



Technical Data Sheet

E POWER 17024B (2 Phase)

Switched Mode Power Supply



E Power 17024B is a compact 120–180 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.

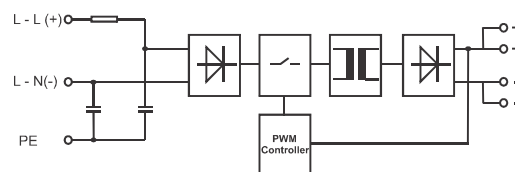
Special Features

- Suitable For Extreme Environment
- Universal 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" Really Output
- DIN Rail Mounting
- Extremely Small in Size
- 3 Year Warrenty

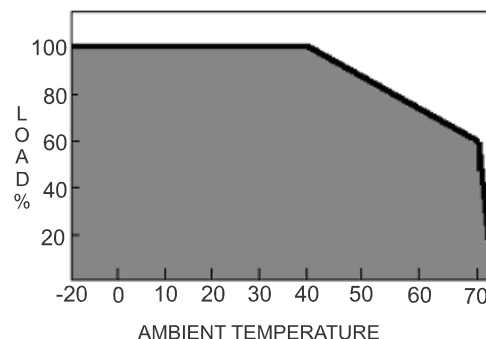
Technical Specifications

Input Data	
AC input voltage range ^{Note 2}	187 VAC...550 VAC
DC input voltage range ^{Note 2}	264 VDC...780 VDC
Nominal input voltage	230 VAC/400 VAC (325 VDC/565 VDC)
Inrush current	≤ 36A typical
AC frequency range	45 Hz...65Hz
Input current	1.0A (400 VAC), 1.5A (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	7.5A @ 40°C 5A @ 40°C (400VAC) (230VAC) 6.5A @ 50°C 4A @ 50°C 5A @ 60°C 3A @ 60°C
Power boost current @ 60°C	7.5A (400VAC) 4.5A (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	25W
Efficiency	> 87%
Residual ripple ^{Note 3}	≤ 120 mVpp
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

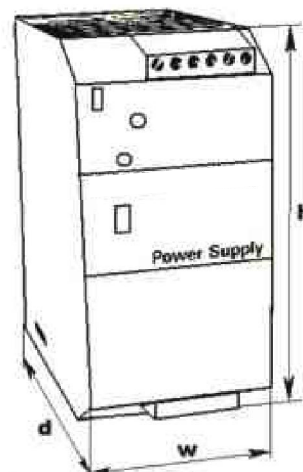
Block Diagram



Temperature derating curve



Dimensions Details



Technical Specifications

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)

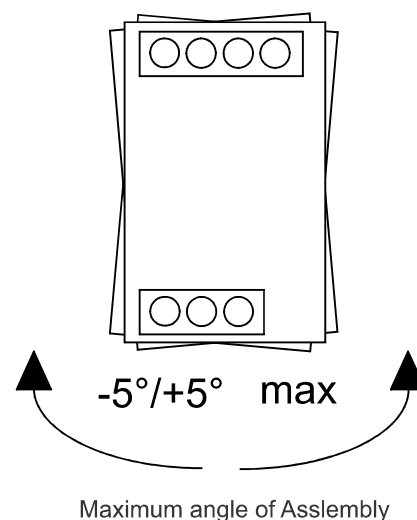
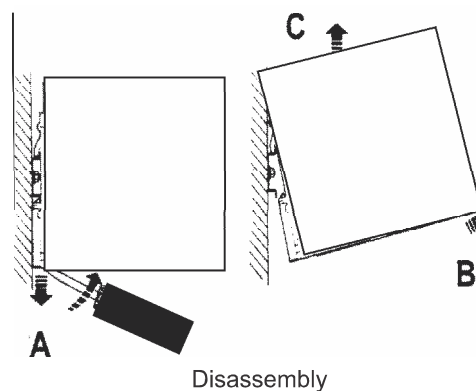
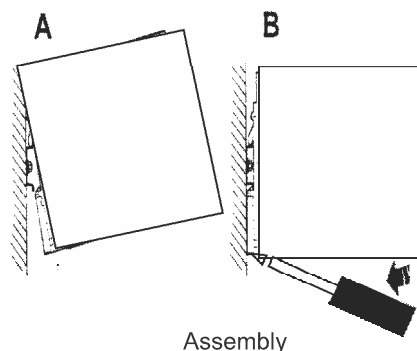
General Data

Isolation voltage input/output	3000V AC
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	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



Technical Specifications (cont.)

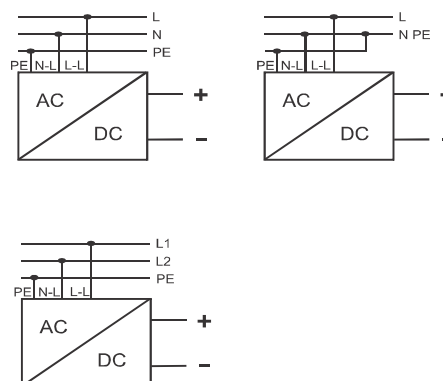
Standards

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

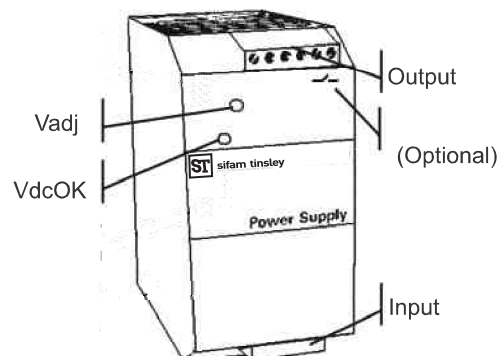
Note :

- 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.

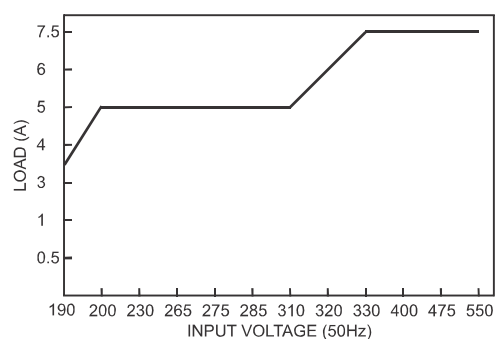
Electrical Connection



Layout



Output characteristics



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 17024B	170W,24V 2P	J											
Reserved				0	0	0	0	0	0	0	0	0	0ST



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