

# FLEX-E 9024B

Primary Switched Power Supply

Preliminary Datasheet

## Technical Datasheet

### Economical Solution for your Power Requirement



SUITABLE FOR EXTREME ENVIRONMENT

UNIVERSAL INPUT RANGE 187-550 VAC/DC

HIGH EFFICIENCY UPTO 87%

WIDE OPERATING TEMPERATURE RANGE

STRONG OVERLOAD WITHSTAND CAPABILITY

OPTIONAL "POWER GOOD" REALY OUTPUT

DIN RAIL MOUNTING

EXTREMELY SMALL IN SIZE

3 YEAR WARRENTY

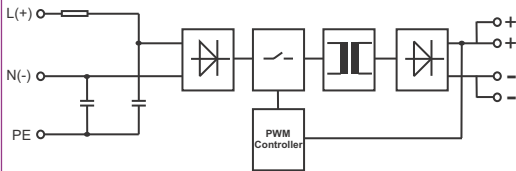


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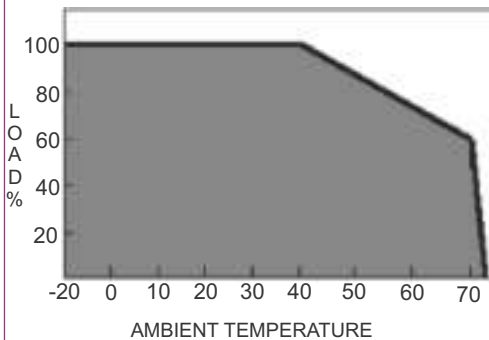
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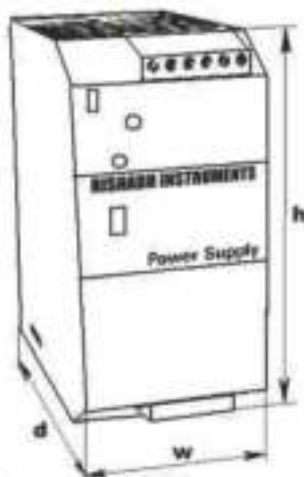
### Block diagram:



### Temperature derating curve:



### Dimensional details:



w x h x d

55 x 110 x 105

all dimensions are in mm

### Technical Specifications:

#### INPUT DATA :

Nominal input voltage	200 VAC...530 VAC
AC input voltage range	187 VAC...550 VAC (Derating < 200 VAC:2.5% / V)
DC input voltage range	264 VDC...780 VDC
Inrush current	≤ 36 A typical
AC frequency range	45 Hz ... 65 Hz
Input current	0.55 A (400 VAC) , 1.2 A (230 VAC)
Internal fuse	T4 A
External fuse (recommended)	10A (MCB curve B)

#### OUTPUT DATA :

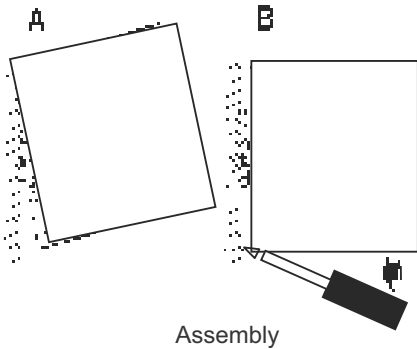
Nominal output voltage	24 VDC ± 3%
Adjustment range	22 VDC ... 27 VDC
Rated current at 24 VDC	5 A @ 40 °C 4 A @ 50 °C 3 A @ 60 °C
Power boost current @ 60 °C	4.5 A
Startup with capacitive load	≤ 50,000 μF
Holdup time	≥ 20 msec (400 VAC)
Derating	From 60 °C 2.5% per Kelvin
Line regulation	< 0.1 % (change in input voltage ± 10 %)
Load regulation	< 1 % (change in load, static 10% ... 90%)
Dissipation power load max	17 W
Efficiency	> 87 % (for 400 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

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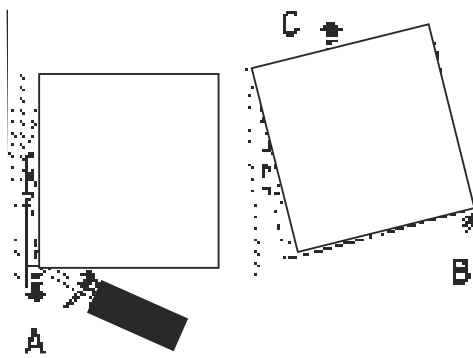
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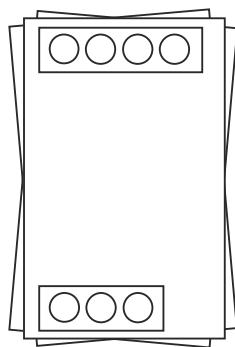
### Installation:



Assembly



Disassembly



-5°/+5° max

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 <sup>2</sup>

#### CLIMATIC DATA :

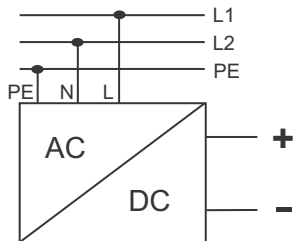
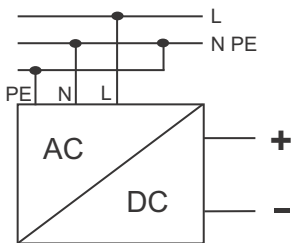
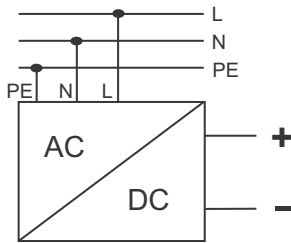
Ambient temperature (operation)	-25 °C ... +70 °C (>60 °C derating)
Ambient temperature (storage)	-40 °C ... +85 °C
Humidity at 25 °C	95 % (no condensation)
Pollution degree environment	2 (in acc. with EN 50178)
Climatic class	3K3 (in acc. with EN 60721)

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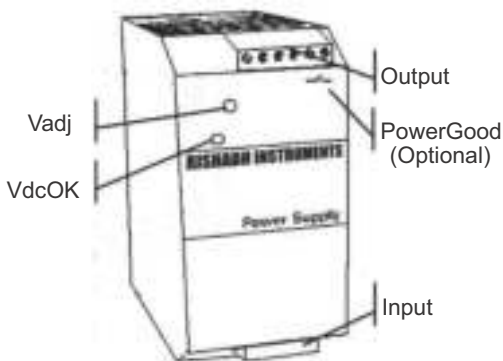
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### Electrical Connection:



### LAYOUT:



### 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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The **CE** mark in according to EMC 2004/108/EC

and low voltage directives 2006/95/EEC



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