

SCHA 10000T/SCDA 10000T

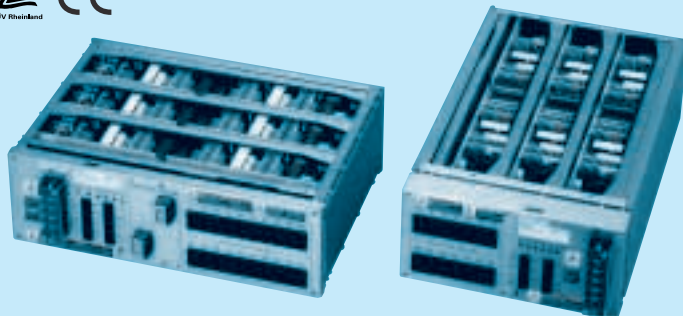
SC H A 10000 T -48 -□

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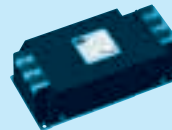
RoHS



SCHA10000T

SCDA10000T

Recommended EMI/EMC Filter TAC-50-223



- ① Series name
- ② External form
H:Wide front interface
D:Compact front interface
- ③ Single output
- ④ Output wattage
- ⑤ Three-phase input
- ⑥ Output voltage
- ⑦ Optional

SPECIFICATIONS

| | MODEL | SCHA10000T-48 | SCDA10000T-48 | |
|-------------------------------|---|---|---|--|
| INPUT | VOLTAGE[V] | AC160 - 264 3φ | | |
| | CURRENT[A] | ACIN200V | 35typ | |
| | FREQUENCY[Hz] | 50/60 (47 - 63) | | |
| | EFFICIENCY[%] | ACIN200-240V | 90typ | |
| | POWER FACTOR | ACIN200-240V | 0.99typ (Io=100%) | |
| | INRUSH CURRENT[A] | ACIN240V*1 | 60typ / 80typ (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start) | |
| | LEAKAGE CURRENT[mA] | 5.0max (ACIN 240V 60Hz, Io=0 - 100%, According to IEC60950-1) | | |
| OUTPUT | VOLTAGE[V] | 48 | | |
| | CURRENT[A] | 208 | | |
| | WATTAGE[W] | 9,984 | | |
| | LINE REGULATION[mV] | 192max | | |
| | LOAD REGULATION[mV] | 720max | | |
| | RIPPLE[mVp-p] | 0 to +50°C *2 | 150max | |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C *2 | 200max (BW:500MHz) | |
| | TEMPERATURE REGULATION[mV] | 0 to +50°C | 240max | |
| | DRIFT[mV] | *3 | 192max | |
| | START-UP TIME[ms] | 750max (ACIN 200V, Io=100%) | | |
| | HOLD-UP TIME[ms] | 20typ (ACIN200V, Io=100%) | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 43.2 - 52.8 | | |
| OUTPUT VOLTAGE SETTING[V] | 47.0 - 49.0 | | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Activate over 105% - 120% of rated current and recovers automatically. (Shut down if low-voltage protection activated) | | |
| | OVERVOLTAGE PROTECTION[V] | *4 | 56.0 - 59.0 (shut down) | |
| | LOW-VOLTAGE PROTECTION[V] | *4 | 28.8 - 33.6 (shut down) | |
| | OPERATING INDICATION | LED : Green (48VDC output), White (AC IN) | | |
| | ALARM OUTPUT | Detecting low input voltage, detecting open phase, detecting low output voltage | | |
| REMOTE ON/OFF (SYSTEM ON/OFF) | Provided | | | |
| ISOLATION | (INPUT) - (OUTPUT · SYSTEM ON/OFF · REMOTE SIGNAL ON/OFF · ALARM) | AC3,000V 1minute, Cutoff current = 100mA, DC2,200V 1minute, Cutoff current = 1mA (At Room Temperature) DC500V 50MΩ min (At Room Temperature) | | |
| | (INPUT) - (FG) | AC2,000V 1minute, Cutoff current = 100mA, DC2,200V 1minute, Cutoff current = 1mA (At Room Temperature) DC500V 50MΩ min (At Room Temperature) | | |
| | (OUTPUT · SYSTEM ON/OFF · REMOTE SIGNAL ON/OFF · ALARM) - (FG) | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | |
| | (OUTPUT) - (SYSTEM ON/OFF · REMOTE SIGNAL ON/OFF · ALARM) | AC100V 1minute, Cutoff current = 50mA, DC100V 10MΩ min (At Room Temperature) | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | 0 to +50°C , 20 - 85%RH (Non condensing), 3,000m(10,000feet) max (Refer to Cooling method) | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | -25 to +85°C , 20 - 90%RH (Non condensing), 9,000m(30,000feet) max | | |
| | VIBRATION | 10 - 55Hz, 19.6m/s ² (2G) , 3minutes period , 30 minutes each along X,Y and Z axis | | |
| | IMPACT | 196.1m/s ² (20G) , 11ms, once each along X, Y and Z axis | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | UL60950-1, C-UL (CSA60950-1), EN60950-1 complies | | |
| | CONDUCTED NOISE | Complies with EN55011 Group1-A, EN55022-A, CISPR22-A, FCC part15 classA, additional EMI/EMC Filter required for meeting class B | | |
| | HARMONIC ATTENUATOR | Complies with IEC61000-3-12 | | |
| OTHERS | CASE SIZE/WEIGHT *5 | 459X150X320mm [18.07X5.91X12.6 inches] (W×H×D)/23kg max | 310.5X150X510mm [12.22X5.91X20.08 inches] (W×H×D)/20kg max | |
| | COOLING METHOD | Forced cooling (require external fan) | | |

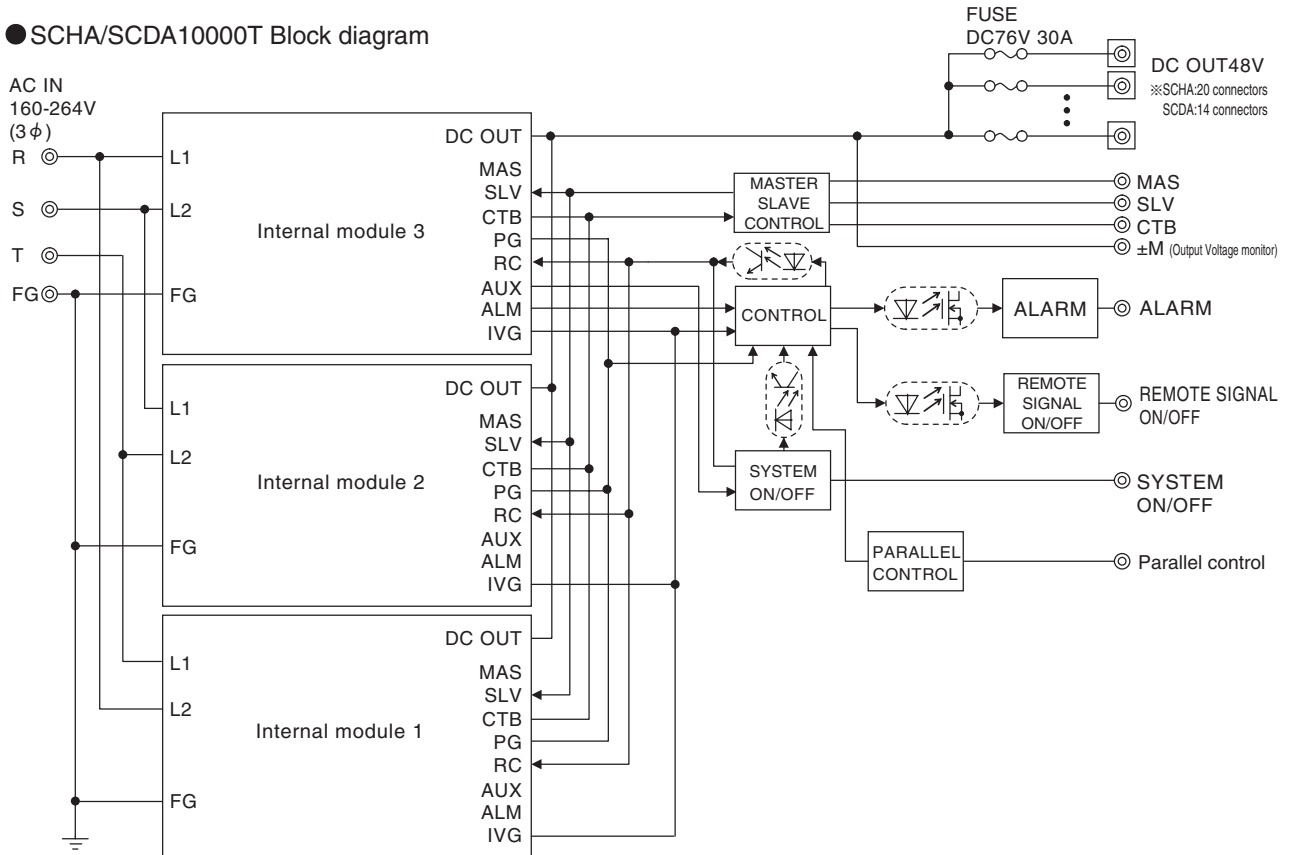
*1 The current of input surge to a built-in noise filter (0.2ms or less) is excluded.
 *2 Measured by 500MHz oscilloscope.
 *3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C , with the input voltage held constant at the rated input/output.

*4 To recover output voltage, recycle input voltage after 3 or more seconds.
 *5 Case size contains neither the terminal blocks, connector and screw nor.

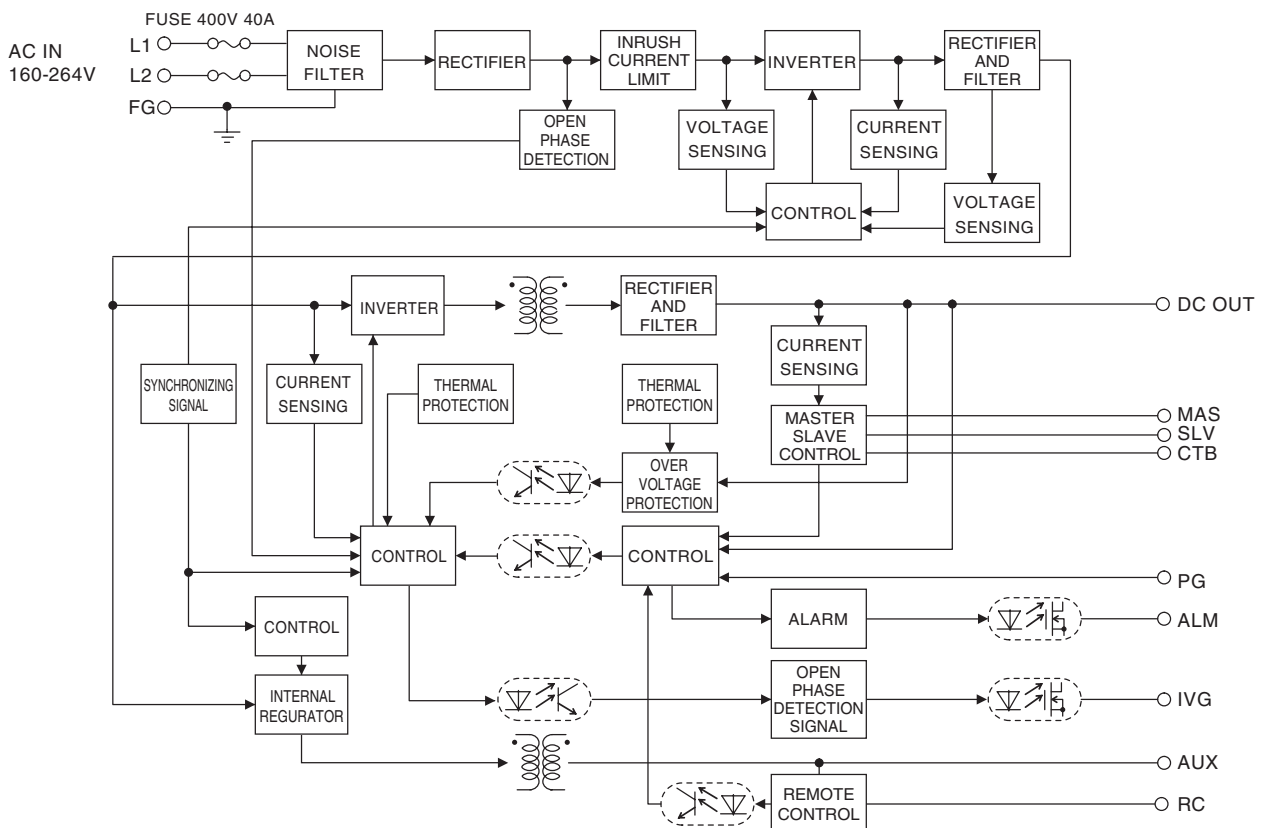
SCHA/SCDA1000T Block diagram

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● SCHA/SCDA1000T Block diagram

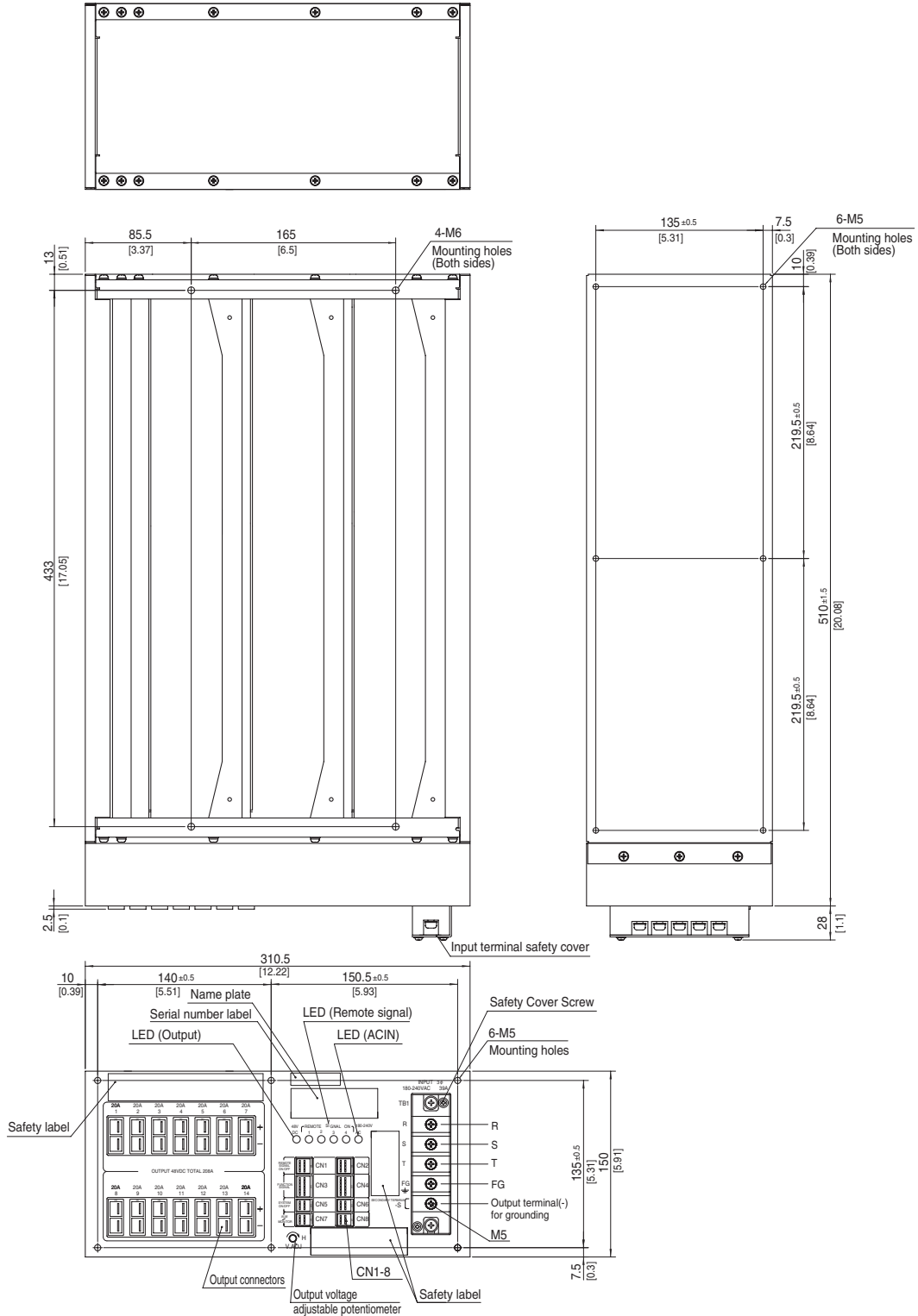


● Internal module Block diagram



SCDA1000T external view

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※ Tolerance : ±1 [±0.04]

※ Chassis material : Stainless steel

※ Weight : 20kg max

※ PCB Material/thickness : FR-4 / 1.6mm [0.04]

※ Dimensions in mm, []=inches

※ Screw tightening torque : M5 Mounting Hole 3.0N · m (30.7kgf · cm) max
 : M6 Mounting Hole 5.4N · m (55.2kgf · cm) max
 : M5 Input terminal 3.0N · m (30.7kgf · cm) max
 : M3 Input terminal safety cover 0.6N · m (6.2kgf · cm) max

※ LED (ACIN) : White with AC input

※ LED (Output) : Green with 48VDC output

※ LED (Remote signal) : Green (Indicates Remote signal status)

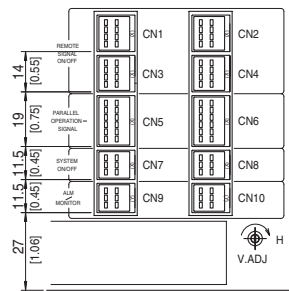
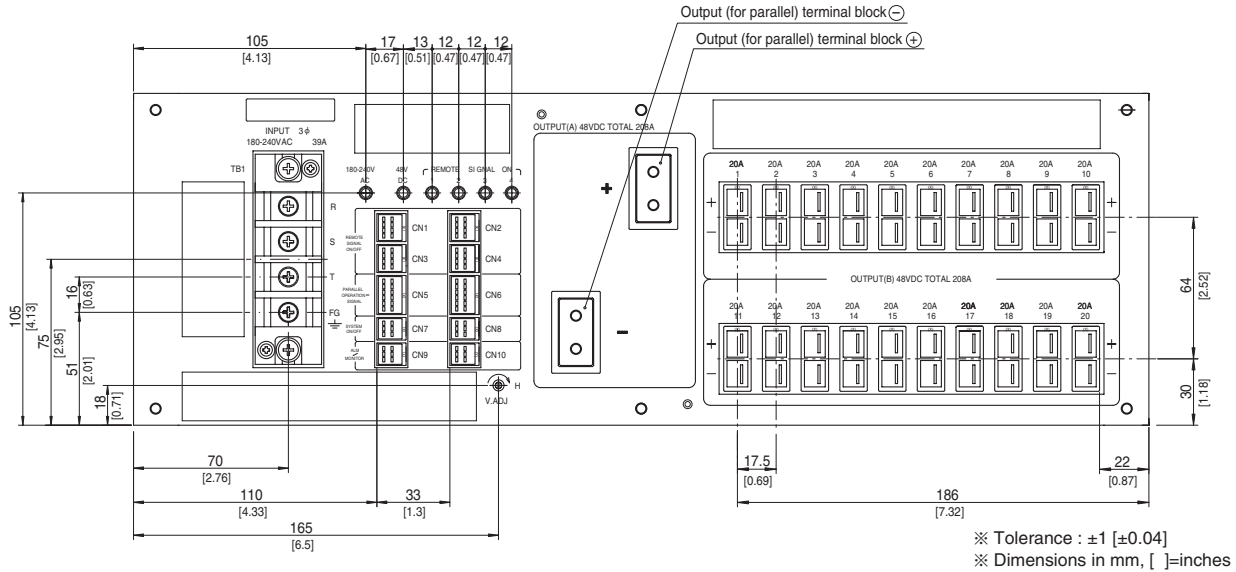
※ Output terminal(-) for grounding

-Output terminal(-) is internally connected to DC48V Output (-).

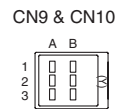
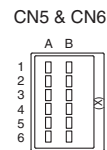
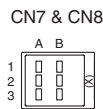
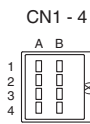
-Output terminal(-) : For grounding to stabilize secondary output by connecting to system ground (earth).

-Can not draw current through output terminal(-) for grounding.

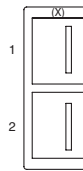
SCHA1000T external view (front panel)



CN1-10 location dimensions



Output Connectors



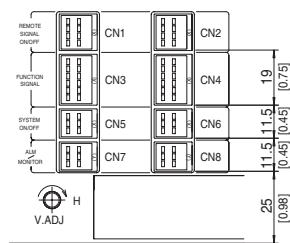
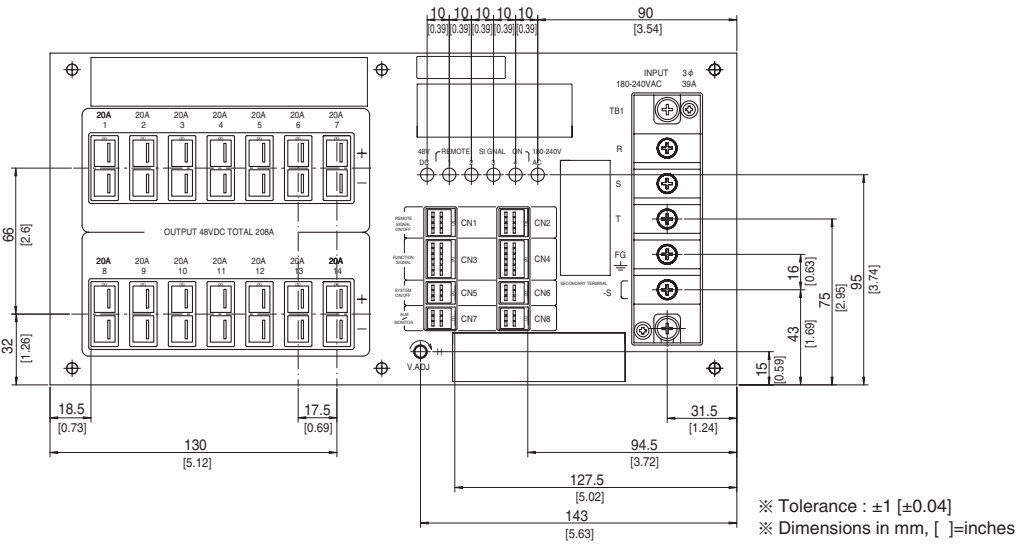
Connector pin numbers

SCHA1000T Functions & Connectors

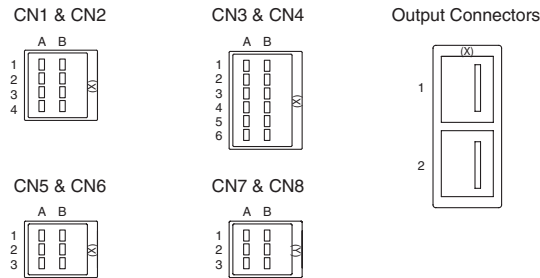
| Connector | Housing | Mfr. | Pin No. | Function |
|------------------|------------|-------------|---------|-----------------------------|
| Output connector | 1-353080-2 | 1-179958-2 | 1 | Output (+) |
| | | | 2 | Output (-) |
| CN1-CN4 | 1318125-1 | 1-1318119-4 | 1A | Remote signal ON/OFF 1+ |
| | | | 1B | Remote signal ON/OFF 1- |
| | | | 2A | Remote signal ON/OFF 2+ |
| | | | 2B | Remote signal ON/OFF 2- |
| | | | 3A | Remote signal ON/OFF 3+ |
| | | | 3B | Remote signal ON/OFF 3- |
| | | | 4A | Remote signal ON/OFF 4+ |
| | | | 4B | Remote signal ON/OFF 4- |
| CN5 & CN6 | 1318126-1 | 1-1318118-6 | 1A,1B | MAS: Master |
| | | | 2A,2B | SLV: Slave |
| | | | 3A,3B | CTB: Current balance |
| | | | 4A,4B | PCNT: Parallel control |
| | | | 5A,5B | COM:GND |
| | | | 6A,6B | N.C. |
| CN7 & CN8 | 1318124-1 | 1-1318119-3 | 1A,1B | System ON/OFF + |
| | | | 3A,3B | System ON/OFF - |
| | | | 2A,2B | N.C. |
| CN9 & CN10 | 1318124-2 | 2-1318119-3 | 1A,1B | Alarm + |
| | | | 3A,3B | Alarm - |
| | | | 2A | +M: Output voltage monitor+ |
| | | | 2B | -M: Output voltage monitor- |

SCDA10000T external view (front panel)

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CN1-8 location dimensions



Connector pin numbers

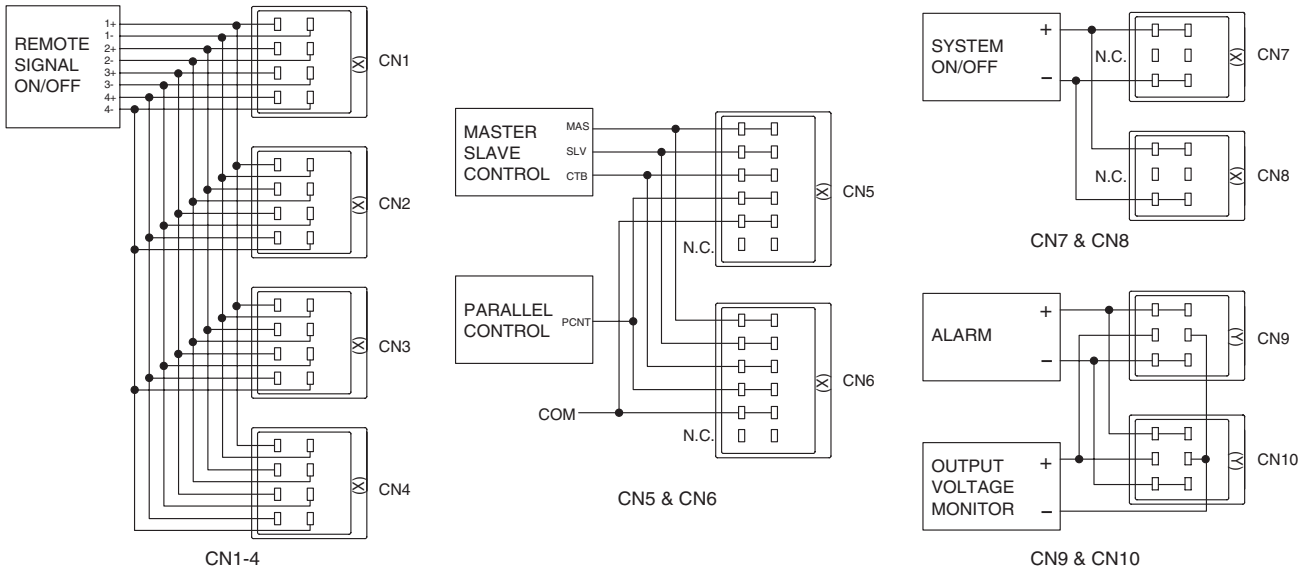
SCDA10000T Functions & Connectors

| Connector | Housing | Mfr. | Pin No. | Function | |
|------------------|------------|-------------|----------------------|------------|-----------------------------|
| Output connector | 1-353080-2 | 1-179958-2 | 1 | Output (+) | |
| | | | 2 | Output (-) | |
| CN1 & CN2 | 1318125-1 | 1-1318119-4 | Tyco Electronics AMP | 1A | Remote signal ON/OFF 1+ |
| | | | | 1B | Remote signal ON/OFF 1- |
| | | | | 2A | Remote signal ON/OFF 2+ |
| | | | | 2B | Remote signal ON/OFF 2- |
| | | | | 3A | Remote signal ON/OFF 3+ |
| | | | | 3B | Remote signal ON/OFF 3- |
| | | | | 4A | Remote signal ON/OFF 4+ |
| | | | | 4B | Remote signal ON/OFF 4- |
| CN3 & CN4 | 1318126-1 | 1-1318118-6 | Tyco Electronics AMP | 1A,1B | MAS: Master |
| | | | | 2A,2B | SLV: Slave |
| | | | | 3A,3B | CTB: Current balance |
| | | | | 4A,4B | PCNT: Parallel control |
| | | | | 5A,5B | COM:GND |
| | | | | 6A,6B | N.C. |
| CN5 & CN6 | 1318124-1 | 1-1318119-3 | Tyco Electronics AMP | 1A,1B | System ON/OFF + |
| | | | | 3A,3B | System ON/OFF - |
| | | | | 2A,2B | N.C. |
| | | | | | |
| CN7 & CN8 | 1318124-2 | 2-1318119-3 | Tyco Electronics AMP | 1A,1B | Alarm + |
| | | | | 3A,3B | Alarm - |
| | | | | 2A | +M: Output voltage monitor+ |
| | | | | 2B | -M: Output voltage monitor- |

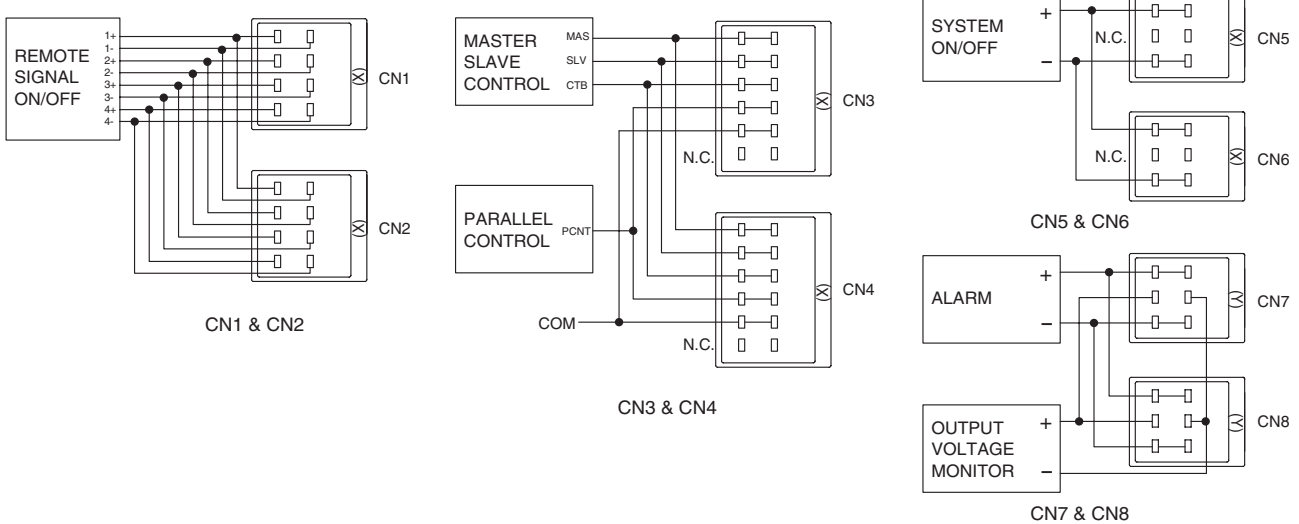
Connection diagram of function connectors

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● SCHA10000T



● SCDA10000T



Basic characteristics data

| Model | Circuit method | Switching frequency [kHz] | Input current [A] | Rated input fuse | Inrush current protection circuit | PCB/Pattern | | |
|-------------|-------------------|---------------------------|-------------------|------------------|-----------------------------------|-------------|--------------|------------------|
| | | | | | | Material | Single sided | Double sided |
| SCHA 10000T | Active filter | 65 | 35 | 400V 40A | SCR | FR-4 | | Double and Multi |
| | Forward converter | 130 | | | | | | |
| SCDA 10000T | Active filter | 65 | 35 | 400V 40A | SCR | FR-4 | | Double and Multi |
| | Forward converter | 130 | | | | | | |

* The value of input current is at ACIN 200V 3 φ and rated load.