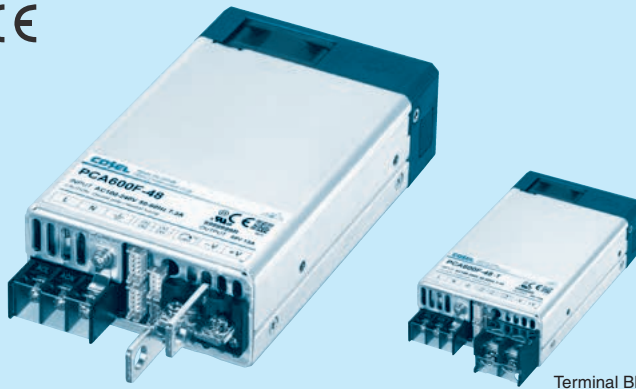
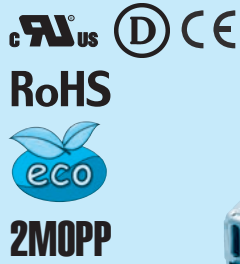


# PCA600F

PC A 600 F -5 -□

① ② ③ ④ ⑤ ⑥



Terminal Block Style

Example recommended EMI/EMC filter  
NAC-16-472



High voltage pulse noise type : NAP series  
Low leakage current type : NAM series  
\* A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Universal input
- ⑤ Output voltage
- ⑥ Optional \*7  
T : Terminal Block Style  
I : with PMBus interface

For option details, refer to instruction manual 7.1.

\*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

| MODEL                 | PCA600F-5 | PCA600F-12 | PCA600F-15 | PCA600F-24 | PCA600F-32 | PCA600F-48 |
|-----------------------|-----------|------------|------------|------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 600       | 636        | 645        | 648        | 640        | 624        |
| DC OUTPUT             | 5V 120A   | 12V 53A    | 15V 43A    | 24V 27A    | 32V 20A    | 48V 13A    |

## SPECIFICATIONS

|                                    | MODEL  | PCA600F-5   | PCA600F-12  | PCA600F-15     | PCA600F-24     | PCA600F-32     | PCA600F-48     |        |
|------------------------------------|--|---|---|----------------|----------------|----------------|----------------|--------|
| INPUT                              | VOLTAGE  | [VAC]   | 85 - 264 1 φ (Output derating is required at less than 90V. Refer to instruction manual 5.2.) |                |                |                |                |        |
|                                    |  | [VDC] *1  | 88 - 370 (Output derating is required at less than 110V. Refer to instruction manual 5.2.)    |                |                |                |                |        |
|                                    | CURRENT[A]   | ACIN 100V   | 7.3typ  |                |                |                |                |        |
|                                    |  | ACIN 230V   | 3.2typ  |                |                |                |                |        |
|                                    | FREQUENCY[Hz]  | 50/60 (45 - 66)   |   |                |                |                |                |        |
|                                    | EFFICIENCY[%]  | ACIN 100V   | (Io=50%)  | 90typ          | 91typ          | 91typ          | 91typ          | 91typ  |
|                                    |  |   | (Io=100%)   | 89typ          | 90typ          | 90typ          | 91typ          | 91typ  |
|                                    |  | ACIN 230V   | (Io=50%)  | 92typ          | 92typ          | 92typ          | 93typ          | 93typ  |
|                                    |  |   | (Io=100%)   | 91typ          | 92typ          | 92typ          | 93typ          | 93typ  |
|                                    | POWER FACTOR   | ACIN 100V   | 0.98typ (Io=100%)   |                |                |                |                |        |
| ACIN 230V                          |  | 0.95typ (Io=100%)   |   |                |                |                |                |        |
| INRUSH CURRENT[A]                  | ACIN 100V*2  | 20/40 typ (Io=100%) (Primary inrush current / Secondary inrush current) (More than 3 sec. to re-start)          |   |                |                |                |                |        |
|                                    | ACIN 230V*2  | 40/40 typ (Io=100%) (Primary inrush current / Secondary inrush current) (More than 3 sec. to re-start)          |   |                |                |                |                |        |
| LEAKAGE CURRENT[ma]                | 0.5max (ACIN 240V 60Hz, Io=100%. According to IEC60601-1)  |   |   |                |                |                |                |        |
| OUTPUT                             | VOLTAGE[V]   | 5   | 12  | 15             | 24             | 32             | 48             |        |
|                                    | CURRENT[A]   | 120   | 53  | 43             | 27             | 20             | 13             |        |
|                                    | LINE REGULATION[mV]  | 20max   | 48max   | 60max          | 96max          | 128max         | 192max         |        |
|                                    | LOAD REGULATION[mV]  | 40max   | 100max  | 120max         | 150max         | 150max         | 480max         |        |
|                                    | RIPPLE[mVp-p]  | 0 to +50°C *3*4   | 160max  | 240max         | 240max         | 240max         | 320max         | 480max |
|                                    |  | -20 to 0°C *3   | 280max  | 320max         | 320max         | 320max         | 420max         | 640max |
|                                    | RIPPLE NOISE[mVp-p]  | 0 to +50°C *3*4   | 240max  | 300max         | 300max         | 300max         | 400max         | 600max |
|                                    |  | -20 to 0°C *3   | 320max  | 360max         | 360max         | 360max         | 480max         | 720max |
|                                    | TEMPERATURE REGULATION[mV]                                 | 0 to +50°C *4   | 50max   | 120max         | 150max         | 240max         | 320max         | 480max |
|                                    |  | -20 to +50°C *4   | 75max   | 180max         | 180max         | 290max         | 400max         | 600max |
|                                    | DRIFT[mV]  | *5  | 20max   | 48max          | 60max          | 96max          | 128max         | 192max |
|                                    | START-UP TIME[ms]  | 700typ (ACIN 100/230V Io=100%)  |   |                |                |                |                |        |
|                                    | HOLD-UP TIME[ms]   | 20typ (ACIN 230V Io=80%) / 16typ (ACIN 230V Io=100%)  |   |                |                |                |                |        |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 3.00 to 6.00   | 7.20 to 14.40   | 9.00 to 18.00   | 14.40 to 28.80 | 19.20 to 38.40 | 28.80 to 57.60 |                |        |
| OUTPUT VOLTAGE SETTING[V]          | 5.00 to 5.05   | 12.00 to 12.12  | 15.00 to 15.15  | 24.00 to 24.24 | 32.00 to 32.32 | 48.00 to 48.48 |                |        |
| PROTECTION CIRCUIT AND OTHERS      | OVERCURRENT PROTECTION                                     | Works over 105% of rating (Recovers automatically, Intermittent overcurrent)                                    |   |                |                |                |                |        |
|                                    | OVERVOLTAGE PROTECTION[V]                                  | 6.25 to 7.00  | 15.00 to 16.80  | 18.75 to 21.00 | 30.00 to 33.60 | 40.00 to 44.80 | 60.00 to 67.20 |        |
|                                    | REMOTE SENSING   | Provided  |   |                |                |                |                |        |
|                                    | REMOTE ON/OFF (RC)   | Provided  |   |                |                |                |                |        |
|                                    | DC_OK LAMP   | LED (Blue)  |   |                |                |                |                |        |
|                                    | ALARM LAMP   | LED (Orange)  |   |                |                |                |                |        |
|                                    | COMMUNICATION FUNCTION                                     | Provided (Extended UART)  |   |                |                |                |                |        |
| ISOLATION                          | INPUT-OUTPUT   | AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) 2MOPP                            |   |                |                |                |                |        |
|                                    | INPUT-FG   | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) 1MOPP                            |   |                |                |                |                |        |
|                                    | OUTPUT-FG  | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)                                   |   |                |                |                |                |        |
|                                    | OUTPUT - AUX · RC · PG · INFO · DS · ADDR0 · ADDR1 · ADDR2 | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)                                   |   |                |                |                |                |        |
| ENVIRONMENT                        | OPERATING TEMP., HUMIDITY AND ALTITUDE                     | -20 to +70°C, 20 - 90%RH (Non condensing)   |   |                |                |                |                |        |
|                                    | STORAGE TEMP., HUMIDITY AND ALTITUDE                       | -20 to +75°C, 20 - 90%RH (Non condensing)   |   |                |                |                |                |        |
|                                    | VIBRATION  | 10 - 55Hz 19.6m/s <sup>2</sup> (2G) 3minutes period, 60minutes each along X, Y and Z axis                       |   |                |                |                |                |        |
|                                    | IMPACT   | 196.1m/s <sup>2</sup> (20G) 11ms, once each X, Y and Z axis   |   |                |                |                |                |        |
| SAFETY AND NOISE REGULATIONS       | AGENCY APPROVALS   | UL60950-1, C-UL (CSA60950-1), EN60950-1, ANSI/AAMI ES60601-1, EN60601-1 3rd, Complies with IEC60601-1-2 4th Ed. |   |                |                |                |                |        |
|                                    | CONDUCTED NOISE  | Complies with FCC Part15 classB, VCCI-B, CISPR32-B, EN55011-B, EN55032-B  |   |                |                |                |                |        |
|                                    | HARMONIC ATTENUATOR *6                                     | Complies with IEC61000-3-2 (class A)  |   |                |                |                |                |        |

## SPECIFICATIONS

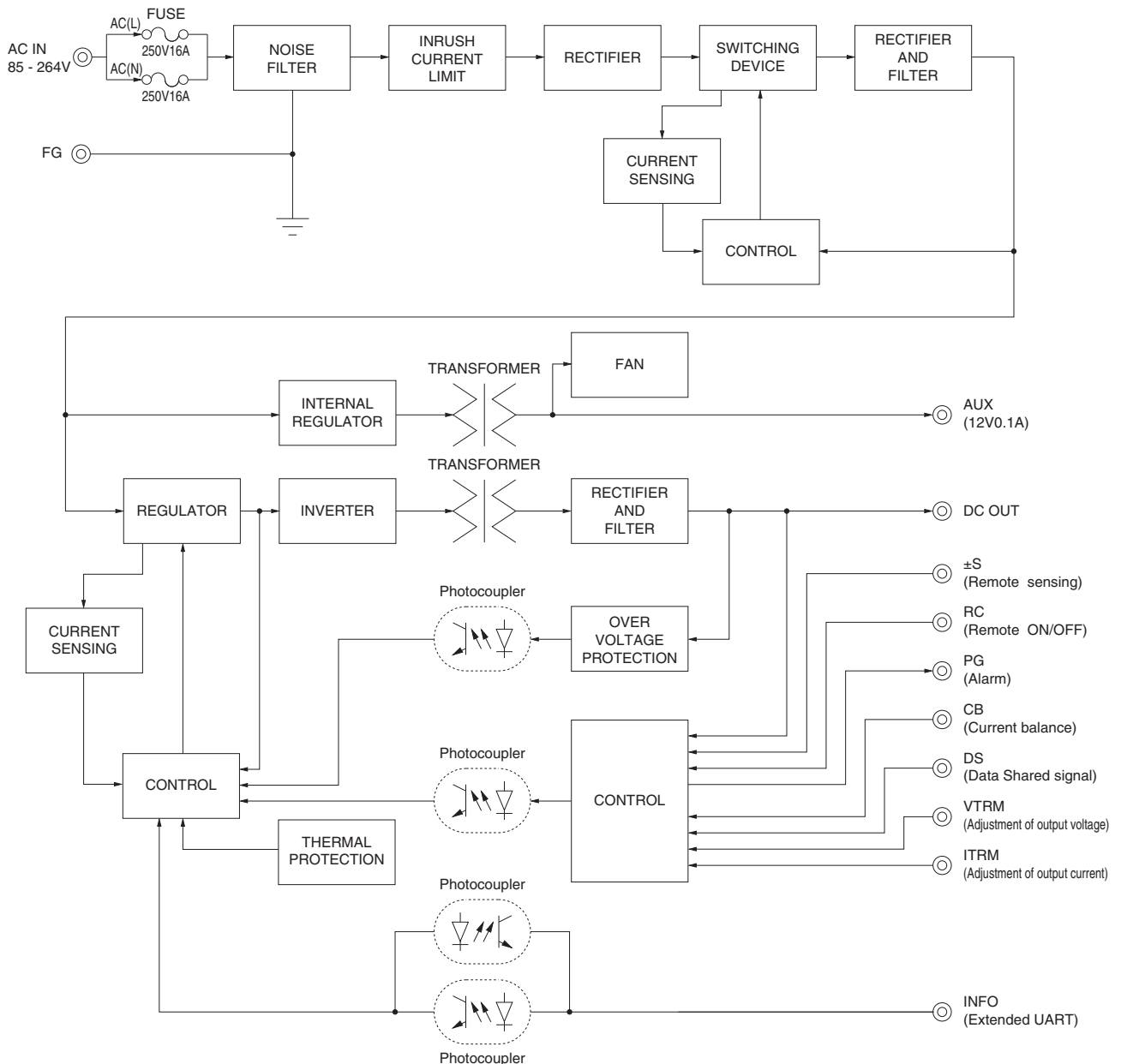
|        |                  |   |
|--------|------------------|---|
| OTHERS | CASE SIZE/WEIGHT | 89 X 41 X 152mm [3.50 X 1.61 X 5.98 inches] (without terminal block and screw) (W X H X D) / 840g max |
|        | COOLING METHOD   | Forced cooling (internal fan)   |

- \*1 DC input safety agency approvals deleted.
- \*2 The value is primary surge. The current of input surge to a built-in EMI/EMS Filter(0.2ms or less) is excluded.
- \*3 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN:RM103).
- \*4 5V output product, the maximum temperature of 40°C.
- \*5 Drift is the change in DC output for an eight hours period after a half-hour warm-up at 25°C.
- \*6 Please contact us about another class.
- \*7 The listed options may affect the published standard specifications. Please contact us for detailed product specifications and safety approvals.
- \* A sound may occur from power supply at pulse loading.

## Features

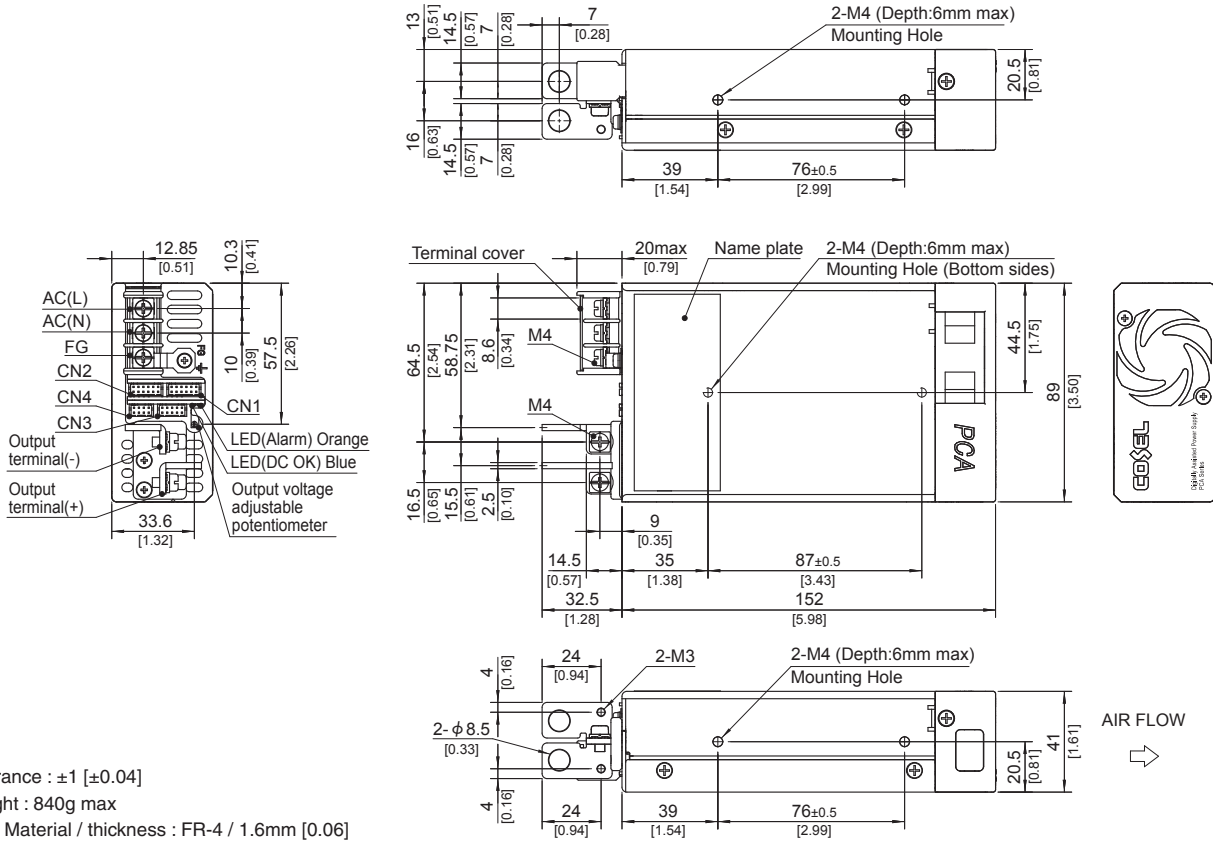
- Low profile (41mm, 1.61 inch = meet to 1U height)
- Universal input 85 - 264VAC (Refer to item 5.2, when using at 85 - 90VAC)
- DC input 88 - 370VDC possible (Refer to item 5.2, when using at 88 - 110VDC)
- For medical electric equipment (ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- Medical Isolation Grade 2MOPP
- With AUX output 12V 0.1A (Voltage variable range 5 - 12V)
- Constant current regulation
- Output voltage can be varied to near 0V (Refer to item 3.6)
- With various alarms
- Parallel Operation / N+1 Parallel Redundancy Operation possible
- Monitoring function by communication and various setting values can be changed (Refer to item 3.11)

## Block diagram



External view

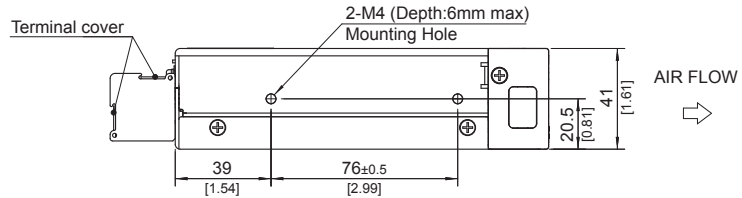
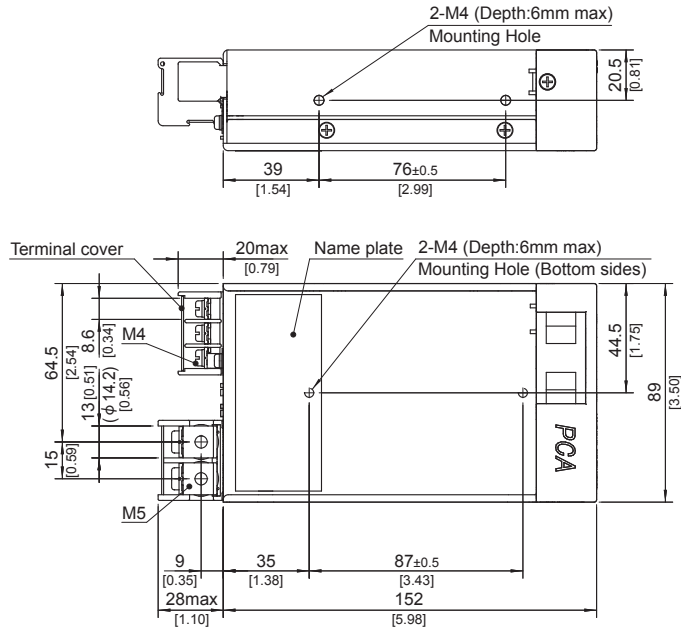
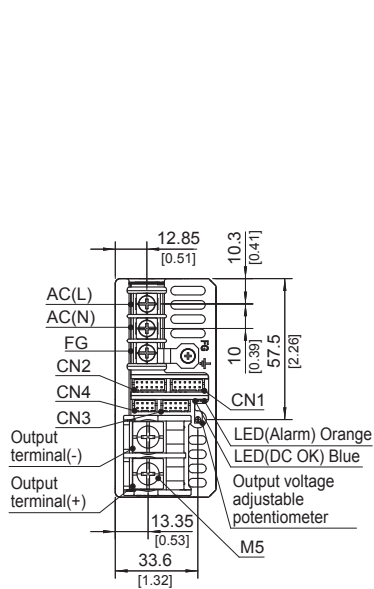
<PCA600F-□ (Bus Bar Style) >



- ※ Tolerance : ±1 [±0.04]
- ※ Weight : 840g max
- ※ PCB Material / thickness : FR-4 / 1.6mm [0.06]
- ※ Chassis Material : Aluminum
- ※ Fan cover Material : PBT
- ※ Dimensions in mm, [ ] = inches
- ※ Mounting torque : 1.2N·m max
- ※ Input and output terminal screw tightening torque
  - M3 0.6N·m max
  - M4 1.6N·m max
- ※ Please connect safety ground to FG terminal on the unit.

## External view

<PCA600F-□-T (Terminal Block Style) >



- ※ Tolerance : ±1 [±0.04]
- ※ Weight : 840g max
- ※ PCB Material / thickness : FR-4 / 1.6mm [0.06]
- ※ Chassis Material : Aluminum
- ※ Fan cover Material : PBT
- ※ Dimensions in mm, [ ] = inches
- ※ Mounting torque : 1.2N·m max
- ※ Input and output terminal screw tightening torque
  - M4 1.6N·m max
  - M5 2.5N·m max
- ※ Please connect safety ground to FG terminal on the unit.