

170 WATT AC-DC CONVERTER

**FHKJ-00X Series
3 CHANNEL**

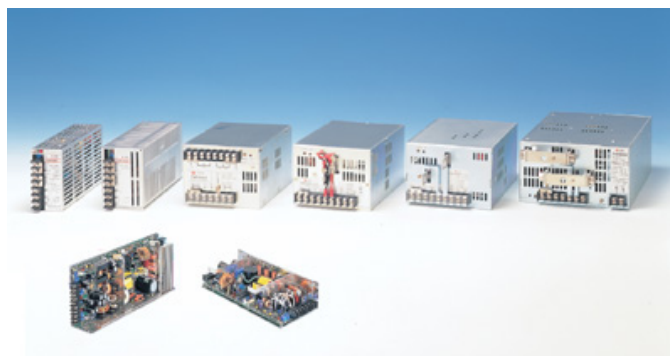
FHKJ-00X-U1 Series



RoHS

General Description

FH-Series is a new generation of power supplies. It's the latest design following international standards and market demands. This type of power supply has all in one: These supplies incorporate Power Factor Correction (PFC), low line distortion per IEC61000-3-2 and universal inputs. (EMI) complies with VDE 0871/B, EN50022/B, FCC level B. Safety complies with VDE/EN 60950-1, CSA 234. Size is compatible with WR-series. High efficiency and near unity power factor: an optimal combination of cost and performance for both power user and supplier.



Features

1. Universal input 85-264VAC
2. Power factor correction
3. Immunity against surge and burst

Options

N/A

Specifications<AC/DC>		Model			
FHKJ**X-U 170WATTS/3 OUTPUTS	FHKJ01X-U	FHKJ03X-U	FHKJ04X-U	FHKJ06X-U	
Input Characteristic					
Input Voltage	AC115-230V				
Input Current	3.0-1.5A				
Input Range	AC85-264V				
Input Frequency	50/60Hz				
Input Frequency Range	47-63Hz				
Phase	Single				
Inrush Current *1	20A(maximum) at AC100V/40A(maximum) at AC200V				
Efficiency [%] (minimum)	70%(typical) at AC100V/72%(typical) at AC200V				
Power Factor	0.99(typical) at AC100V/0.97(typical) at AC200V				

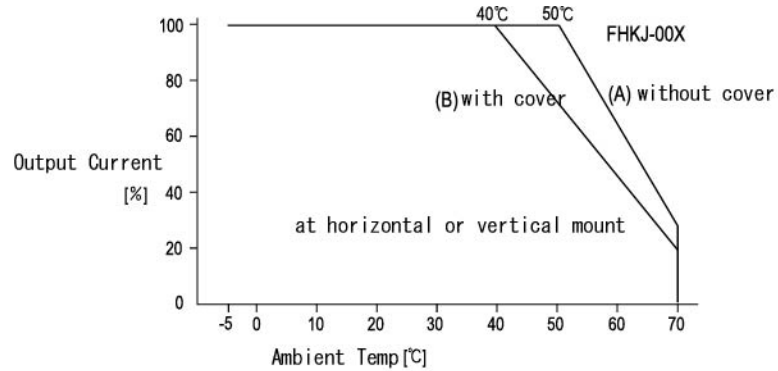


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HIGH QUALITY SWITCHING POWER SUPPLIES

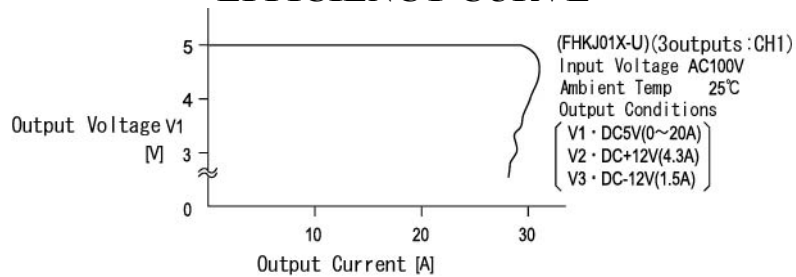
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DERATING CURVE



※ For safety specification, contact ETA Sales Representative

EFFICIENCY CURVE



Specifications<AC/DC>				Model											
FHKJ**X-U 170WATTS/3 OUTPUTS				FHKJ01X-U			FHKJ03X-U			FHKJ04X-U			FHKJ06X-U		
Output Voltage [V]				5	+12	-12	5	+12	-5	5	+15	-15	5	24	12
Output Current [A] *2				3-20	6.5	1.5	3-20	6.5	2	3-20	5.5	1.2	3-20	3.3	1.5
					Peak8.5			Peak8.5					Peak4.3		
Voltage Adjust Range				+/- 10% of Rated Output Voltage(at no load within the input range)											
Ripple and Noise [mVp-p](maximum) *3				150	220	220	150	220	150	150	250	250	150	340	220
Regulation															
a.Statistic Line Regulation [mV](maximum)				40	96	96	40	96	40	40	120	120	40	192	96
b.Statistic Load Regulation [mV](maximum)				50	120	120	50	120	50	50	150	150	50	240	120
c.Temperature Coefficient *4				0.03%/°C											
d.Drift[mV](maximum) *5				50	120	120	50	120	50	50	150	150	50	240	120
e.Dynamic Load Regulation [mV](typical) *6				not specified											
f.Recovery Time *6				not specified											
Rise up time				500mS(maximum) at 25°C and rated input/output											
Hold up time				50mS(minimum) at 25°C and rated input/output											
Functions															
Overcurrent Protection [A]				Current Limiting with automatic recovery											
				activates ≥179watts Please contact factory for further information											
Overvoltage Protection				V1,V2:Output shutdown(to reset,leave 3minutes after shut-off)/V3:not available											
≥ 120% of Rated Output Voltage[V]				6.0	14.4	-	6.0	14.4	-	6.0	18.0	-	6.0	28.8	-
Remote Sense				not available											
Remote On/Off				available											
Power Fail Detection				available											
Parallel/series Operation				not available											
Environmental															
Operating Temperature				-5 to +50°C/enclosed type:-5 to +40°C											
Operating Humidity				30 to 85%RH(non-condensing)											
Storage Temperature				-20 to +85°C											
Storage Humidity				20 to 85%RH(non-condensing)											
Withstanding Voltage				Primary-Secondary AC3,000V for 1minute											
				Primary-Frame Ground AC2,500V for 1minute											
				Secondary-Frame Ground AC500V for 1minute											
Isolation Resistance				Primary-Secondary-Frame Ground 100MΩ(minimum) by DC500V insulation tester											
Vibration				5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)											
Shock				294m/s ²											
Cooling				Convection											
Leakage Current				1mA(maximum) at 25°C,rated input/output and rated input frequency											
Line Conducted Noise				Built to meet FCC Part15-B Class B											
				Built to meet VCCI Class B											
				Built to meet EN55022											
Line Harmonic Distortion				Built to meet IEC1000-3-2											
Safety				UL: UL1950											
				C-UL: CSA C22.2 No.950(Level 3)											
				VDE:EN60950-1 2006, IEC950, VDE0805											
Weight (typical)				1,200g/enclosed type:1,450g											
? MTBF [H]				170,000											
? Switching Frequency[kHz](typical)				125											

Conditions:

*1 at cold start

*2 Total power of the outputs is limited to 170W(maximum)[190W(maximum) at peak load condition]
each output is affected by this limit

*3 measured by a bayonet probe at the end of a pair of 20cm long wires terminated with a 47uF electrolytic capacitor and a 0.1uF film capacitor in parallel at a 0 to 100MHz bandwidth

*4 at -5 to +50°C

*5 for 7hour period after 1hour warm-up at 25°C and rated input/output

*6 when output current changed from 25% to 75% of rated output current rapidly at rated input



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