

Power Supplies

AC Input

Single Output, General-Purpose

E Series EAK-G(15 to 150W)

UL Approved

The E series EAK-G power supplies are bestsellers that have realized low price and compact size (95mm in height). The 5, 12, 15, and 24V outputs versatile for switching power supplies are standardized in a range of the 15W to 150W types. This series of products have been approved in the UL safety standards and in FCC class B of the noise terminal voltage. We recommend them for a wide variety of uses.

FEATURES

- AC.100V input low-price single output power supply.
- Compact (Height: 95mm).
- Wide variety of lineup covering 15W to 150W.
- LED indicator display function.
- Low noise (FCC class B compliant).



PART NUMBERS AND RATINGS

EAK-G: AC.100V INPUT(UL RECOGNIZED)

| Output voltage(V) | 15W Type | | 30W Type | | 50W Type | | 100W Type | | 150W Type | |
|----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | Current(A) | Part No. | Current(A) | Part No. | Current(A) | Part No. | Current(A) | Part No. | Current(A) | Part No. |
| 5 | 3 | EAK05-3R0G | 6 | EAK05-6R0G | 10 | EAK05-10RG | 20 | EAK05-20RG | 30 | EAK05-30RG |
| 12 | 1.3 | EAK12-1R3G | 2.5 | EAK12-2R5G | 4.2 | EAK12-4R2G | 8.4 | EAK12-8R3G | 12.5 | EAK12-12RG |
| 15 | 1 | EAK15-1R0G | 2 | EAK15-2R0G | 3.4 | EAK15-3R4G | 6.7 | EAK15-6R6G | 10 | EAK15-10RG |
| 24 | 0.7 | EAK24-0R7G | 1.3 | EAK24-1R3G | 2.1 | EAK24-2R1G | 4.2 | EAK24-4R2G | 6.3 | EAK24-6R0G |

Power Supplies

E Series EAK-G(15 to 150W)

AC Input

Single Output, General-Purpose

UL Approved

EAK-G15W TYPE

SPECIFICATIONS AND STANDARDS

| | | | | | |
|---|--------------------|--|---|----------------|-----------------|
| Part No. | | EAK05-3R0G | EAK12-1R3G | EAK15-1R0G | EAK24-0R7G |
| Rated output voltage and current* | | 5V • 3A | 12V • 1.3A | 15V • 1A | 24V • 0.7A |
| Maximum output power | W | 15 | 15.6 | 15 | 16.8 |
| Input conditions | | | | | |
| Input voltage | V | Eac: 85 to 132V[Rating: 100 to 115] /Edc: 110 to 175V | | | |
| Input frequency | Hz | 47 to 66[Rating: 50 to 60](Single phase) | | | |
| Input current | A | 0.6/0.5/0.4max.[AC.85/100/115V] | | | |
| Fuse rating | A | 2[Built-in] | | | |
| Surge current | A | 8 to 9max.[Input and output ratings, 25°C, cold start] | | | |
| Leakage current | mA | 0.5max.[Input and output ratings] | | | |
| Efficiency | % | 71typ. | 80typ. | 80typ. | 80typ. |
| Output characteristics | | | | | |
| Output voltage Edc | V | 5 | 12 | 15 | 24 |
| Voltage variable range Edc | V | 4.5 to 5.5 | 10.8 to 13.2 | 13.5 to 16.5 | 21.6 to 26.4 |
| Maximum output current | A | 3 | 1.3 | 1 | 0.7 |
| Overvoltage threshold Edc | V | 6 to 6.9 | 13.7 to 15.7 | 17 to 19 | 27 to 30.5 |
| Overcurrent threshold | A | 3.3 to 4.9 | 1.4 to 2.2 | 1.1 to 1.6 | 0.8 to 1.2 |
| Voltage stability | Source effect | % | ±1max.(±0.3typ.)[Within the input voltage range] | | |
| | Load effect | % | ±1.5max.(±0.6typ.)[10 to 100% load] | | |
| | Temperature effect | % | ±1max.(±0.3typ.)[Ambient temperature: -10 to +60°C] | | |
| | Drift(Time effect) | % | 1max.[25°C, input and output ratings, after input voltage ON for 30min to 8h] | | |
| | Recovery | %/ms | ±4max./1max.[50 to 100% sudden load change] | | |
| Ripple Ep-p | mV | 50max.(30typ.) | 80max.(40typ.) | 80max.(40typ.) | 100max.(50typ.) |
| Ripple noise Ep-p | mV | 120max. | 190max. | 220max. | 310max. |
| Start up time | ms | 100max. | | | |
| Hold up time | ms | 20min./17min.[0 to +60/-10 to 0°C] | | | |
| Auxiliary functions | | | | | |
| Indicator display | | LED(Red) indicates when voltage output is ON. | | | |
| Overvoltage protection | | Voltage shut-down type, recovers upon reset(interval approx. 30s). | | | |
| Overcurrent protection | | Rectangular type, automatic recovery. | | | |
| Remote ON-OFF | | No | | | |
| Remote sensing | | No | | | |
| Output voltage external variable function | | No | | | |
| Standards | | | | | |
| Safety standards | | UL1950-3 approved. | | | |
| Noise terminal voltage | | FCC class B meet. | | | |
| Constructions | | | | | |
| External dimensions | mm | 95×35×90[H×W×L] | | | |
| Weight | g | 380max. | | | |
| Mounting method | | Can be attached to 2 sides. | | | |
| Case material | | Cover: Zinc-plated iron | | | |

* Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

Power Supplies

AC Input

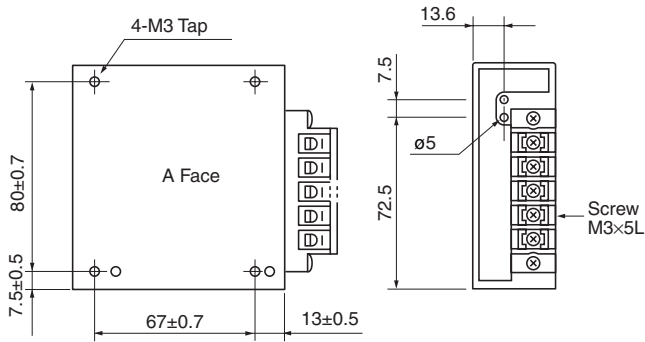
Single Output, General-Purpose

E Series EAK-G(15 to 150W)

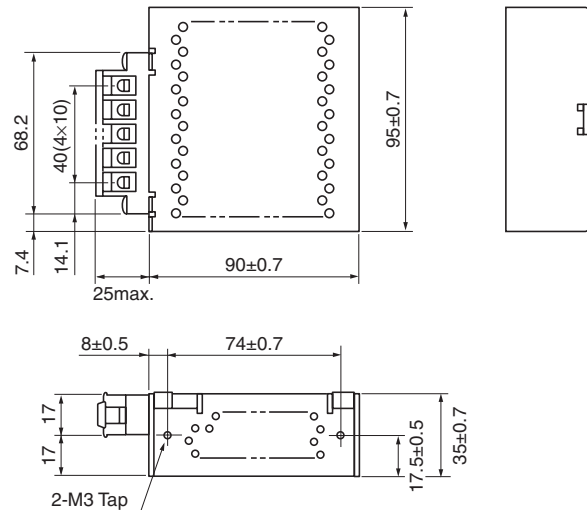
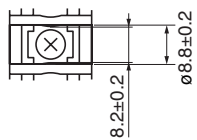
UL Approved

EAK-G15W TYPE

SHAPES AND DIMENSIONS



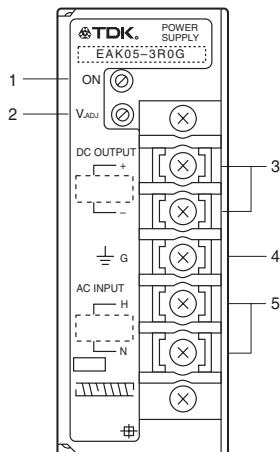
[Detail drawing of terminal block]



Dimensions in mm
±1mm : without specified dimensions

- Do not insert M3 tap installation screws more than 7mm from surface of power supply.
- Important system to earthquake-proof, insert installation Screws to 4 places of A side.

TERMINAL DESIGNATIONS AND FUNCTIONS



| Terminal No. | Designations and functions | |
|--------------|---------------------------------------|--|
| 1 | Operation indicator LED(ON) | This Red LED becomes indicated when voltage is output. |
| 2 | Output voltage adjustment trim(V.ADJ) | Adjusts output voltage. The output voltage increases by rotating it clockwise. |
| 3 | DC output terminals(DC output +, -) | Connect to load. |
| 4 | Frame ground terminal(G) | Connect to earth ground. This is connected to the case. |
| 5 | AC input terminals(H, N, AC INPUT) | Connect to AC.100/115V single phase input line. |

Power Supplies

E Series EAK-G(15 to 150W)

AC Input

Single Output, General-Purpose

UL Approved

EAK-G30W TYPE

SPECIFICATIONS AND STANDARDS

| | | | | | |
|---|--------------------|--|---|----------------|-----------------|
| Part No. | | EAK05-6R0G | EAK12-2R5G | EAK15-2R0G | EAK24-1R3G |
| Rated output voltage and current* | | 5V • 6A | 12V • 2.5A | 15V • 2A | 24V • 1.3A |
| Maximum output power | W | 30 | 30 | 30 | 31.2 |
| Input conditions | | | | | |
| Input voltage | V | Eac: 85 to 132V[Rating: 100 to 115] /Edc: 110 to 175V | | | |
| Input frequency | Hz | 47 to 66[Rating: 50 to 60](Single phase) | | | |
| Input current | A | 1/0.9/0.8max.[AC.85/100/115V] | | | |
| Fuse rating | A | 2.5[Built-in] | | | |
| Surge current | A | 17 to 20max.[Input and output ratings, 25°C, cold start] | | | |
| Leakage current | mA | 0.5max.[Input and output ratings] | | | |
| Efficiency | % | 77typ. | 81typ. | 81typ. | 84typ. |
| Output characteristics | | | | | |
| Output voltage Edc | V | 5 | 12 | 15 | 24 |
| Voltage variable range Edc | V | 4.5 to 5.5 | 10.8 to 13.2 | 13.5 to 16.5 | 21.6 to 26.4 |
| Maximum output current | A | 6 | 2.5 | 2 | 1.3 |
| Overvoltage threshold Edc | V | 6 to 6.9 | 13.7 to 15.7 | 17 to 19 | 27 to 30.5 |
| Overcurrent threshold | A | 6.5 to 8.5 | 2.7 to 4 | 2.2 to 3.3 | 1.4 to 2.1 |
| Voltage stability | Source effect | % | ±1max.(±0.3typ.)[Within the input voltage range] | | |
| | Load effect | % | ±1.5max.(±0.6typ.)[10 to 100% load] | | |
| | Temperature effect | % | ±1max.(±0.3typ.)[Ambient temperature: -10 to +60°C] | | |
| | Drift(Time effect) | % | 1max.[25°C, input and output ratings, after input voltage ON for 30min to 8h] | | |
| | Recovery | %/ms | ±4max./1max.[50 to 100% sudden load change] | | |
| Ripple Ep-p | mV | 50max.(30typ.) | 80max.(40typ.) | 80max.(40typ.) | 100max.(50typ.) |
| Ripple noise Ep-p | mV | 120max. | 190max. | 220max. | 310max. |
| Start up time | ms | 100max. | | | |
| Hold up time | ms | 20min./17min.[0 to +60/-10 to 0°C] | | | |
| Auxiliary functions | | | | | |
| Indicator display | | LED(Red) indicates when voltage output is ON. | | | |
| Overvoltage protection | | Voltage shut-down type, recovers upon reset(interval approx. 30s). | | | |
| Overcurrent protection | | Rectangular type, automatic recovery. | | | |
| Remote ON-OFF | | No | | | |
| Remote sensing | | No | | | |
| Output voltage external variable function | | No | | | |
| Standards | | | | | |
| Safety standards | | UL1950-3 approved. | | | |
| Noise terminal voltage | | FCC class B meet. | | | |
| Constructions | | | | | |
| External dimensions | mm | 95×35×115[H×W×L] | | | |
| Weight | g | 380max. | | | |
| Mounting method | | Can be attached to 2 sides. | | | |
| Case material | | Cover: Zinc-plated iron | | | |

* Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

Power Supplies

AC Input

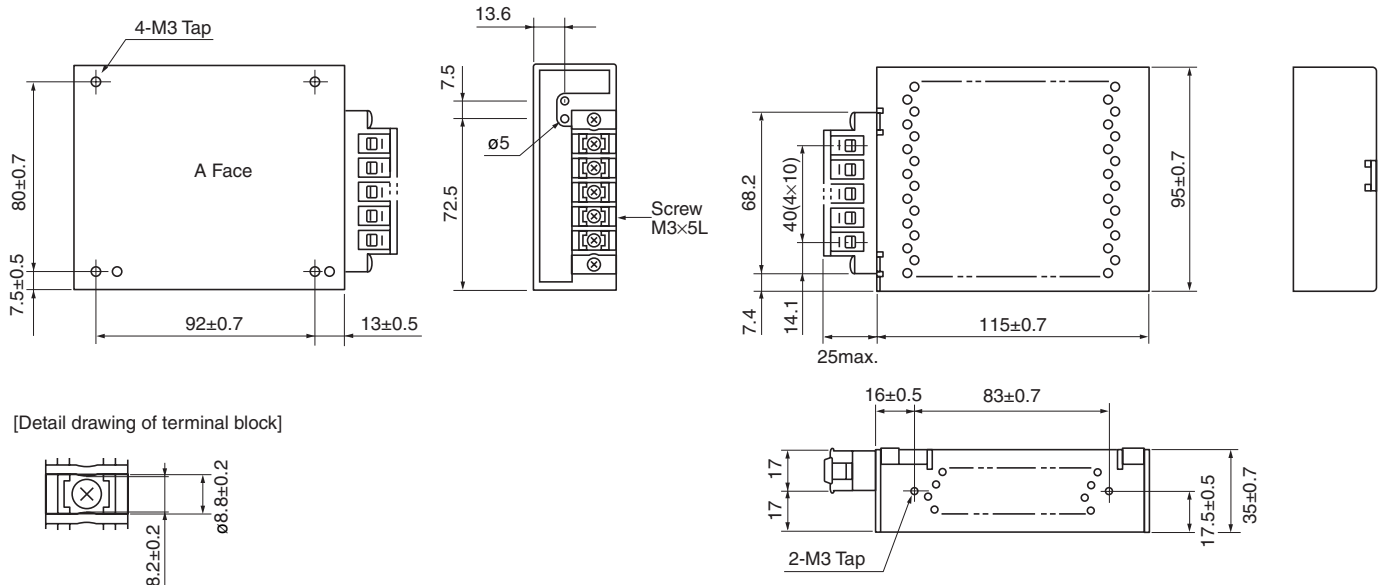
Single Output, General-Purpose

E Series EAK-G(15 to 150W)

UL Approved

EAK-G30W TYPE

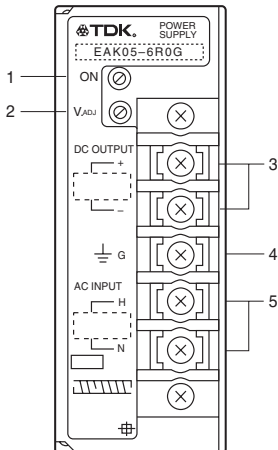
SHAPES AND DIMENSIONS



Dimensions in mm
±1mm : without specified dimensions

- Do not insert M3 tap installation screws more than 7mm from surface of power supply.
- Important system to earthquake-proof, insert installation Screws to 4 places of A side.

TERMINAL DESIGNATIONS AND FUNCTIONS



| Terminal No. | Designations and functions | |
|--------------|---|--|
| 1 | Operation indicator LED(ON) | This Red LED becomes indicated when voltage is output. |
| 2 | Output voltage adjustment trim(V _{ADJ}) | Adjusts output voltage. The output voltage increases by rotating it clockwise. |
| 3 | DC output terminals(DC output +, -) | Connect to load. |
| 4 | Frame ground terminal(G) | Connect to earth ground. This is connected to the case. |
| 5 | AC input terminals(H, N, AC INPUT) | Connect to AC.100/115V single phase input line. |

Power Supplies

E Series EAK-G(15 to 150W)

AC Input

Single Output, General-Purpose

UL Approved

EAK-G50W TYPE

SPECIFICATIONS AND STANDARDS

| | | | | | |
|---|--------------------|--|---|----------------|-----------------|
| Part No. | | EAK05-10RG | EAK12-4R2G | EAK15-3R4G | EAK24-2R1G |
| Rated output voltage and current* | | 5V • 10A | 12V • 4.2A | 15V • 3.4A | 24V • 2.1A |
| Maximum output power | W | 50 | 50.4 | 51 | 50.4 |
| Input conditions | | | | | |
| Input voltage | V | Eac: 85 to 132V[Rating: 100 to 115] /Edc: 110 to 175V | | | |
| Input frequency | Hz | 47 to 66[Rating: 50 to 60](Single phase) | | | |
| Input current | A | 1.4/1.2/1.1max.[AC.85/100/115V] | | | |
| Fuse rating | A | 3.15[Built-in] | | | |
| Surge current | A | 36 to 41max.[Input and output ratings, 25°C, cold start] | | | |
| Leakage current | mA | 0.5max.[Input and output ratings] | | | |
| Efficiency | % | 80typ. | 83typ. | 84typ. | 85typ. |
| Output characteristics | | | | | |
| Output voltage Edc | V | 5 | 12 | 15 | 24 |
| Voltage variable range Edc | V | 4.5 to 5.5 | 10.8 to 13.2 | 13.5 to 16.5 | 21.6 to 26.4 |
| Maximum output current | A | 10 | 4.2 | 3.4 | 2.1 |
| Overvoltage threshold Edc | V | 6 to 6.9 | 13.7 to 15.7 | 17 to 19 | 27 to 30.5 |
| Overcurrent threshold | A | 11 to 13.5 | 4.6 to 5.7 | 3.7 to 4.6 | 2.3 to 2.9 |
| Voltage stability | Source effect | % | ±1max.(±0.3typ.)[Within the input voltage range] | | |
| | Load effect | % | ±1.5max.(±0.6typ.)[10 to 100% load] | | |
| | Temperature effect | % | ±1max.(±0.3typ.)[Ambient temperature: -10 to +60°C] | | |
| | Drift(Time effect) | % | 0.5max.[25°C, input and output ratings, after input voltage ON for 30min to 8h] | | |
| | Recovery | %/ms | ±4max./1max.[50 to 100% sudden load change] | | |
| Ripple Ep-p | mV | 50max.(30typ.) | 80max.(40typ.) | 80max.(40typ.) | 100max.(50typ.) |
| Ripple noise Ep-p | mV | 120max. | 190max. | 220max. | 310max. |
| Start up time | ms | 150max. | | | |
| Hold up time | ms | 20min./17min.[0 to +60/-10 to 0°C] | | | |
| Auxiliary functions | | | | | |
| Indicator display | | LED(Red) indicates when voltage output is ON. | | | |
| Overvoltage protection | | Voltage shut-down type, recovers upon reset(interval approx. 60s). | | | |
| Overcurrent protection | | Rectangular type, automatic recovery. | | | |
| Remote ON-OFF | | No | | | |
| Remote sensing | | No | | | |
| Output voltage external variable function | | No | | | |
| Standards | | | | | |
| Safety standards | | UL1950-3 approved. | | | |
| Noise terminal voltage | | FCC class B meet. | | | |
| Constructions | | | | | |
| External dimensions | mm | 95×37×150[H×W×L] | | | |
| Weight | g | 510max. | | | |
| Mounting method | | Can be attached to 2 sides. | | | |
| Case material | | Cover: Zinc-plated iron | | | |

* Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

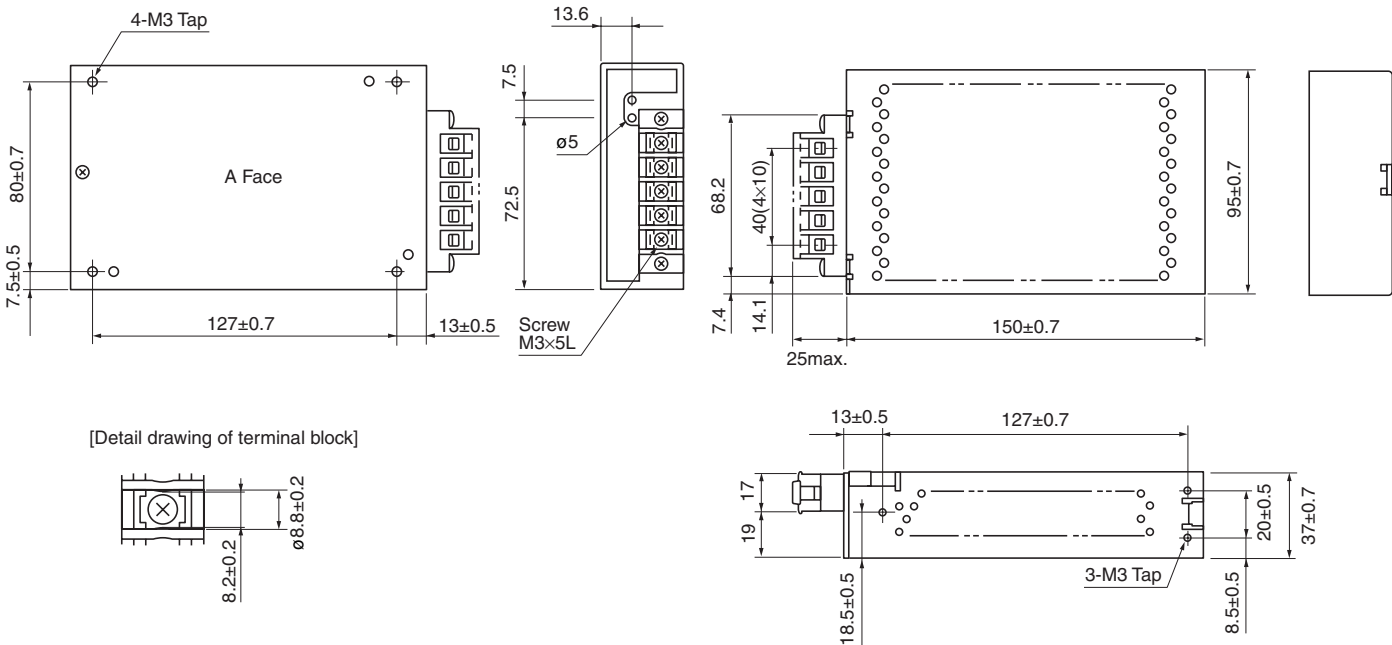
Power Supplies

AC Input
Single Output, General-Purpose

E Series EAK-G(15 to 150W)

UL Approved

EAK-G50W TYPE
SHAPES AND DIMENSIONS

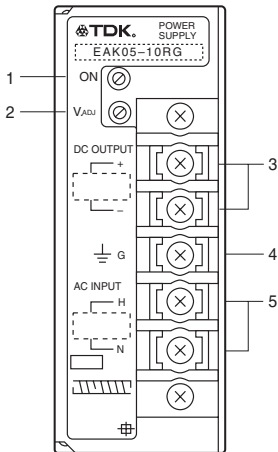


Dimensions in mm

±1mm : without specified dimensions

- Do not insert M3 tap installation screws more than 7mm from surface of power supply.
- Important system to earthquake-proof, insert installation Screws to 4 places of A side.

TERMINAL DESIGNATIONS AND FUNCTIONS



| Terminal No. | Designations and functions | |
|--------------|---|--|
| 1 | Operation indicator LED(ON) | This Red LED becomes indicated when voltage is output. |
| 2 | Output voltage adjustment trim(V _{ADJ}) | Adjusts output voltage. The output voltage increases by rotating it clockwise. |
| 3 | DC output terminals(DC output +, -) | Connect to load. |
| 4 | Frame ground terminal(G) | Connect to earth ground. This is connected to the case. |
| 5 | AC input terminals(H, N, AC INPUT) | Connect to AC.100/115V single phase input line. |

Power Supplies

E Series EAK-G(15 to 150W)

AC Input

Single Output, General-Purpose

UL Approved

EAK-G100W TYPE

SPECIFICATIONS AND STANDARDS

| | | | | | |
|---|--------------------|---|---|----------------|-----------------|
| Part No. | | EAK05-20RG | EAK12-8R3G | EAK15-6R6G | EAK24-4R2G |
| Rated output voltage and current* | | 5V • 20A | 12V • 8.4A | 15V • 6.7A | 24V • 4.2A |
| Maximum output power | W | 100 | 100.8 | 100.5 | 100.8 |
| Input conditions | | | | | |
| Input voltage | V | Eac: 85 to 132V[Rating: 100 to 115] /Edc: 110 to 175V | | | |
| Input frequency | Hz | 47 to 66[Rating: 50 to 60](Single phase) | | | |
| Input current | A | 2.9/2.5/2.2max.[AC.85/100/115V] | | | |
| Fuse rating | A | 4[Built-in] | | | |
| Surge current | A | 15 to 17max.[Input and output ratings, 1st surge current, reset after 30s minimum.] | | | |
| Leakage current | mA | 0.5max.[Input and output ratings] | | | |
| Efficiency | % | 78typ. | 80typ. | 81typ. | 82typ. |
| Output characteristics | | | | | |
| Output voltage Edc | V | 5 | 12 | 15 | 24 |
| Voltage variable range Edc | V | 4.5 to 5.5 | 10.8 to 13.2 | 13.5 to 16.5 | 21.6 to 26.4 |
| Maximum output current | A | 20 | 8.4 | 6.7 | 4.2 |
| Overvoltage threshold Edc | V | 6 to 6.9 | 13.7 to 15.7 | 17 to 19 | 27 to 30.5 |
| Overcurrent threshold | A | 22 to 27 | 9.2 to 11.3 | 7.4 to 9.1 | 4.6 to 5.7 |
| Voltage stability | Source effect | % | ±1max.(±0.3typ.)[Within the input voltage range] | | |
| | Load effect | % | ±1.5max.(±0.6typ.)[10 to 100% load] | | |
| | Temperature effect | % | ±1max.(±0.3typ.)[Ambient temperature: -10 to +60°C] | | |
| | Drift(Time effect) | % | 0.5max.[25°C, input and output ratings, after input voltage ON for 30min to 8h] | | |
| | Recovery | %/ms | ±4max./1max.[50 to 100% sudden load change] | | |
| Ripple Ep-p | mV | 50max.(30typ.) | 80max.(40typ.) | 80max.(40typ.) | 100max.(50typ.) |
| Ripple noise Ep-p | mV | 120max. | 190max. | 220max. | 310max. |
| Start up time | ms | 150max. | | | |
| Hold up time | ms | 20min./17min.[0 to +60/-10 to 0°C] | | | |
| Auxiliary functions | | | | | |
| Indicator display | | LED(Red) indicates when voltage output is ON. | | | |
| Overvoltage protection | | Voltage shut-down type, recovers upon reset(interval approx. 60s). | | | |
| Overcurrent protection | | Rectangular type, automatic recovery. | | | |
| Remote ON-OFF | | No | | | |
| Remote sensing | | No | | | |
| Output voltage external variable function | | No | | | |
| Standards | | | | | |
| Safety standards | | UL1950-3 approved. | | | |
| Noise terminal voltage | | FCC class B meet. | | | |
| Constructions | | | | | |
| External dimensions | mm | 95×55×180[H×W×L] | | | |
| Weight | g | 900max. | | | |
| Mounting method | | Can be attached to 2 sides. | | | |
| Case material | | Cover: Zinc-plated iron | | | |

* Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

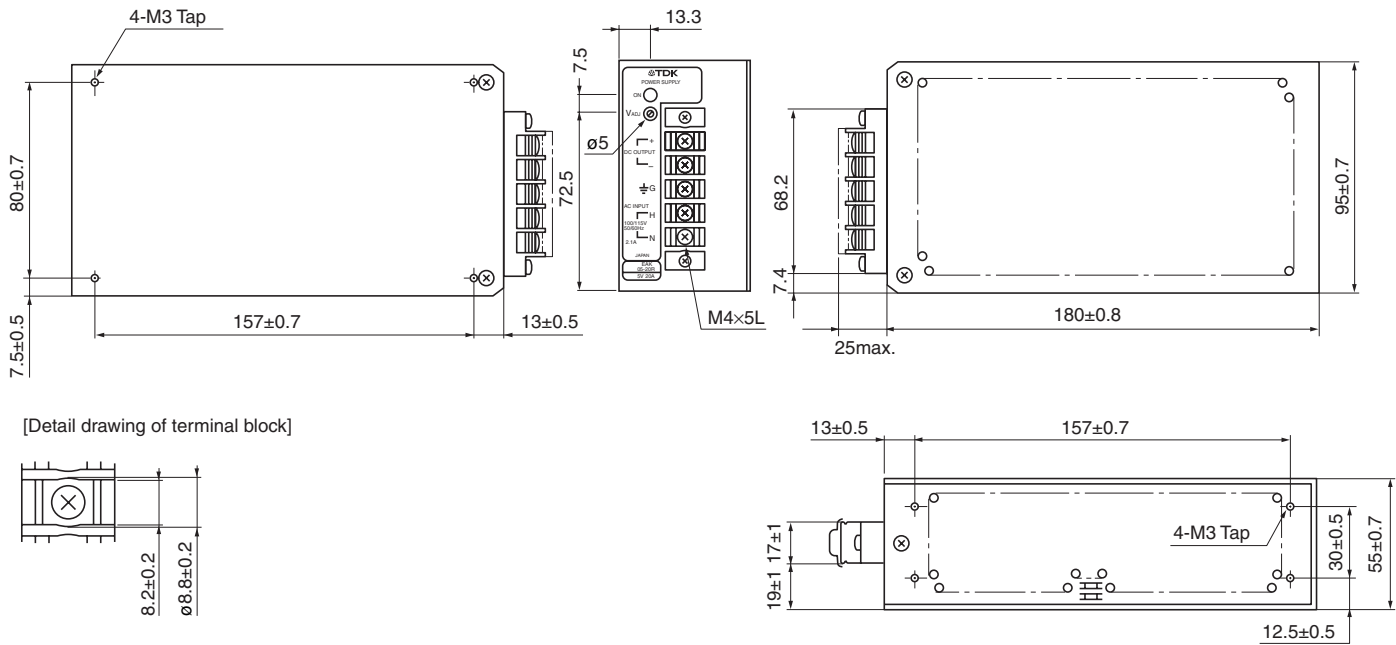
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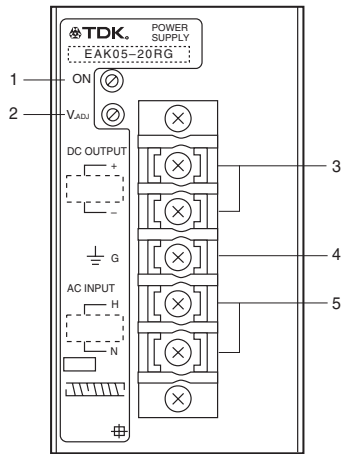
EAK-G100W TYPE
SHAPES AND DIMENSIONS



Dimensions in mm
 $\pm 1 \text{ mm}$: without specified dimensions

- Do not insert M3 tap installation screws more than 7mm from surface of power supply.

TERMINAL DESIGNATIONS AND FUNCTIONS



| Terminal No. | Designations and functions | |
|--------------|---|--|
| 1 | Operation indicator LED(ON) | This Red LED becomes indicated when voltage is output. |
| 2 | Output voltage adjustment trim(V_{ADJ}) | Adjusts output voltage. The output voltage increases by rotating it clockwise. |
| 3 | DC output terminals(DC output +, -) | Connect to load. |
| 4 | Frame ground terminal(G) | Connect to earth ground. This is connected to the case. |
| 5 | AC input terminals(H, N, AC INPUT) | Connect to AC.100/115V single phase input line. |

Power Supplies

E Series EAK-G(15 to 150W)

AC Input

Single Output, General-Purpose

UL Approved

EAK-G150W TYPE

SPECIFICATIONS AND STANDARDS

| | | | | | |
|---|--------------------|---|---|----------------|-----------------|
| Part No. | | EAK05-30RG | EAK12-12RG | EAK15-10RG | EAK24-6R0G |
| Rated output voltage and current* | | 5V • 30A | 12V • 12.5A | 15V • 10A | 24V • 6.3A |
| Maximum output power | W | 150 | 150 | 150 | 151.2 |
| Input conditions | | | | | |
| Input voltage | V | Eac: 85 to 132V[Rating: 100 to 115] /Edc: 110 to 175V | | | |
| Input frequency | Hz | 47 to 66[Rating: 50 to 60](Single phase) | | | |
| Input current | A | 4/3.3/2.9max.[AC.85/100/115V] | | | |
| Fuse rating | A | 6.3[Built-in] | | | |
| Surge current | A | 15 to 17max.[Input and output ratings, 1st surge current, reset after 30s minimum.] | | | |
| Leakage current | mA | 0.5max.[Input and output ratings] | | | |
| Efficiency | % | 78typ. | 80typ. | 81typ. | 82typ. |
| Output characteristics | | | | | |
| Output voltage Edc | V | 5 | 12 | 15 | 24 |
| Voltage variable range Edc | V | 4.5 to 5.5 | 10.8 to 13.2 | 13.5 to 16.5 | 21.6 to 26.4 |
| Maximum output current | A | 30 | 12.5 | 10 | 6.3 |
| Overvoltage threshold Edc | V | 6 to 6.9 | 13.7 to 15.7 | 17 to 19 | 27 to 30.5 |
| Overcurrent threshold | A | 33 to 40.5 | 13.7 to 16.8 | 11 to 13.5 | 6.9 to 8.5 |
| Voltage stability | Source effect | % | ±1max.(±0.3typ.)[Within the input voltage range] | | |
| | Load effect | % | ±1.5max.(±0.6typ.)[10 to 100% load] | | |
| | Temperature effect | % | ±1max.(±0.3typ.)[Ambient temperature: -10 to +60°C] | | |
| | Drift(Time effect) | % | 0.5max.[25°C, input and output ratings, after input voltage ON for 30min to 8h] | | |
| | Recovery | %/ms | ±4max./1max.[50 to 100% sudden load change] | | |
| Ripple Ep-p | mV | 50max.(30typ.) | 80max.(40typ.) | 80max.(40typ.) | 100max.(50typ.) |
| Ripple noise Ep-p | mV | 120max. | 190max. | 220max. | 310max. |
| Start up time | ms | 150max. | | | |
| Hold up time | ms | 20min./17min.[0 to +60/-10 to 0°C] | | | |
| Auxiliary functions | | | | | |
| Indicator display | | LED(Red) indicates when voltage output is ON. | | | |
| Overvoltage protection | | Voltage shut-down type, recovers upon reset(interval approx. 70s). | | | |
| Overcurrent protection | | Rectangular type, automatic recovery. | | | |
| Remote ON-OFF | | No | | | |
| Remote sensing | | No | | | |
| Output voltage external variable function | | No | | | |
| Standards | | | | | |
| Safety standards | | UL1950-3 approved. | | | |
| Noise terminal voltage | | FCC class B meet. | | | |
| Constructions | | | | | |
| External dimensions | mm | 95×65×220[H×W×L] | | | |
| Weight | g | 1.5max. | | | |
| Mounting method | | Can be attached to 2 sides. | | | |
| Case material | | Cover: Zinc-plated iron | | | |

* Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

Power Supplies

E Series EAK-G(15 to 150W)

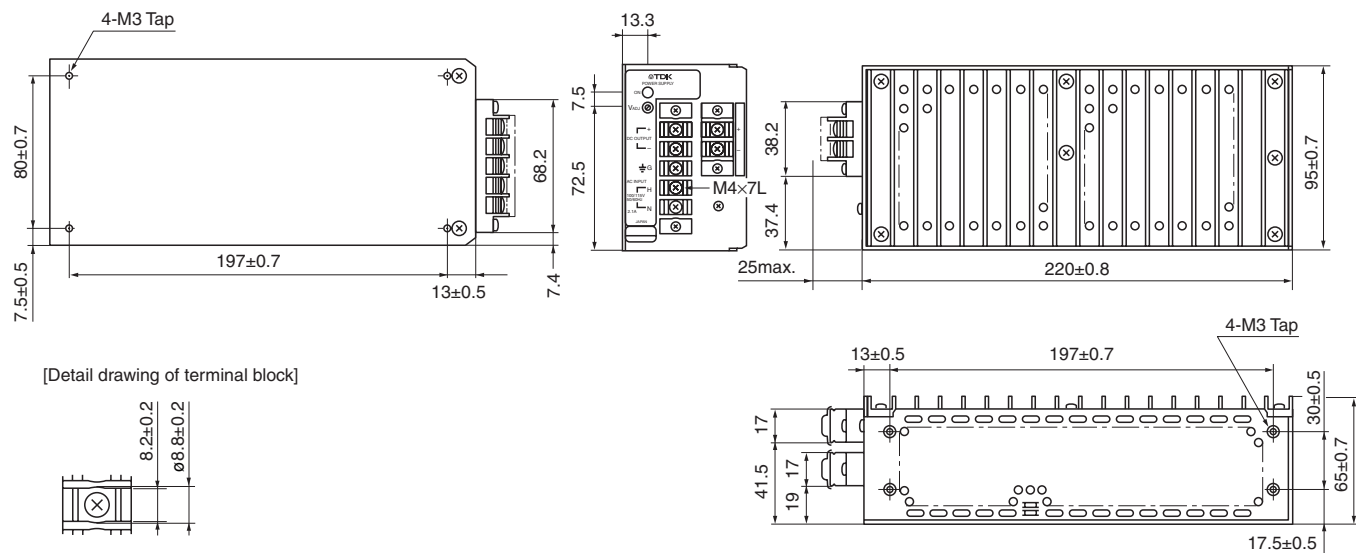
AC Input

Single Output, General-Purpose

UL Approved

EAK-G150W TYPE

SHAPES AND DIMENSIONS

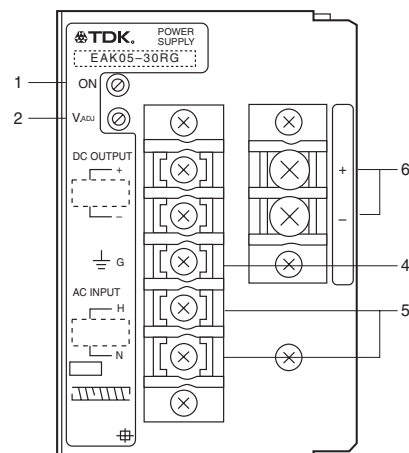


Dimensions in mm

±1mm : without specified dimensions

- Do not insert M3 tap installation screws more than 7mm from surface of power supply.
- Output terminals on 2 places. Connect both terminals when output current was over 25A.

TERMINAL DESIGNATIONS AND FUNCTIONS



| Terminal No. | Designations and functions | |
|--------------|---|--|
| 1 | Operation indicator LED(ON) | This Red LED becomes indicated when voltage is output. |
| 2 | Output voltage adjustment trim(V _{ADJ}) | Adjusts output voltage. The output voltage increases by rotating it clockwise. |
| 3 | DC output terminals(DC output +, -) | Connect to load. |
| 4 | Frame ground terminal(G) | Connect to earth ground. This is connected to the case. |
| 5 | AC input terminals(H, N, AC INPUT) | Connect to AC.100/115V single phase input line. |
| 6 | Direct output terminal(DC OUTPUT, +, -, +, -) | Connect a load line to this terminal. Allowable current per pin is 25A max. A use of two pins each is recommended. |

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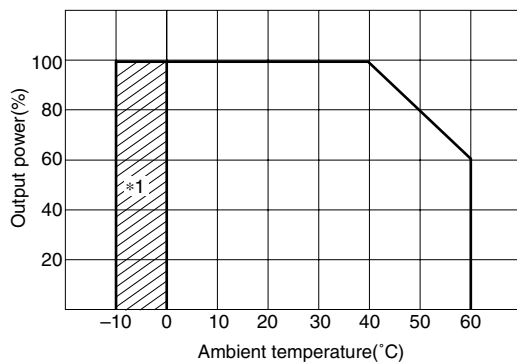
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COMMON SPECIFICATIONS

| | | |
|---|-----------------------------------|--|
| Temperature and humidity | | |
| Temperature range | Operating(°C) | -10 to +60 [Derating is necessary when operating environment temperature exceed 40°C.] |
| | Storage(°C) | |
| Humidity range | Operating(%)RH | 20 to 95[Maximum wet-bulb temperature: 35°C, without dewing] |
| | Storage(%)RH | |
| Vibration and shock | | |
| Vibration | 5 to 10Hz | All amplitude 10mm[3 directions, each 1h] |
| | 10 to 200Hz | Acceleration 19.6m/s ² (2G)[3 directions, each 1h] |
| Shock | Acceleration | 588m/s ² (60G)[3 directions, each 3 times] |
| | Pulse duration | 11±5ms |
| Withstand voltage and insulation resistance | | |
| Withstand voltage | Input terminal to case(G) | Eac: 2kV, 1min[Normal temperature, normal humidity, cutout current 10mA] |
| | Input terminal to output terminal | |
| Insulation resistance | Input terminal to case(G) | Edc: 500V, 100MΩ min. [Normal temperature, normal humidity] |
| | Input terminal to output terminal | |
| | Output terminal to case(G) | |

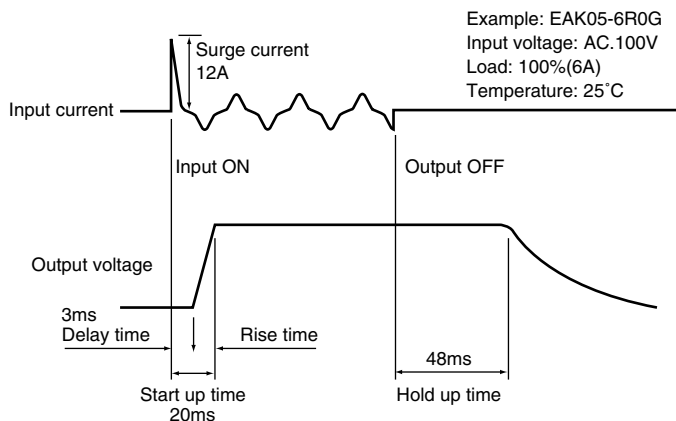
OUTPUT POWER-AMBIENT TEMPERATURE(DERATINGS)



*1 Different standards are used for ripple, noise, and hold up time in a range of -10 to 0°C.

- For use at 40°C or higher temperature, reduce the output power based on the above table.
- When starting the power supply at 0°C or lower ambient temperature, the output ripple, the start up time, the hold up time or the like may not satisfy the specification values.

SURGE CURRENT, START UP/HOLD UP TIMES

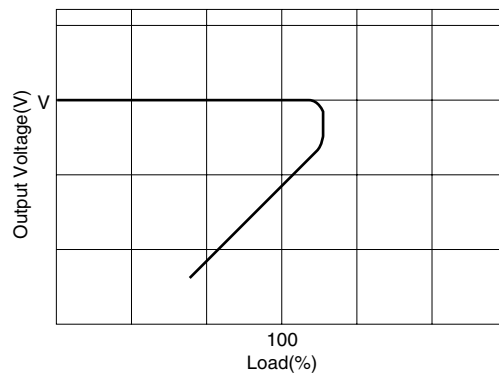


OVERCURRENT PROTECTION

If short or load current in the load side is excessive, the output voltage is automatically decreased.

The output voltage automatically recovers upon a release from the overload condition.

The 15W and 30W types have the load characteristics as shown below. Therefore, the rated output voltage possibly cannot be maintained if the rated output current is exceeded as peak current at the start-up or during operation. Be careful in case of large current flowing at the start-up of a motor or the like. There is no problem for use within a range of normal rated current.



Power Supplies

AC Input

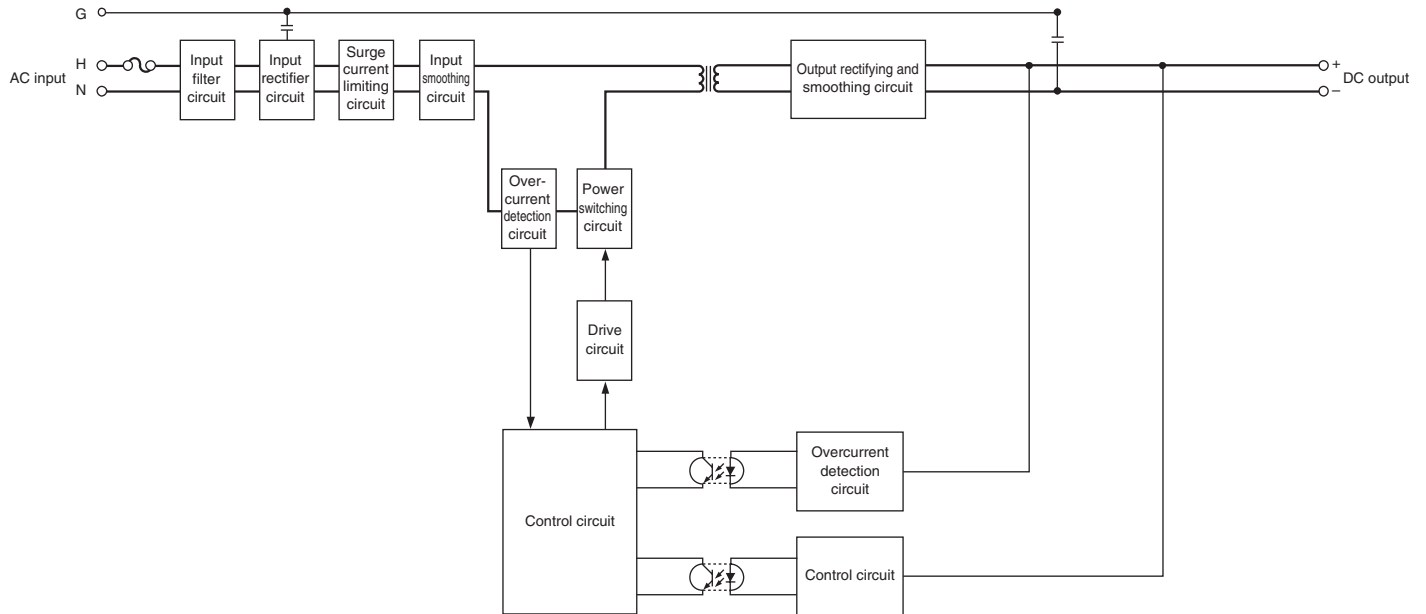
Single Output, General-Purpose

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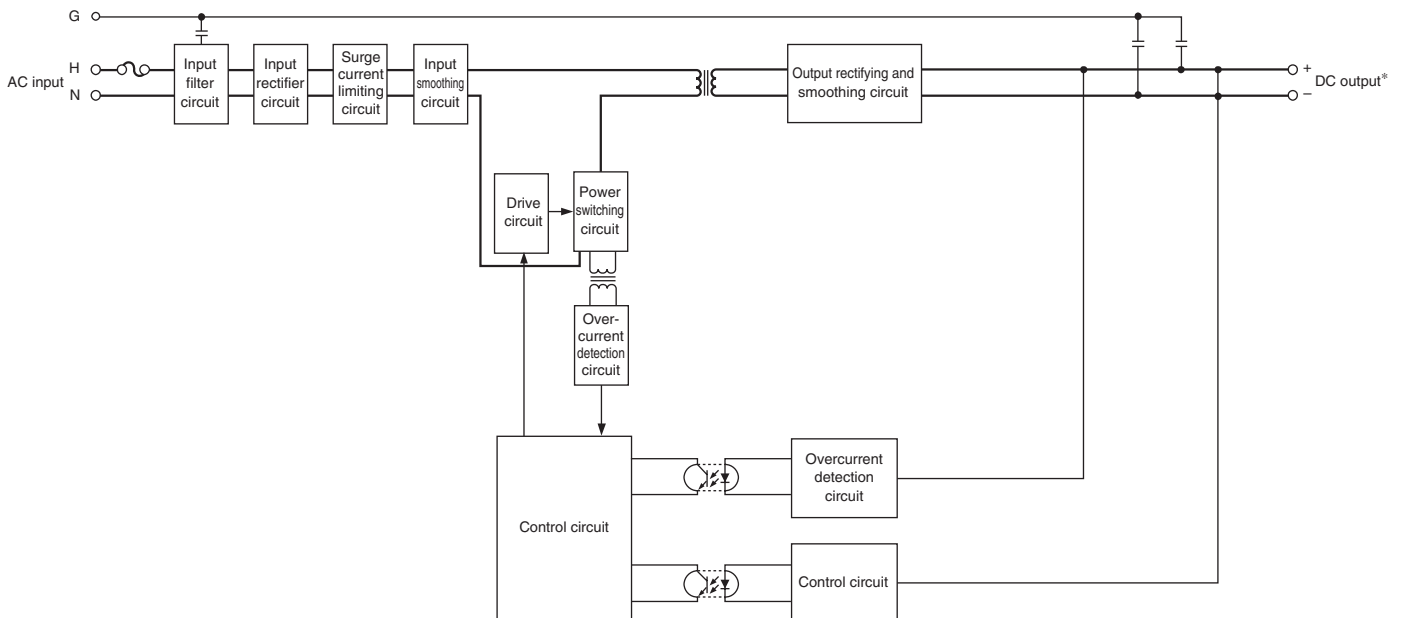
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BLOCK DIAGRAM

15W AND 30W TYPES



50W, 100W AND 150W TYPES



* The 150W type provides 2 each + and - output terminals.

Power Supplies

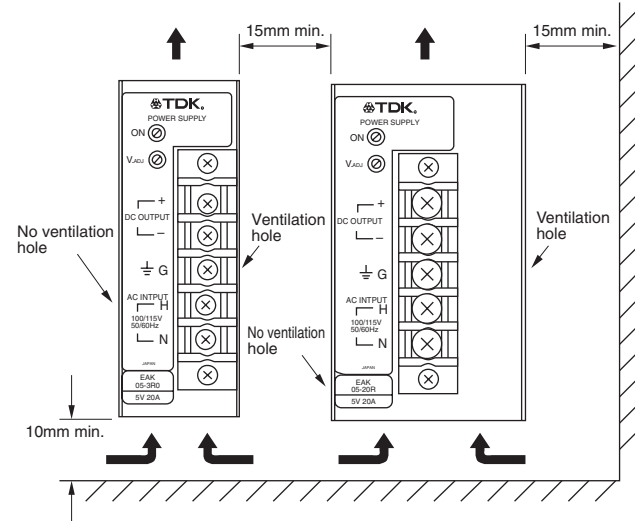
AC Input

Single Output, General-Purpose

E Series EAK-G(15 to 150W)

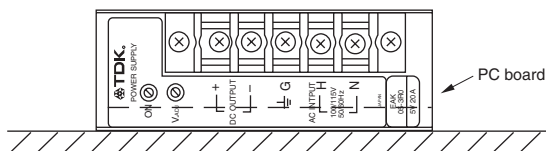
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INSTALLATION



The ventilation holes are provided on three surfaces, top, bottom, and side surfaces. Install each power supply in such a way as to provide sufficient ventilation.

Maintain a 15mm min. distance from surrounding equipment, etc. and a 10mm min. distance from the bottom up to the power supply. Tapped holes for M3 are located on the bottom and side surfaces. Mount the power supply with M3 screws. During the mounting, be careful not to insert the screw 7mm or deeper from the surface of the product.



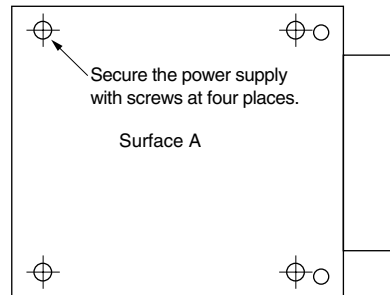
If the power supply is laterally installed, the heat dissipation is slightly deteriorated due to a difference from the natural convective direction.

Derating of 60 to 80% is recommended.

Install the power supply so that the inside PC board is located at the bottom.

VIBRATION PROOF

For equipment in which the vibration proof is significant, install the power supply with the tapped holes for installation located at four places on the surface A as shown below. Note that, however, this installation is intended only for EAK 15W, 30W, and 50W types.



OTHER CONDITIONS

- Unless conditions are otherwise specified in the specifications or standards, 25°C and rated input-output should be applied.
- Two or more EAK-G 150W type units cannot be used with output terminals connected in parallel.