

LDA10F

LDA 10 F -5 -□

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Recommended EMI/EMC Filter
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional *2
- C : with Coating
- G : Low leakage current
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

| MODEL | LDA10F-3 | LDA10F-5 | LDA10F-12 | LDA10F-15 | LDA10F-24 |
|-----------------------|----------|----------|-----------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 6 | 10 | 10.8 | 10.5 | 12 |
| DC OUTPUT | 3V 2.0A | 5V 2.0A | 12V 0.9A | 15V 0.7A | 24V 0.5A |

SPECIFICATIONS

| | MODEL | LDA10F-3 | LDA10F-5 | LDA10F-12 | LDA10F-15 | LDA10F-24 | |
|-------------------------------|--|---|--|-------------|-------------|-----------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1 φ or DC110 - 370 | | | | | |
| | CURRENT[A] | ACIN 100V | 0.25typ (Io=100%) | | | | |
| | | ACIN 200V | 0.16typ (Io=100%) | | | | |
| | FREQUENCY[Hz] | 47 - 440 or DC | | | | | |
| | EFFICIENCY[%] | 68typ | 72typ | 74typ | 74typ | 78typ | |
| | INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) | | | | |
| | | ACIN 200V | 30typ (Io=100%) (At cold start) | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN) | | | | | | |
| OUTPUT | VOLTAGE[V] | 3 | 5 | 12 | 15 | 24 | |
| | CURRENT[A] | 2 | 2 | 0.9 | 0.7 | 0.5 | |
| | LINE REGULATION[mV] | 20max | 20max | 48max | 60max | 96max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 120max | 150max | |
| | RIPPLE[mVp-p] | 0 to +50°C | 80max | 80max | 120max | 120max | 120max |
| | | -10 - 0°C | 140max | 140max | 160max | 160max | 160max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C | 120max | 120max | 150max | 150max | 150max |
| | | -10 - 0°C | 160max | 160max | 180max | 180max | 180max |
| | TEMPERATURE REGULATION[mV] | 50max | 50max | 120max | 150max | 240max | |
| | DRIFT[mV] | *1 20max | 20max | 48max | 60max | 96max | |
| | START-UP TIME[ms] | 200max (ACIN 100V, Io=100%) | | | | | |
| | HOLD-UP TIME[ms] | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) 100typ (ACIN 200V, Io=100%) | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed ("Y" which can be adjusted the output is available as option :5, 12, 15, 24V ±10%) | | | | |
| OUTPUT VOLTAGE SETTING[V] | — | 4.9 - 5.3 | 11.5 - 12.5 | 14.4 - 15.6 | 23.0 - 25.0 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating and recovers automatically | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00V min | Works over 115% of rating, by zener diode clamping | | | | |
| | OPERATING INDICATION | Not provided | | | | | |
| | REMOTE SENSING | Not provided | | | | | |
| ISOLATION | REMOTE ON/OFF | Not provided | | | | | |
| | INPUT-OUTPUT | 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) | | | | | |
| ENVIRONMENT | OUTPUT-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | |
| | 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 | | | | | |
| SAFETY AND NOISE REGULATIONS | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | |
| | AGENCY APPROVALS | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1 | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 50 X 21 X 105mm (W X H X D) /75g max (without chassis and cover) | | | | | |
| | COOLING METHOD | Convection | | | | | |

*1 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.
 *2 Please contact us about safety approvals for the model with option.
 * Avoid prolonged use under over-load.
 * Series/Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.

External view



| I/O Connector | Mating Connector | Terminal |
|---------------|------------------|---------------------|
| CN1 | B3P5-VH | VHR-5N |
| | | Chain:SVH-21T-P1.1 |
| | | Loose:BVH-21T-P1.1 |
| CN2 | B4B-XH-A | XHP-4 |
| | | Chain:SXH-001T-P0.6 |
| | | Loose:BXH-001T-P0.6 |

(Mir : J.S.T.)

<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 |

※ Keep drawing current per pin below 2A for CN2.

- ※ Weight : 75g 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

LDA

Performance data

■ STATIC CHARACTERISTICS (LDA10F-5)



■ RISE TIME & FALL TIME (LDA10F-5)



■ OVERCURRENT CHARACTERISTICS (LDA10F-5)



■ DERATING CURVE



LDA15F

LDA 15 F -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional *2
- C :with Coating
- G :Low leakage current
- S :with Chassis
- SN :with Chassis & cover
- Y :with Potentiometer



| MODEL | LDA15F-3 | LDA15F-5 | LDA15F-12 | LDA15F-15 | LDA15F-24 |
|-----------------------|----------|----------|-----------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 9 | 15 | 15.6 | 15 | 16.8 |
| DC OUTPUT | 3V 3.0A | 5V 3.0A | 12V 1.3A | 15V 1.0A | 24V 0.7A |

SPECIFICATIONS

| | MODEL | LDA15F-3 | LDA15F-5 | LDA15F-12 | LDA15F-15 | LDA15F-24 | |
|-------------------------------|--|---|---|-------------|-------------|-----------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1 φ or DC110 - 370 | | | | | |
| | CURRENT[A] | ACIN 100V | 0.37typ (Io=100%) | | | | |
| | | ACIN 200V | 0.23typ (Io=100%) | | | | |
| | FREQUENCY[Hz] | 47 - 440 or DC | | | | | |
| | EFFICIENCY[%] | 70typ | 74typ | 76typ | 76typ | 78typ | |
| | INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) | | | | |
| | | ACIN 200V | 30typ (Io=100%) (At cold start) | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN) | | | | | | |
| OUTPUT | VOLTAGE[V] | 3 | 5 | 12 | 15 | 24 | |
| | CURRENT[A] | 3 | 3 | 1.3 | 1 | 0.7 | |
| | LINE REGULATION[mV] | 20max | 20max | 48max | 60max | 96max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 120max | 150max | |
| | RIPPLE[mVp-p] | 0 to +50°C | 80max | 80max | 120max | 120max | 120max |
| | | -10 - 0°C | 140max | 140max | 160max | 160max | 160max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C | 120max | 120max | 150max | 150max | 150max |
| | | -10 - 0°C | 160max | 160max | 180max | 180max | 180max |
| | TEMPERATURE REGULATION[mV] | 50max | 50max | 120max | 150max | 240max | |
| | DRIFT[mV] | *1 20max | 20max | 48max | 60max | 96max | |
| | START-UP TIME[ms] | 200max (ACIN 100V, Io=100%) | | | | | |
| | HOLD-UP TIME[ms] | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) 100typ (ACIN 200V, Io=100%) | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed ("Y"which can be adjusted the output is available as option :5, 12, 15, 24V ±10%) | | | | |
| OUTPUT VOLTAGE SETTING[V] | — | 4.9 - 5.3 | 11.5 - 12.5 | 14.4 - 15.6 | 23.0 - 25.0 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating and recovers automatically | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00V min | Works over 115% of rating, by zener diode clamping | | | | |
| | OPERATING INDICATION | Not provided | | | | | |
| | REMOTE SENSING | Not provided | | | | | |
| ISOLATION | REMOTE ON/OFF | Not provided | | | | | |
| | INPUT-OUTPUT | 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) | | | | | |
| ENVIRONMENT | OUTPUT-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | |
| | OPERATING TEMP.,HUMID.AND ALTIITUDE | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3.000m (10.000feet) max | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTIITUDE | -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 | | | | | |
| SAFETY AND NOISE REGULATIONS | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | |
| | AGENCY APPROVALS | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1 | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 50 X 21 X 125mm (W X H X D) /95g max (without chassis and cover) | | | | | |
| | COOLING METHOD | Convection | | | | | |

*1 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.
 *2 Please contact us about safety approvals for the model with option.
 * Avoid prolonged use under over-load.
 * Series/Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.

External view



| I/O Connector | Mating Connector | Terminal |
|---------------|------------------|----------------------|
| CN1 | B3P5-VH | VHR-5N |
| | | Chain:SVH-21T-P1.1 |
| | | Loose:BVH-21T-P1.1 |
| CN2 | B4B-XH-A | XHP-4 |
| | | Chain: SXH-001T-P0.6 |
| | | Loose: BXH-001T-P0.6 |

(Mfr : J.S.T.)

<PIN CONNECTION>

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

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

- ※ Weight : 95g 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

Performance data

■ STATIC CHARACTERISTICS (LDA15F-5)



■ RISE TIME & FALL TIME (LDA15F-5)



■ OVERCURRENT CHARACTERISTICS (LDA15F-5)



■ DERATING CURVE



LDA30F

LDA 30 F -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional *2
- C :with Coating
- G :Low leakage current
- S :with Chassis
- SN :with Chassis & cover
- Y :with Potentiometer



| MODEL | LDA30F-3 | LDA30F-5 | LDA30F-12 | LDA30F-15 | LDA30F-24 |
|-----------------------|----------|----------|-----------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 18 | 30 | 30 | 30 | 31.2 |
| DC OUTPUT | 3V 6.0A | 5V 6.0A | 12V 2.5A | 15V 2.0A | 24V 1.3A |

SPECIFICATIONS

| | MODEL | LDA30F-3 | LDA30F-5 | LDA30F-12 | LDA30F-15 | LDA30F-24 | |
|------------------------------------|--|---|---------------------------------|-------------|-------------|-----------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1 φ or DC110 - 370 | | | | | |
| | CURRENT[A] | ACIN 100V | 0.8typ (Io=100%) | | | | |
| | | ACIN 200V | 0.4typ (Io=100%) | | | | |
| | FREQUENCY[Hz] | 47 - 440 or DC | | | | | |
| | EFFICIENCY[%] | 70typ | 75typ | 77typ | 78typ | 79typ | |
| | INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) | | | | |
| | | ACIN 200V | 30typ (Io=100%) (At cold start) | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN) | | | | | | |
| OUTPUT | VOLTAGE[V] | 3 | 5 | 12 | 15 | 24 | |
| | CURRENT[A] | 6 | 6 | 2.5 | 2 | 1.3 | |
| | LINE REGULATION[mV] | 20max | 20max | 48max | 60max | 96max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 120max | 150max | |
| | RIPPLE[mVp-p] | 0 to +50°C | 80max | 80max | 120max | 120max | 120max |
| | | -10 - 0°C | 140max | 140max | 160max | 160max | 160max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C | 120max | 120max | 150max | 150max | 150max |
| | | -10 - 0°C | 160max | 160max | 180max | 180max | 180max |
| | TEMPERATURE REGULATION[mV] | 60max | 60max | 150max | 180max | 290max | |
| | DRIFT[mV] | *1 20max | 20max | 48max | 60max | 96max | |
| | START-UP TIME[ms] | 200max (ACIN 100V, Io=100%) | | | | | |
| | HOLD-UP TIME[ms] | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) | | | | | |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed ("Y"which can be adjusted the output is available as option :5, 12, 15, 24V ±10%) | | | | | |
| OUTPUT VOLTAGE SETTING[V] | — | 4.9 - 5.3 | 11.5 - 12.5 | 14.4 - 15.6 | 23.0 - 25.0 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating and recovers automatically | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00 - 5.25V | Works at 115 - 140% of rating | | | | |
| | OPERATING INDICATION | Not provided | | | | | |
| | REMOTE SENSING | Not provided | | | | | |
| ISOLATION | REMOTE ON/OFF | Not provided | | | | | |
| | INPUT-OUTPUT | 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) | | | | | |
| ENVIRONMENT | OUTPUT-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | |
| | OPERATING TEMP.,HUMID.AND ALTIITUDE | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3.000m (10.000feet) max | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTIITUDE | -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 | | | | | |
| SAFETY AND NOISE REGULATIONS | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | |
| | AGENCY APPROVALS | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1 | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 55 X 26 X 133mm (W X H X D) /200g max (without chassis and cover) | | | | | |
| | COOLING METHOD | Convection | | | | | |

*1 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.
 *2 Please contact us about safety approvals for the model with option.
 * Avoid prolonged use under over-load.
 * Series/Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.

External view



| I/O Connector | Mating Connector | Terminal |
|---------------|------------------|--|
| CN1 | B3P5-VH | VHR-5N |
| | | Chain:SVH-21T-P1.1 Loose:BVH-21T-P1.1 |
| CN2 | B4P-VH | VHR-4N |
| | | Chain:SVH-21T-P1.1 Loose:BVH-21T-P1.1 |

(Mfr : J.S.T.)

<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 |

※ Weight : 200g 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

※ Keep drawing current per pin below 5A for CN2.

Performance data

■ STATIC CHARACTERISTICS (LDA30F-5)



■ RISE TIME & FALL TIME (LDA30F-5)



■ OVERCURRENT CHARACTERISTICS (LDA30F-5)



■ DERATING CURVE



LDA50F

LDA 50 F -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter
NAC-06-472



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

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

| MODEL | LDA50F-3 | LDA50F-5 | LDA50F-9 | LDA50F-12 | LDA50F-15 | LDA50F-18 | LDA50F-24 | LDA50F-24-H | LDA50F-24-HR | LDA50F-30 |
|-----------------------|-----------|----------|----------|-----------|-----------|-----------|-----------|-------------|--------------|-----------|
| MAX OUTPUT WATTAGE[W] | 30 | 50 | 50.4 | 51.6 | 52.5 | 50.4 | 50.4 | 50.4 | 50.4 | 51 |
| DC OUTPUT | *3 3V 10A | 5V 10A | 9V 5.6A | 12V 4.3A | 15V 3.5A | 18V 2.8A | 24V 2.1A | 24V 2.1(3)A | 24V 2.1(3)A | 30V 1.7A |

SPECIFICATIONS

| | MODEL | LDA50F-3 | LDA50F-5 | LDA50F-9 | LDA50F-12 | LDA50F-15 | LDA50F-18 | LDA50F-24 | LDA50F-24-H | LDA50F-24-HR | LDA50F-30 | |
|-------------------------------|--|---|--|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-----------|--|
| INPUT | VOLTAGE[V] | AC85 - 264 1 φ or DC110 - 370 | | | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 1.3typ (Io=100%) | | | | | | | | | |
| | | ACIN 200V | 0.7typ (Io=100%) | | | | | | | | | |
| | FREQUENCY[Hz] | 47 - 440 or DC | | | | | | | | | | |
| | EFFICIENCY[%] | 73typ | 77typ | 78typ | 80typ | 81typ | 81typ | 82typ | 82typ | 82typ | 82typ | |
| | INRUSH CURRENT[A] | ACIN 100V | 15typ (Io=100%) (At cold start) | | | | | | | | | |
| | | ACIN 200V | 30typ (Io=100%) (At cold start) | | | | | | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN) | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | 3 | 5 | 9 | 12 | 15 | 18 | 24 | 24 | 24 | 30 | |
| | CURRENT[A] | *1 10 | 10 | 5.6 | 4.3 | 3.5 | 2.8 | 2.1 | 2.1 (3) | 2.1 (3) | 1.7 | |
| | LINE REGULATION[mV] | 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 96max | 120max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 100max | 120max | 120max | 150max | 150max | 150max | 180max | |
| | RIPPLE[mVp-p] | 0 to +50°C | 80max | 80max | 120max | 120max | 120max | 120max | 120max | 120max | 120max | |
| | | -10 - 0°C | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 160max | 160max | |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C | 120max | 120max | 150max | 150max | 150max | 150max | 150max | 250max | 250max | |
| | | -10 - 0°C | 160max | 160max | 180max | 180max | 180max | 180max | 180max | 280max | 280max | |
| | TEMPERATURE REGULATION[mV] | 60max | 60max | 120max | 150max | 180max | 200max | 290max | 290max | 290max | 360max | |
| | DRIFT[mV] | *2 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 96max | 120max | |
| | START-UP TIME[ms] | 200max (ACIN 100V, Io=100%) | | | | | | | | | | |
| | HOLD-UP TIME[ms] | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 | Fixed ("Y"which can be adjusted the output is available as option :5, 9, 12, 15, 18, 24, 30V ±10%) | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | — | 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 | 23.0 - 25.0 | 28.5 - 31.5 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating (-H : peak) and recovers automatically | | | | | | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00 - 5.25V Works at 115 - 140% of rating | | | | | | | | | | |
| | OPERATING INDICATION | Not provided | | | | | | | | | | |
| | REMOTE SENSING | Not provided | | | | | | | | | | |
| ISOLATION | REMOTE ON/OFF | Option (Refer to Instruction Manual) | | | | | | | | | | |
| | INPUT-OUTPUT | AC3.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| ENVIRONMENT | INPUT-FG | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| | OUTPUT-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | OPERATING TEMP.,HUMID.AND ALTIITUDE | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3.000m (10.000feet) max | | | | | | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTIITUDE | -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 | | | | | | | | | | |
| OTHERS | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | | | | |
| | AGENCY APPROVALS | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1 | | | | | | | | | | |
| OTHERS | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | | |
| | CASE SIZE/WEIGHT | 55 X 26 X 195mm (W X H X D) /250g 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(24V:50.4W).
 *2 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.
 *3 () : peak current
 *4 Please contact us about safety approvals for the model with option.

* Avoid prolonged use under over-load.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.

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 |

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

※ Keep drawing current per pin below 5A for CN2.

- ※ Weight : 250g 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

Performance data

■ STATIC CHARACTERISTICS (LDA50F-5)



■ RISE TIME & FALL TIME (LDA50F-5)



■ OVERCURRENT CHARACTERISTICS (LDA50F-5)



■ DERATING CURVE



LDA75F

LDA 75 F -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter
NAC-06-472



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

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



| MODEL | LDA75F-3 | LDA75F-5 | LDA75F-9 | LDA75F-12 | LDA75F-15 | LDA75F-18 | LDA75F-24 | LDA75F-24-H | LDA75F-24-HR | LDA75F-30 |
|-----------------------|-----------|----------|----------|-----------|-----------|-----------|-----------|---------------|---------------|-----------|
| MAX OUTPUT WATTAGE[W] | 45 | 75 | 76.5 | 75.6 | 75 | 75.6 | 76.8 | 76.8 | 76.8 | 75 |
| DC OUTPUT | *3 3V 15A | 5V 15A | 9V 8.5A | 12V 6.3A | 15V 5A | 18V 4.2A | 24V 3.2A | 24V 3.2(4.5)A | 24V 3.2(4.5)A | 30V 2.5A |

SPECIFICATIONS

| MODEL | LDA75F-3 | LDA75F-5 | LDA75F-9 | LDA75F-12 | LDA75F-15 | LDA75F-18 | LDA75F-24 | LDA75F-24-H | LDA75F-24-HR | LDA75F-30 | | | | | | | | | | | | | | |
|------------------------------------|-------------------------------------|--|---|-----------|-----------|-----------|-----------|-------------|--------------|-----------|--|---|--------|---------------------------------|--------|--|-----------|--|-----------|--|--------|--|--------|--|
| INPUT | VOLTAGE[V] | | | | | | | | | | | AC85 - 264 1 φ or DC110 - 370 | | | | | | | | | | | | |
| | CURRENT[A] | | ACIN 100V | | | | | | | | | | | 1.8typ (Io=100%) | | | | | | | | | | |
| | | | ACIN 200V | | | | | | | | | | | 1.0typ (Io=100%) | | | | | | | | | | |
| | FREQUENCY[Hz] | | | | | | | | | | | 47 - 440 | | | | | | | | | | | | |
| | EFFICIENCY[%] | | | | | | | | | | | 73typ 79typ 79typ 80typ 81typ 81typ 82typ 82typ 82typ 82typ | | | | | | | | | | | | |
| | INRUSH CURRENT[A] | | ACIN 200V | | | | | | | | | | | 30typ (Io=100%) (At cold start) | | | | | | | | | | |
| LEAKAGE CURRENT[mA] | | | | | | | | | | | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN) | | | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | | 3 | | 5 | | 9 | | 12 | | 15 | | 18 | | 24 | | 24 | | 24 | | 30 | | | |
| | CURRENT[A] | | *1 15 | | 15 | | 8.5 | | 6.3 | | 5 | | 4.2 | | 3.2 | | 3.2 (4.5) | | 3.2 (4.5) | | 2.5 | | | |
| | LINE REGULATION[mV] | | 20max | | 20max | | 36max | | 48max | | 60max | | 72max | | 96max | | 96max | | 96max | | 120max | | | |
| | LOAD REGULATION[mV] | | 40max | | 40max | | 100max | | 100max | | 120max | | 120max | | 150max | | 150max | | 150max | | 180max | | | |
| | RIPPLE[mVp-p] | | 0 to +50°C | | 80max | | 80max | | 120max | | 120max | | 120max | | 120max | | 120max | | 120max | | 120max | | | |
| | | | -10 - 0°C | | 140max | | 140max | | 160max | | 160max | | 160max | | 160max | | 160max | | 160max | | 160max | | | |
| | RIPPLE NOISE[mVp-p] | | 0 to +50°C | | 120max | | 120max | | 150max | | 150max | | 150max | | 150max | | 150max | | 250max | | 250max | | 150max | |
| | | | -10 - 0°C | | 160max | | 160max | | 180max | | 180max | | 180max | | 180max | | 180max | | 280max | | 280max | | 180max | |
| | TEMPERATURE REGULATION[mV] | | 60max | | 60max | | 120max | | 150max | | 180max | | 200max | | 290max | | 290max | | 290max | | 360max | | | |
| | DRIFT[mV] | | *2 20max | | 20max | | 36max | | 48max | | 60max | | 72max | | 96max | | 96max | | 96max | | 120max | | | |
| START-UP TIME[ms] | | 200max (ACIN 100V, Io=100%) | | | | | | | | | | | | | | | | | | | | | | |
| HOLD-UP TIME[ms] | | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) | | | | | | | | | | | | | | | | | | | | | | |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | | 2.85 - 3.6 Fixed ("Y"which can be adjusted the output is available as option : 5, 9, 12, 15, 18, 24, 30V ±10%) | | | | | | | | | | | | | | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | | — 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 23.0 - 25.0 28.5 - 31.5 | | | | | | | | | | | | | | | | | | | | | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating (-H : peak) 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 | | 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-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | | | | | | | | | | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTIITUDE | | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max | | | | | | | | | | | | | | | | | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTIITUDE | | -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, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1 | | | | | | | | | | | | | | | | | | | | | |
| | CONDUCTED NOISE | | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | | | | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | | 55 X 32 X 222mm (W X H X D) /320g 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(24V:76.8W).
 *2 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.
 *3 () : peak current
 *4 Please contact us about safety approvals for the model with option.

* Avoid prolonged use under over-load.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.

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 |

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

※Keep drawing current per pin below 5A for CN2.

- ※ Weight : 320g or less (Without chassis and cover)
- ※ Tolerance : ± 1
- ※ Dimensions in mm.
- ※ PCB Material : Glass composite (CEM3)
- ※ Chassis and cover is optional.
- ※ Mounting torque : 1.5 N·m (16 kgf·cm) max

Performance data

■ STATIC CHARACTERISTICS (LDA75F-5)



■ RISE TIME & FALL TIME (LDA75F-5)



■ OVERCURRENT CHARACTERISTICS (LDA75F-5)



■ DERATING CURVE



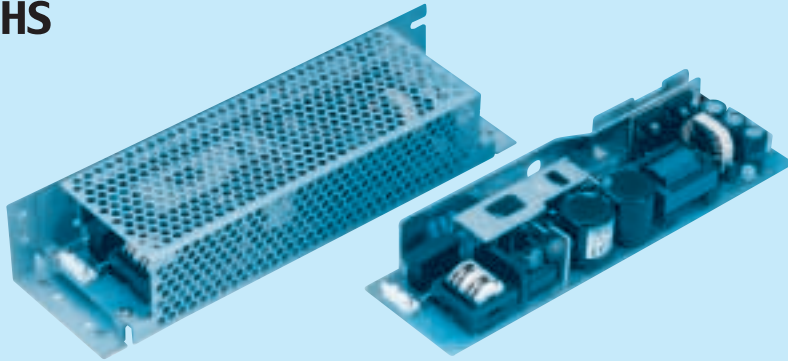
LDA100W

LDA 100 W -5 -□

① ② ③ ④ ⑤



RoHS



Recommended EMI/EMC Filter
NAC-06-472



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

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

| MODEL | LDA100W-3 | LDA100W-5 | LDA100W-9 | LDA100W-12 | LDA100W-15 | LDA100W-18 | LDA100W-24 | LDA100W-24-H | LDA100W-30 | LDA100W-48 |
|-----------------------|-----------|-----------|-----------|------------|------------|------------|------------|---------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 60 | 100 | 103.5 | 102 | 100.5 | 100.8 | 103.2 | 103.2 | 105 | 96 |
| DC OUTPUT | *3 3V 20A | 5V 20A | 9V 11.5A | 12V 8.5A | 15V 6.7A | 18V 5.6A | 24V 4.3A | 24V 4.3(6.5)A | 30V 3.5A | 48V 2.0A |

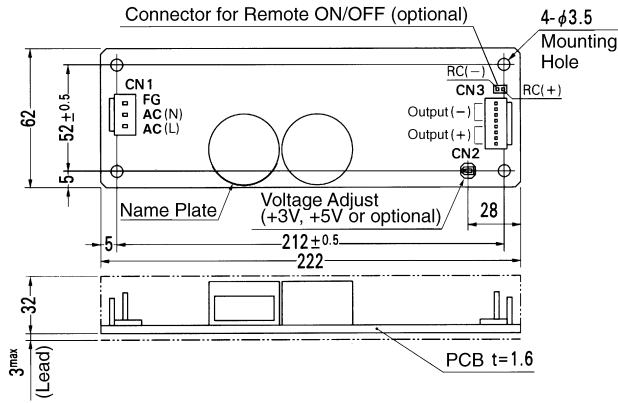
SPECIFICATIONS

| MODEL | LDA100W-3 | LDA100W-5 | LDA100W-9 | LDA100W-12 | LDA100W-15 | LDA100W-18 | LDA100W-24 | LDA100W-24-H | LDA100W-30 | LDA100W-48 | |
|------------------------------|-------------------------------------|------------------------|-----------|------------|------------|------------|------------|--------------|------------|------------|--|
| INPUT | MODEL | | | | | | | | | | |
| | VOLTAGE[V] | | | | | | | | | | |
| | CURRENT[A] | | | | | | | | | | |
| | FREQUENCY[Hz] | | | | | | | | | | |
| | EFFICIENCY[%] | | | | | | | | | | |
| | INRUSH CURRENT[A] | | | | | | | | | | |
| OUTPUT | LEAKAGE CURRENT[mA] | | | | | | | | | | |
| | VOLTAGE[V] | | | | | | | | | | |
| | CURRENT[A] | | | | | | | | | | |
| | LINE REGULATION[mV] | | | | | | | | | | |
| | LOAD REGULATION[mV] | | | | | | | | | | |
| | RIPPLE[mVp-p] | | | | | | | | | | |
| | RIPPLE NOISE[mVp-p] | | | | | | | | | | |
| | TEMPERATURE REGULATION[mV] | | | | | | | | | | |
| | DRIFT[mV] | | | | | | | | | | |
| | START-UP TIME[ms] | | | | | | | | | | |
| | HOLD-UP TIME[ms] | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | | | | | | | | | | |
| | OUTPUT VOLTAGE SETTING[V] | | | | | | | | | | |
| | PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | | | | | | | | |
| OVERVOLTAGE PROTECTION | | | | | | | | | | | |
| OPERATING INDICATION | | | | | | | | | | | |
| REMOTE SENSING | | | | | | | | | | | |
| ISOLATION | REMOTE ON/OFF | | | | | | | | | | |
| | INPUT-OUTPUT | | | | | | | | | | |
| | INPUT-FG | | | | | | | | | | |
| ENVIRONMENT | OUTPUT-FG | | | | | | | | | | |
| | OPERATING TEMP.,HUMID.AND ALTIITUDE | | | | | | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTIITUDE | | | | | | | | | | |
| | VIBRATION | | | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | IMPACT | | | | | | | | | | |
| | AGENCY APPROVALS | | | | | | | | | | |
| | CONDUCTED NOISE | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | | | | | | | | | | |
| | COOLING METHOD | | | | | | | | | | |

*1 Peak load for 20sec. or less is acceptable if the total wattage is less than the rated wattage(24V:103.2W).
 *2 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.
 *3 () : peak current
 *4 Please contact us about safety approvals for the model with option.

* Avoid prolonged use under over-load.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.

External view



- ※ Weight : 360g or less (Without chassis and cover)
- ※ Tolerance : ± 1
- ※ Dimensions in mm.
- ※ PCB Material : Glass composite (CEM3)
- ※ Chassis and cover is optional.
- ※ Mounting torque : 1.5 N·m (16 kgf·cm) max

| 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>

| CN1 | Pin No. | Input | CN2 | Pin No. | Output | CN3 | Pin No. | Remote ON/OFF |
|-----|---------|-------|-----|---------|--------|-----|---------|---------------|
| | 1 | AC(L) | | 1~4 | -V | | 1 | RC(+) |
| | 2 | | | 5~8 | +V | | 2 | RC(-) |
| | 3 | AC(N) | | | | | | |
| | 4 | | | | | | | |
| 5 | FG | | | | | | | |

※ Keep drawing current per pin below 5A for CN2.

Performance data

■ STATIC CHARACTERISTICS (LDA100W-5)



■ RISE TIME & FALL TIME (LDA100W-5)



■ OVERCURRENT CHARACTERISTICS (LDA100W-5)



■ DERATING CURVE



LDA150W

LDA 150 W -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Autoranging input
- ④ Output voltage
- ⑤ Optional *4
- C :with Coating
- G :Low leakage current
- L :with LED
- R :with Remote ON/OFF
- S :with Chassis
- SN :with Chassis & cover
- Y :with Potentiometer



| MODEL | LDA150W-3 | LDA150W-5 | LDA150W-9 | LDA150W-12 | LDA150W-15 | LDA150W-18 | LDA150W-24 | LDA150W-24-H | LDA150W-30 | LDA150W-48 |
|-----------------------|-----------|-----------|-----------|------------|------------|------------|------------|--------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 90 | 150 | 153 | 150 | 150 | 153 | 151.2 | 151.2 | 150 | 144 |
| DC OUTPUT | *3 3V 30A | 5V 30A | 9V 17A | 12V 12.5A | 15V 10A | 18V 8.5A | 24V 6.3A | 24V 6.3(10)A | 30V 5A | 48V 3A |

SPECIFICATIONS

| MODEL | LDA150W-3 | LDA150W-5 | LDA150W-9 | LDA150W-12 | LDA150W-15 | LDA150W-18 | LDA150W-24 | LDA150W-24-H | LDA150W-30 | LDA150W-48 | | | | | | | | | | | | | | |
|------------------------------------|--------------------------------------|---|---|--|-------------|-------------|-------------|--------------|-------------|-------------|--|-----------------------------|--------|---------------------------------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| INPUT | VOLTAGE[V] | | | | | | | | | | | AC 85 - 132 / 170 - 264 1 φ | | | | | | | | | | | | |
| | CURRENT[A] | | ACIN 100V | | | | | | | | | | | 3.6typ (Io=100%) | | | | | | | | | | |
| | | | ACIN 200V | | | | | | | | | | | 2.0typ (Io=100%) | | | | | | | | | | |
| | FREQUENCY[Hz] | | | | | | | | | | | 47 - 440 | | | | | | | | | | | | |
| | EFFICIENCY[%] | | | | | | | | | | | 75typ | 79typ | 79typ | 82typ | 83typ | 84typ | 85typ | 85typ | 85typ | 82typ | | | |
| | INRUSH CURRENT[A] | | ACIN 200V | | | | | | | | | | | 30typ (Io=100%) (At cold start) | | | | | | | | | | |
| LEAKAGE CURRENT[mA] | | | | | | | | | | | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN) | | | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | | 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(10) | 5 | 3 | | | | | | | | | | | | |
| | 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 | 240max | | | | | | | | | | | | |
| | RIPPLE[mVp-p] | | 0 to +50°C | | 80max | 80max | 120max | 120max | 120max | 120max | 220max | 150max | | | | | | | | | | | | |
| | | | -10 - 0°C | | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 260max | 160max | | | | | | | | | | | |
| | RIPPLE NOISE[mVp-p] | | 0 to +50°C | | 120max | 120max | 150max | 150max | 150max | 150max | 250max | 150max | | | | | | | | | | | | |
| | | | -10 - 0°C | | 160max | 160max | 180max | 180max | 180max | 180max | 180max | 280max | 180max | | | | | | | | | | | |
| | TEMPERATURE REGULATION[mV] | | 60max | 60max | 120max | 150max | 180max | 200max | 290max | 290max | 360max | 560max | | | | | | | | | | | | |
| | DRIFT[mV] | | *2 20max | 20max | 36max | 48max | 60max | 72max | 96max | 96max | 120max | 192max | | | | | | | | | | | | |
| START-UP TIME[ms] | | 200max (ACIN 100V, Io=100%) | | | | | | | | | | | | | | | | | | | | | | |
| HOLD-UP TIME[ms] | | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) | | | | | | | | | | | | | | | | | | | | | | |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | | 2.85 - 3.6 | 4.5 - 5.5 | Fixed ("Y" which can be adjusted the output is available as option :9, 12, 15, 18, 24, 30, 48V ±10%) | | | | | | | | | | | | | | | | | | | | |
| OUTPUT VOLTAGE SETTING[V] | | — | — | 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 (-H : peak) 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 | | 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-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ 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, EN60950-1, EN50178, CSA C22.2 No.234 Complies with DEN-AN and IEC60950-1 | | | | | | | | | | | | | | | | | | | | | |
| | CONDUCTED NOISE | | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | | | | | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | | 75×37×222mm (W×H×D) /510g 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(24V:151.2W).

*2 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.

*3 () : peak current

*4 Please contact us about safety approvals for the model with option.

* Avoid prolonged use under over-load.

* Parallel operation with other model is not possible.

* Derating is required when operated with chassis and cover.

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 |

<PIN CONNECTION>

| Pin No. | Input | Pin No. | Output | Pin No. | Remote ON/OFF |
|---------|-------|---------|--------|---------|---------------|
| 1 | AC(L) | CN2 | 1~6 | 1 | RC(+) |
| 2 | | | | | |
| 3 | AC(N) | CN3 | 1~7 | 2 | RC(-) |
| 4 | | | | | |
| 5 | FG | | | | |

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

※ Weight : 510g 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 : 1.5 N·m (16 kgf·cm) max

(Mfr : J.S.T.)

LDA

Performance data

■ STATIC CHARACTERISTICS (LDA150W-5)



■ RISE TIME & FALL TIME (LDA150W-5)



■ OVERCURRENT CHARACTERISTICS (LDA150W-5)



■ DERATING CURVE



LDA300W

LDA 300 W -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter
NAC-16-472



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

- ① Series name
- ② Output wattage
- ③ Autoranging input
- ④ Output voltage
- ⑤ Optional *4
- C :with Coating
- G :Low leakage current
- L :with LED
- R :with Remote ON/OFF
- S :with Chassis
- SNF :with Chassis & cover & fan
- T :Vertical terminal block

| | | | | | | | | | |
|-----------------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|
| MODEL | LDA300W-3 | LDA300W-5 | LDA300W-9 | LDA300W-12 | LDA300W-15 | LDA300W-18 | LDA300W-24 | LDA300W-30 | LDA300W-48 |
| MAX OUTPUT WATTAGE[W] | 180 | 300 | 306 | 324 | 330 | 306 | 336 | 300 | 302.4 |
| DC OUTPUT | 3V 60A | 5V 60A | 9V 34A | 12V 27A | 15V 22A | 18V 17A | 24V 14A | 30V 10A | 48V 6.3A |

SPECIFICATIONS

| MODEL | | LDA300W-3 | LDA300W-5 | LDA300W-9 | LDA300W-12 | LDA300W-15 | LDA300W-18 | LDA300W-24 | LDA300W-30 | LDA300W-48 | |
|------------------------------------|--|---|------------------|-----------|------------|------------|------------|------------|------------|------------|-----------|
| INPUT | VOLTAGE[V] | AC 85 - 132 / 170 - 264 1 φ | | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 7.5typ (Io=100%) | | | | | | | | |
| | | ACIN 200V | 4.5typ (Io=100%) | | | | | | | | |
| | FREQUENCY[Hz] | 47 - 440 | | | | | | | | | |
| | EFFICIENCY[%] | ACIN 100V | 72typ | 78typ | 78typ | 80typ | 81typ | 81typ | 83typ | 83typ | 83typ |
| | | ACIN 200V | 74typ | 81typ | 81typ | 83typ | 84typ | 84typ | 86typ | 86typ | 86typ |
| INRUSH CURRENT[A] | ACIN 100V | 15/30A typ (Primary/Secondary Surge Current) Io=100% (More than 3sec.to re-start) | | | | | | | | | |
| | ACIN 200V | 30/30typ (Primary/Secondary Surge Current) Io=100% (More than 3sec.to re-start) | | | | | | | | | |
| LEAKAGE CURRENT[mA] | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN) | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | 3 | 5 | 9 | 12 | 15 | 18 | 24 | 30 | 48 | |
| | CURRENT[A] | Forced air | 60 | 60 | 34 | 27 | 22 | 17 | 14 | 10 | 6.3 |
| | | Convection*1 | 40 (60) | 40 (60) | 23 (34) | 17 (27) | 14 (22) | 12 (17) | 9 (14) | 7 (10) | 4.2 (6.3) |
| | LINE REGULATION[mV] | 20max | 20max | 36max | 48max | 60max | 72max | 96max | 120max | 192max | |
| | LOAD REGULATION[mV] | 40max | 40max | 100max | 100max | 120max | 120max | 150max | 180max | 240max | |
| | RIPPLE[mVp-p] | 0 to +50°C*2 | 80max | 80max | 120max | 120max | 120max | 120max | 120max | 120max | 150max |
| | | -10 - 0°C*2 | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 160max | 200max |
| | RIPPLE NOISE[mVp-p] | 0 to +50°C*2 | 120max | 120max | 150max | 150max | 150max | 150max | 150max | 150max | 400max |
| | | -10 - 0°C*2 | 160max | 160max | 180max | 180max | 180max | 180max | 180max | 180max | 600max |
| | TEMPERATURE REGULATION[mV] | 60max | 60max | 120max | 150max | 180max | 200max | 290max | 360max | 560max | |
| | DRIFT[mV] | *3 | 20max | 20max | 36max | 48max | 60max | 72max | 96max | 120max | 192max |
| START-UP TIME[ms] | 200max (ACIN 100V, Io=100%) | | | | | | | | | | |
| HOLD-UP TIME[ms] | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) | | | | | | | | | | |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6 5, 9, 12, 15, 18, 24, 30, 48V ±10% | | | | | | | | | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rating and recovers automatically | | | | | | | | | |
| | OVERVOLTAGE PROTECTION | 4.00 - 5.25V Works at 115 - 140% of rating | | | | | | | | | |
| | OPERATING INDICATION | Not provided | | | | | | | | | |
| | REMOTE SENSING | Provided | | | | | | | | | |
| REMOTE ON/OFF | Option (Refer to Instruction Manual) | | | | | | | | | | |
| ISOLATION | INPUT-OUTPUT | 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-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature) | | | | | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTIITUDE | -10 to +70°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max | | | | | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTIITUDE | -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, EN50178 Complies with DEN-AN and IEC60950-1 | | | | | | | | | |
| | CONDUCTED NOISE | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | 108×50×255mm (W×H×D) /1kg max (without terminal block) | | | | | | | | | |
| | COOLING METHOD | Convection / Forced air (Refer to DERATING CURVE) | | | | | | | | | |

*1 Peak load for 30sec. 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.
 *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 Please contact us about safety approvals for the model with option.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with chassis and cover.

External view



Standard Model

Horizontal type

Vertical type

Optional Model "-T"
(Ex. LDA300W-5-T)

Optional Model "-SNF"
(EX. LDA300W-5-SNF)

Applicable options

| Terminal Block Horizontal type | | Terminal Block Vertical type | |
|--------------------------------|------------------------|------------------------------|---------------|
| -S | Available | -ST | Available |
| -SN | Not Available | -SNT | Not Available |
| -SNF | Available 5V, 12V, 24V | -SNFT | Not Available |

CN1 (Connector for Sensing)
Type: B4B-XH-A

| Pin No. | Function |
|---------|---------------------|
| 1 | -M |
| 2 | -S (Remote Sensing) |
| 3 | +S (Remote Sensing) |
| 4 | +M |

Mating Housing & Pin
Mfr: J. S. T.
XHP-4(BXH-001T-P0.6 or SXH-001T-P0.6)

CN2 (Optional connector for Remote ON/OFF: optional)
Type: B2B-XH-A

| Pin No. | Function |
|---------|----------|
| 1 | RC (+) |
| 2 | RC (-) |

Mating Housing & Pin
Mfr: J. S. T.
XHP-2(BXH-001T-P0.6 or SXH-001T-P0.6)

- ※ Weight : 1kg or less (without casecover)
- ※ Tolerance : ±1
- ※ Dimensions : mm.
- ※ PCB Material : Glass composite (CEM3)
- ※ Keep drawing current per pin below 20A for TB2
- ※ Mounting torque : 1.5N·m (16kgf·cm) max

LDA

Performance data

■ STATIC CHARACTERISTICS (LDA300W-5)



■ RISE TIME & FALL TIME (LDA300W-5)



■ OVERCURRENT CHARACTERISTICS (LDA300W-5)



■ DERATING CURVE



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