



Data Sheet

RISH FLEX-e15XXA

Power Supply



Measure



Control



Record

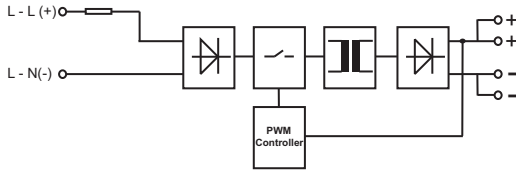


Analyze

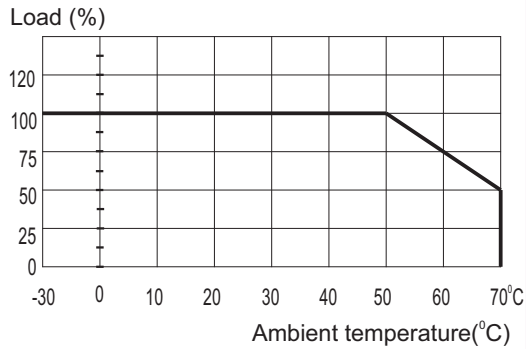


Optimize

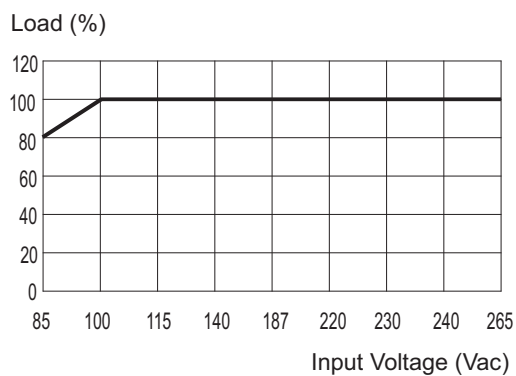
Block diagram:



Temperature derating curve:



Input Voltage derating curve:



Technical Specifications:

INPUT DATA :

| | |
|-----------------------------|---|
| AC input voltage range | 85 VAC...264 VAC (Refer Derating Curve) |
| DC input voltage range | 120 VDC ... 370 VDC |
| Nominal input voltage | 115 VAC / 230 VAC (165 VDC / 325 VDC) |
| Inrush current | ≤ 18 A typical |
| AC frequency range | 45 Hz ... 65 Hz |
| Input current | 0.4 A (115 VAC) , 0.3 A (230 VAC) |
| Internal fuse | T2 A |
| External fuse (recommended) | 10A (MCB curve B) |

OUTPUT DATA :

| | |
|-----------------------------------|--|
| Nominal output voltage | See Table 1 |
| Rated current | See Table 1 |
| Power boost current | See Table 1 |
| Holdup time | ≥ 50 msec (230 VAC), 15 msec (115 VAC) |
| Line regulation | < ± 0.5 % |
| Load regulation | < ± 0.5 % (change in load, static 10% ... 90%) |
| Overload | 105 ... 180 % rated output power |
| Dissipation power load max | 2.24 W |
| Efficiency | > 87 % |
| Residual ripple ^{Note 2} | ≤ 120 mVpp |
| Short circuit protection | Yes |
| Overload protection | Yes (Hiccup mode) |
| Overvoltage output protection | Yes (See Table 1) |
| Parallel connection | No |
| Series connection | Yes |
| Turn on Delay | 1 Seconds |
| Rise time | 100 msec |
| Resistance to reverse feed | See Table 1 |



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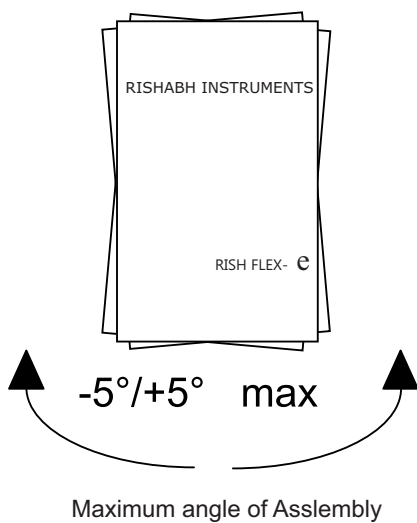
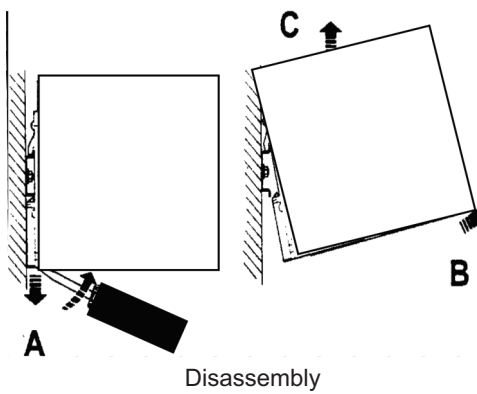
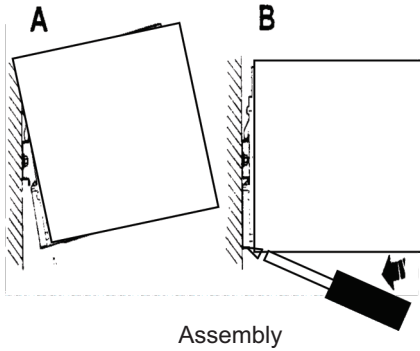


Analyze



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Installation:



Technical Specifications: (cont.)

GENERAL DATA :

| | |
|--------------------------------|---|
| Isolation voltage input/output | 3000V AC |
| Degree of protection | IP20 (EN/IEC 60529) |
| Protection class | II |
| MTBF | > 5,00,000 Hrs in acc. with IEC 61709 (SN29500) |
| Type of housing | Plastic enclosure |
| Housing material | PC Lexan 940 |
| Dimensions W / H / D | 18 mm / 90 mm / 62 mm |
| Weight | 0.2 kg approx. |
| Connection terminal blocks | Screw type 2.5 mm ² |

CLIMATIC DATA :

| | |
|---------------------------------|-----------------------------|
| Ambient temperature (operation) | -30 °C ... +70 °C |
| Ambient temperature (storage) | -40 °C ... +85 °C |
| Humidity at 25 °C | 95 % (no condensation) |
| Pollution degree environment | 2 (in acc. with EN 50178) |
| Climatic class | 3K3 (in acc. with EN 60721) |



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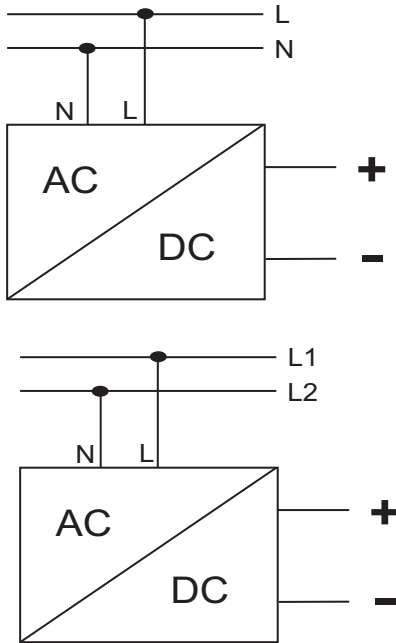


Analyze

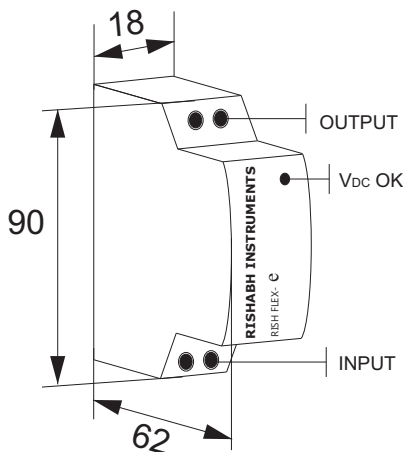


Optimize

Electrical Connection:



Layout & Dimensional Details:



w x h x d

18 x 90 x 62

all dimensions are in mm

Technical Specifications: (cont.)

STANDARDS :

Electrical safety:

| | |
|-------------------------|--|
| Assembling device | IEC/EN 60950 (VDE 0805) EN 50178 (VDE 0160) |
| Installation according | IEC/EN 60950 |
| Input/output separation | EN 60950-1(SELV) , EN 60204-1(PELV) Double or reinforced insulation |

| | |
|------------------------|--|
| EMC standards immunity | IEC 61326-1:2012, Table 2. EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 |
|------------------------|--|

| | |
|------------------------|------------------------------|
| EMC standards emission | EN 61000-6-4 EN 61000-3-2 |
|------------------------|------------------------------|

| | |
|---|------------|
| Safety of electrical equipment for machines | EN 60204-1 |
|---|------------|

Note:

- 1) All parameters not specifically mentioned are measured at 230VAC input, Rated load and 25°C of ambient temperature.
- 2) Ripple and noise are measured at 20MHz of bandwidth short length lead terminated with a 0.1uF & 47uF parallel capacitor.

Table 1:

| Parameter | RISH FLEX - e 1512A | RISH FLEX - e 1515A | RISH FLEX - e 1524A |
|--------------------------------|--|---|---|
| Nominal Output Data | 12 VDC \pm 3% | 15 VDC \pm 3% | 24 VDC \pm 3% |
| Rated Current | 1.25 A @ 50°C 0.94 A @ 60°C 0.625 A @ 70°C | 1.0 A @ 50°C 0.75 A @ 60°C 0.5 A @ 70°C | 0.63 A @ 50°C 0.48 A @ 60°C 0.32 A @ 70°C |
| Power Boost current @ 70°C | 1.25 A (For \leq 3 Minutes) | 1.0 A (For \leq 3 Minutes) | 0.63 A (For \leq 3 Minutes) |
| Output Over Voltage Protection | 24 VDC Typ. | 24 VDC Typ. | 35 VDC Typ. |
| Resistance to reverse feed | Max 16 VDC | Max 16 VDC | Max 35 VDC |

Order Code :

| Model No | Order Code | Input Voltage | Output Voltage | Output Current | Power Range |
|-------------------|---------------------|----------------------|----------------|----------------|-------------|
| 1P FLEX - e 1515A | RF14-1N000000000000 | 115 V AC/ 230V AC | 15 V DC | 1.0 A | 15 W |
| 1P FLEX - e 1512A | RF14-1M000000000000 | | 12 V DC | 1.25 A | |
| 1P FLEX - e 1524A | RF14-1P000000000000 | | 24 V DC | 0.63 A | |



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All specifications are subject to change without notice



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