

AC Input

Conformity to RoHS Directive

Single Output, Long Life, UL/C-UL/TÜV Approved

R Series RAW(100W to 1.5kW)

These products are meets the input harmonics current requirement and high-reliability power supplies, having the same shape as for the conventional ones. Dimensions are tailored for a compatible design with the RAX series that have given satisfactory results for years, therefor enabling a direct replacement between them. These power supplies comply with the safety standards with full countermeasures against EMI and answer a wide range of customers' needs with preparations of 35 models under five types of 100W to 1.5kW.



FEATURES

- Input harmonics current requirement IEC1000-3-2 meet.
- Universal input(AC.100 to 200V; Switching not required.), single output power supply.
- Alarm indicator and alarm signal output function(750W).
- Current balance function(1.5kW).
- · Output voltage external variable function.
- · Remote ON-OFF function.
- · Remote sensing function.
- It is a product conforming to RoHS directive.

PART NUMBERS AND RATINGS

| Output | 100W Typ | e | 175W Typ | е | 350W Typ | ре | 750W Typ | ре | 1.5kW T | уре |
|------------|------------|-----------|-----------|------------|-----------|------------|-----------|------------|----------|-------------|
| voltage(V) | Current(A) | Part No. | Current(A |) Part No. | Current(A |) Part No. | Current(A |) Part No. | Current(| A) Part No. |
| 3 | 20 | RAW03-20R | 35 | RAW03-35R | 70 | RAW03-70R | 150 | RAW03-150 | 300 | RAW03-300 |
| 5 | 20 | RAW05-20R | 35 | RAW05-35R | 70 | RAW05-70R | 150 | RAW05-150 | 300 | RAW05-300 |
| 12 | 8.4 | RAW12-8R4 | 14.6 | RAW12-14R | 30 | RAW12-30R | 62.5 | RAW12-62R | 125 | RAW12-125 |
| 15 | 6.7 | RAW15-6R7 | 11.7 | RAW15-11R | 24 | RAW15-24R | 50 | RAW15-50R | 100 | RAW15-100 |
| 24 | 4.2 | RAW24-4R2 | 7.3 | RAW24-7R3 | 16 | RAW24-16R | 31.3 | RAW24-31R | 65 | RAW24-65R |
| 28 | 3.6 | RAW28-3R6 | 6.3 | RAW28-6R3 | 13 | RAW28-13R | 26.8 | RAW28-26R | 55 | RAW28-55R |
| 48 | 2.1 | RAW48-2R1 | 3.7 | RAW48-3R7 | 7.5 | RAW48-7R5 | 15.7 | RAW48-15R | 32 | RAW48-32R |

[•] Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.



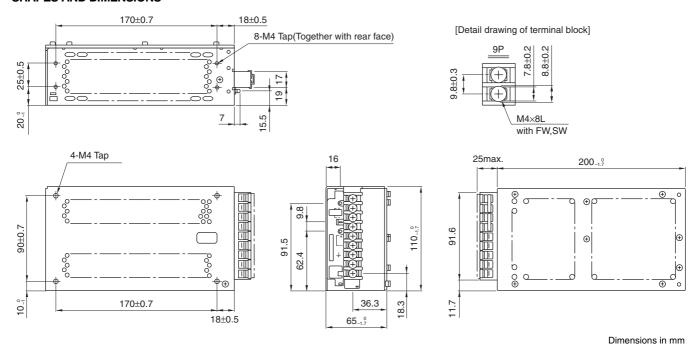
RAW100W Type

| Part No. | | | RAW03-20R | RAW05-20R | RAW12-8R4 | RAW15-6R7 | RAW24-4R2 | RAW28-3R6 | RAW48-2R1 | | | |
|--------------------------|-------------------------------|-----------|-----------|---|--|--|--------------------------|-------------------|--------------------|--------------------|--|--|
| | tput voltage and | dourrent | * | 3V • 20A | 5V • 20A | 12V • 8.4A | 15V • 6.7A | 24V • 4.2A | 28V • 3.6A | 48V • 2.1A | | |
| | n output power | Current | W | 70 | 100 | 100.8 | 100.5 | 100.8 | 100.8 | 100.8 | | |
| Input con | | | VV | 70 | 100 | 100.6 | 100.5 | 100.6 | 100.6 | 100.0 | | |
| Input volt | | | V | 85 to 26/[Batis | 85 to 264[Rating: 100 to 240] | | | | | | | |
| Input fred | | | Hz | | g: 50 to 60](Sing | la phasa) | | | | | | |
| input nec | quericy | | A | | ax./0.62max.[AC | | | | | | | |
| Input curi | rent | | A | | | - | 7 | | | | | |
| Fuse ration | na | | A | 3.15[Built-in] | 3V: 1.4max./1.2max./0.5max.[AC.85/100/240V] | | | | | | | |
| Surge cu | | | A | | / [ΔC 120/240V | 1et curae currer | nt, reset after 30s | minimum 1 | | | | |
| Leakage | | | mA | | max.[AC.120/2407, | | it, reset after 503 | s minimum, | | | | |
| Power fa | | | шА | 0.99typ. | 111ax.[AO. 120/24 | OV | | | | | | |
| 1 OWEI IA | CiOi | % | 100V | 65typ. | 74typ. | 76typ. | 77typ. | 78typ. | 79typ. | 79typ. | | |
| Efficiency | У | % | 240V | 67typ. | 74typ. 78typ. | 81typ. | 82typ. | 83typ. | 83typ. | 83typ. | | |
| Output of | naracteristics | /0 | 240 V | O7 typ. | 70typ. | στιγρ. | oztyp. | оогур. | оотур. | оотур. | | |
| | oltage Edc | | V | 3 | 5 | 12 | 15 | 24 | 28 | 48 | | |
| | /ariable range E | dc | V | 1.8 to 3.5 | 3.5 to 5.5 | 8.4 to 13.2 | 12 to 16.5 | 16.5 to 26.4 | 25.2 to 30.8 | 30.8 to 52.8 | | |
| | n output current | uc | A | 20 | 20 | 8.4 | 6.7 | 4.2 | 3.6 | 2.1 | | |
| | output current | | A | 0 | 0 | 0.4 | 0.7 | 0 | 0 | 0 | | |
| | age threshold E | do | V | 3.8 to 4.6 | 6 to 6.9 | 13.7 to 15.7 | 17 to 19.5 | 27 to 30.5 | 31.4 to 34.5 | 55 to 59 | | |
| | | JC | A | 22 to 24 | 22 to 24 | 9.2 to 10.1 | 7.4 to 8.1 | 4.7 to 5.1 | 4 to 4.3 | 2.3 to 2.5 | | |
| Overcurre | | | | | | | | 4.7 10 5.1 | 4 10 4.3 | 2.3 10 2.5 | | |
| | Source effect % Load effect % | | | | 0.6max.(0.1typ.)[Within the input voltage range] 1max.(0.6typ.)[0 to 100% load] Total effect ±2max.(±1typ.) | | | | | | | |
| Voltage Temperature effe | | offoot | % | | | | :0°C1 | - Total ellect | ±2max.(± myp.) | | | |
| stability | | | % | | 2max.(0.4typ.)[Ambient temperature: -10 to +50°C] 0.5max.[25°C, input and output ratings, after input voltage ON for 30min to 8h] | | | | | | | |
| | Drift(Time effe | eCt) | % | | | t ratings, after in Iden load chang | | or 30min to 8nj | | | | |
| Dinnla Er | Recovery | | %/ms | ±4max./ max. 50max. | 50 to 100% sud | 80max. | | 100mov | 100mov | 1F0mov | | |
| Ripple Ep | | | mV | 100max. | 100max. | 170max. | 80max. 200max. | 100max. | 100max. 290max. | 150max. 400max. | | |
| Ripple no Start up t | | | mV | | | | | 290max. | 290Max. | 400max. | | |
| | | | ms | 300max.(200typ.)/300max.(150typ.)[AC.100/240V] | | | | | | | | |
| Hold up t | | | ms | 20min.(45typ.)/20min.(55typ.)[AC.100/240V] | | | | | | | | |
| | n load capacitor | | μF | 10000 | | | | | | | | |
| | functions | | | LED/Organ) in | ali a a ta a da a | | NI. | | | | | |
| Indicator | | | | | | oltage output is C | אכ. reset(interval ap | | loca fire al | | | |
| | age protection | | | | | | reset(interval ap | prox. 5s), set va | liue fixea. | | | |
| | ent protection | | | , | pe, automatic re | ecovery. | | | | | | |
| Remote (| | | | Yes(Floating) | | | | | | | | |
| Remote s | <u> </u> | | | Yes | | | | | | | | |
| Current b | | | | No | | | | | | | | |
| | oltage external v | ariable t | unction | Yes | | | | | | | | |
| | lave operation | | | No | | | | | | | | |
| Alarm sig | | | | No | | | | | | | | |
| Standard | | | | | | -/O.L.II.\ | | | | | | |
| Safety sta | | | | UL1950, CSA C22.2 No.950-95(C-UL), EN60950-1(TÜV) approved. FCC class B, VCCl class B, VDE0871 class B meet. | | | | | | | | |
| | minal voltage | | | | | JE08/1 class B | meet. | | | | | |
| | monics current i | requirem | nent | IEC1000-3-2 n | neet. | | | | | | | |
| Construc | | | 1 | 0= 000 | | | | | | | | |
| | dimensions | | mm | 110×65×200[H | l×VV×L] | | | | | | | |
| Weight | | | kg | 1.3max. | | | | | | | | |
| Mounting | | | | Can be attache | | | | | | | | |
| Case ma | terial | | | Frame and cov | /er: Aluminum | | | | | | | |
| | | | | | | | | | | | | |

^{*} Current rating(maximum output current) is determined for -10 to +50°C. Derating is required when used outside this temperature range.

RAW100W Type

SHAPES AND DIMENSIONS



• Do not insert M4 tap installation screws more than 7mm from surface of housing.



±1mm: without specified dimensions

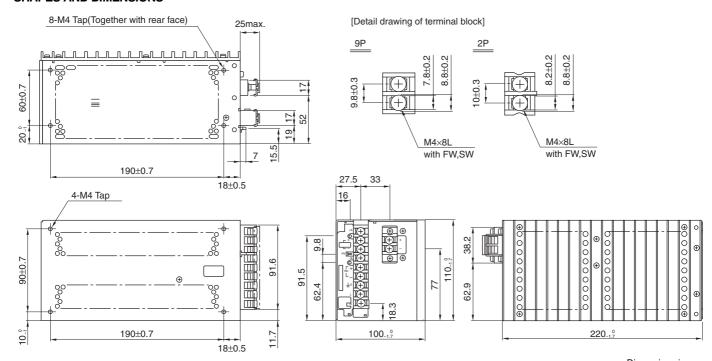
RAW175W Type

| Part No. | | | RAW03-35R | RAW05-35R | RAW12-14R | RAW15-11R | RAW24-7R3 | RAW28-6R3 | RAW48-3R7 | | |
|---------------------|-------------------------|-----------|-----------|---|--------------------------------------|------------------|---------------------|-------------------|----------------|--------------|--|
| | tput voltage and | deurrant | * | 3V • 35A | 5V • 35A | 12V • 14.6A | 15V • 11.7A | 24V • 7.3A | 28V • 6.3A | 48V • 3.7A | |
| | n output power | Current | W | 122.5 | 175 | 175.2 | 175.5 | 175.2 | 176.4 | 177.6 | |
| Input cor | | | VV | 122.5 | 175 | 175.2 | 175.5 | 175.2 | 170.4 | 177.0 | |
| Input volt | | | V | 85 to 264[Ratin | na: 100 to 2401 | | | | | | |
| | | | Hz | | g: 50 to 60](Sing | llo phaco) | | | | | |
| Input free | quericy | | A | | g. 50 to 60](Sing ax./1.15max.[AC | | | | | | |
| Input cur | rent | | A | | | | | | | | |
| Fuse rati | na | | A | 3V: 2.4max./2max./0.8max.[AC.85/100/240V] 5[Built-in] | | | | | | | |
| Surge cu | | | A | | /IAC 120/240V | 1ct curae currer | nt, reset after 30s | minimum 1 | | | |
| Leakage | | | mA | | max.[AC.120/240V, | | ii, iesei ailei sos | s minimum.j | | | |
| Power fa | | | ША | 0.99typ. | 111ax.[AU. 120/24 | .OV] | | | | | |
| roweria | Cloi | % | 100V | 71typ. | 76typ. | 79typ. | 80typ. | 81typ. | 81typ. | 81typ. | |
| Efficiency | y | % | 240V | 71typ. 74typ. | 80typ. | 79typ. 83typ. | 83typ. | 86typ. | ,, | 86typ. | |
| O. da. d al | | 70 | 240V | 74typ. | ουιγρ. | озіур. | озіур. | оогур. | 86typ. | σοιγρ. | |
| | naracteristics | | V | 0 | F | 10 | 15 | 0.4 | 00 | 48 | |
| | oltage Edc | -1- | V | 3 | 5 | 12 | 15 | 24 | 28 | | |
| | variable range E | ac | | 1.8 to 3.5 | 3.5 to 5.5 | 8.4 to 13.2 | 12 to 16.5 | 16.5 to 26.4 | 25.2 to 30.8 | 30.8 to 52.8 | |
| | n output current | | Α | 35 | 35 | 14.6 | 11.7 | 7.3 | 6.3 | 3.7 | |
| | output current | | Α | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | age threshold Ed | dc | V | 3.8 to 4.6 | 6 to 6.9 | 13.7 to 15.7 | 17 to 19.5 | 27 to 30.5 | 31.4 to 34.5 | 55 to 59 | |
| Overcurr | Overcurrent threshold A | | | 36.8 to 38.5 | 36.8 to 38.5 | 15.3 to 16.1 | 12.3 to 12.9 | 8 to 8.3 | 6.9 to 7.2 | 4.3 to 4.5 | |
| | Source effect | | % | 0.6max.(0.1typ.)[Within the input voltage range] | | | | | | | |
| Voltage Load effect | | | % | | [0 to 100% load] | | | Total effect | ±2max.(±1typ.) | | |
| stability | Temperature e | | % | | [Ambient tempe | | | | | | |
| | Drift(Time effe | ect) | % | | | | put voltage ON | for 30min to 8h] | | | |
| | Recovery | | %/ms | | [50 to 100% suc | | | + | * | , | |
| | Ripple Ep-p mV | | | 50max. | 50max. | 80max. | 80max. | 100max. | 100max. | 150max. | |
| Ripple no | | | mV | 100max. | 100max. | 170max. | 200max. | 290max. | 290max. | 400max. | |
| Start up t | | | ms | 400max.(300typ.)/400max.(300typ.)[AC.100/240V] | | | | | | | |
| Hold up t | | | ms | 20min.(45typ.)/20min.(55typ.)[AC.100/240V] | | | | | | | |
| | n load capacitor | | μF | 10000 | | | | | | | |
| | functions | | | | | | | | | | |
| Indicator | | | | | dicates when vo | | | | | | |
| Overvolta | age protection | | | Output voltage | shut-down type | , recovers upon | reset(interval ap | prox. 5s), set va | llue fixed. | | |
| | ent protection | | | , | rpe, automatic re | ecovery. | | | | | |
| Remote (| ON-OFF | | | Yes(Floating) | | | | | | | |
| Remote | <u> </u> | | | Yes | | | | | | | |
| Current b | palance | | | No | | | | | | | |
| Output vo | oltage external v | ariable 1 | function | Yes | | | | | | | |
| Master s | lave operation | | | No | | | | | | | |
| Alarm sig | gnal | | | No | | | | | | | |
| Standard | ls | | | | | | | | | | |
| Safety st | andards | | | UL1950, CSA | C22.2 No.950-9 | 5(C-UL), EN609 | 50-1(TÜV) appro | oved. | | | |
| Noise ter | minal voltage | | | FCC class B, \ | VCCI class B, VI | DE0871 class B | meet. | | | | |
| Input har | monics current i | requirem | nent | IEC1000-3-2 n | neet. | | | | | | |
| Construc | tions | | | | | | | | | | |
| External | dimensions | | mm | 110×100×220[| H×W×L] | | | | | | |
| Weight | | | kg | 1.9max. | | | | | | | |
| Mounting | method | | - | Can be attache | ed to 3 sides. | | | | | | |
| Case ma | | | | Frame and cov | ver: Aluminum | | | | | | |
| | | | | | | | | | | | |

^{*} Current rating(maximum output current) is determined for -10 to +50°C. Derating is required when used outside this temperature range.

RAW175W Type

SHAPES AND DIMENSIONS



Dimensions in mm ±1mm: without specified dimensions

• Do not insert M4 tap installation screws more than 7mm from surface of housing.





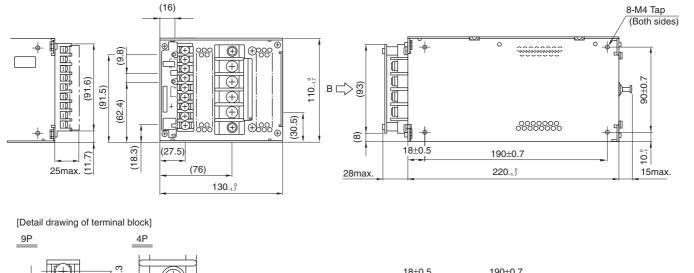
RAW350W Type

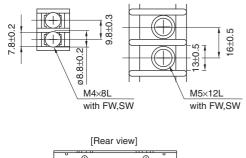
| Part No. | | | | RAW03-70R | RAW05-70R | RAW12-30R | RAW15-24R | RAW24-16R | RAW28-13R | RAW48-7R5 | | | |
|------------------------------|------------------------------|------------|-----------|--|---|-------------------|----------------------|-------------------|----------------|--------------|--|--|--|
| Rated ou | tput voltage an | d current | *1 | 3V • 70A | 5V • 70A | 12V • 30A | 15V • 24A | 24V • 16A | 28V • 13A | 48V • 7.5A | | | |
| Maximun | n output power | | W | 245 | 350 | 360 | 360 | 384 | 364 | 360 | | | |
| Input con | ditions | | | | | | | | | | | | |
| Input volt | age Eac | | V | 85 to 264[Rati | 85 to 264[Rating: 100 to 240] | | | | | | | | |
| Input fred | | | Hz | | 47 to 66[Rating: 50 to 60](Single phase) | | | | | | | | |
| | | | Α | 6.6max./5.6ma | 6.6max./5.6max./2.3max.[AC.85/100/240V] | | | | | | | | |
| Input cur | rent | | Α | 3V: 4.7max./4i | max./1.7max.[A0 | C.85/200/240V] | | | | | | | |
| Fuse rati | ng | | Α | 10[Built-in] | - | - | | | | | | | |
| Surge cu | rrent | | Α | 20max./40max | c.[AC.120/240V, | 1st surge currer | nt, reset after 30s | minimum.] | | | | | |
| Leakage | | | mA | | 20max./40max.[AC.120/240V, 1st surge current, reset after 30s minimum.] 0.5max./0.75max.[AC.120/240V] | | | | | | | | |
| Power fa | | | | 0.99typ. | | | | | | | | | |
| | | % | 100V | 65typ. | 72typ. | 73typ. | 75typ. | 76typ. | 77typ. | 79typ. | | | |
| Efficiency | / | % | 240V | 68typ. | 76typ. | 77typ. | 78typ. | 79typ. | 80typ. | 82typ. | | | |
| Output ch | naracteristics | | | 71 | - 71- | 21: | - 71- | - 71 | | 1 - 31- | | | |
| | oltage Edc | | V | 3 | 5 | 12 | 15 | 24 | 28 | 48 | | | |
| | variable range E | dc | V | 1.8 to 3.5 | 3.5 to 5.5 | 8.4 to 13.2 | 12 to 16.5 | 16.5 to 26.4 | 25.2 to 30.8 | 30.8 to 52.8 | | | |
| | n output current | | A | 70 | 70 | 30 | 24 | 16 | 13 | 7.5 | | | |
| | output current | • | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | age threshold E | dc | V | 3.8 to 4.6 | 6 to 6.9 | 13.7 to 15.7 | 17 to 19.5 | 27 to 30.5 | 31.4 to 34.5 | 55 to 59 | | | |
| | ent threshold | uo | A | 73 to 84 | 73 to 84 | 31.5 to 36 | 25.2 to 28.8 | 16.8 to 19.2 | 13.6 to 15.6 | 7.8 to 9 | | | |
| Overcum | Source effect | | % | | | | | 10.0 to 13.2 | 10.0 to 10.0 | 7.0 to 5 | | | |
| | Load effect % | | | 0.1max.(0.05typ.)[Within the input voltage range] 0.3max.(0.1typ.)[0 to 100% load] Total effect ±1.5max.(±0.7typ.) | | | | | | | | | |
| Voltage | Voltage Temperature effect % | | | 1max.(0.5typ.)[Ambient temperature: -10 to +50°C] | | | | | | | | | |
| stability Drift(Time effect) | | | % | | | | s, after input volta | an ONI for 20mi | n to Ohl | | | | |
| | | | %/ms | | [50 to 100% sud | | | age ON IOI SOITII | ii to orij | | | | |
| Dipple Er | | | mV | ±4max./max. | 50max. | 80max. | 80max. | 100max. | 100max. | 150max. | | | |
| | | mV | 100max. | 100max. | 170max. | 200max. | 290max. | 290max. | 400max. | | | | |
| | | | ms | | | | | 290Hax. | 290IIIax. | 400max. | | | |
| Hold up t | | | | 900max.(500typ.)/900max.(300typ.)[AC.100/240V] 20min.(45typ.)/20max.(50typ.)[AC.100/240V] | | | | | | | | | |
| | | | ms μF | 20min.(4styp.)/20max.(sotyp.)[AC.100/240V] | | | | | | | | | |
| | n load capacitor | | μг | 10000 | | | | | | | | | |
| Auxiliary | | | | LED/Croon) in | diaataa udaan ya | Itaaa autout ia C | NI. | | | | | | |
| Indicator | |) | | LED(Green) indicates when voltage output is ON. | | | | | | | | | |
| | age protection*2 | | | Output voltage shut-down type, set value fixed. | | | | | | | | | |
| | Itage threshold | | | Output voltage shut-down type Rectangular type(output limited when low voltage detected). | | | | | | | | | |
| | ent protection*2 | , | | | | | ge detected). | | | | | | |
| Fan alarr | | | | | shut-down type | | | | | | | | |
| | protection*2 | | | | shut-down type | | | | | | | | |
| Remote (| | | | Yes(Floating) | | | | | | | | | |
| Remote | | | | Yes | | | | | | | | | |
| Current b | | | | No | | | | | | | | | |
| | oltage external | variable i | tunction | Yes | | | | | | | | | |
| | ave operation | | | No | | | | | | | | | |
| Alarm sig | | | | No | | | | | | | | | |
| Standard | | | | | | | | | | | | | |
| Safety st | | | | · | | , , | 50-1(TÜV) appro | oved. | | | | | |
| | minal voltage | | | | VCCI class A(50 | UKHz to 30MHz) | meet. | | | | | | |
| | monics current | requirem | nent | IEC1000-3-2 r | neet. | | | | | | | | |
| Construc | | | | | | | | | | | | | |
| | dimensions | | mm | 110×130×220[| H×W×L] | | | | | | | | |
| Weight | | | kg | 2.5max. | | | | | | | | | |
| Mounting | | | | Can be attach | | | | | | | | | |
| Case ma | terial | | | Frame and co | ver: Aluminum | | | | | | | | |
| *1 Curron | t rating/maxim | ım outou | t ourront | \ ia datarminad f | or 10 to 150°C | Dorotina io roa | iirad whan usad | autoida thia tam | noroturo rongo | | | | |

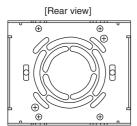
^{*1} Current rating(maximum output current) is determined for –10 to +50°C. Derating is required when used outside this temperature range. *2 Recovers upon reset(interval approx. 40s).

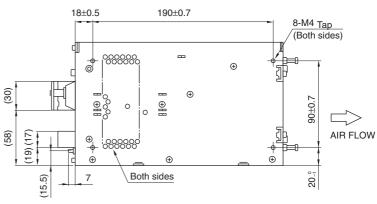
RAW350W Type

SHAPES AND DIMENSIONS









• Do not insert M4 tap installation screws more than 7mm from surface of housing.





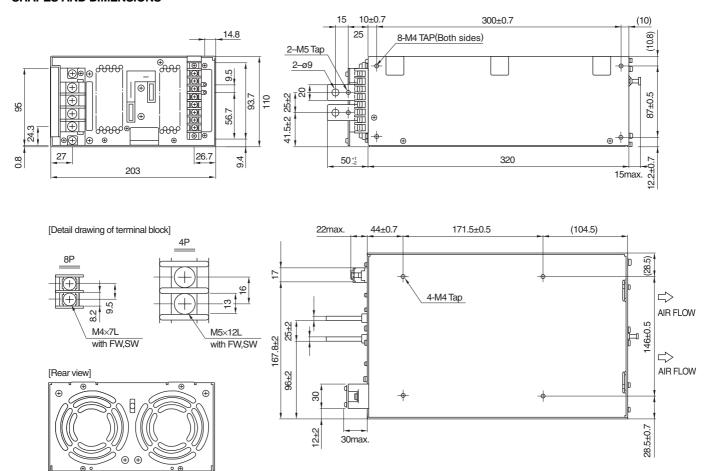
RAW1.5kW Type

| | | • | | | | | | | | | | | |
|-------------------------------------|---------------------------------------|------------|----------|---|--|----------------------|--------------------|-----------------|--------------|--------------|--|--|--|
| Part No. | | | | RAW03-300 | RAW05-300 | RAW12-125 | RAW15-100 | RAW24-65R | RAW28-55R | RAW48-32R | | | |
| | tput voltage and | d current | | 3V • 300A | 5V • 300A | 12V • 125A | 15V • 100A | 24V • 65A | 28V • 55A | 48V • 32A | | | |
| Maximum | n output power | | W | 1050 | 1500 | 1500 | 1500 | 1560 | 1540 | 1536 | | | |
| Input con | ditions | | | | | | | | | | | | |
| Input volta | age Eac | | V | 85 to 264[Rati | 85 to 264[Rating: 100 to 240] | | | | | | | | |
| Input freq | luency | | Hz | 47 to 66[Ratin | 47 to 66[Rating: 50 to 60](Single phase) | | | | | | | | |
| A | | | | 29max./22max | x./10max.[AC.85 | /100/240V] | | | | | | | |
| Input curr | rent | | Α | 3V: 18max./16 | Smax./7max.[AC | .85/100/240V] | | | | | | | |
| Fuse ratir | ng | | Α | | 30[Built-in] | | | | | | | | |
| Surge cur | rrent | | Α | | x.[AC.120/240V, | 1st surge currer | nt, reset after 30 | s minimum.] | | | | | |
| Leakage | | | mA | | 20max./40max.[AC.120/240V, 1st surge current, reset after 30s minimum.] 1max./2max.[AC.120/240V] | | | | | | | | |
| Power fac | | | Į. | | 0.99typ. | | | | | | | | |
| | | % | 100V | 70typ. | 75typ. | 76typ. | 76typ. | 78typ. | 79typ. | 80typ. | | | |
| Efficiency | / | % | 240V | 73typ. | 80typ. | 81typ. | 81typ. | 82typ. | 83typ. | 84typ. | | | |
| Output ch | Output characteristics | | | | | - · · · · · · | 0.1961 | | | / [| | | |
| | oltage Edc | | V | 3 | 5 | 12 | 15 | 24 | 28 | 48 | | | |
| | rariable range E | :dc | V | 1.8 to 3.5 | 3.5 to 5.5 | 8.4 to 13.2 | 12 to 16.5 | 16.5 to 26.4 | 25.2 to 30.8 | 30.8 to 52.8 | | | |
| | n output current | | A | 300 | 300 | 125 | 100 | 65 | 55 | 32 | | | |
| | output current | | Α | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | age threshold E | do | V | 3.8 to 4.6 | 6 to 6.9 | 13.7 to 15.7 | 17 to 19.5 | 27 to 30.5 | 31.4 to 34.5 | 55 to 59 | | | |
| | ent threshold | uc | A | 315 to 350 | 315 to 350 | 130 to 140 | 105 to 115 | 68 to 72 | 57.7 to 63.2 | 33.6 to 36.8 | | | |
| Overcure | | | | | | | | 00 10 72 | 37.7 10 03.2 | 33.0 10 30.0 | | | |
| | Voltage Source effect % Load effect % | | | 0.1max.(0.05typ.)[Within the input voltage range] | | | | | | | | | |
| Voltage | | | | 0.6max.(0.4typ.)[0 to 100% load] Total effect ±1.5max.(±0.7typ.) 1max.(0.5typ.)[Ambient temperature: -10 to +50°C] | | | | | | | | | |
| etability Temperature effect | | | % | | | | | 0111 00 1 | . 011 | | | | |
| - | Drift(Time effect) % | | | | p.)[25°C, input a | | | age ON for 30mi | n to 8hj | | | | |
| <u> </u> | Recovery | | %/ms | ,,,, | 50 to 100% sudo | | | 1 | 1 | 1 | | | |
| Ripple Ep-p mV | | | 140max. | 140max. | 140max. | 140max. | 140max. | 140max. | 140max. | | | | |
| Ripple no | | | mV | 200max. | 200max. | 250max. | 250max. | 300max. | 300max. | 400max. | | | |
| Start up ti | | | ms | 900max.(600typ.)/900max.(300typ.)[AC.100/240V] | | | | | | | | | |
| Hold up ti | | | ms | 20min.(40typ.)/20min.(50typ.)[AC.100/240V] | | | | | | | | | |
| | n load capacitor | | μF | 10000 | | | | | | | | | |
| Auxiliary f | | | | | | | | | | | | | |
| Indicator (| | | | LED(Green) illuminates when voltage output is ON. | | | | | | | | | |
| | age protection*2 | | | Output voltage shut-down type, set value fixed. | | | | | | | | | |
| Under vol | Itage threshold* | 2 | | Output voltage shut-down type, FAN alarm. | | | | | | | | | |
| | ent protection*2 | | | | Rectangular type(output limited when low voltage detected). | | | | | | | | |
| Fan alarm | n* ² | | | Output voltage shut-down type | | | | | | | | | |
| Overheat | protection*2 | | | Output voltage | e shut-down type |) | | | | | | | |
| Remote C | ON-OFF | | | Yes(Floating) | - | | | | | | | | |
| Remote s | sensing | | | Yes | | | | | | | | | |
| Current b | alance | | | Yes | | | | | | | | | |
| Output vo | oltage external v | variable f | unction | Yes | | | | | | | | | |
| | ave operation | | | No | | | | | | | | | |
| Alarm sig | | | | No | | | | | | | | | |
| Standards | | | | 1 | | | | | | | | | |
| Safety sta | | | | UL1950, CSA | C22.2 No.950-9 | 5(C-UL), EN609 | 950-1(TÜV) appr | oved. | | | | | |
| | minal voltage | | | , | VCCI class A(50 | , ,, | , , , , , | | | | | | |
| | | requirem | ent | IEC1000-3-2 r | | OIA 12 10 001VII 12) | , 1110011 | | | | | | |
| Input harmonics current requirement | | | | 0.000 0 21 | | | | | | | | | |
| Constructions External dimensions | | | | 110, 200, 200(11,1)(11 | | | | | | | | | |
| | | | mm | 110~203~320 | 110×203×320[H×WxL] | | | | | | | | |
| External of | dimensions | | mm ka | | [H×W×L] | | | | | | | | |
| External of Weight | dimensions | | mm kg | 7.5max. | • | | | | | | | | |
| External of | dimensions | | | 7.5max. Can be attach | • | | | | | | | | |

^{*1} Current rating(maximum output current) is determined for –10 to +50°C. Derating is required when used outside this temperature range. *2 Recovers upon reset(interval approx. 40s).

RAW1.5kW Type

SHAPES AND DIMENSIONS



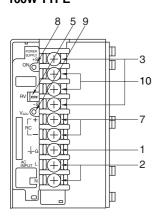
Dimensions in mm ±1mm: without specified dimensions

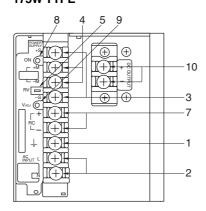
• Do not insert M4 tap installation screws more than 7mm from surface of housing.



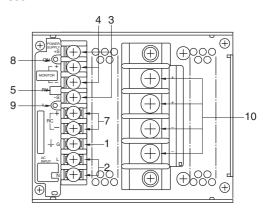


TERMINAL DESIGNATIONS AND FUNCTIONS 100W TYPE 175W TYPE

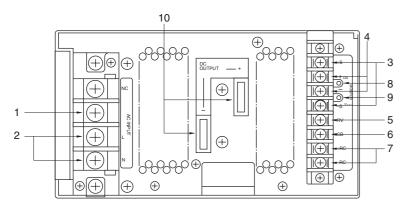




350W TYPE



1.5kW TYPE

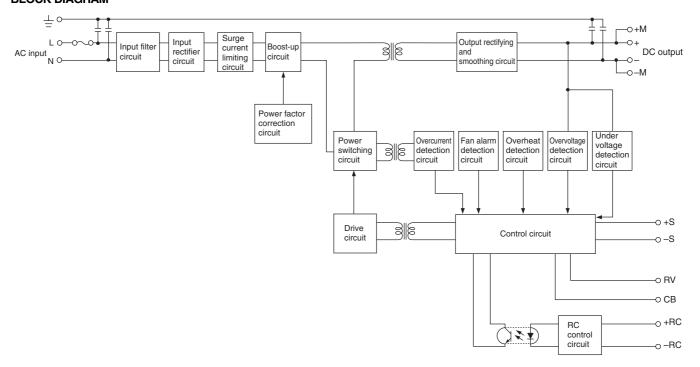


| Terminal No. | Designations and functions | |
|--------------|--|--|
| 1 | Frame ground terminal(G) | Connect to earth ground. This is connected to the case. |
| 2 | AC input terminals(L, N) | Connect to AC.100 to 120V or AC.200 to 240V input line. |
| 3 | Remote sensing terminals(+S, -S) | These terminals are used to compensate voltage loss from the output terminal to a load. Normally they are shorted with a metal bar. |
| 4 | DC output monitor terminals(+M, -M) | This terminal is used to monitor DC current output. Load lines should not be connected to these monitor terminals. These monitor terminals should be jumpered when the remote monitoring feature is not in use. |
| 5 | Output voltage adjustment terminal(RV) | This terminal is used for controlling output voltage from outside. |
| 6 | Current balance terminal(CB) | This terminal is used when several power supplies are connected in parallel to connect the respective CB and –S terminals in parallel. |
| 7 | Remote ON-OFF terminals(+RC, -RC) | Output is turned ON-OFF by disconnecting-connecting the RC terminals(output ON when open). RC terminals are floating. |
| 8 | Operation indicator LED(Green) | This Green LED becomes indicated when voltage is output. |
| 9 | Output voltage adjustment trim(V.ADJ) | Adjusts output voltage. |
| 10 | DC output terminals(+, -) | Connect to load. • The 175W and 350W Types are provided with four output terminals. For the DC output terminals, current should be less than 20A per pin for the 175W Type and less than 40A per pin for the 350W Type. |

[•] All specifications are subject to change without notice.



RAW100W, 175W, 350W, 1.5kW TYPES BLOCK DIAGRAM



- The 350W Type has no CB function.
- The 100W and 175W Types have no CB function, fan alarm detection circuit, under voltage detection circuit, nor overheat detection circuit.

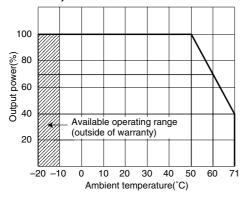
COMMON SPECIFICATIONS

| Туре | | 100W, 175W | 350W, 1.5kW | |
|---|-----------------------------------|---|--|--|
| Temperature and hu | ımidity | | | |
| Temperature range | Operating(°C) | −10 to +71[Derating is necessary when operating environment temperature exceed 50°C.] | −10 to +71[Derating is necessary when operating environment temperature exceed 50°C.] | |
| | Storage(°C) | -30 to +75 | −30 to +75 | |
| Humidity range | Operating(%)RH | 10 to 95[Maximum wet-bulb temperature: 35°C, without dewing] | 10 to 95[Maximum wet-bulb temperature: 35°C, without dewing] | |
| | Storage(%)RH | | | |
| Vibration and shock | | | | |
| | | 5 to 13Hz: All amplitude 10mm | 5 to 10Hz: All amplitude 10mm | |
| Vibration | | [3 directions, each 1h] | [3 directions, each 1h] | |
| VIDIALION | | 13 to 200Hz: Acceleration 29.4m/s ² (3G) [3 directions, each 1h] | 10 to 200Hz: Acceleration 19.6m/s ² (2G) [3 directions, each 1h] | |
| Charle | Acceleration | 588m/s ² (60G)[3 directions, each 3 times] | 294m/s ² (30G)[3 directions, each 3 times] | |
| Shock | Pulse duration | 11±5ms | 11±5ms | |
| Withstand voltage a | nd insulation resistance | | | |
| | Input terminal to case(G) | Eac: 2.5kV, 1min[Normal temperature, normal | Eac: 2.5kV, 1min[Normal temperature, normal | |
| \\(\int \\ \int \\ \text{ith at and \(\text{valtage} \) | Input terminal to output terminal | humidity, cutout current 20mA] | humidity, cutout current 20mA] | |
| Withstand voltage | Output terminal to case(G) | Eac: 500V, 1min [Normal temperature, normal humidity cutout] | Eac: 500V, 1min [Normal temperature, normal humidity cutout] | |
| | Input terminal to case(G) | Edo: 500\/ 100\/O min | Edg. 500V 100MO min | |
| Insulation resistance | Input terminal to output terminal | Edc: 500V, 100MΩ min. | Edc: 500V, 100MΩ min. | |
| | Output terminal to case(G) | [Normal temperature, normal humidity] | [Normal temperature, normal humidity] | |

[•] All specifications are subject to change without notice.



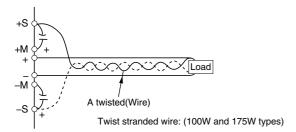
OUTPUT POWER-AMBIENT TEMPERATURE (DERATINGS)



REMOTE SENSING

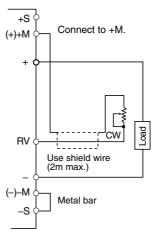
Remote Sensing compensates to provide stability at the load terminal when voltage drop in the line between the power supply and the load causes instability. Remote sensing is possible if the voltage drop per wire between the output and load terminals is 0.15V max. for 3V models, 0.25V max. for 5V models and 0.4V max. for 12 to 48V models.

If the overvoltage protection operations too easily, install an external electrolytic capacitor, rated 470 μ F min., between +, +S and –, –S for 100W and 175W types or between +M, +S and –M, –S for 350W and 1.5kW types.



OUTPUT VOLTAGE EXTERNAL VARIABLE FUNCTION (RV)

The output voltage settings can be adjusted by attaching an external trimmer to the RV terminal. In this case, make the following wiring (Note that, however, a rise time has a delay). When using this function, care must be taken to make sure that the wires are not disconnected or miswired.



- (1) Remove a short piece between the +S and +M (+S, +) terminals.
- (2) Rotate V.ADJ full counterclockwise.
- (3) Connect a 5kΩ trimmer at the load end between the +M and RV terminals.

The symbols in parentheses are intended for the 100W and 175W Types.

CURRENT BALANCE (CB TERMINAL)

This terminal has a monitoring function to control and equalize the output current of power supplies connected in parallel by mutually connecting the respective CB terminals and the –S terminals of each power supply. Voltage almost proportional to the output current can be obtained between the CB and –S terminals.

(1) Conditions for current balance

The variation in output voltage between the respective power supplies cannot exceed 5%

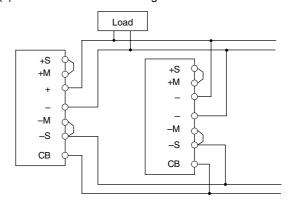
(Highest voltage-lowest voltage) ÷ rated voltage=5% max. The output current is 20 to 90% of the total output rated current.

(2) Uniform performance (for two power supplies)

The variation in output current between the respective power supplies does not exceed 10%

(Highest current–lowest current) ÷ (rated voltage×the number of power supplies in parallel)=10% max.

(3) CB terminal connection diagram



 Equalize the impedance of the load wires coming from each power supply. Use a stranded wire or a shielded wire for the wiring from CB and –S (shielded wire for –S).



REMOTE ON-OFF

Power supply output voltage can be turned ON/OFF externally at the Remote ON-OFF terminals(+RC, -RC) by activating one of the following signals:

Output voltage is turned on when the level is high between the +RC and -RC terminals(open or external voltage application of 2.4 to 24V; incoming current 1mA max.)

Output voltage is turned off when the level is low between the +RC and –RC terminals(short or terminal voltage of 0 to 0.4V; outgoing current 1.6mA max.)(also stops fan on 350W Type).

Keep the +RC terminal open when not in use, because it is internally pulled up.

 \pm RC terminals are insulated from AC input terminals and the DC output terminals.

Insulation between the \pm RC terminals and the output conforms to the common specifications (Output to case). Withstand voltage between AC input terminals and \pm RC terminals conforms to the common specifications (Input to case).

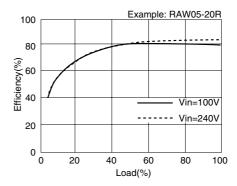
POWER SUPPLY PROTECTION

In readiness for abnormal occurrences, the power supplies are equipped with fault detection circuit. Operation upon detection is as follows:

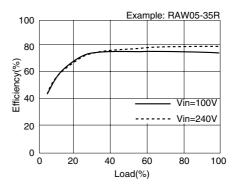
| as ionovs. | |
|---|---|
| Protective function | Operation |
| OV Output overvoltage protection | Output is shut down upon detection of an abnormal output voltage rise (See the specifications and standard list for information of the detection point). The output recovers after removing the cause upon input shutdown and a reset after a 40s minimum interval. |
| UV Output under-voltage protection | Output is shut down when the output voltage drops to 60% or lower of the rated output voltage (3V: approx. 45%) and the condition continues for approx. 20s on over current protection and others. The output recovers after removing the cause upon input shutdown and a reset after a 40s minimum interval. |
| FAN Fan alarm | Output is shut down when the fan speed drops or if the fan movement is restricted. The output recovers after removing the cause upon input shutdown and a reset after a 40s minimum interval. |
| Overheat protection | Output is shut down when the internal temperature of the power supply rises abnormally. The output recov- ers in the same manner as for the above OV. The output, however, recovers only after the internal temperature drops. |

The 100W and 175W Types have OV (overvoltage protection) only. The operation is the same as for the above list excepting that the recovery interval is approx. 5s.

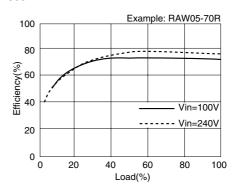
EFFICIENCY 100W TYPE



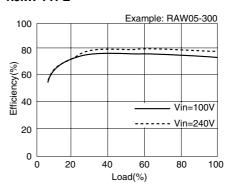
175W TYPE



350W TYPE

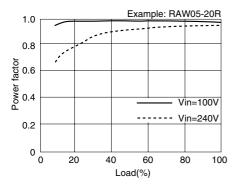


1.5kW TYPE

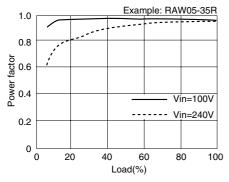


[•] All specifications are subject to change without notice.

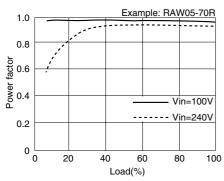
POWER FACTOR 100W TYPE



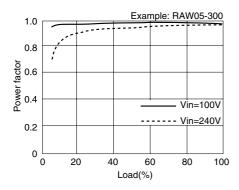
175W TYPE



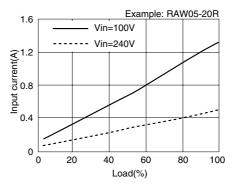
350W TYPE



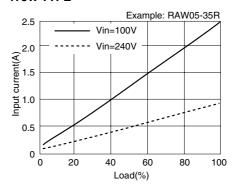
1.5kW TYPE



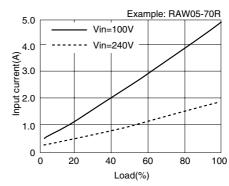
INPUT CURRENT 100W TYPE



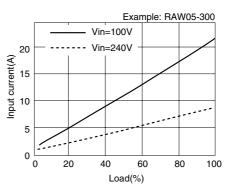
175W TYPE



350W TYPE



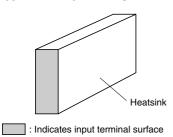
1.5kW TYPE



[•] All specifications are subject to change without notice.

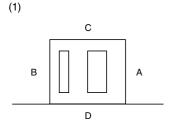


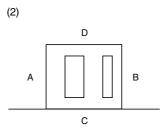
INSTALLATIONS 100W AND 175W TYPES

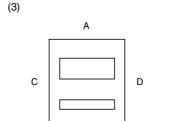


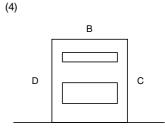
Maintain a 10mm min. distance between each power supply surface and surrounding equipment, etc. and install in such a way as to cause heat convection to occur.

350W TYPE



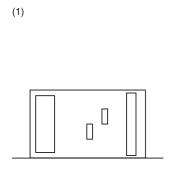


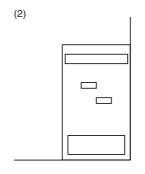


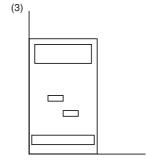


- Maintain a 20mm min. distance between the ventilation holes, fan surface and surrounding equipment, etc.
- When a 10mm min. distance cannot be maintained between surface A and surrounding equipment, etc. operate 3V and 5V output models at 60A max.
- Do not forget to maintain a 10mm min. distance between either surface C or D and surrounding equipment, etc.
- Install so as to provide heat-outside air exchange.

1.5kW TYPE







Maintain a 20mm min. distance between the ventilation holes, fan surface and surrounding equipment, etc. and install so as to provide heatoutside air exchange.

FAN REPLACEMENT

Contact TDK for fan replacement. Consult with us if customer fan replacement is inevitable. In this case, however, the responsibility for quality assurance on the replacement lies on the customer.



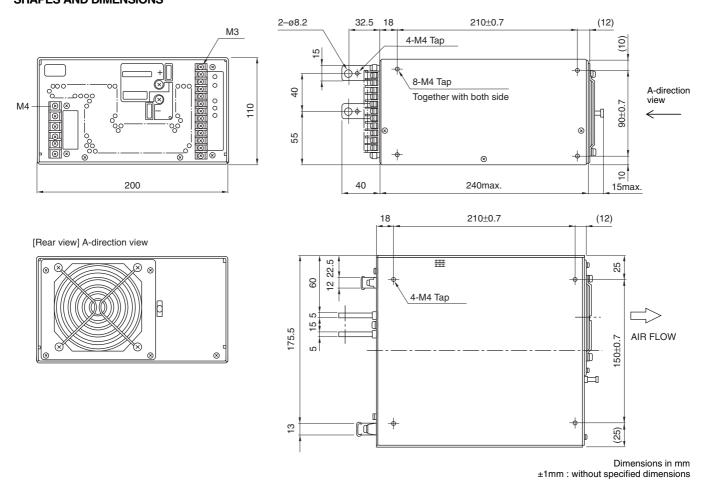
RAW750W Type

| · | | | | | | | | | | | | | |
|----------------------|-----------------------|------------|-----------|--|---|----------------------|----------------------------|------------------|----------------|--------------|--|--|--|
| Part No. | | | | RAW03-150 | RAW05-150 | RAW12-62R | RAW15-50R | RAW24-31R | RAW28-26R | RAW48-15R | | | |
| Rated ou | tput voltage an | d current | | 3V • 150A | 5V • 150A | 12V • 62.5A | 15V • 50A | 24V • 31.3A | 28V • 26.8A | 48V • 15.7A | | | |
| Maximun | n output power | | W | 450 | 750 | 750 | 750 | 751.2 | 750.4 | 753.6 | | | |
| Input cor | ditions | | | | | | | | | | | | |
| Input volt | age Eac | | V | 85 to 264[Rati | 85 to 264[Rating: 100 to 240] | | | | | | | | |
| Input fred | | | Hz | | 47 to 66[Rating: 50 to 60](Single phase) | | | | | | | | |
| | | | Α | 12max./6max. | 12max./6max.[AC.100/240V] | | | | | | | | |
| Input cur | rent | | Α | 3V: 8max./4m | ax.[AC.100/240\ | /] | | | | | | | |
| Fuse rati | ng | | Α | 20[Built-in] | | | | | | | | | |
| | | | Α | | c.[AC.100/240V, | 1st surge currer | nt, reset after 30s | s minimum.] | | | | | |
| Leakage | | | mA | 1max./2max.[/ | 20max./40max.[AC.100/240V, 1st surge current, reset after 30s minimum.] 1max./2max.[AC.100/240V] | | | | | | | | |
| Power fa | | | 1 | | 0.99typ. | | | | | | | | |
| | | % | 100V | 68typ. | 74typ. | 75typ. | 75typ. | 76typ. | 77typ. | 79typ. | | | |
| Efficiency | У | % | 240V | 70typ. | 77typ. | 78typ. | 78typ. | 79typ. | 80typ. | 82typ. | | | |
| Output cl | naracteristics | ,,, | | . 0.56. | | . otyp. | , otyp. | . 0.56. | остур. | 0=1)p1 | | | |
| | oltage Edc | | V | 3 | 5 | 12 | 15 | 24 | 28 | 48 | | | |
| | /ariable range E | -dc | V | 2.7 to 3.6 | 4 to 5.5 | 8.4 to 13.2 | 12 to 16.5 | 16.5 to 26.4 | 22.4 to 30.8 | 32.6 to 52.8 | | | |
| | n output current | | A | 150 | 150 | 62.5 | 50 | 31.3 | 26.8 | 15.7 | | | |
| | output current | | A | 0 | 0 | 02.5 | 0 | 0 | 0 | 0 | | | |
| | age threshold E | do | V | 3.8 to 4.6 | 6 to 6.9 | 13.7 to 15.7 | 17 to 19.5 | 27 to 30.5 | 31.4 to 34.5 | 55 to 59 | | | |
| | ent threshold | .uc | A | 157 to 175 | 157 to 175 | 65 to 71 | 52.5 to 58.5 | 32.8 to 36 | 28.1 to 30.8 | 16.4 to 18.1 | | | |
| Overcuit | Source effect | | % | | | | | 32.0 10 30 | 20.1 10 30.0 | 10.4 (0 16.1 | | | |
| | | | | 0.3max.(0.1typ.)[Within the input voltage range] | | | | | | | | | |
| Voltage | Voltage Load effect % | | | | 1max.(0.5typ.)[10 to 100% load] Total effect ±2max.(±1typ.) 1max.(0.5typ.)[Ambient temperature: -10 to +50°C] | | | | | | | | |
| Drift(Time effect) % | | | % | | | | | 0111 | | | | | |
| | | | | | | s, after input volta | age ON for 30mi | n to 8hj | | | | | |
| <u> </u> | Recovery %/ms | | | | • | lden load change | | 1 | 1 | 1 | | | |
| Ripple Ep-p mV | | | 100max. | 100max. | 180max. | 180max. | 190max. | 200max. | 200max. | | | | |
| Ripple noise Ep-p mV | | | 200max. | 200max. | 250max. | 250max. | 300max. | 350max. | 500max. | | | | |
| Start up t | | | ms | 900max.(500typ.)[AC.100V] | | | | | | | | | |
| Hold up t | | | ms | 20min.[AC.100V] | | | | | | | | | |
| | n load capacitor | r | μF | 10000 | | | | | | | | | |
| | functions | | | | | | | | | | | | |
| Indicator | | | | LED(Green) indicates when voltage output is ON. | | | | | | | | | |
| | age protection*2 | | | Output voltage shut-down type, LED(Red) indicates when AL signal goes to OV LED. | | | | | | | | | |
| | Itage threshold | | | Output voltage shut-down type, LED(Red) indicates when AL signal goes to UV LED. | | | | | | | | | |
| | ent protection*2 | ! | | | | d when low volta | | | | | | | |
| Fan alarr | n* ² | | | | Output voltage shut-down type, LED(Red) indicates when AL signal goes to FAN LED. | | | | | | | | |
| Overheat | t protection*2 | | | Output voltage | e shut-down type | e, LED(Red) indi | cates when AL s | ignal goes to O\ | / LED. | | | | |
| Remote (| ON-OFF | | | Yes(Floating) | | | | | | | | | |
| Remote | sensing | | | Yes | | | | | | | | | |
| Current b | palance | | | Yes | | | | | | | | | |
| Output vo | oltage external | variable 1 | function | Yes | | | | | | | | | |
| | lave operation | | | No | | | | | | | | | |
| Alarm sig | nal . | | | Yes | | | | | | | | | |
| Standard | | | | - | | | | | | | | | |
| Safety st | | | | UL1950. CSA | C22.2 No.950-9 | 5(C-UL). EN609 | 50-1(TÜV) appro | oved. | | | | | |
| | minal voltage | | | FCC class A r | | , ,, | , , | | | | | | |
| | monics current | requirem | nent | IEC1000-3-2 r | | | | | | | | | |
| Construc | | . 54411011 | | | | | | | | | | | |
| | dimensions | | mm | 110×200×240 | H×W×I 1 | | | | | | | | |
| Weight | G. 11011010110 | | kg | 5max. | | | | | | | | | |
| Mounting | method | | ''9 | Can be attach | ad to 3 sides | | | | | | | | |
| Case ma | | | | | over: Aluminum | | | | | | | | |
| - | | | | | | Davida -: !- :: | ulus al colo e e e e e e e | andalah delah | | | | | |
| *1 Curron | t rating/maxim | ım outnu | t ourront | ic dotorminad t | or 10 to 150°C | Dorating is regu | uired when used | outside this tem | noraturo rango | | | | |

^{*1} Current rating(maximum output current) is determined for –10 to +50°C. Derating is required when used outside this temperature range. *2 Recovers upon reset(interval approx. 40s).

RAW750W Type

SHAPES AND DIMENSIONS

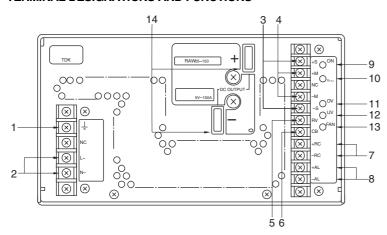


• Do not insert M4 tap installation screws more than 7mm from surface of housing.



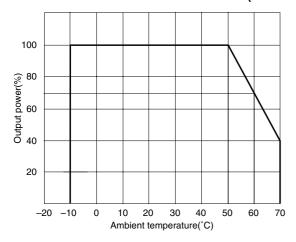


RAW750W TYPE TERMINAL DESIGNATIONS AND FUNCTIONS



| Terminal No. | Designations and functions | |
|--------------|--|---|
| 1 | Frame ground terminal(G) | Connect to earth ground. This is connected to the case. |
| 2 | AC input terminals(L, N) | Connect to AC.100 to 120V or AC.200 to 240V input line. |
| 3 | Remote sensing terminals(+S, -S) | These terminals are used to compensate voltage loss from the output terminal to a load. Normally they are shorted with a metal bar. |
| 4 | DC output monitor terminals(+M, -M) | This terminal is used to monitor DC current output. Load lines should not be connected to these monitor terminals,. These monitor terminals should be jumpered when the remote monitoring function is not in use. |
| 5 | Output voltage adjustment terminal(RV) | This terminal is used for controlling output voltage from outside. |
| 6 | Current balance terminal(CB) | This terminal is used when several power supplies are connected in parallel to connect the respective CB and –S terminals in parallel. |
| 7 | Remote ON-OFF terminals(+RC, -RC) | Output is turned ON-OFF by disconnecting-connecting the RC terminals(output ON when open). RC terminals are floating. |
| 8 | Alarm terminal(AL +, -) | Transmits an alarm signal to stop the output upon an operation of the abnormal detection circuit for output overvoltage protection, output low voltage protection, and overheat protection. |
| 9 | Operation indicator LED(Green) | This Green LED becomes indicated when voltage is output. |
| 10 | Output voltage adjustment trim(V.ADJ) | Adjusts output voltage. |
| 11 | Output overvoltage indicator LED(Red) | This LED(Red) indicates with the output shutdown and the fan stop when the output voltage drops or the internal temperature of the power supply rises up abnormally. |
| 12 | Output low voltage indicator LED(Red) | This LED(Red) indicates with the output shutdown and the fan stop when the output voltage drops or the internal temperature of the power supply rises up abnormally. |
| 13 | Fan alarm indicator LED(Red) | This LED(Red) indicates when the fan speed is down or the fan movement is restricted. The output is not shut down. |
| 14 | DC output terminals(+, -) | Connect to load. |
| | | |

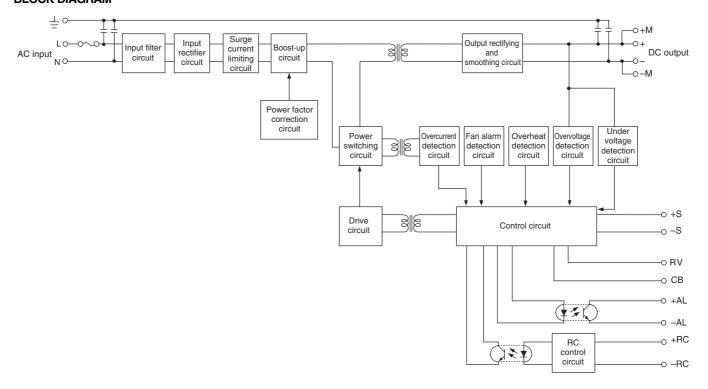
OUTPUT POWER-AMBIENT TEMPERATURE(DERATINGS)



[•] All specifications are subject to change without notice.



RAW750W TYPE BLOCK DIAGRAM



COMMON SPECIFICATIONS

| Temperature and humidi | ty | | | | | |
|--------------------------|-----------------------------------|--|--|--|--|--|
| Tomporeture renee | Operating(°C) | -10 to +70 [Derating is necessary when operating environment temperature exceed 50°C.] | | | | |
| Temperature range | Storage(°C) | –25 to +75 | | | | |
| I li mai alib i mana ara | Operating(%)RH | 10 to OE[Maximum wat hall tamparatura, OEOC without daving] | | | | |
| Humidity range | Storage(%)RH | 20 to 95[Maximum wet-bulb temperature: 35°C, without dewing] | | | | |
| Vibration and shock | | | | | | |
| Vibration | 5 to 10Hz | All amplitude 10mm[3 directions, each 1h] | | | | |
| | 10 to 55Hz | 19.6m/s ² (2G)[3 directions, each 1h] | | | | |
| Chaole | Acceleration | 294m/s ² (30G)[3 directions, each 3 times] | | | | |
| Shock | Pulse duration | 11±5ms | | | | |
| Withstand voltage and in | sulation resistance | | | | | |
| \\(\iithatand\) valtaga | Input terminal to case(G) | Face Old / 1 min[Narmal tamparature narmal humidity autout aureant 00m/] | | | | |
| Withstand voltage | Input terminal to output terminal | Eac: 2kV, 1min[Normal temperature, normal humidity, cutout current 20mA] | | | | |
| | Input terminal to case(G) | | | | | |
| Insulation resistance | Input terminal to output terminal | Edc: 500V, 100M Ω min. [Normal temperature, normal humidity] | | | | |
| | Output terminal to case(G) | | | | | |

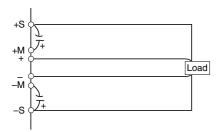
[•] All specifications are subject to change without notice.



RAW750W TYPE REMOTE SENSING

Remote Sensing compensates to provide stability at the load terminal when voltage drop in the line between the power supply and the load causes instability. Remote sensing is possible if the voltage drop per wire between the output and load terminals is 0.15V max. for 3V models, 0.25V max. for 5.0V models and 0.4V max. for 12 to 48V models.

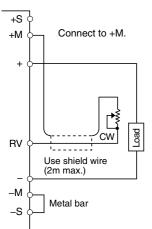
If the overvoltage protection operations too easily, install an external electrolytic capacitor, rated $1\mu F$ min. between the +S, +M and -S, -M terminals in the diagram shown below.



• Sensing lines should be twist or use shielded wire.

OUTPUT VOLTAGE EXTERNAL VARIABLE FUNCTION (RV)

The output voltage settings specified in four items can be adjusted by attaching an external trimmer to the RV terminal. In this case, make the following wiring (Note that, however, a rise time has a delay). When using this function, care must be taken to make sure that the wires are not disconnected or miswired.

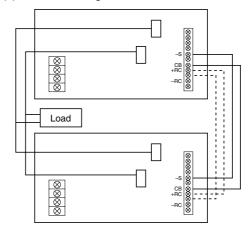


- (1) Remove a short piece (metal bar) between the +S and +M terminals.
 (2) Rotate V.ADJ full counterclockwise.
 (3) Connect a 5kg (3)/5V 12V 15V
- (3) Connect a 5kΩ (3V, 5V, 12V, 15V, 24V, and 28V) or 10kΩ (48V) trimmer at the load end between the +M and RV terminals.

CURRENT BALANCE (CB TERMINAL)

This terminal has a monitoring function to control and equalize the output current of power supplies connected in parallel by mutually connecting the respective CB terminals and the –S terminals of each power supply (Use eight power supplies connected in parallel.).

- (1) Conditions for current balance
 - The variation in output voltage between the respective power supplies cannot exceed 5%
 - (Highest voltage–lowest voltage) \div rated voltage=5% max. The output current is 20 to 90% of the total output rated current.
- (2) Uniform performance (for two power supplies)
 The variation in output current between the respective power supplies does not exceed ±10% under the conditions for current balance.
- (3) Connection diagram



 When using the CB and Remote ON-OFF concurrently, connect the respective RC terminals of each power supply in parallel.

REMOTE ON-OFF

The output voltage can be turned on or off at a TTL level externally.

Between +RC and -RC: Turned on upon setting to high level (2.4 to 24V) or being open.

Between +RC and -RC: Turned off upon setting to low level (0 to 0.4V) (Outgoing current 1.6mA max.). The fan stops, too.

The ±RC terminals are at a floating level to the DC output terminals. Keep the +RC terminal open when not in use since it is internally pulled up. Insulation between the RC terminals and the output conforms to the common specifications (Insulation resistance; output to case) and withstand voltage between AC input terminals and RC terminals conforms to the common specifications (Withstand voltage; input to output, input to case, output to case).



RAW750W TYPE

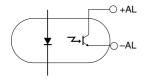
POWER SUPPLY PROTECTION

In readiness for abnormal occurrences, the power supplies are equipped with fault detection circuit. Operation upon detection is as follows:

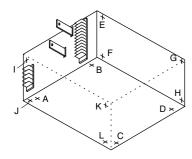
| as ioliows. | | | |
|---|--|--|---|
| Protective function | Operation | LED indicator | External alarm |
| OV Output overvoltage protection (Overheat) | Output is shut down and the fan stops upon detection of an abnormal output voltage rise or an abnormal internal temperature rise. The output recovers after functional operation upon input shutdown and a reset after a 40s minimum interval. Note that, however, reset only after the internal temperature drops sufficiently in case of the abnormal internal temperature rise. | s upon detection of an abnor- butput voltage rise or an rmal internal temperature. The output recovers after ional operation upon input down and a reset after a 40s num interval. Note that, how- reset only after the internal erature drops sufficiently in of the abnormal internal tem- rure rise. | |
| UV Output under-voltage protection | Output is shut down and the fan stops when the output voltage drops to 60% or lower of the rated output voltage (3V: approx. 45%) and the condition continues for approx. 40s on over current protection and others. The output recovers after functional operation upon input shutdown and a reset after a 40s minimum interval. | Yes (Red) | coupler closed; output between collector and emitter. Abnormal: Photo- coupler opens. |
| FAN Fan alarm | Output is shut down and the fan stops if the fan movement is restricted. The output recovers after functional operation upon input shutdown and a reset after a 40s minimum interval. | Yes (Red) | |

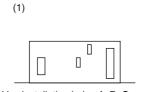
For external alarm, use photo-coupler having max. 8mA collector current and max. 40V emitter voltage.

OUTPUT FORM



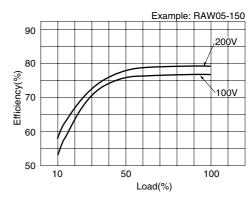
INSTALLATIONS



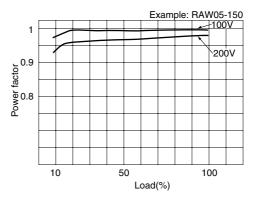


Use installation holes A, B, C, and D for securing the power supply.

EFFICIENCY(TYPICAL)

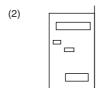


POWER FACTOR(TYPICAL)

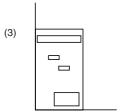


FAN REPLACEMENT

Contact TDK for fan replacement. Consult with us if customer fan replacement is inevitable. In this case, however, the responsibility for quality assurance on the replacement lies on the customer.



Use installation holes A, B, C, D, I, J, K, and L for securing the power supply.



Use installation holes A, B, C, D, E, F, G, and H for securing the power supply.

 Maintain a 20mm min. distance between the ventilation holes, fan surface and surrounding equipment, etc. and install so as to provide heat-outside air exchange.

[•] All specifications are subject to change without notice.