



Technical Data Sheet

F Power 170xxA



F Power 170XXA is a compact DIN-rail mounted switch mode power supply designed to provide reliable DC power for industrial control and automation applications. Its space-saving design, wide input voltage range and strong overload capability ensure dependable performance, while built-in protection features enhance system safety and reliability.

Special Features



- Single-phase, 115–230 Vac (manual select), up to 91% efficiency
- 50% overload capability without switch-off
- Flexible power output: 120–180 W
- "Power Good" relay output
- 3 protection modes: Hiccup, Continuous Out, Manual Reset
- DIN rail mountable, compact (2.17 x 4.33 x 4.13 inches), 3-year warranty

Parameter	F Power 17012A	F Power 17024A	F Power 17048A
Input Data			
Nominal Input Voltage (2 x Vac)	115 – 230 (manual select 115 / 230)		
Input Voltage Range (Vac)	90 – 135 (115) / 180 – 280 (230)	90 – 135 (115) / 170 – 280 (230)	90 – 135 (115) / 180 – 280 (230)
Inrush Current (Vn and In Load) I _{2t}	≤ 16 A ≤ 5 msec.	≤ 11 A ≤ 5 msec.	≤ 16 A ≤ 5 msec.
Frequency	47 – 63 Hz ±6%		
Input Current (115 – 230 Vac)	2.8 – 1.3 A	2.8 - 0.9A	2.8 – 1.3 A
Internal Fuse	T 4 A		
External Fuse (recommended)	10 A (MCB curve B)		
Output Data			
Output Voltage (Vn), Factory Setting ±3%	12 Vdc	24 Vdc	48 Vdc
Adjustment Range (Vadj)	10 – 14 Vdc	22 – 27 Vdc	41 – 55 Vdc
Start-Up with Strong Load (capacitive load)	≤ 50,000 μF		
Turn-On Delay after Applying Mains Voltage	1 sec. (max)		
Rated Current at Vn, 40°C (In)	14 A (permanent)	7.5 A (permanent)	3.75 A (permanent)
Rated Current at Vn, 50°C (In)	12 A (permanent)	6 A (permanent)	3 A (permanent)
Rated Current at Vn, 60°C (In)	10 A (permanent)	5 A (permanent)	2.5 A (permanent)
Power Boost Current at 60°C (In), ≤ 3 min.	14 A	7.5 A	3.75 A
Current Max. Overload ≥ 4 Vdc (permanent)	I _{max} = I _{n60°C} x (1.8 – 2.2)		
Current Short Circuit I _{cc} (max 2 sec.: Hiccup / permanent: Continuous)	20 A	16 A	7.5 A
Hold-Up Time (min. Vac)	Typ. 20 msec		
Residual Ripple	≤ 80 mV _{pp}		
Efficiency	≥ 91%		
Over Temperature Protection	Yes. Shut-down output and automatic restart.		
Short-Circuit Protection	1° Hiccup Mode 2° Continuous Mode 3° Manual Reset		
Dissipation Power Load Max (W)	13		
Over Load Protection	Yes		
Over Voltage Output Protection	Yes (typ. 35 Vdc)	Yes (typ. 35 Vdc)	Yes (typ. 72 Vdc)
Parallel Connection	Yes		
Power Good Contact Rating (EN60947.4.1)	Max. DC1: 30 Vdc 1 A; AC1: 60 Vac 1 A (resistive load). Min. 1 mA at 5 Vdc (min. permissive load)		

Climatic Data	
Ambient Temperature Operation	-25°C up to +70°C (>60°C derating 2.5%/°C)
Ambient Temperature Storage	-40°C up to +85°C
Humidity at 25°C, no condensation	95% to 25°C
General Data	
Isolation Voltage (In / Out)	3000 Vac
Isolation Voltage (In / PE)	1605 Vac
Isolation Voltage (Out / PE)	500 Vac
Protection Class (EN/IEC 60529)	IP 20
Reliability: MTBF (IEC 61709)	> 5,00,000 h
Pollution Degree Environment	2
Connection Terminal Blocks (Screw Type)	2.5 mm ² (24 – 14 AWG)
Protection Class	I, with PE connected
Dimension (w-h-d)	2.17 x 4.33 x 4.13 inches
Weight	0.60 kg approx.

Norms and Certifications:

- The CE mark is in accordance with EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.
- The CE mark in According to EMC 89/336/EEC and 93/68/EEC and the Low voltage directive 2006/95/EC (Rish Flex 15048A)

Electrical Safety:

According to IEC/EN 60950 (VDE 0805) and EN 50178 (VDE 0160) for assembling device. The unit must be installed according to IEC/EN 60950. Input/Output separation: SELV EN60950-1 and PELV EN 60204-1. Double or reinforced insulation.

EMC Immunity:

EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN61000-6-2

EMC Emission:

EN61000-6-4, EN61000-3-2

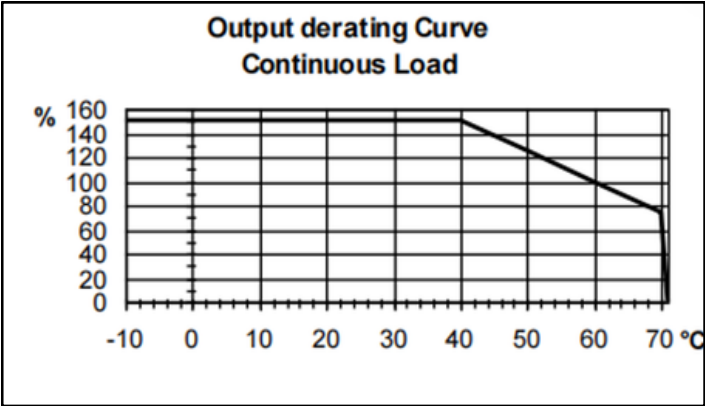
Standards Conformity:

EN 60204-1 – Safety of Electrical Equipment of Machines

Derating Curves:

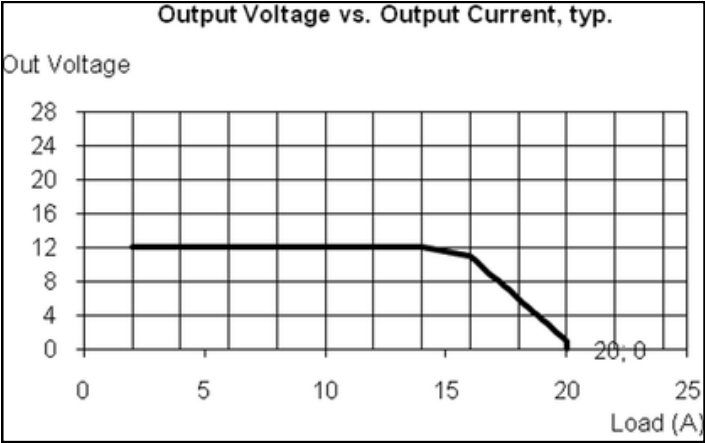
Load Current in % Vs Temperature in C

F Power 170xxA

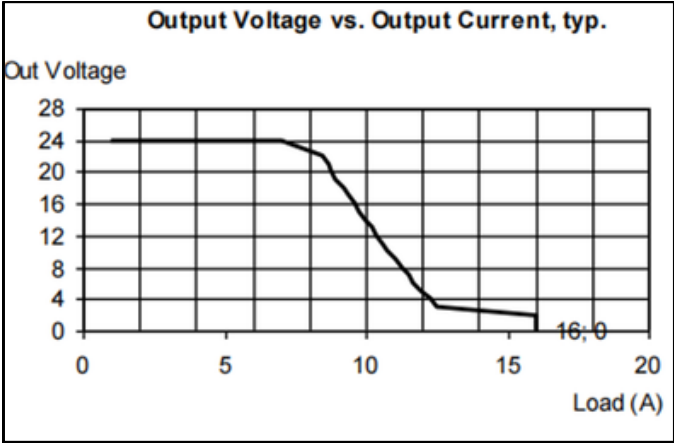


Output Voltage Vs Load Current

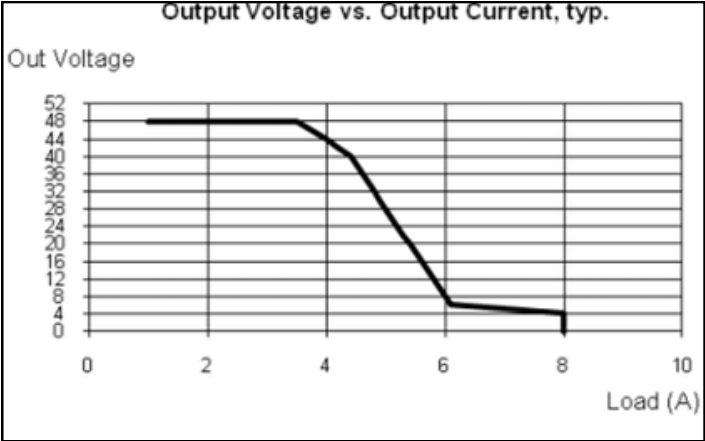
F Power 17012A



F Power 17024A



F Power 17048A



Ordering Information

F Power 170XXA												
Product Code	RF13-	X	X	0	0	0	0	0	0	0	0	0ST
System of RF13 (F POWER)	1P	1										
F POWER 17012A	170W,12V 1P		R									
F POWER 17024A	170W,24V 1P		C									
F POWER 17048A	170W,48V 1P		F									
Reserved				0	0	0	0	0	0	0	0	0ST



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