

Technical Datasheet

Economical Solution for your Power Requirement



SUITABLE FOR EXTREME ENVIRONMENT

UNIVERSAL INPUT RANGE 85-264 VAC

UNIVERSAL INPUT RANGE 125-350 VDC

HIGH EFFICIENCY $\geq 87\%$

WIDE OPERATING TEMPERATURE RANGE:
-25 TO 70°C

"POWER GOOD" RELAY OUTPUT

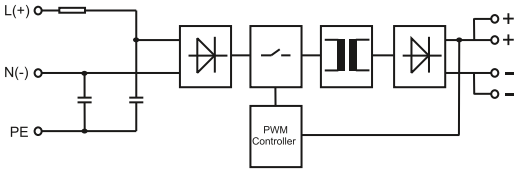
DIN RAIL MOUNTING

EXTREMELY COMPACT SIZE

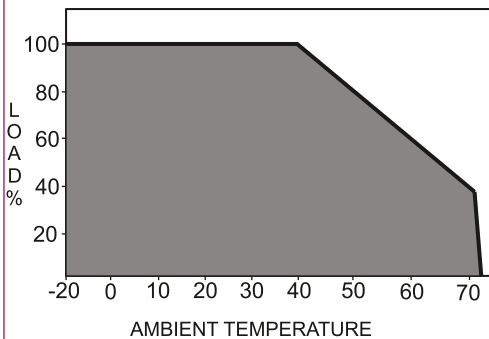
3 YEARS WARRANTY

FLEX-e 9024A

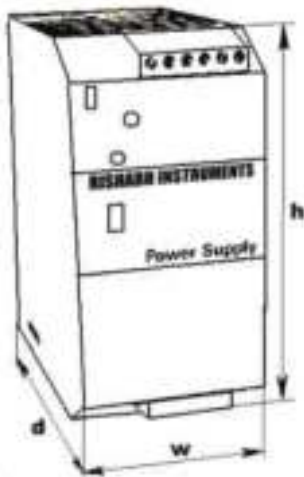
Block diagram:



Temperature derating curve:



Dimensional details:



w x h x d
55 x 110 x 105
 all dimensions are in mm

Technical Specifications:

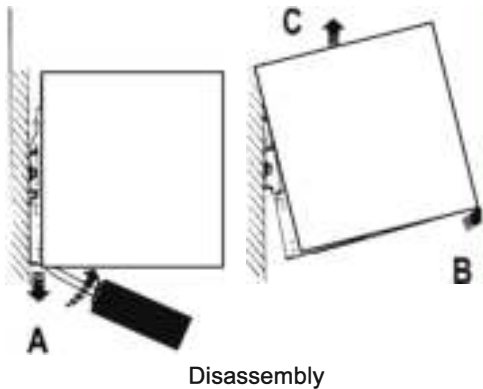
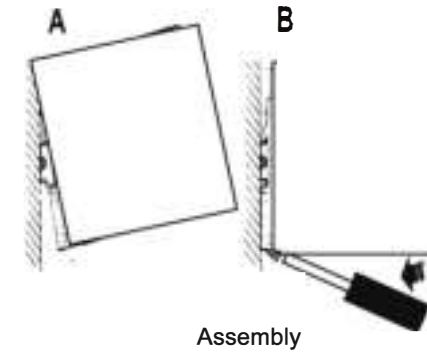
INPUT DATA :

| | |
|-----------------------------|---|
| Nominal input voltage | 100 VAC ... 240 VAC |
| AC input voltage range | 85 VAC ... 264 VAC (Derating < 100 VAC: 2.5% / V) |
| DC input voltage range | 125 VDC ... 350 VDC |
| Inrush current | ≤ 36 A typical |
| AC frequency range | 45 Hz ... 65 Hz |
| Input current | 1.1 A (230 VAC) , 2.8 A (115 VAC) |
| Internal fuse | T4 A |
| External fuse (recommended) | 10A or 10A B curve MCB |

OUTPUT DATA :

| | |
|-------------------------------|--|
| Nominal output voltage | 24 VDC ± 3% |
| Adjustment range | 22 VDC ... 27 VDC |
| Rated current at 24 VDC | 5 A @ 40 °C 4 A @ 50 °C 3 A @ 60 °C |
| Power boost current @ 60 °C | 4.5 A |
| Startup with capacitive load | ≤ 50,000 μF |
| Holdup time | ≥ 20 msec (230 VAC) |
| Derating | From 60 °C 2.5% per Kelvin |
| Line regulation | < 0.1 % (change in input voltage ± 10 %) |
| Load regulation | < 1 % (change in load, static 10% ... 90%) |
| Dissipation power load max | 17 W |
| Efficiency | ≥ 87 % (for 230 VAC and nominal values) |
| Residual ripple | ≤ 120 mVpp (with nominal values) |
| Short circuit protection | Yes |
| Overload protection | Yes (Hiccup mode) |
| Overvoltage output protection | Yes (35 VDC Typ.) |
| Parallel connection | No |
| Series connection | Yes |
| Turn on Delay | 1.5 Seconds |

Installation:



Maximum angle of Asssembly

Technical Specifications: (cont.)

OUTPUT DATA : (Continued)

| | |
|-----------------------------|--|
| Resistance to reverse feed | max. 35 VDC |
| Power good relay (optional) | Max 30 VDC, 1A (For resistive load EN60947-4-1) Max 60 VAC, 1A Min 5 VDC, 1 mA (Minimum permissive load) |

GENERAL DATA :

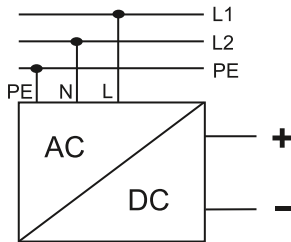
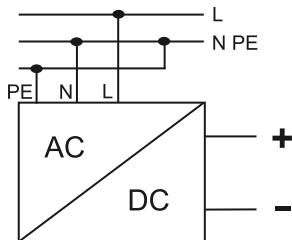
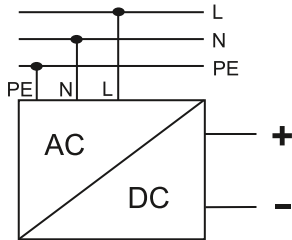
| | |
|--------------------------------|---|
| Isolation voltage input/output | 3000V AC (type test) 2000V AC (routine test) |
| Isolation voltage input/PE | 1605V AC (type test) 1500V AC (routine test) |
| Isolation voltage output/PE | 500 V DC (routine test) |
| Degree of protection | IP20 (EN/IEC 60529) |
| Protection class | I, with PE connected |
| MTBF | > 5,00,000 h in acc. with IEC 61709 (SN 29500) |
| Type of housing | Aluminum |
| Housing material | Aluminum |
| Dimensions W / H / D | 55 mm / 110 mm / 105 mm |
| Weight | 0.5 kg approx. |
| Connection terminal blocks | Screw type 2.5 mm ² |

CLIMATIC DATA :

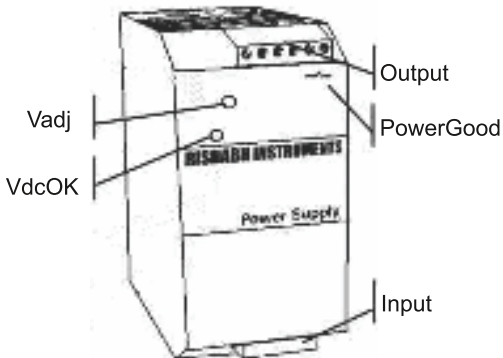
| | |
|---------------------------------|-------------------------------------|
| Ambient temperature (operation) | -25 °C ... +70 °C (>60 °C derating) |
| Ambient temperature (storage) | -40 °C ... +85 °C |
| Humidity at 25 °C | 95 % (no condensation) |
| Pollution degree environment | 2 (in acc. with EN 50178) |
| Climatic class | 3K3 (in acc. with EN 60721) |

FLEX-e 9024A

Electrical Connection:



LAYOUT:



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 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

Order Coding

| Order Code | Model No | Input Voltage | Output Voltage | Output Current | Power Range |
|--------------------|---------------------|-------------------------------------|----------------|----------------|-------------|
| RF13-1V10000000000 | Rish Flex e - 9024A | 85 ... 264 V AC 125 ... 350 V DC | 24 V DC | 5 A | 90 W |

Conformal coating for power supplies is done on request



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