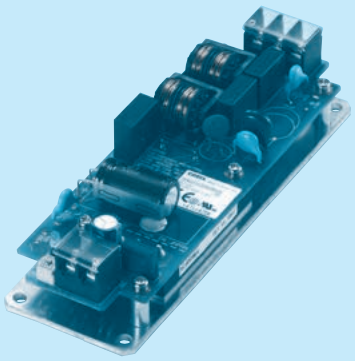
Electrical Equipment Safety Regulations
RoHS Regulations

COSEL AC-DC Power Supplies Bus Converter・Power Module Value-added Type

# SNTUNS50

## Ordering information

SNTUN ① S ② 50 ③ F ④ 05 ⑤ - □ ⑥



Recommended EMI/EMC Filter
NAC-04-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊The EMI/EMC Filter is recommended to connect with several devices.

①Series name
②Single output
③Output wattage
④Universal Input
⑤Output voltage
⑥Optional
C :with Coating
J :Connector type

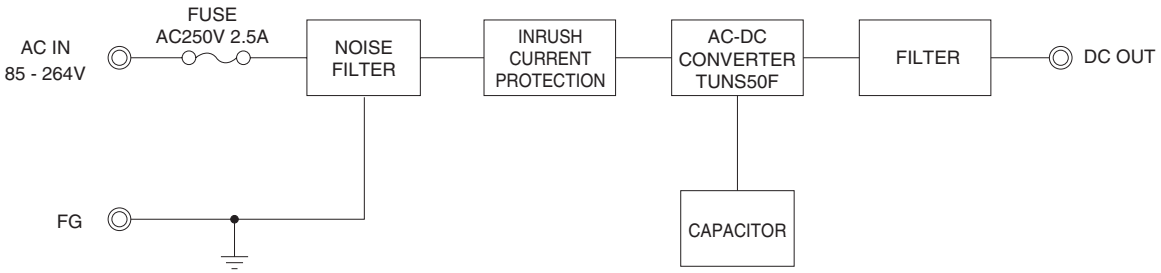
| MODEL | SNTUNS50F05 | SNTUNS50F12 | SNTUNS50F24 |
|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 50.0 | 50.4 | 50.4 |
| DC OUTPUT | 5V 10A | 12V 4.2A | 24V 2.1A |

## SPECIFICATIONS

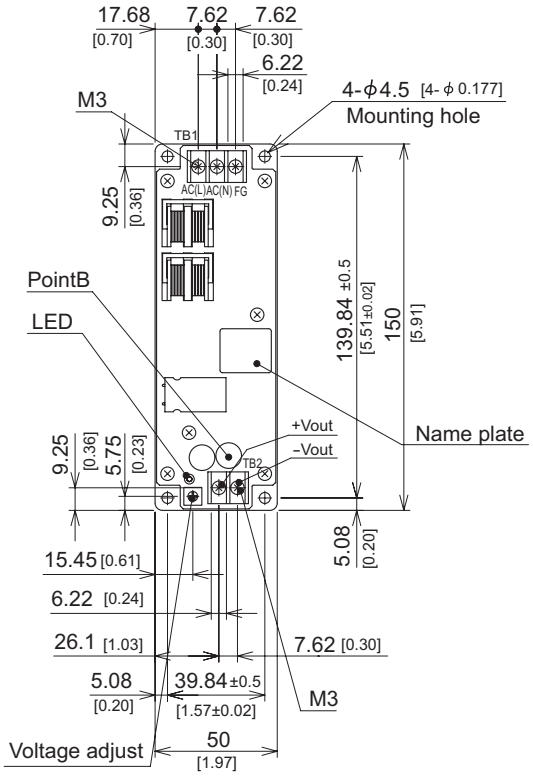
| | MODEL | | SNTUNS50F05 | SNTUNS50F12 | SNTUNS50F24 |
|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | AC85 - 264 1φ (Please refer to the instruction manual 1.1 and 3.2) | | |
| | CURRENT[A] | ACIN 100V | 0.67typ (Io=100%) | | |
| | | ACIN 200V | 0.37typ (Io=100%) | | |
| | FREQUENCY[Hz] | | 50/60 (47 - 63) | | |
| | EFFICIENCY[%] | ACIN 100V | 76typ | 80typ | 81typ |
| | | ACIN 200V | 78typ | 83typ | 84typ |
| | POWER FACTOR (Io=100%) | ACIN 100V | 0.95typ | | |
| | | ACIN 200V | 0.90typ | | |
| | INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) (Ta=25℃) | | |
| | | ACIN 200V | 30typ (Io=100%) (At cold start) (Ta=25℃) | | |
| | LEAKAGE CURRENT[mA] | | 0.4/0.75 (ACIN 100V / 240V 60Hz, Io=100%, According to IEC62368-1 and DEN-AN) | | |
| OUTPUT | VOLTAGE[V] | | 5 | 12 | 24 |
| | CURRENT[A] | | 10 | 4.2 | 2.1 |
| | LINE REGULATION[mV] | | 10max | 24max | 48max |
| | LOAD REGULATION[mV] | | 150max | 100max | 100max |
| | RIPPLE[mVp-p] | 0 to +95℃ ＊1 | 80max | 120max | 120max |
| | | -20 to 0℃ ＊1 | 140max | 160max | 160max |
| | | 0 to 15% Load ＊1 | 200max | 280max | 380max |
| | RIPPLE NOISE[mVp-p] | 0 to +95℃ ＊1 | 120max | 150max | 150max |
| | | -20 to 0℃ ＊1 | 200max | 200max | 250max |
| | | 0 to 15% Load ＊1 | 280max | 360max | 460max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 50max | 120max | 240max |
| | | -20 to +95℃ | 100max | 240max | 480max |
| | DRIFT[mV] | ＊2 | 20max | 40max | 90max |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | | 4.50 - 5.50 | 10.80 - 13.20 | 21.60 - 26.40 |
| | OUTPUT VOLTAGE SETTING[V] | | 5.00 - 5.15 | 12.00 - 12.48 | 24.00 - 24.96 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | |
| | OVERVOLTAGE PROTECTION[V] | | 6.30 - 7.00 | 13.90 - 16.35 | 27.60 - 32.40 |
| | REMOTE SENSING | | Not provided | | |
| | REMOTE ON/OFF | | Not provided | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -20 to +95℃ (On aluminum base plate), 20 - 95%RH (Non condensing) ＊4 | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -20 to +95℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | |
| | VIBRATION | | 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | | UL60950-1, C-UL (CSA60950-1), EN62368-1 Complies with DEN-AN | | |
| | CONDUCTED NOISE | | Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B | | |
| | HARMONIC ATTENUATOR | | Complies with IEC61000-3-2 (Class A) ＊3 | | |
| OTHERS | CASE SIZE/WEIGHT | | 50×36×150mm [1.97×1.42×5.91 inches] (W×H×D) / 230g max | | |

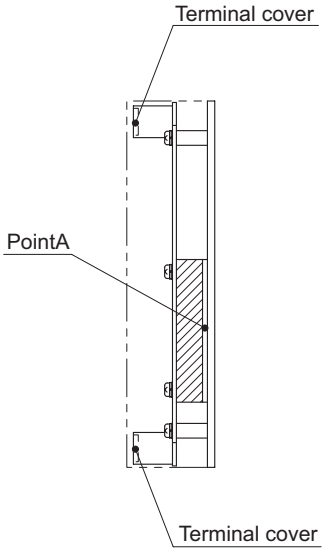
＊1 Refer to Instruction manual for measuring method of an electrical property.
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊3 Please contact us about another class.
＊4 Refer to Instruction manual 3.2 and 3.3.

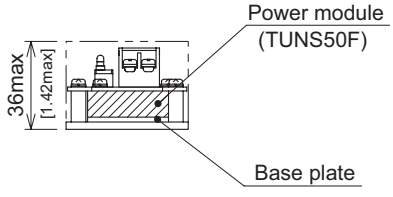
## Block diagram




## External view



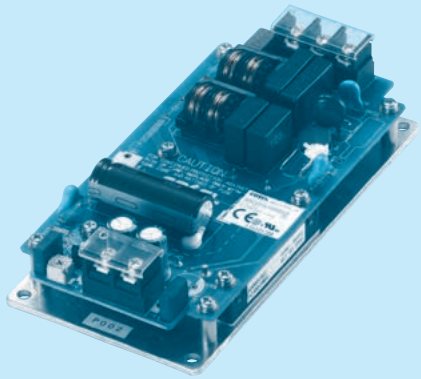

* Tolerance ±1 [±0.04]
* Weight : 230g max
* Dimensions in mm, [ ]=inches
* PCB material / thickness : FR-4 / 1.6mm [0.06]
* Base plate material / thickness : Aiuminum / 3.0mm [0.12]
* Screw tightning torque M3 : 0.9N・m (9.2kgf・cm) max
* Please connect safety ground to the base plate in φ4.5 [φ0.177] hole.

COSEL AC-DC Power Supplies Bus Converter・Power Module Value-added Type

# SNTUNS100

## Ordering information

| SNTUN | S | 100 | F | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |



Recommended EMI/EMC Filter
NAC-04-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊The EMI/EMC Filter is recommended to connect with several devices.

①Series name
②Single output
③Output wattage
④Universal Input
⑤Output voltage
⑥Optional
C :with Coating
J :Connector type

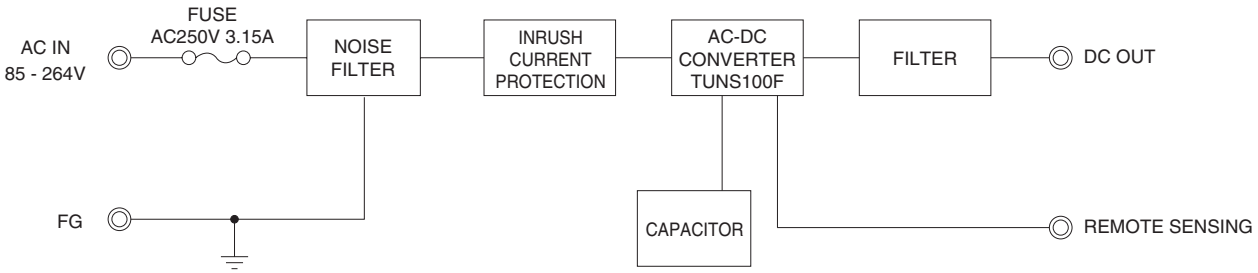
| MODEL | SNTUNS100F05 | SNTUNS100F12 | SNTUNS100F24 |
|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 100.0 | 100.8 | 100.8 |
| DC OUTPUT | 5V 20A | 12V 8.4A | 24V 4.2A |

## SPECIFICATIONS

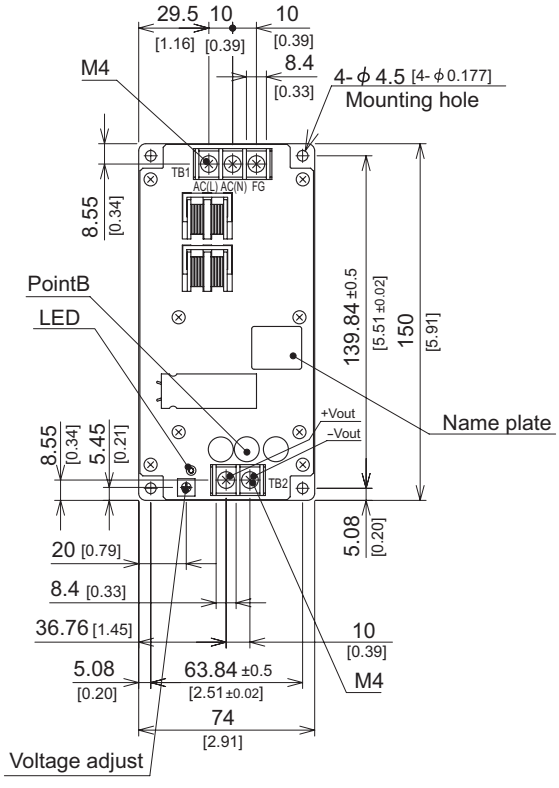
| | MODEL | | SNTUNS100F05 | SNTUNS100F12 | SNTUNS100F24 |
|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | AC85 - 264 1φ (Please refer to the instruction manua 1.1 and 3.2) | | |
| | CURRENT[A] | ACIN 100V | 1.3typ (Io=100%) | | |
| | | ACIN 200V | 0.7typ (Io=100%) | | |
| | FREQUENCY[Hz] | | 50/60 (47 - 63) | | |
| | EFFICIENCY[%] | ACIN 100V | 79typ | 81typ | 82typ |
| | | ACIN 200V | 82typ | 83typ | 84typ |
| | POWER FACTOR (Io=100%) | ACIN 100V | 0.95typ | | |
| | | ACIN 200V | 0.90typ | | |
| | INRUSH CURRENT[A] | ACIN 100V | 20yp (Io=100%) (At cold start) (Ta=25℃) | | |
| | | ACIN 200V | 40typ (Io=100%) (At cold start) (Ta=25℃) | | |
| | LEAKAGE CURRENT[mA] | | 0.4/0.75 (ACIN 100V / 240V 60Hz, Io=100%, According to IEC62368-1 and DEN-AN) | | |
| OUTPUT | VOLTAGE[V] | | 5 | 12 | 24 |
| | CURRENT[A] | | 20 | 8.4 | 4.2 |
| | LINE REGULATION[mV] | | 10max | 24max | 48max |
| | LOAD REGULATION[mV] | | 150max | 100max | 100max |
| | RIPPLE[mVp-p] | 0 to +95℃ ＊1 | 80max | 120max | 120max |
| | | -20 to 0℃ ＊1 | 140max | 160max | 160max |
| | | 0 to 15% Load ＊1 | 160max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] | 0 to +95℃ ＊1 | 120max | 150max | 150max |
| | | -20 to 0℃ ＊1 | 200max | 200max | 250max |
| | | 0 to 15% Load ＊1 | 240max | 300max | 300max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 50max | 120max | 240max |
| | | -20 to +95℃ | 100max | 240max | 480max |
| | DRIFT[mV] | ＊2 | 20max | 40max | 90max |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | | 4.50 - 5.50 | 10.80 - 13.20 | 21.60 - 26.40 |
| | OUTPUT VOLTAGE SETTING[V] | | 5.00 - 5.15 | 12.00 - 12.48 | 24.00 - 24.96 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | |
| | OVERVOLTAGE PROTECTION[V] | | 6.30 - 7.00 | 13.90 - 16.35 | 27.60 - 32.40 |
| | REMOTE SENSING | | Optional (Option:K) | – | – |
| | REMOTE ON/OFF | | Not provided | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -20 to +95℃ (On aluminum base plate), 20 - 95%RH (Non condensing) ＊4 | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -20 to +95℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | |
| | VIBRATION | | 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | | UL60950-1, C-UL (CSA60950-1), EN62368-1 Complies with DEN-AN | | |
| | CONDUCTED NOISE | | Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B | | |
| | HARMONIC ATTENUATOR | | Complies with IEC61000-3-2 (Class A) ＊3 | | |
| OTHERS | CASE SIZE/WEIGHT | | 74×37×150mm [2.91×1.46×5.91 inches] (W×H×D) / 340g max | | |

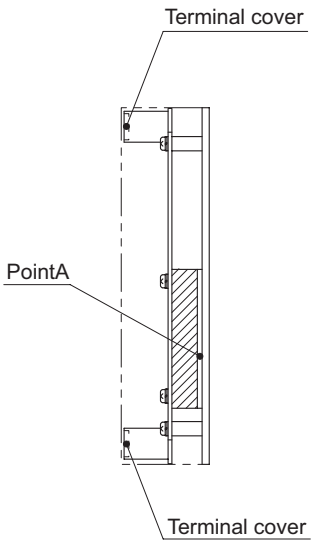
＊1 Refer to Instruction manual for measuring method of an electrical property.
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊3 Please contact us about another class.
＊4 Refer to Instruction manual 3.2 and 3.3.

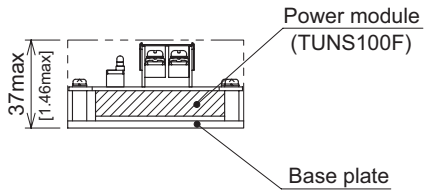
## Block diagram




## External view




* Tolerance ±1 [±0.04]
* Weight : 340g max
* Dimensions in mm, [ ]=inches
* PCB material / thickness : FR-4 / 1.6mm [0.06]
* Base plate material / thickness : Aiuminum / 3.0mm [0.12]
* Screw tightning torque M4 : 1.2N・m (12.2kgf・cm) max
* Please connect safety ground to the base plate in φ4.5 [φ0.177] hole.

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