

# RISH FLEX-*e* 17024B

Primary Switched Power Supply

## Technical Datasheet

Economical Solution for your Power Requirement



SUITABLE FOR EXTREME ENVIRONMENT

UNIVERSAL AC INPUT RANGE 187-550 V

UNIVERSAL DC INPUT RANGE 264-780 V

HIGH EFFICIENCY UPTO 87%

WIDE OPERATING TEMPERATURE RANGE :  
-25 TO 70°C

“POWER GOOD” REALY OUTPUT

DIN RAIL MOUNTING

EXTREMELY SMALL IN SIZE

3 YEAR WARRENTY



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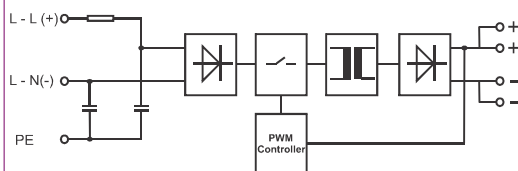
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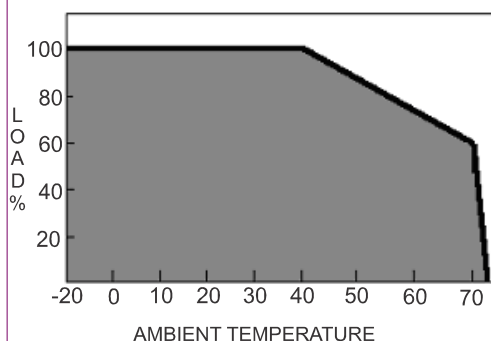
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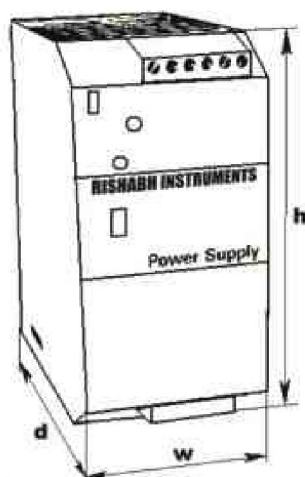
### Block diagram:



### Temperature derating curve:



### Dimensional details:



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

### Technical Specifications:

#### INPUT DATA :

AC input voltage range <sup>Note 2</sup>	187 VAC...550 VAC
DC input voltage range <sup>Note 2</sup>	264 VDC ... 780 VDC
Nominal input voltage	230 VAC / 400 VAC (325 VDC / 565 VDC)
Inrush current	≤ 36 A typical
AC frequency range	45 Hz ... 65 Hz
Input current	1.0 A (400 VAC) , 1.5 A (230 VAC)
Internal fuse	T4 A
External fuse (recommended)	10A (MCB curve B)

#### OUTPUT DATA :

Nominal output voltage	24 VDC ± 3%	
Adjustment range	22 VDC ... 27 VDC	
Rated current at 24 VDC	7.5 A @ 40 °C (400VAC) 6.5 A @ 50 °C 5 A @ 60 °C	5 A @ 40 °C (230VAC) 4 A @ 50 °C 3 A @ 60 °C
Power boost current @ 60 °C	7.5 A (400VAC)	4.5 A (230VAC)
Holdup time	≥ 20 msec (400 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	25 W	
Efficiency	> 87 %	
Residual ripple <sup>Note 3</sup>	≤ 120 mVpp	
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	2 Seconds	



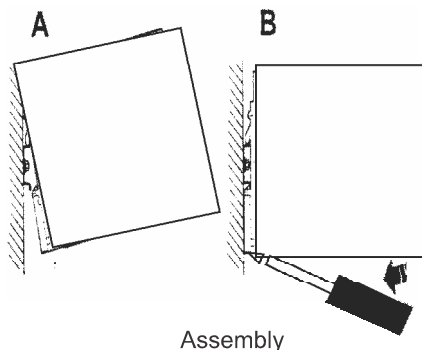
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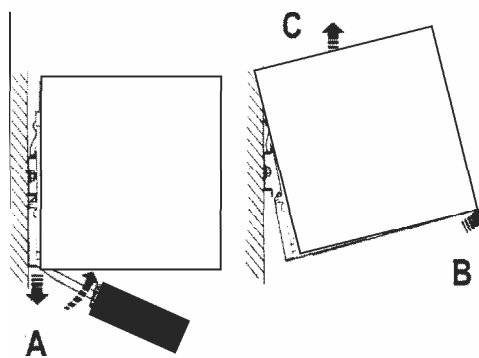
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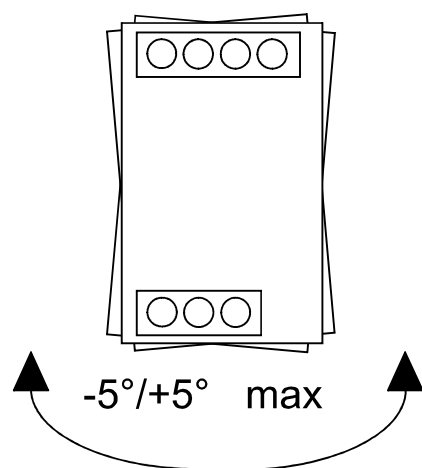
### Installation:



Assembly



Disassembly



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
Isolation voltage input/PE	1605V AC
Isolation voltage output/PE	500 V AC
Degree of protection	IP20 (EN/IEC 60529)
Protection class	I, with PE connected
MTBF	> 3,00,000 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 <sup>2</sup>

#### 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)



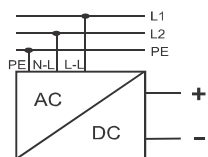
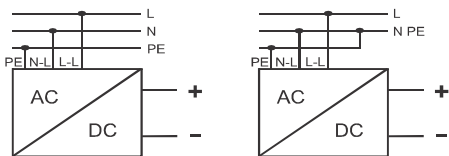
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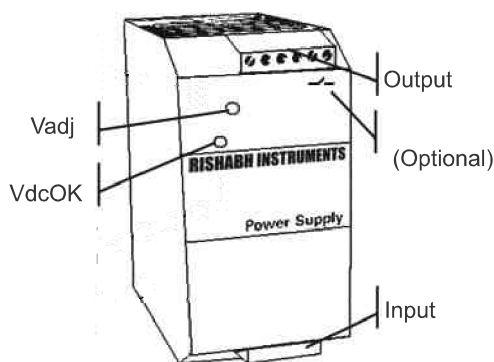
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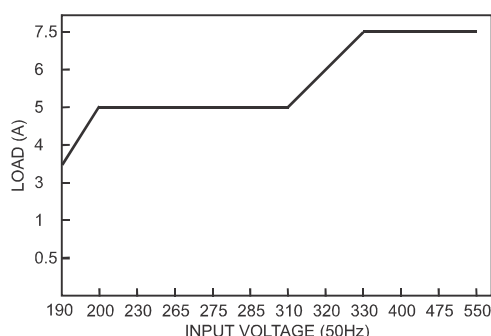
### Electrical Connection:



### Layout:



### Output characteristics:



### 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
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EMC standards emission	EN 61000-6-4 EN 61000-3-2
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Safety of electrical equipment for machines	EN 60204-1
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Note:

- 1) All parameters not specifically mentioned are measured at 400VAC input, Rated load and 25°C of ambient temperature.
- 2) For input voltage < 200VAC / 280VDC, 2.5% per V Derating needed. Please check output characteristics curve for more details.
- 3) Ripple and noise are measured at 20MHz of bandwidth short length lead terminated with a 0.1uF & 47uF parallel capacitor.



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