



Technical Data Sheet

E POWER 9024B (2 Phase)

Switched Mode Power Supply



E Power 9024B is a compact 95–120 W, two-phase DIN rail mounting switched-mode power supply designed to deliver reliable 24 VDC output from a wide universal input range of 187–550 VAC or 264–780 VDC. With high efficiency up to 87%, adjustable output voltage, robust overload protection, and optional Power Good relay, it is an ideal solution for industrial automation, process control, and harsh operating environments.

Special Features

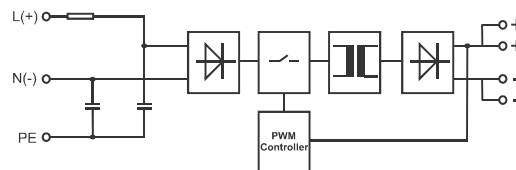
- Suitable For Extreme Environment
- Universal Input range 187-550 VAC/264-780VDC
- High Efficiency UPTO 87%
- Wide Operating Temperature Range
- Strong overload withstand capability
- Optional " Power Good" Really Output
- DIN Rail Mounting
- Extremely Small in Size
- 3 Year Warrenty



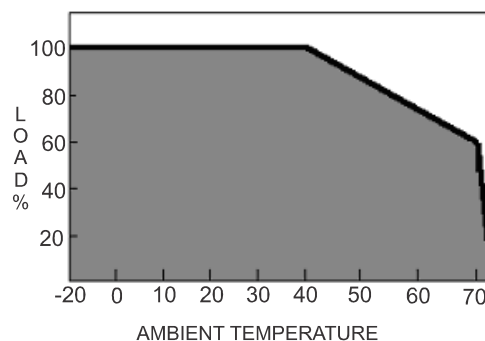
Technical Specifications (cont.)

Input Data	
Nominal input voltage	230 VAC/ 400 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	≤ 36A typical
AC frequency range	45 Hz...65Hz
Input current	1 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	5 A @ 40 °C 4 A @ 50 °C 3 A @ 60 °C
Power boost current @ 60°C	4.5A
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	17W
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 Type.)
Parallel connection	No
Series connection	YES
Turn on Delay	2 Seconds

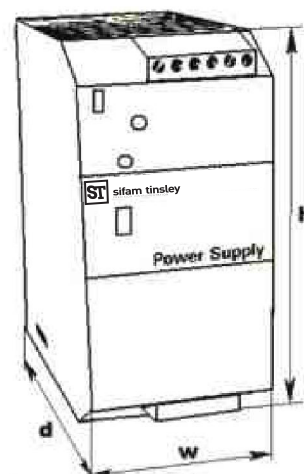
Block Diagram



Temperature derating curve



Dimensions Details



w x h x d
2.16 x 4.33 x 4.13

All the dimensions are in inch.

Technical Specifications (cont.)

Output Data (Continued)

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

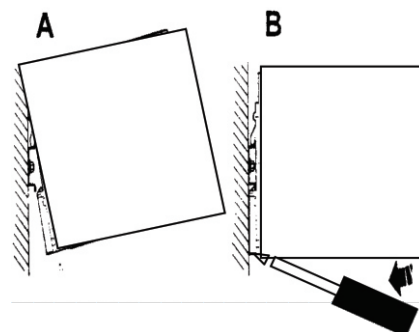
General Data

Isolation voltage input/output	3000V AC (type test)
Isolation voltage input/PE	1605V AC (type test)
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	2.16 inch / 4.33 inch / 4.13 inch
Weight	0.5kg approx.
Connection terminal blocks	Screw type 2.5mm ²

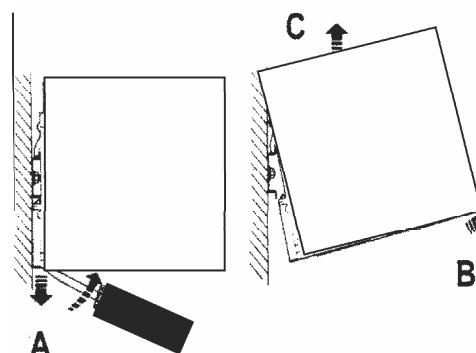
Climatic Data

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)

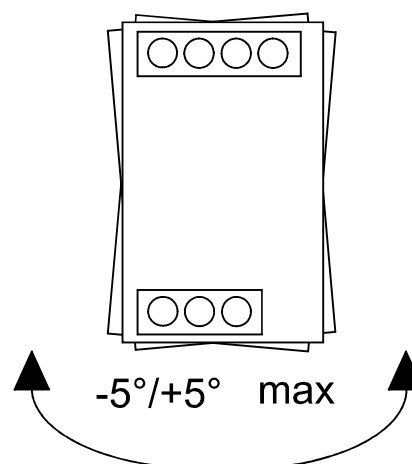
Installation



Assembly



Disassembly



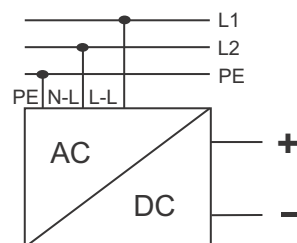
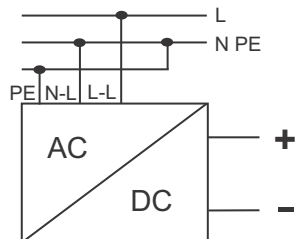
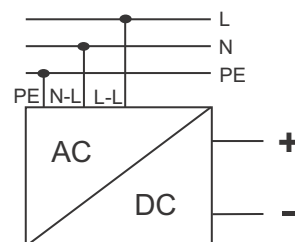
Maximum angle of Assembly

Technical Specifications (cont.)

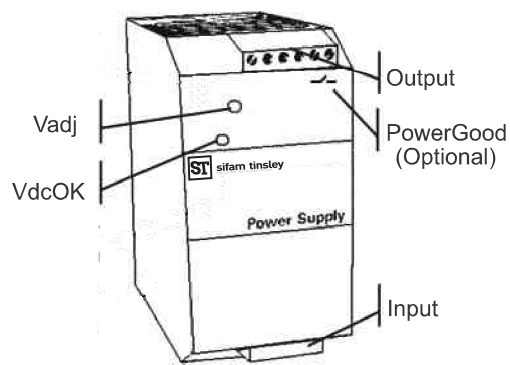
Standards

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

Electrical Connection



Layout



Ordering information

Product Code	RF14-	X	X	0	0	0	0	0	0	0	0	0	0ST
System of RF14 (E POWER)	2P	2											
E POWER 9024B	90W,24V 2P		I										
Reserved				0	0	0	0	0	0	0	0	0	0ST


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