

Recommended Noise Filter
NAC-06-472



High voltage pulse noise type : NAP series
Low leakage current type : NAM series
*The Noise Filter is recommended to connect with several devices.

- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional *6
- C : with Coating
- G : Low leakage current
- J2 : Mini terminal block
- R : with Remote ON/OFF
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

| MODEL | LEA50F-3R3-Y | LEA50F-5 | LEA50F-9 | LEA50F-12 | LEA50F-15 | LEA50F-18 | LEA50F-24 | LEA50F-24-H | LEA50F-30 | LEA50F-48 |
|-----------------------|--------------|----------|----------|-----------|-----------|-----------|-----------|---------------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 33 | 50 | 50.4 | 51.6 | 52.5 | 50.4 | 50.4 | 50.4 | 51 | 52.8 |
| DC OUTPUT | *5 3.3V 10A | 5V 10A | 9V 5.6A | 12V 4.3A | 15V 3.5A | 18V 2.8A | 24V 2.1A | 24V 2.1(2.6)A | 30V 1.7A | 48V 1.1A |

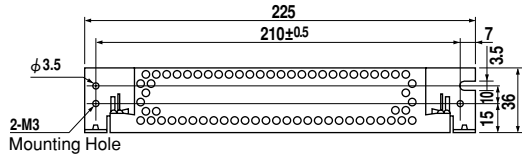
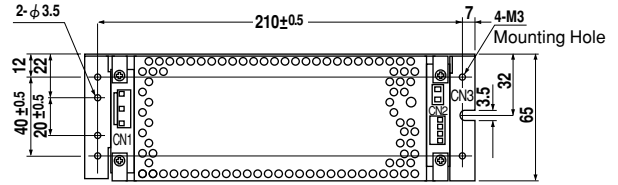
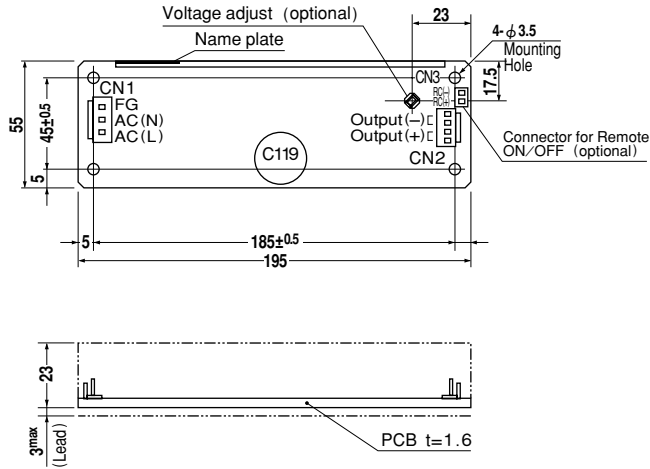
SPECIFICATIONS

| | MODEL | LEA50F-3R3-Y | LEA50F-5 | LEA50F-9 | LEA50F-12 | LEA50F-15 | LEA50F-18 | LEA50F-24 | LEA50F-24-H | LEA50F-30 | LEA50F-48 | |
|-------------------------------|--|---|--|-------------|-------------|-------------|-------------|-------------|----------------|-------------|-----------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1 φ or DC120 - 370 | | | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 0.6 | 0.7typ | | | | | | | | |
| | | ACIN 200V | 0.3 | 0.35typ | | | | | | | | |
| | FREQUENCY[Hz] | 50/60 (47 - 63) or DC | | | | | | | | | | |
| | EFFICIENCY[%] | ACIN 100V | 70typ | 75typ | 78typ | 78typ | 79typ | 80typ | 81typ | 81typ | 82typ | 83typ |
| | | ACIN 200V | 71typ | 77typ | 80typ | 80typ | 81typ | 82typ | 83typ | 83typ | 84typ | 85typ |
| | POWER FACTOR | ACIN 100V | 0.98typ | 0.99typ | | | | | | | | |
| ACIN 200V | | 0.91typ | 0.93typ | | | | | | | | | |
| INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| | ACIN 200V | 30typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to IEC60950 and DEN-AN) | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 9 | 12 | 15 | 18 | 24 | 24 | 30 | 48 | |
| | CURRENT[A] | *1 10 | 10 | 5.6 | 4.3 | 3.5 | 2.8 | 2.1 | 2.1 (Peak 2.6) | 1.7 | 1.1 | |
| | LINE REGULATION[mV] | 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 100max | 120max | 120max | 150max | 150max | 180max | 300max | |
| | RIPPLE[mVp-p] | 0 to +50°C *2 | 80max | 80max | 120max | 120max | 120max | 120max | 150max | 150max | 180max | 300max |
| | | -10 - 0°C *2 | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 160max | 160max | 200max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C *2 | 120max | 120max | 150max | 150max | 150max | 150max | 150max | 150max | 150max | 350max |
| | | -10 - 0°C *2 | 160max | 160max | 180max | 180max | 180max | 180max | 180max | 180max | 180max | 400max |
| | TEMPERATURE REGULATION[mV] | 0 to +50°C | 50max | 50max | 90max | 120max | 150max | 180max | 240max | 240max | 300max | 480max |
| | | -10 to +50°C | 60max | 60max | 120max | 150max | 180max | 200max | 290max | 290max | 360max | 600max |
| | DRIFT[mV] | *3 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | START-UP TIME[ms] | 500max (ACIN 100V, Io=100%) | | | | | | | | | | |
| | HOLD-UP TIME[ms] | 20typ (Io=100%) | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed (*Y which can be adjusted the output is available as optional: ±10%) | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | 3.25 - 3.35 | 4.9 - 5.3 | 8.6 - 9.4 | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 28.5 - 31.5 | 46.0 - 50.0 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically | | | | | | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00 - 5.25V Works at 115 - 140% of rating | | | | | | | | | | |
| | OPERATING INDICATION | Not provided | | | | | | | | | | |
| | REMOTE SENSING | Not provided | | | | | | | | | | |
| REMOTE ON/OFF | Option (Refer to Instruction Manual) | | | | | | | | | | | |
| ISOLATION | INPUT-OUTPUT · RC | *4 AC3.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | INPUT-FG | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT · RC-FG | *4 AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT-RC | *4 AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature) | | | | | | | | | | |
| ENVIRONMENT | OPERATING TEMP., HUMID. AND ALTITUDE | -10 to +70°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3.000m (10.000feet) max | | | | | | | | | | |
| | STORAGE TEMP., HUMID. AND ALTITUDE | -20 to +75°C, 20 - 90%RH (Non condensing), 9.000m (30.000feet) max | | | | | | | | | | |
| | VIBRATION | 10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | |
| | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | UL60950-1, C-UL, EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input) | | | | | | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | | |
| | HARMONIC ATTENUATOR | Complies with IEC61000-3-2 | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 55×26×195mm (W×H×D) /210g max (without chassis and cover) | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | |

*1 Peak load for 10sec. or less is acceptable if the total wattage is less than the rated wattage.
 *2 This is the value that measured on measuring board with capacitor of 22 μF within 150mm from output terminal.
 Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
 *3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C,

with the input voltage held constant at the rated input/output.
 *4 Applicable when remote control (optional) is added.
 *5 () : peak current.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.
 *6 Please contact us about safety approvals for the model with option.

External view



| I / O Connector | Mating Connector | Terminal |
|-----------------|------------------|----------|
| CN1 | B3P5-VH | VHR-5N |
| CN2 | B4P-VH | VHR-4N |
| CN3 | B2B-XH-A | XHP-2 |

(PIN CONNECTION)

| Pin No. | Input |
|---------|-------|
| 1 | AC(L) |
| 2 | |
| 3 | AC(N) |
| 4 | |
| 5 | FG |

| Pin No. | Output |
|---------|--------|
| 1 | -V |
| 2 | -V |
| 3 | +V |
| 4 | +V |

(Optional)

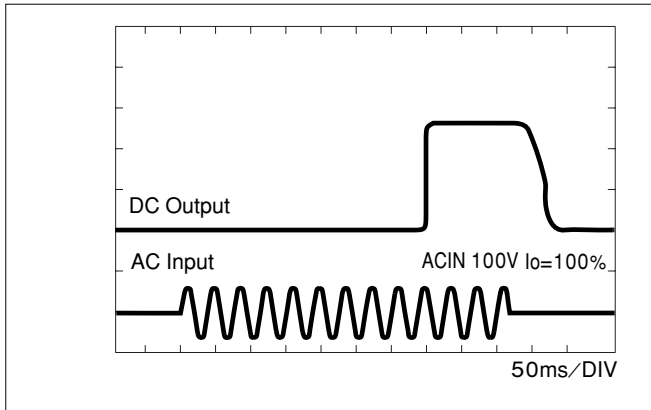
| Pin No. | Remote ON/OFF |
|---------|---------------|
| 1 | RC(+) |
| 2 | RC(-) |

- ※Weight: 210g or less (Without chassis and cover)
- ※Tolerance: ±1
- ※Dimensions in mm.
- ※PCB Material: Glass composite (CEM3)
- ※Chassis and cover is optional.
- ※Mounting torque: 0.6N·m(6.3kgf·cm)max

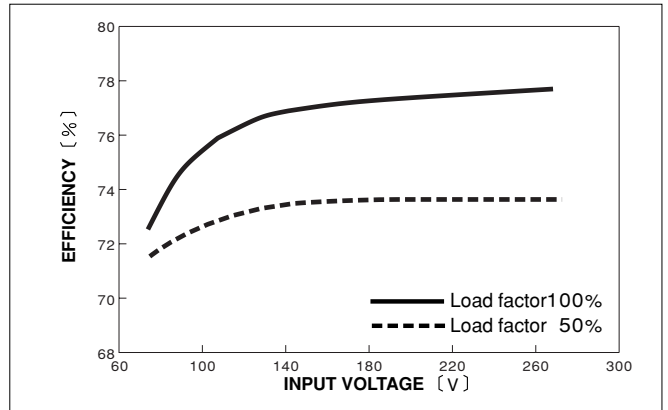
LEA

Performance data

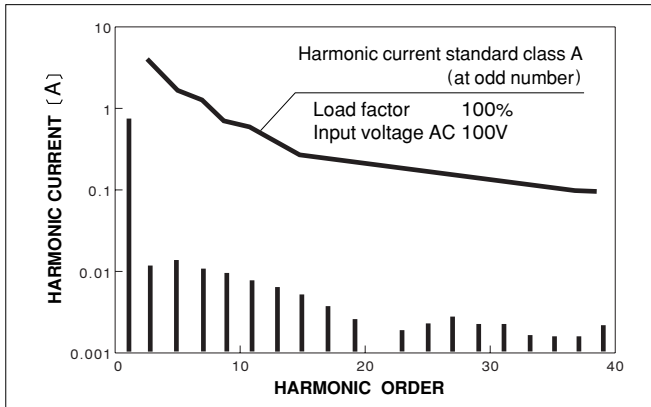
RISE TIME & FALL TIME (LEA50F-5)



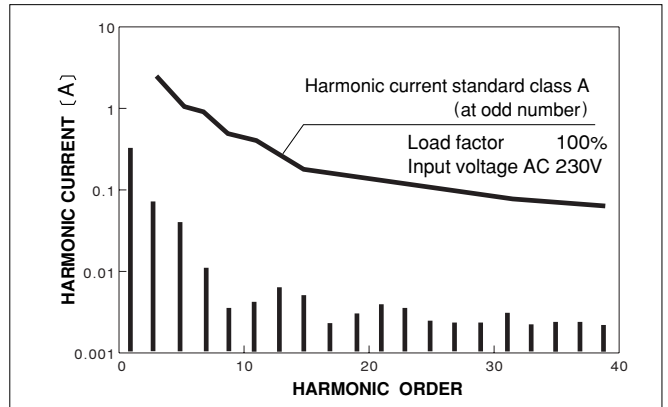
EFFICIENCY (LEA50F-5)

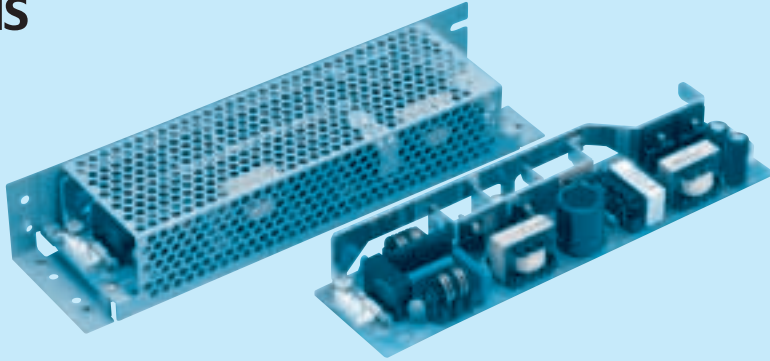


INPUT HARMONIC CURRENT (LEA50F-5)



INPUT HARMONIC CURRENT (LEA50F-5)





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High voltage pulse noise type : NAP series
Low leakage current type : NAM series
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- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional * 6
- C : with Coating
- G : Low leakage current
- J2 : Mini terminal block
- R : with Remote ON/OFF
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

| MODEL | LEA75F-3R3-Y | LEA75F-5 | LEA75F-9 | LEA75F-12 | LEA75F-15 | LEA75F-18 | LEA75F-24 | LEA75F-24-H | LEA75F-30 | LEA75F-48 |
|-----------------------|--------------|----------|----------|-----------|-----------|-----------|-----------|---------------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 49.5 | 75 | 76.5 | 75.6 | 75 | 75.6 | 76.8 | 76.8 | 75 | 76.8 |
| DC OUTPUT | *5 3.3V 15A | 5V 15A | 9V 8.5A | 12V 6.3A | 15V 5A | 18V 4.2A | 24V 3.2A | 24V 3.2(3.8)A | 30V 2.5A | 48V 1.6A |

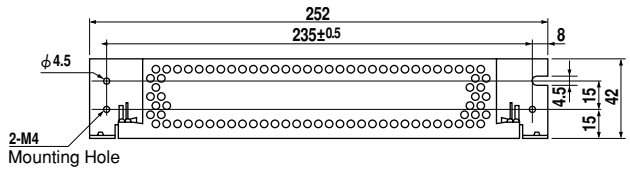
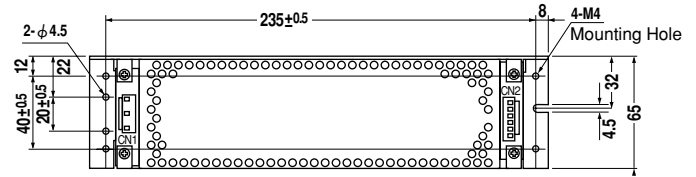
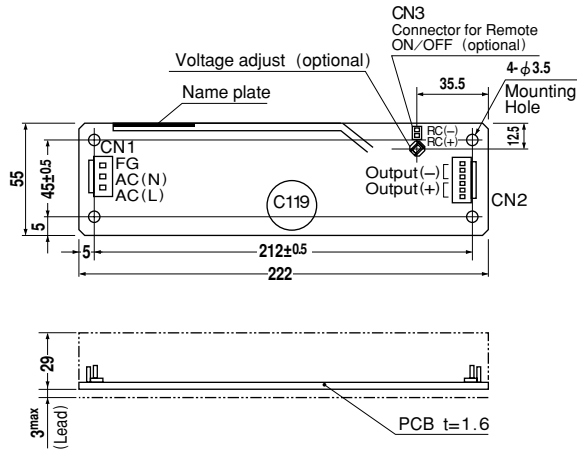
SPECIFICATIONS

| | MODEL | LEA75F-3R3-Y | LEA75F-5 | LEA75F-9 | LEA75F-12 | LEA75F-15 | LEA75F-18 | LEA75F-24 | LEA75F-24-H | LEA75F-30 | LEA75F-48 | |
|-------------------------------|--|---|--|-------------|-------------|-------------|-------------|-------------|----------------|-------------|-----------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1φ or DC120 - 370 | | | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 0.8 | 1.1typ | | | | | | | | |
| | | ACIN 200V | 0.4 | 0.55typ | | | | | | | | |
| | FREQUENCY[Hz] | 50/60 (47 - 63) or DC | | | | | | | | | | |
| | EFFICIENCY[%] | ACIN 100V | 70typ | 75typ | 78typ | 78typ | 79typ | 81typ | 82typ | 82typ | 82typ | 84typ |
| | | ACIN 200V | 71typ | 77typ | 80typ | 80typ | 81typ | 83typ | 84typ | 84typ | 84typ | 86typ |
| | POWER FACTOR | ACIN 100V | 0.98typ | 0.99typ | | | | | | | | |
| ACIN 200V | | 0.92typ | 0.94typ | | | | | | | | | |
| INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| | ACIN 200V | 30typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to IEC60950 and DEN-AN) | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 9 | 12 | 15 | 18 | 24 | 24 | 30 | 48 | |
| | CURRENT[A] | *1 15 | 15 | 8.5 | 6.3 | 5 | 4.2 | 3.2 | 3.2 (Peak 3.8) | 2.5 | 1.6 | |
| | LINE REGULATION[mV] | 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 100max | 120max | 120max | 150max | 150max | 180max | 300max | |
| | RIPPLE[mVp-p] | 0 to +50°C *2 | 80max | 80max | 120max | 120max | 120max | 120max | 150max | 150max | 180max | 300max |
| | | -10 - 0°C *2 | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 160max | 160max | 200max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C *2 | 120max | 120max | 150max | 150max | 150max | 150max | 150max | 150max | 150max | 350max |
| | | -10 - 0°C *2 | 160max | 160max | 180max | 180max | 180max | 180max | 180max | 180max | 180max | 400max |
| | TEMPERATURE REGULATION[mV] | 0 to +50°C | 50max | 50max | 90max | 120max | 150max | 180max | 240max | 240max | 300max | 480max |
| | | -10 to +50°C | 60max | 60max | 120max | 150max | 180max | 200max | 290max | 290max | 360max | 600max |
| | DRIFT[mV] | *3 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | START-UP TIME[ms] | 500max (ACIN 100V, Io=100%) | | | | | | | | | | |
| | HOLD-UP TIME[ms] | 20typ (Io=100%) | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed (*Y which can be adjusted the output is available as optional: ±10%) | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | 3.25 - 3.35 | 4.9 - 5.3 | 8.6 - 9.4 | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 28.5 - 31.5 | 46.0 - 50.0 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically | | | | | | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00 - 5.25V Works at 115 - 140% of rating | | | | | | | | | | |
| | OPERATING INDICATION | Not provided | | | | | | | | | | |
| | REMOTE SENSING | Not provided | | | | | | | | | | |
| REMOTE ON/OFF | Option (Refer to Instruction Manual) | | | | | | | | | | | |
| ISOLATION | INPUT-OUTPUT · RC | *4 AC3.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | INPUT-FG | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT · RC-FG | *4 AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT-RC | *4 AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature) | | | | | | | | | | |
| ENVIRONMENT | OPERATING TEMP., HUMID. AND ALTITUDE | -10 to +70°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3.000m (10.000feet) max | | | | | | | | | | |
| | STORAGE TEMP., HUMID. AND ALTITUDE | -20 to +75°C, 20 - 90%RH (Non condensing), 9.000m (30.000feet) max | | | | | | | | | | |
| | VIBRATION | 10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | |
| | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | UL60950-1, C-UL, EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input) | | | | | | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | | |
| | HARMONIC ATTENUATOR | Complies with IEC61000-3-2 | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 55 x 32 x 222mm (W x H x D) /290g max (without chassis and cover) | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | |

*1 Peak load for 10 sec. or less is acceptable if the total wattage is less than the rated wattage.
 *2 This is the value that measured on measuring board with capacitor of 22 μF within 150mm from output terminal.
 Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
 *3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C,

with the input voltage held constant at the rated input/output.
 *4 Applicable when remote control (optional) is added.
 *5 () : peak current.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.
 *6 Please contact us about safety approvals for the model with option.

External view



| I / O Connector | Mating Connector | Terminal |
|-----------------|------------------|----------|
| CN1 | B3P5-VH | VHR-5N |
| CN2 | B6P-VH | VHR-6N |
| CN3 | B2B-XH-A | XHP-2 |

<PIN CONNECTION>

| Pin No. | Input |
|---------|-------|
| 1 | AC(L) |
| 2 | |
| 3 | AC(N) |
| 4 | |
| 5 | FG |

| Pin No. | Output |
|---------|--------|
| 1~3 | -V |
| 4~6 | +V |

<Optional>

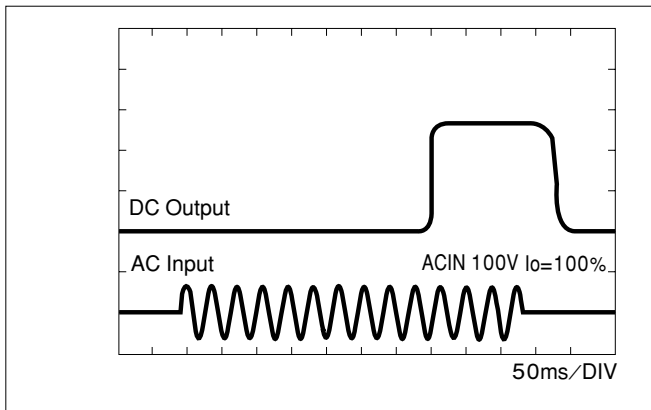
| Pin No. | Remote ON/OFF |
|---------|---------------|
| 1 | RC(+) |
| 2 | RC(-) |

- ※Weight: 290g or less (Without chassis and cover)
- ※Tolerance: ±1
- ※Dimensions in mm.
- ※PCB Material: Glass composite (CEM3)
- ※Chassis and cover is optional.
- ※Chassis and cover is not available to remote ON/OFF unit.
- ※Mounting torque: 1.5N·m(16kgf·cm)max

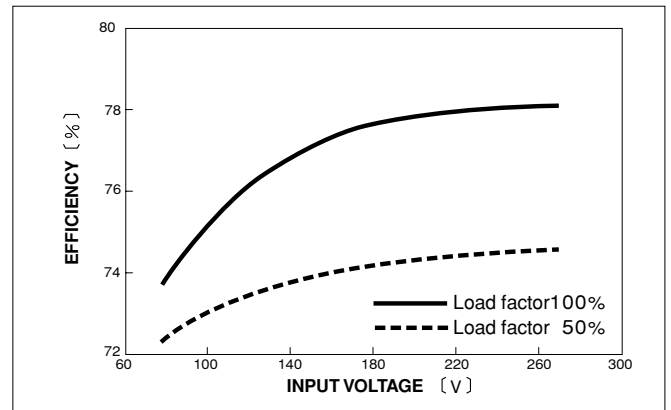
LEA

Performance data

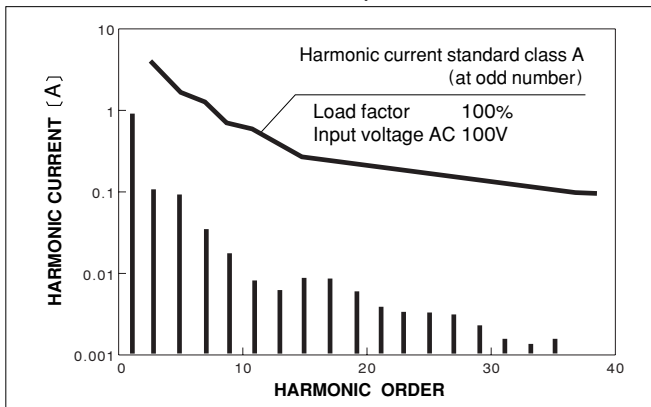
RISE TIME & FALL TIME (LEA75F-5)



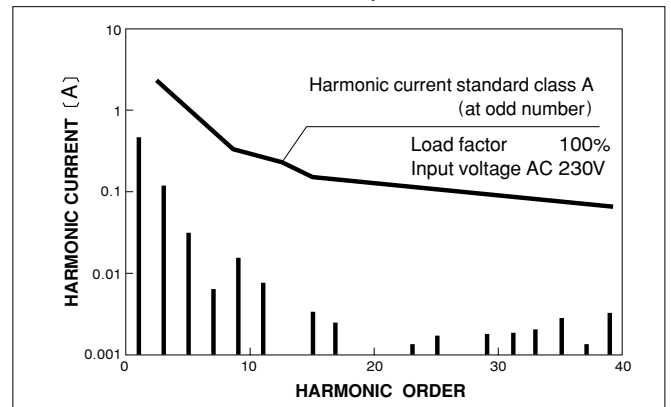
EFFICIENCY (LEA75F-5)

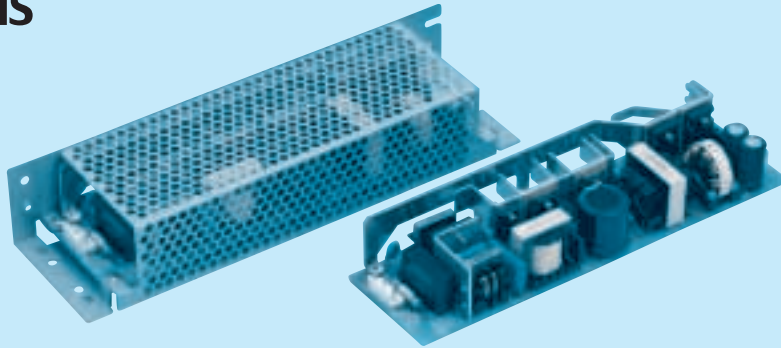


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- ③ Universal input
- ④ Output voltage
- ⑤ Optional * 6
- C : with Coating
- G : Low leakage current
- J2 : Mini terminal block
- R : with Remote ON/OFF
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

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|-----------------------|---------------|-----------|-----------|------------|------------|------------|------------|---------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 66 | 100 | 103.5 | 102 | 100.5 | 100.8 | 103.2 | 103.2 | 105 | 105.6 |
| DC OUTPUT | *5 3.3V 20A | 5V 20A | 9V 11.5A | 12V 8.5A | 15V 6.7A | 18V 5.6A | 24V 4.3A | 24V 4.3(5.0)A | 30V 3.5A | 48V 2.2A |

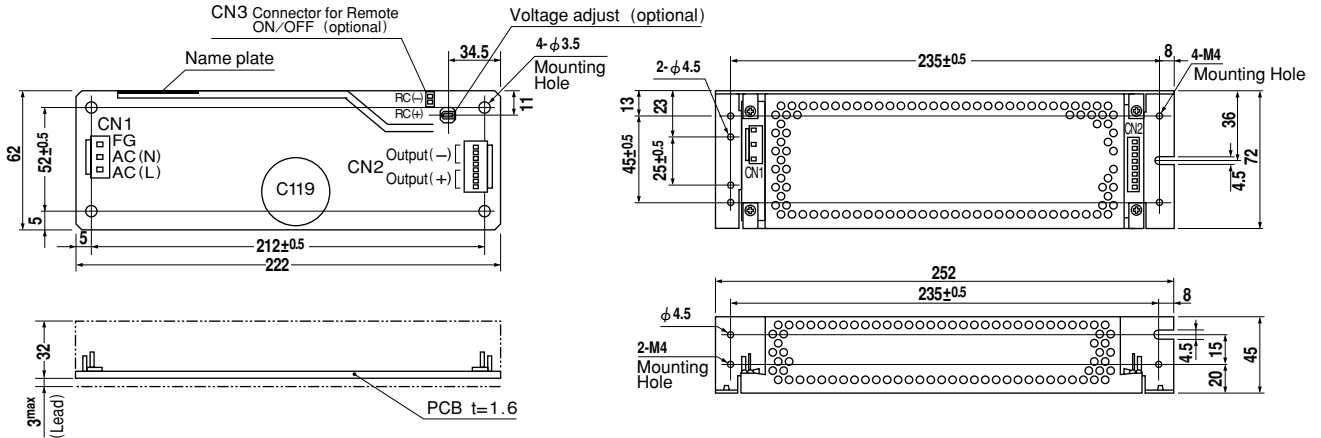
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|-------------------------------|--|---|--|-------------|-------------|-------------|-------------|-------------|----------------|-------------|------------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1 φ or DC120 - 370 | | | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 1.0 | 1.4typ | | | | | | | | |
| | | ACIN 200V | 0.5 | 0.7typ | | | | | | | | |
| | FREQUENCY[Hz] | 50/60 (47 - 63) or DC | | | | | | | | | | |
| | EFFICIENCY[%] | ACIN 100V | 71typ | 75typ | 79typ | 79typ | 79typ | 81typ | 81typ | 81typ | 82typ | 83typ |
| | | ACIN 200V | 73typ | 78typ | 81typ | 81typ | 82typ | 83typ | 84typ | 84typ | 85typ | 85typ |
| | POWER FACTOR | ACIN 100V | 0.98typ | 0.99typ | | | | | | | | |
| ACIN 200V | | 0.92typ | 0.94typ | | | | | | | | | |
| INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| | ACIN 200V | 30typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to IEC60950 and DEN-AN) | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 9 | 12 | 15 | 18 | 24 | 24 | 30 | 48 | |
| | CURRENT[A] | *1 20 | 20 | 11.5 | 8.5 | 6.7 | 5.6 | 4.3 | 4.3 (Peak 5.0) | 3.5 | 2.2 | |
| | LINE REGULATION[mV] | 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 100max | 120max | 120max | 150max | 150max | 180max | 300max | |
| | RIPPLE[mVp-p] | 0 to +50°C *2 | 80max | 80max | 120max | 120max | 120max | 120max | 150max | 150max | 180max | 300max |
| | | -10 - 0°C *2 | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 160max | 160max | 200max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C *2 | 120max | 120max | 150max | 150max | 150max | 150max | 150max | 150max | 150max | 350max |
| | | -10 - 0°C *2 | 160max | 160max | 180max | 180max | 180max | 180max | 180max | 180max | 180max | 400max |
| | TEMPERATURE REGULATION[mV] | 0 to +50°C | 50max | 50max | 90max | 120max | 150max | 180max | 240max | 240max | 300max | 480max |
| | | -10 to +50°C | 60max | 60max | 120max | 150max | 180max | 200max | 290max | 290max | 360max | 600max |
| | DRIFT[mV] | *3 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | START-UP TIME[ms] | 500max (ACIN 100V, Io=100%) | | | | | | | | | | |
| | HOLD-UP TIME[ms] | 20typ (Io=100%) | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed (*Y which can be adjusted the output is available as optional: ±10%) | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | 3.25 - 3.35 | 4.9 - 5.3 | 8.6 - 9.4 | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 28.5 - 31.5 | 46.0 - 50.0 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically | | | | | | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00 - 5.25V Works at 115 - 140% of rating | | | | | | | | | | |
| | OPERATING INDICATION | Not provided | | | | | | | | | | |
| | REMOTE SENSING | Not provided | | | | | | | | | | |
| REMOTE ON/OFF | Option (Refer to Instruction Manual) | | | | | | | | | | | |
| ISOLATION | INPUT-OUTPUT · RC | *4 AC3.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | INPUT-FG | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT · RC-FG | *4 AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT-RC | *4 AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature) | | | | | | | | | | |
| ENVIRONMENT | OPERATING TEMP., HUMID. AND ALTITUDE | -10 to +70°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3.000m (10.000feet) max | | | | | | | | | | |
| | STORAGE TEMP., HUMID. AND ALTITUDE | -20 to +75°C, 20 - 90%RH (Non condensing), 9.000m (30.000feet) max | | | | | | | | | | |
| | VIBRATION | 10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | |
| | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | UL60950-1, C-UL, EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input) | | | | | | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | | |
| | HARMONIC ATTENUATOR | Complies with IEC61000-3-2 | | | | | | | | | | |
| | CASE SIZE/WEIGHT | 62 X 35 X 222mm (W X H X D) /380g max (without chassis and cover) | | | | | | | | | | |
| OTHERS | COOLING METHOD | Convection | | | | | | | | | | |

*1 Peak load for 10 sec. or less is acceptable if the total wattage is less than the rated wattage.
 *2 This is the value that measured on measuring board with capacitor of 22 μF within 150mm from output terminal.
 Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
 *3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C,

with the input voltage held constant at the rated input/output.
 *4 Applicable when remote control (optional) is added.
 *5 () : peak current.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.
 *6 Please contact us about safety approvals for the model with option.

External view



| I / O Connector | Mating Connector | Terminal | |
|-----------------|------------------|----------|----------------------|
| CN1 | B3P5-VH | VHR-5N | Chain: SVH-21T-P1.1 |
| | | | Loose: BVH-21T-P1.1 |
| CN2 | B8P-VH | VHR-8N | Chain: SVH-21T-P1.1 |
| | | | Loose: BVH-21T-P1.1 |
| CN3 | B2B-XH-A | XHP-2 | Chain: SXH-001T-P0.6 |
| | | | Loose: BXH-001T-P0.6 |

(Mfr: J.S.T.)

(PIN CONNECTION)

| Pin No. | Input |
|---------|-------|
| 1 | AC(L) |
| 2 | |
| 3 | AC(N) |
| 4 | |
| 5 | FG |

| Pin No. | Output |
|---------|--------|
| 1~4 | -V |
| 5~8 | +V |

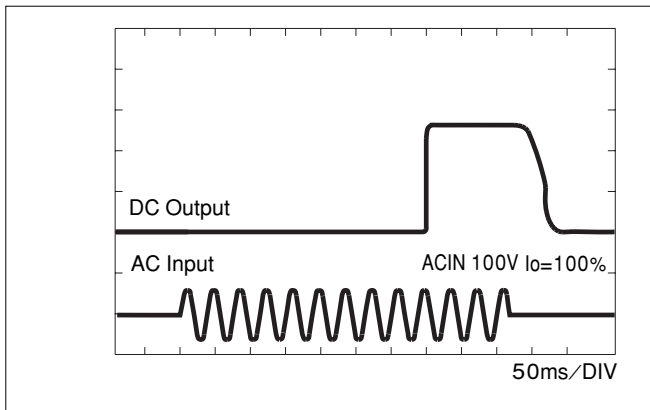
(Optional)

| Pin No. | Remote ON/OFF |
|---------|---------------|
| 1 | RC(+) |
| 2 | RC(-) |

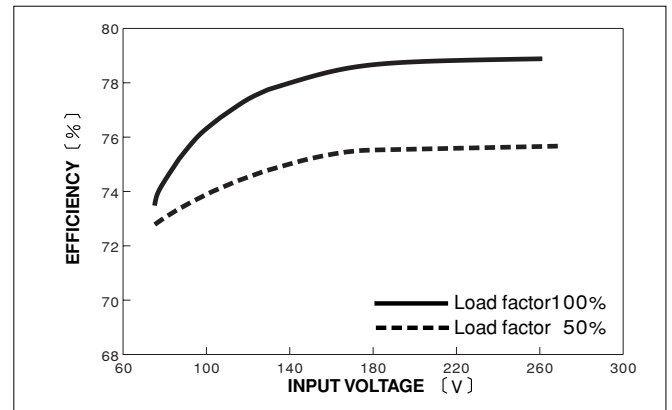
- ※Weight: 380g or less (Without chassis and cover)
- ※Tolerance: ±1
- ※Dimensions in mm.
- ※PCB Material: Glass composite (CEM3)
- ※Chassis and cover is optional.
- ※Chassis and cover is not available to remote ON/OFF unit.
- ※Mounting torque: 1.5N·m(16kgf·cm)max

Performance data

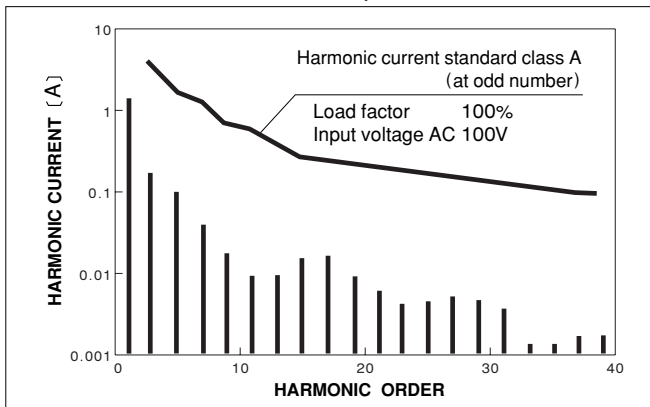
RISE TIME & FALL TIME (LEA100F-5)



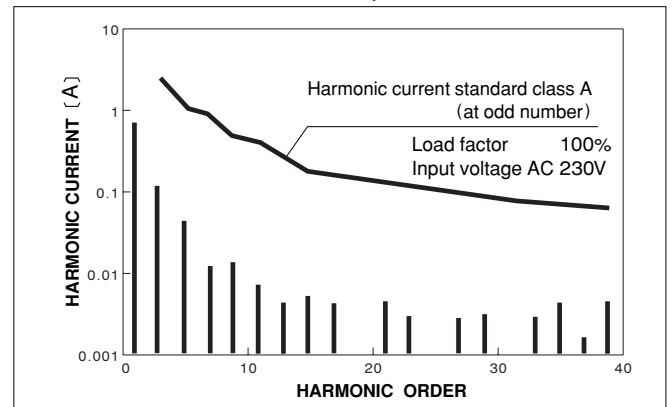
EFFICIENCY (LEA100F-5)

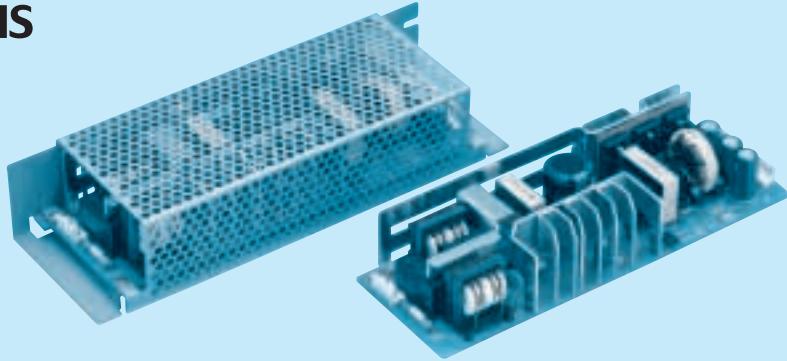


INPUT HARMONIC CURRENT (LEA100F-5)



INPUT HARMONIC CURRENT (LEA100F-5)





Recommended Noise Filter
NAC-06-472



High voltage pulse noise type : NAP series
Low leakage current type : NAM series
*The Noise Filter is recommended to connect with several devices.

- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional * 6
- C : with Coating
- G : Low leakage current
- J2 : Mini terminal block
- R : with Remote ON/OFF
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

| MODEL | LEA150F-3R3-Y | LEA150F-5 | LEA150F-9 | LEA150F-12 | LEA150F-15 | LEA150F-18 | LEA150F-24 | LEA150F-24-H | LEA150F-30 | LEA150F-48 |
|-----------------------|---------------|-----------|-----------|------------|------------|------------|------------|---------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 99 | 150 | 153 | 150 | 150 | 153 | 151.2 | 151.2 | 150 | 153.6 |
| DC OUTPUT | *5 3.3V 30A | 5V 30A | 9V 17A | 12V 12.5A | 15V 10A | 18V 8.5A | 24V 6.3A | 24V 6.3(7.5)A | 30V 5A | 48V 3.2A |

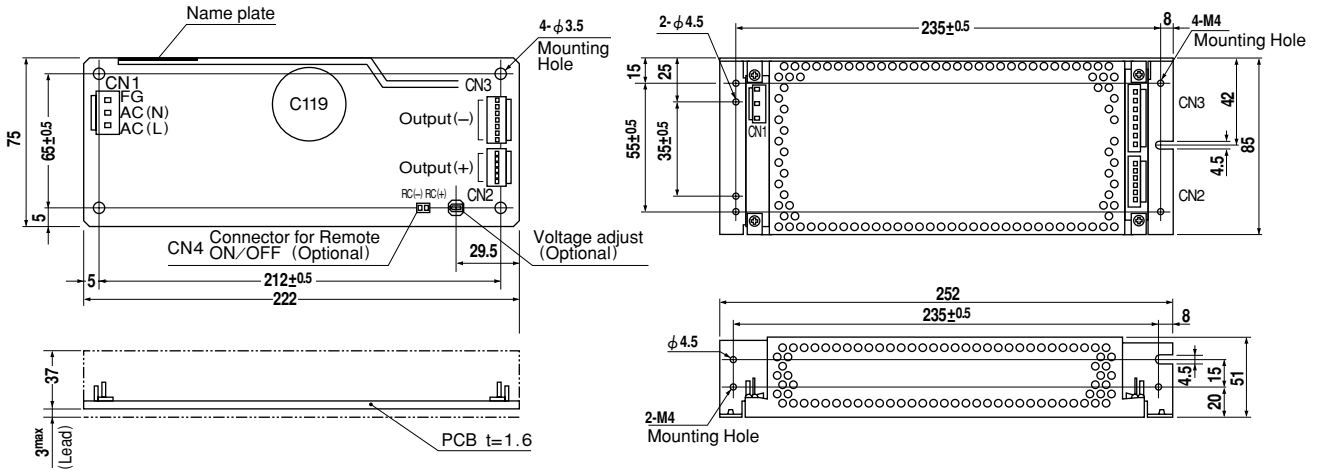
SPECIFICATIONS

| | MODEL | LEA150F-3R3-Y | LEA150F-5 | LEA150F-9 | LEA150F-12 | LEA150F-15 | LEA150F-18 | LEA150F-24 | LEA150F-24-H | LEA150F-30 | LEA150F-48 | |
|-------------------------------|--|---|--|-------------|-------------|-------------|-------------|-------------|----------------|-------------|------------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1 φ or DC120 - 370 | | | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 1.4 | 2.0typ | | | | | | | | |
| | | ACIN 200V | 0.7 | 1.0typ | | | | | | | | |
| | FREQUENCY[Hz] | 50/60 (47 - 63) or DC | | | | | | | | | | |
| | EFFICIENCY[%] | ACIN 100V | 71typ | 76typ | 79typ | 78typ | 80typ | 81typ | 81typ | 81typ | 84typ | 84typ |
| | | ACIN 200V | 74typ | 79typ | 82typ | 81typ | 83typ | 84typ | 84typ | 84typ | 87typ | 87typ |
| | POWER FACTOR | ACIN 100V | 0.98typ | 0.99typ | | | | | | | | |
| ACIN 200V | | 0.91typ | 0.94typ | | | | | | | | | |
| INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| | ACIN 200V | 30typ (Io=100%) (At cold start) (Ta=25°C) | | | | | | | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to IEC60950 and DEN-AN) | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 9 | 12 | 15 | 18 | 24 | 24 | 30 | 48 | |
| | CURRENT[A] | *1 30 | 30 | 17 | 12.5 | 10 | 8.5 | 6.3 | 6.3 (Peak 7.5) | 5 | 3.2 | |
| | LINE REGULATION[mV] | 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 100max | 120max | 120max | 150max | 150max | 180max | 300max | |
| | RIPPLE[mVp-p] | 0 to +50°C *2 | 80max | 80max | 120max | 120max | 120max | 120max | 150max | 150max | 180max | 300max |
| | | -10 - 0°C *2 | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 160max | 160max | 200max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C *2 | 120max | 120max | 150max | 150max | 150max | 150max | 150max | 150max | 150max | 350max |
| | | -10 - 0°C *2 | 160max | 160max | 180max | 180max | 180max | 180max | 180max | 180max | 180max | 400max |
| | TEMPERATURE REGULATION[mV] | 0 to +50°C | 50max | 50max | 90max | 120max | 150max | 180max | 240max | 240max | 300max | 480max |
| | | -10 to +50°C | 60max | 60max | 120max | 150max | 180max | 200max | 290max | 290max | 360max | 600max |
| | DRIFT[mV] | *3 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | |
| | START-UP TIME[ms] | 500max (ACIN 100V, Io=100%) | | | | | | | | | | |
| | HOLD-UP TIME[ms] | 20typ (Io=100%) | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed (*Y which can be adjusted the output is available as optional: ±10%) | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | 3.25 - 3.35 | 4.9 - 5.3 | 8.6 - 9.4 | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 28.5 - 31.5 | 46.0 - 50.0 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically | | | | | | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00 - 5.25V Works at 115 - 140% of rating | | | | | | | | | | |
| | OPERATING INDICATION | Not provided | | | | | | | | | | |
| | REMOTE SENSING | Not provided | | | | | | | | | | |
| REMOTE ON/OFF | Option (Refer to Instruction Manual) | | | | | | | | | | | |
| ISOLATION | INPUT-OUTPUT · RC | *4 AC3.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | INPUT-FG | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT · RC-FG | *4 AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT-RC | *4 AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature) | | | | | | | | | | |
| ENVIRONMENT | OPERATING TEMP., HUMID. AND ALTITUDE | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3.000m (10.000feet) max | | | | | | | | | | |
| | STORAGE TEMP., HUMID. AND ALTITUDE | -20 to +75°C, 20 - 90%RH (Non condensing), 9.000m (30.000feet) max | | | | | | | | | | |
| | VIBRATION | 10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | | | |
| | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | UL60950-1, C-UL, EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input) | | | | | | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | | |
| | HARMONIC ATTENUATOR | Complies with IEC61000-3-2 | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 75 × 40 × 222mm (W × H × D) /500g max (without chassis and cover) | | | | | | | | | | |
| | COOLING METHOD | Convection | | | | | | | | | | |

*1 Peak load for 10 sec. or less is acceptable if the total wattage is less than the rated wattage.
 *2 This is the value that measured on measuring board with capacitor of 22 μF within 150mm from output terminal.
 Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
 *3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C,

with the input voltage held constant at the rated input/output.
 *4 Applicable when remote control (optional) is added.
 *5 (): peak current.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.
 *6 Please contact us about safety approvals for the model with option.

External view



| I / O Connector | Mating Connector | Terminal |
|-----------------|------------------|----------------------|
| CN1 | B3P5-VH | VHR-5N |
| | | Chain: SVH-21T-P1.1 |
| | | Loose: BVH-21T-P1.1 |
| CN2 | B6P-VH | VHR-6N |
| | | Chain: SVH-21T-P1.1 |
| | | Loose: BVH-21T-P1.1 |
| CN3 | B7P-VH | VHR-7N |
| | | Chain: SVH-21T-P1.1 |
| | | Loose: BVH-21T-P1.1 |
| CN4 | B2B-XH-A | XHP-2 |
| | | Chain: SXH-001T-P0.6 |
| | | Loose: BXH-001T-P0.6 |

(Mfr: J.S.T.)

(PIN CONNECTION)

| CN1 | Pin No. | Input |
|-----|---------|-------|
| | 1 | AC(L) |
| | 2 | AC(N) |
| | 3 | AC(N) |
| | 4 | AC(N) |
| 5 | FG | |

| CN2 | Pin No. | Output |
|-----|---------|--------|
| | 1~6 | +V |

(Optional)

| CN4 | Pin No. | Remote ON/OFF |
|-----|---------|---------------|
| | 1 | RC(+) |
| | 2 | RC(-) |

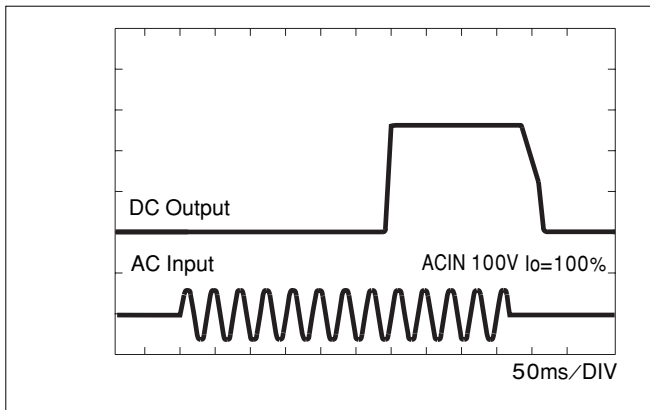
※Keep drawing current per pin below 5A for CN2, CN3

- ※Weight: 500g or less (Without chassis and cover)
- ※Tolerance: ±1
- ※Dimensions in mm.
- ※PCB Material: Glass composite (CEM3)
- ※Chassis and cover is optional.
- ※Chassis and cover is not available to remote ON/OFF unit.
- ※Mounting torque: 1.5N·m(16kgf·cm)max

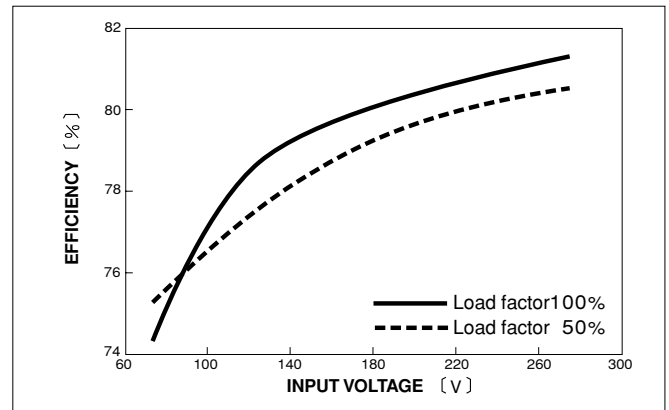
LEA

Performance data

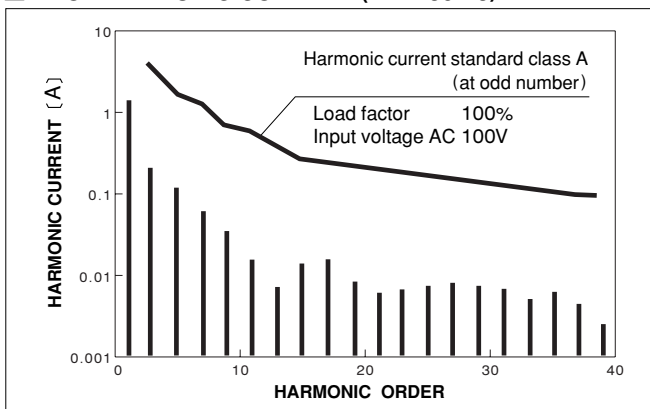
RISE TIME & FALL TIME (LEA150F-5)



EFFICIENCY (LEA150F-5)



INPUT HARMONIC CURRENT (LEA150F-5)



INPUT HARMONIC CURRENT (LEA150F-5)

