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# LF P 100 

${ }^{\text {ch }}{ }_{\text {us }} \triangleq C \epsilon$
RoHS


High voltage pulse noise type : NAP series ow leakage current type : NAM series *The EMI/EMC Filter is recommended to connect with several devices.
1)Series name
(2) Single output (3)Output wattage (4)Universal inpu (5) Output voltage (6) Optional * C: with Coating G: Low leakage current J1: VH(J.S.T.)connector type $R$ : with Remote ON/OFF R2: with Remote ON/OFF S: with Chassis SN: with Chassis \& cover

Please refer to Instruction manual 6.

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

| MODEL | LFP100F-24-Y | LFP100F-36-Y | LFP100F-48-Y |  |
| :--- | ---: | :--- | :--- | :--- |
| MAX OUTPUT WATTAGE[W] | $* 2$ | $103.2(206.4)$ | $100.8(201.6)$ | $100.8(201.6)$ |
| DC OUTPUT | $* 2$ | $24 \mathrm{~V} 4.3 \mathrm{~A}(8.6 \mathrm{~A})$ | $36 \mathrm{~V} 2.8 \mathrm{~A}(5.6 \mathrm{~A})$ | $48 \mathrm{~V} 2.1 \mathrm{~A}(4.2 \mathrm{~A})$ |

SPECIFICATIONS

|  | MODEL |  | LFP100F-24-Y | LFP100F-36-Y | LFP100F-48-Y |
| :---: | :---: | :---: | :---: | :---: | :---: |
| INPUT | VOLTAGE[V] |  | AC85-264 1 $\phi$ (Refer to Instruction Manual 1.1 and 3.2) *5 |  |  |
|  | CURRENT[A] | ACIN 100V | 1.3typ (lo=100\%) |  |  |
|  |  | ACIN 200V | 0.7typ ( $\mathrm{lo}=100 \%$ ) |  |  |
|  | FREQUENCY[Hz] |  | $50 / 60$ (47-63) |  |  |
|  | EFFICIENCY[\%] | ACIN 100V | 84.0typ (10=100\%) | 84.0typ (lo=100\%) | 84.0typ (lo=100\%) |
|  |  | ACIN 200V | 87.0typ ( $\mathrm{lo=100} \mathrm{\%)}$ | 87.0typ (lo=100\%) | 87.0typ (lo=100\%) |
|  | POWER FACTOR | ACIN 100V | $0.99 \mathrm{typ}(\mathrm{lo}=100 \%)$ |  |  |
|  |  | ACIN 200V | 0.95typ (lo=100\%) |  |  |
|  | INRUSH CURRENT[A] | ACIN 100V | 15typ (lo=100\%) (At cold start) ( $\mathrm{Ta}=25^{\circ} \mathrm{C}$ ) |  |  |
|  |  | ACIN 200V | 30 typ (lo=100\%) (At cold start) ( $\mathrm{Ta}=25^{\circ} \mathrm{C}$ ) |  |  |
|  | LEAKAGE CURRENT[mA] |  | 0.40 / 0.75max (ACIN 100V / 240V 60Hz, Io=100\%, According to IEC60950-1 and DEN-AN) |  |  |
| OUTPUT | VOLTAGE[V] |  |  |  |  |
|  | CURRENT[A] |  | 4.3 (Peak 8.6) | 2.8 (Peak 5.6) | 2.1 (Peak 4.2) |
|  | LINE REGULATION[mV] ${ }^{* 7}$ |  | 96max | 144max | 192max |
|  | LOAD REGULATION[mV] *7 |  | 150max | 240max | 240max |
|  | RIPPLE[mVp-p] *3 | 0 to $+50^{\circ} \mathrm{C}$ | 120 max | 150max | 150max |
|  |  | -10-0 $0^{\circ} \mathrm{C}$ | 160max | 200max | 200max |
|  | RIPPLE NOISE[mVp-p]*3 | 0 to $+50^{\circ} \mathrm{C}$ | 150max | 250max | 250max |
|  |  | -10-0 $0^{\circ} \mathrm{C}$ | 180max | 300max | 300max |
|  | TEMPERATURE REGULATION[mV] | 0 to $+50^{\circ} \mathrm{C}$ | 240max | 360max | 480max |
|  |  | -10 to $+50^{\circ} \mathrm{C}$ | 290max | 450max | 600max |
|  | DRIFT[mV] *4 |  | 96max | 144max | 192max |
|  | START-UP TIME[ms] |  |  |  |  |
|  | HOLD-UP TIME[ms] |  | 350typ (ACIN 100V, Io=100\%) |  |  |
|  | OUTPUTVOLTAGE ADJUSTMENT RANGE[V] |  | 21.60 to 27.50 32.40 to 39.60 |  | 39.60 to 52.80 |
|  | OUTPUT VOLTAGE SETTING[V] |  | 24.00 to 24.96 36.00 to 37.44 48.00 to 49.92 <br> Works over $101 \%$ of rating and recovers automatically   |  |  |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION |  |  |  |  |
|  | OVERVOLTAGE PROTECTION[V] |  | 27.60 to 33.60 41.40 to 50.40 |  | 55.20 to 67.20 |
|  | OPERATING INDICATION |  | Not provided |  |  |
|  | REMOTE SENSING |  | Not provided |  |  |
|  | REMOTE ON/OFF |  | Option (Refer to Instruction Manual 6) |  |  |
| ISOLATION | INPUT-OUTPUT•RC |  | AC3,000V 1minute, Cutoff current $=10 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |
|  | INPUT-FG |  | AC2,000V 1minute, Cutoff current $=10 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |
|  | OUTPUT•RC-FG $\quad * 6$ |  | AC500V 1minute, Cutoff current $=25 \mathrm{~mA}, \mathrm{DC500V} 50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |
|  | OUTPUT-RC ${ }^{* 6}$ |  | AC100V 1minute, Cutoff current $=25 \mathrm{~mA}$, DC100V $10 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALITTUDE *5 |  | -10 to $+70^{\circ} \mathrm{C}, 20-90 \% \mathrm{RH}$ (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max |  |  |
|  | STORAGE TEMP.,HUMID.AND ALTITUDE |  | -20 to $+75^{\circ} \mathrm{C}, 20-90 \% \mathrm{RH}$ (Non condensing), 9,000m (30,000feet) max |  |  |
|  | VIBRATION |  | $10-55 \mathrm{~Hz}, 19.6 \mathrm{~m} / \mathrm{s}^{2}(2 \mathrm{G})$, 3minutes period, 60 minutes each along $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |
|  | IMPACT |  | $196.1 \mathrm{~m} / \mathrm{s}^{2}$ (20G), 11 ms , once each $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS (AT ONIY AC input) |  | UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN |  |  |
|  | CONDUCTED NOISE |  | Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B |  |  |
|  | HARMONIC ATTENUATOR |  | Complies with IEC61000-3-2 (Class A) *8 |  |  |
| OTHERS | CASE SIZE/WEIGHT |  | $62 \times 33 \times 155 \mathrm{~mm}$ [ $2.44 \times 1.30 \times 6.10$ inches] (WXHXD) / 290g max (with chassis \& cover : 480g max) |  |  |
|  | COOLING METHOD |  | Convection (Refer to Instruction Manual 3.1 and 3.2) *5 |  |  |

*1 Specification is changed at option, refer to Instruction Manual.
*2 Peak loading for 10 sec . And Duty $40 \%$ max, refer to Instruction Manual 5. In detail.
() means peak current. There is a possibility that an internal device is damaged when the specification is exceeded
*3 This is the value that measured on measuring board with capacitor of $22 \mu \mathrm{~F}$ at 150 mm from output terminal.

## LFP-2

## Block diagram



## External view

※ External size of option is different from standard model.


# LF P 150 


(1)Series name
(2) Single output (3)Output wattage (4) Universal input
(5) Output voltage
(6) Optional *

C: with Coating G: Low leakage current J1: VH(J.S.T.)connector type R: with Remote ON/OFF R2: with Remote ON/OFF S : with Chassis SN: with Chassis \& cover

Please refer to Instruction manual 6.

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

| MODEL | LFP150F-24-Y | LFP150F-36-Y | LFP150F-48-Y |  |
| :--- | ---: | :--- | :--- | :--- |
| MAX OUTPUT WATTAGE[W] | $*_{2}$ | $151.2(302.4)$ | $151.2(302.4)$ | $153.6(307.2)$ |
| DC OUTPUT | $*_{2}$ | $24 \mathrm{~V} 6.3 \mathrm{~A}(12.6 \mathrm{~A})$ | $36 \mathrm{~V} 4.2 \mathrm{~A}(8.4 \mathrm{~A})$ | 48 V 3.2A $(6.4 \mathrm{~A})$ |

SPECIFICATIONS


## Block diagram



## External view

※ External size of option is different from standard model.



Recommended EMI/EMC Filter NAC-06-472

(1)Series name
(2) Single output (3)Output wattage (4) Universal input (5) Output voltage (6) Optional * C: with Coating G: Low leakage current J1: VH(J.S.T.)connector type R : with Remote ON/OFF R2: with Remote ON/OFF S : with Chassis SN: with Chassis \& cover T: Vertical terminal block U1: Can be attached the external capacitor unit

Please refer to Instruction manual 6.

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit,
so handle the unit with care.

|  |  |  | LFP240F-24-Y | LFP240F-30-Y | LFP240F-36-Y | LFP240F-48-Y |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MODEL <br> MAX OUTPUT WATTAGE[W] |  | *2 | 300 (480) | 300 (480) | 302.4 (482.4) | 302.4 (480) |
| DC OUTPUT | ${ }^{2}$ | Convection | 24V 10A (20A) | 30V 8A (16A) | 36V 6.7A (13.4A) | 48V 5A (10A) |
|  | *2 | Forced air | 24V 12.5A (20A) | 30V 10A (16A) | 36V 8.4A (13.4A) | 48V 6.3A (10A) |

SPECIFICATIONS

|  | MODEL |  | LFP240F-24-Y | LFP240F-30-Y | LFP240F-36-Y | LFP240F-48-Y |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INPUT | VOLTAGE[V] |  | AC85-264 1 $\phi$ (Refer to Instruction Manual 1.1 and 3.2) *5 |  |  |  |
|  | CURRENT[A] | ACIN 100V | 3.6 typ (lo=100\%) |  |  |  |
|  |  | ACIN 200 V | 1.8typ (lo=100\%) |  |  |  |
|  | FREQUENCY[Hz] |  | 50 / 60 (47-63) |  |  |  |
|  | EFFICIENCY[\%] | ACIN 100V | 86.0typ (lo=100\%) | 86.0typ (lo=100\%) | 86.0typ (lo=100\%) | 86.0typ (lo=100\%) |
|  |  | ACIN 200V | 88.5typ (lo=100\%) | 88.5typ ( $\mathrm{lo=100} \mathrm{\%} \mathrm{)}$ | 89.0typ (lo=100\%) | 89.0typ (lo=100\%) |
|  | POWER FACTOR | ACIN 100V | 0.99typ (lo=100\%) |  |  |  |
|  |  | ACIN 200V | 0.95typ (lo=100\%) |  |  |  |
|  | INRUSH CURRENT[A] | ACIN 100V | 15 / 30typ (lo=100\%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start) |  |  |  |
|  |  | ACIN 200V | $30 / 30$ typ (lo=100\%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start) |  |  |  |
|  | LEAKAGE CURRENT[mA] |  | 0.40 / 0.75max (ACIN 100V / 240V 60Hz, Io=100\%, According to IEC60950-1 and DEN-AN) |  |  |  |
| OUTPUT | VOLTAGE[V] |  | 24 | 30 | 36 | 48 |
|  | CURRENT[A] | Convection *2 | 10 (Peak 20) | 8 (Peak 16) | 6.7 (Peak 13.4) | 5 (Peak 10) |
|  |  | Forced air *2 | 12.5 (Peak 20) | 10 (Peak 16) | 8.4 (Peak 13.4) | 6.3 (Peak 10) |
|  | LINE REGULATION[mV] *7 |  | 96max | 144max | 144max | 192max |
|  | LOAD REGULATION[mV] *7 |  | 150max | 240max | 240max | 240max |
|  | RIPPLE[mVp-p] | 0 to $+50^{\circ} \mathrm{C}$ | 120max | 150max | 150max | 150max |
|  |  | $-10 \cdot 0^{\circ} \mathrm{C}$ | 160max | 200max | 200max | 200max |
|  | RIPPLE NOISE[mVp-p]*3 | 0 to $+50^{\circ} \mathrm{C}$ | 150max | 250max | 250max | 250max |
|  |  | $-10 \cdot 0^{\circ} \mathrm{C}$ | 180max | 300max | 300max | 300max |
|  | TEMPERATURE REGULATION[mV] | 0 to $+50^{\circ} \mathrm{C}$ | 240max | 360max | 360max | 480max |
|  |  | -10 to $+50^{\circ} \mathrm{C}$ | 290max | 450max | 450max | 600max |
|  | DRIFT[mV] *4 |  | 96max | 144max | 144max | 192max |
|  | START-UP TIME[ms] |  | 350 typ (ACIN 100V, Io=100\%) |  |  |  |
|  | HOLD-UP TIME[ms] | *9 | 20typ (ACIN 100V, Io=100\%) |  |  |  |
|  | OUTPUTVOLTAGE ADJUSTMENT RANGE[V] |  | 21.60 to 27.50 | 27.00 to 33.00 | 32.40 to 39.60 | 39.60 to 52.80 |
|  | OUTPUT VOLTAGE SETTING[V] |  | 24.00 to 24.96 | 30.00 to 31.20 | 36.00 to 37.44 | 48.00 to 49.92 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION |  | Works over 101\% of rating and recovers automatically |  |  |  |
|  | OVERVOLTAGE PROTECTION[V] |  | 27.60 to 33.60 34.50 to 42.00 41.40 to 50.40 55.20 to 67.20 |  |  |  |
|  | OPERATING INDICATION |  |  |  |  |  |
|  | REMOTE SENSING |  | Not provided |  |  |  |
|  | REMOTE ON/OFF |  | Option (Refer to Instruction Manual 6) |  |  |  |
| ISOLATION | INPUT-OUTPUT•RC *6 |  | AC3,000V 1minute, Cutoff current $=10 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | INPUT-FG |  | AC2,000V 1minute, Cutoff current $=10 \mathrm{~mA}, \mathrm{DC} 500 \mathrm{~V} 50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | OUTPUT•RC-FG |  | AC500V 1minute, Cutoff current $=25 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | OUTPUT-RC |  | AC100V 1minute, Cutoff current $=25 \mathrm{~mA}, \mathrm{DC100V} 10 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
| ENVIRONMENT | OPERATINGTEMP,,HUMID.AND ALTITUDE *5 |  | -10 to $+70^{\circ} \mathrm{C}, 20-90 \% \mathrm{RH}$ (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max |  |  |  |
|  | STORAGE TEMP.,HUMID.AND ALTITUDE |  | -20 to $+75^{\circ} \mathrm{C}, 20-90 \%$ RH (Non condensing), 9,000m (30,000feet) max |  |  |  |
|  | VIBRATION |  | $10-55 \mathrm{~Hz}, 19.6 \mathrm{~m} / \mathrm{s}^{2}$ (2G), 3minutes period, 60minutes each along $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |  |
|  | IMPACT |  | $196.1 \mathrm{~m} / \mathrm{s}^{2}$ (20G), 11 ms , once each $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |  |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS (AT ONIY AC input) |  | UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN |  |  |  |
|  | CONDUCTED NOISE |  | Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B |  |  |  |
|  | HARMONIC ATTENUATOR |  | Complies with IEC61000-3-2 (Class A) *8 |  |  |  |
| OTHERS | CASE SIZE/WEIGHT |  | $84 \times 46 \times 180 \mathrm{~mm}[3.31 \times 1.81 \times 7.09$ inches] (W $\times \mathrm{H} \times \mathrm{D}$ ) / 540g max (with chassis \& cover : 860 g max ) |  |  |  |
|  | COOLING METHOD |  | Convection / Forced air (Refer to Instruction Manual 3.1 and 3.2) $* 5$ |  |  |  |

[^0]*7 Please contact us about dynamic load and input response
*8 Please contact us about another class.
*9 By attaching an external capacitor unit, it is possible to extend the hold-up time.

* Derating is required when operated with chassis and cover
* Sound noise may be generated by power supply in case of pulse load.


## Block diagram



## External view



## ${ }_{c} \mathbf{N}_{\text {us }} \triangle C \epsilon$

RoHS

Recommended EMI/EMC Filter NAC-06-472


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

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

| MODEL |  |  | LFP300F-24-TY | LFP300F-30-TY | LFP300F-36-TY | LFP300F-48-TY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAX OUTPUT WATTAGE[W] |  | *2 | 360 (600) | 360 (600) | 360 (604.8) | 360 (604.8) |
|  | *2 | Convection | 24V 12.5A (25A) | 30V 10A (20A) | 36V 8.4A (16.8A) | 48V 6.3A (12.6A) |
| DC OUTPUT |  | Forced air | 24V 15A (25A) | 30V 12A (20A) | 36V 10A (16.8A) | 48V 7.5A (12.6A) |

## SPECIFICATIONS

|  | MODEL |  | LFP300F-24-TY | LFP300F-30-TY | LFP300F-36-TY | LFP300F-48-TY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INPUT | VOLTAGE[V] |  | AC85-264 1 $\phi$ (Refer to Instruction Manual 1.1 and 3.2) *5 |  |  |  |
|  | CURRENT[A] | ACIN 100V | 4.3typ (lo=100\%) |  |  |  |
|  |  | ACIN 200V | 2.2 typ (lo=100\%) |  |  |  |
|  | FREQUENCY[Hz] |  | $50 / 60$ (47-63) |  |  |  |
|  | EFFICIENCY[\%] | ACIN 100V | 85.0 typ (lo=100\%) | 85.5 typ ( $\mathrm{lo}=100 \%$ ) | 85.5 typ (lo=100\%) | 85.5typ (lo=100\%) |
|  |  | ACIN 200V | 88.0typ (lo=100\%) | 88.0typ (lo=100\%) | 88.0 typ (lo=100\%) | 88.0typ (lo=100\%) |
|  | POWER FACTOR | ACIN 100V | 0.99typ ( $\mathrm{lo}=100 \%$ ) |  |  |  |
|  |  | ACIN 200V | 0.95typ (lo=100\%) |  |  |  |
|  | INRUSH CURRENT[A] | ACIN 100V | 15 / 30typ (lo=100\%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start) |  |  |  |
|  |  | ACIN 200V | $30 / 30$ typ (lo=100\%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start) |  |  |  |
|  | LEAKAGE CURRENT[mA] |  | 0.45 / 0.75max (ACIN 100V / 240V 60Hz, Io=100\%, According to IEC60950-1 and DEN-AN) |  |  |  |
| OUTPUT | VOLTAGE[V] |  | 24 | 30 | 36 | 48 |
|  | CURRENT[A] | ACIN 100V*2 | 12.5 (Peak 22) Convection | 10 (Peak 18) Convection | 8.4 (Peak 14.6) Convection | 6.3 (Peak 11) Convection |
|  |  |  | 15 (Peak 22) Forced air | 12 (Peak 18) Forced air | 10 (Peak 14.6) Forced air | 7.5 (Peak 11) Forced air |
|  |  | ACIN 200V*2 | 12.5 (Peak 25) Convection | 10 (Peak 20) Convection | 8.4 (Peak 16.8) Convection | 6.3 (Peak 12.6) Convection |
|  |  |  | 15 (Peak 25) Forced air | 12 (Peak 20) Forced air | 10 (Peak 16.8) Forced air | 7.5 (Peak 12.6) Forced air |
|  | LINE REGULATION[mV] *7 |  | 96max | 144max | 144max | 192max |
|  | LOAD REGULATION[mV] *7 |  | 150 max | 240max | 240max | 240 max |
|  | RIPPLE[mVp-p] ${ }^{*}$ | 0 to $+40^{\circ} \mathrm{C}$ | 120 max | 150max | 150max | 150max |
|  |  | $-10 \cdot 0^{\circ} \mathrm{C}$ | 160max | 200max | 200max | 200max |
|  | RIPPLE NOISE[mVp-p]*3 | 0 to $+40^{\circ} \mathrm{C}$ | 150 max | 250max | 250max | 250max |
|  |  | $-10 \cdot 0^{\circ} \mathrm{C}$ | 180max | 300max | 300max | 300max |
|  | TEMPERATURE REGULATION[mV] | 0 to $+40^{\circ} \mathrm{C}$ | 240 max | 360max | 360max | 480max |
|  |  | -10 to $+40^{\circ} \mathrm{C}$ | 290max | 450max | 450max | 600max |
|  | DRIFT[mV] ${ }_{4}$ |  | 96max | 144max | 144max | 192max |
|  | START-UP TIME[ms] |  | 350 typ (ACIN 100V, Io=100\%) |  |  |  |
|  | HOLD-UP TIME[ms] | *9 | 20typ (ACIN 100V, lo=100\%) |  |  |  |
|  | OUTPUTVOLTAGE ADJUSTMENT RANGE[V] |  | 21.60 to 27.50 | 27.00 to 33.00 | 32.40 to 39.60 | 39.60 to 52.80 |
|  | OUTPUT VOLTAGE SETTING[V] |  | 24.00 to 24.96 | 30.00 to 31.20 | 36.00 to 37.44 | 48.00 to 49.92 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION |  | Works over 101\% of rating and recovers automatically |  |  |  |
|  | OVERVOLTAGE PROTECTION[V] |  | 27.60 to 33.60 | 34.50 to 42.00 | 41.40 to 50.40 | 55.20 to 67.20 |
|  | OPERATING INDICATION |  | Not provided |  |  |  |
|  | REMOTE SENSING |  | Not provided |  |  |  |
|  | REMOTE ON/OFF |  | Option (Refer to Instruction Manual 6) |  |  |  |
| ISOLATION | INPUT-OUTPUT•RC |  | AC3,000V 1minute, Cutoff current $=10 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | INPUT-FG |  | AC2,000V 1minute, Cutoff current $=10 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | OUTPUT•RC-FG *6 |  | AC500V 1minute, Cutoff current $=25 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | OUTPUT-RC *6 |  | AC100V 1minute, Cutoff current $=25 \mathrm{~mA}, \mathrm{DC100V} 10 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
| ENVIRONMENT | OPERATING TEMP, HUMID.AND ALTITUDE *5 |  | -10 to $+70^{\circ} \mathrm{C}, 20-90 \% \mathrm{RH}$ (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max |  |  |  |
|  | STORAGE TEMP.,HUMID.AND ALTITUDE |  | -20 to $+75^{\circ} \mathrm{C}, 20-90 \% \mathrm{RH}$ (Non condensing), 9,000m (30,000feet) max |  |  |  |
|  | VIBRATION |  | $10-55 \mathrm{~Hz}, 19.6 \mathrm{~m} / \mathrm{s}^{2}$ (2G), 3minutes period, 60minutes each along $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |  |
|  | IMPACT |  | $196.1 \mathrm{~m} / \mathrm{s}^{2}$ (20G), 11 ms , once each $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |  |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS (AT ONIY AC input) |  | UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN |  |  |  |
|  | CONDUCTED NOISE |  | Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B |  |  |  |
|  | HARMONIC ATTENUATOR |  | Complies with IEC61000-3-2 (Class A) *8 |  |  |  |
| OTHERS | CASE SIZE/WEIGHT |  | $95 \times 52.5 \times 222 \mathrm{~mm}$ [3.74×2.07×8.74 inches] (WXHXD) (without terminal block) / 810g max (with chassis \& cover : $1,270 \mathrm{~g}$ max) |  |  |  |
|  | COOLING METHOD |  | Convection / Forced air (Refer to Instruction Manual 3.1 and 3.2) *5 |  |  |  |
| *1 Specification is changed at option, refer to Instruction Manual. <br> *2 Peak loading for 10 sec . And Duty $40 \%$ max, refer to Instruction Manual 5. In detail. <br> () means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. |  |  | Measured by 20 MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103). <br> *4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at $25^{\circ} \mathrm{C}$, with the input voltage held constant at the rated input/output. |  | *7 Please contact us about dynamic load and input response. <br> *8 Please contact us about another class. <br> *9 By attaching an external capacitor unit, it is possible to extend the hold-up time. <br> * To meet the specifications. Do not operate over-loaded condition. <br> * Parallel operation is not possible. |  |
| *3 This is th capacitor | the value that measured on measuring of $22 \mu \mathrm{~F}$ at 150 mm from output terminal. |  | *5 Derating is required. <br> *6 Applicable when remote control (optional) is added. |  | * Derating is required when operated with chassis and cover. <br> * Sound noise may be generated by power supply in case of pulse load. |  |

## Block diagram




## External view

## ※ External size of option is different from standard model.

Standard type

※ 5 Mounting holes are existing.
※ The back side of P.C.B. of the power supply is assembled some SMDs.
Be attention not to bump against the attached area by vibration
※ Use the spacer of 8 mm length or more regarding insulation.
And do not use press-fitting bush.
※ Point A, Point B, Point C, Point D are thermometry points.
Please refer to Instruction Manual 3.
※ Keep drawing current per pin below 20A for TB2.


[^0]:    *1 Specification is changed at option, refer to Instruction Manual
    *2 Peak loading for 10sec. And Duty 40\% max, refer to Instruction Manual 5. In detail.
    ( ) means peak current. There is a possibility that an internal device is damaged when the specification is exceeded
    *3 This is the value that measured on measuring board with capacitor of $22 \mu \mathrm{~F}$ at 150 mm from output terminal.

