

Power Supplies

ECX-002, -004, -006 Series

AC Input

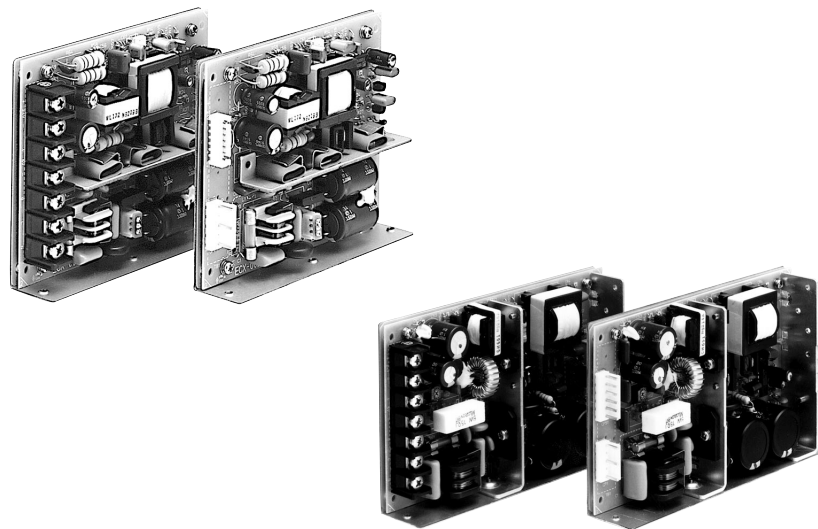
Multi Output, General-Purpose

FEATURES

- Switches between AC. 100/200V.
- 5V and 24V outputs are isolated from one another.
- Outstanding for pulse load, mechanical drive applications.
- Small and light weight.

PART NUMBERS AND RATINGS

Part No.	Maximum output power(W) [Peak]	Output current(A)	
		5V	24V
ECX-002	39	0 to 3	0 to 1
ECX-004	63	0 to 3	0 to 2
ECX-006	87	0 to 3	0 to 3



Power Supplies

ECX-002, -004, -006 Series

AC Input

Multi Output, General-Purpose

SPECIFICATIONS

39W TYPE

Open frame type Terminal strip:ECX-002A*/Vertical connector:ECX-002B/Lateral connector: ECX-002C

L-shape frame type Terminal strip:ECX-002D/Vertical connector:ECX-002E/Lateral connector: ECX-002F

*ECX-002A is a standard product. Other items are special order products.

Part No.		ECX-002			
Output voltage, current* ¹		V ₁ : 5V • 3A V ₂ : 24V • 1A			
Maximum output power	W	39			
Input requirements					
Input voltage Eac* ²	V	85 to 115[Rating:100](The input range of 170 to 253V[Rating: 200] is possible by internal switching.)			
Input frequency	Hz	47 to 66[Single phase]			
Input current	A	1.2max.[25°C, input and output ratings]			
Fuse rating	A	3[Internal]			
Surge current* ³	A	50max.[25°C, cold start]			
Leakage current	mA	1max.[25°C, input and output ratings]			
Efficiency	%	75typ.			
Output characteristics					
Output voltage	V	5[V ₁]		24[V ₂]	
Voltage variable range	V	Fixed		Fixed	
Maximum output current	A	3		1	
Minimum output current	A	0		0	
Voltage stability	Input variation	%	±1max.	±3.5max.	[Within the input voltage range V ₂ :10* ⁵ to 100% 0 to +40°C] Total variation ±5max. (24V:+15, −10max.)
	Load variation* ⁴	%	±2max.	+10, −8max.	
	Temperature variation	%	±1max.	±5max.	
	Drift	%	±1max.	±5max.[25°C, input and output ratings, after input voltage ON for 30min to 8h]	
	Dynamic load	V/ms	—	—	
Ripple Ep-p* ⁶	mV	100max.		600max.	
Noise Ep-p* ⁶	mV	150max.		800max.	
Start up time	s	1.5max.[Rise time: 20ms max.]			Normal temperature, input and output ratings, load capacitance 100μF max.
Hold up time	ms	20min.			
Accessory equipment					
Operation indicator		None			
Overvoltage protection		Only V ₁ protected by built-in overvoltage prevention switch inhibition. Recovery when input reset(restart requires roughly 5min wait).			
Overcurrent protection* ⁷		Entirely shuts off output upon overcurrent detection(load shorted). Recovery when input reset(restart requires roughly 5min wait).			
Remote ON-OFF		None			
Remote sensing		None			
Current balance		None			
Standards					
Safety standards		—			
Noise terminal voltage		—			
Construction					
External dimensions H×W×L	mm	Open frame type 24×93×119		L-shape frame type 25×95×120	
Weight	g	300max.			
Mounting method		Can be attached to 2 sides(Without frame type can be attached to 1 side).			
Case and cover		Without cover(With frame also available)			
Input and output cables		—			

*¹ Rated output current was determined at 40°C. Use 75% load derating at 50°C, 50% load derating at 60°C.

V₂ peak current should occur within a less than 10s time interval. Effective current should be kept below the current rating.

*² The product is shipped set for 200V input. For use of the product with 100V input, attach the input voltage switching connector.

*³ A power thermistor is used as the current surge control element.

*⁴ Determined for 10 to 100% load variation range.

*⁵ V₂ output voltage becomes 30V max. when V₂ output drops below 10%.

*⁶ Ripple and noise were determined at 0 to +40°C and rated input and output conditions.

*⁷ Output overcurrent protection is only effective during a short.

Power Supplies

ECX-002, -004, -006 Series

AC Input

Multi Output, General-Purpose

SPECIFICATIONS

63W TYPE

L-shape frame type Terminal strip:ECX-004D*/Vertical connector:ECX-004E/Lateral connector: ECX-004F

*ECX-004D is a standard product. Other items are special order products.

Part No.		ECX-004			
Output voltage, current* ¹		V1: 5V • 3A V2: 24V • 2A			
Maximum output power	W	63			
Input requirements					
Input voltage Eac* ²	V	85 to 115[Rating:100](The input range of 170 to 253V[Rating: 200] is possible by internal switching.)			
Input frequency	Hz	47 to 66[Single phase]			
Input current	A	1.8max.[25°C, input and output ratings]			
Fuse rating	A	3[Internal]			
Surge current* ³	A	50max.[25°C, cold start]			
Leakage current	mA	1max.[25°C, input and output ratings]			
Efficiency	%	75typ.			
Output characteristics					
Output voltage	V	5[V1]	24[V2]		
Voltage variable range	V	Fixed	Fixed		
Maximum output current	A	3	2		
Minimum output current	A	0	0		
Voltage stability	Input variation	%	±1max.	±3.5max.	[Within the input voltage range V2:10 ^{±5} to 100% 0 to +40°C] Total variation ±5max. (24V:+15, −10max.)
	Load variation* ⁴	%	±2max.	+10, −8max.	
	Temperature variation	%	±1max.	±5max.	
	Drift	%	±1max.	±5max.[25°C, input and output ratings, after input voltage ON for 30min to 8h]	
	Dynamic load	V/ms	—	—	
Ripple Ep-p* ⁶	mV	100max.	600max.		
Noise Ep-p* ⁶	mV	150max.	800max.		
Start up time	s	1.5max.[Rise time: 20ms max.]			Normal temperature, input and output ratings, load capacitance 100μF max.
Hold up time	ms	10min.			
Accessory equipment					
Operation indicator		None			
Overvoltage protection		Only V1 protected by built-in overvoltage prevention switch inhibition. Recovery when input reset(restart requires roughly 5min wait).			
Overcurrent protection* ⁷		Entirely shuts off output upon overcurrent detection(load shorted) or signal lamp operation.			
Remote ON-OFF		None			
Remote sensing		None			
Current balance		None			
Standards					
Safety standards		—			
Noise terminal voltage		—			
Construction					
External dimensions H×W×L	mm	30×95×130			
Weight	g	400max.			
Mounting method		Can be attached to 2 sides.			
Case and cover		Without cover(With frame)			
Input and output cables		—			

*¹ Rated output current was determined at 40°C. Use 75% load derating at 50°C, 50% load derating at 60°C.

V2 peak current should occur within a less than 10s time interval. Effective current should be kept below the current rating.

*² The product is shipped set for 200V input. For use of the product with 100V input, attach the input voltage switching connector.

*³ A power thermistor is used as the current surge control element.

*⁴ Determined for 10 to 100% load variation range.

*⁵ V2 output voltage becomes 30V max. when V2 output drops below 10%.

*⁶ Ripple and noise were determined at 0 to +40°C and rated input and output conditions.

*⁷ Output overcurrent protection is only effective during a short.

Power Supplies

ECX-002, -004, -006 Series

AC Input

Multi Output, General-Purpose

SPECIFICATIONS

87W TYPE

L-shape frame type Terminal strip:ECX-006D*/Vertical connector:ECX-006E/Lateral connector: ECX-006F

*ECX-006D is a standard product. Other items are special order products.

Part No.		ECX-006					
Output voltage, current*1		V1: 5V • 3A V2: 24V • 3A					
Maximum output power	W	87					
Input requirements							
Input voltage Eac*2	V	85 to 115[Rating:100](The input range of 170 to 253V[Rating: 200] is possible by internal switching.)					
Input frequency	Hz	47 to 66[Single phase]					
Input current	A	2.5max.[25°C, input and output ratings]					
Fuse rating	A	5[Internal]					
Surge current*3	A	50max.[25°C, cold start]					
Leakage current	mA	1max.[25°C, input and output ratings]					
Efficiency	%	82typ.					
Output characteristics							
Output voltage	V	5[V1]	24[V2]				
Voltage variable range	V	Fixed	Fixed				
Maximum output current	A	3	3				
Minimum output current	A	0	0				
Voltage stability	Input variation	%	±1max.	±3.5max.	[Within the input voltage range V2:10*5 to 100% 0 to +40°C]	Total variation ±5max. (24V:±10max.)	
	Load variation*4	%	±2max.	±8max.			
	Temperature variation	%	±1max.	±2max.			
	Drift	%	±0.5max.	±1.5max.[25°C, input and output ratings, after input voltage ON for 30min to 8h]			
	Dynamic load	V/ms	—	—			
Ripple Ep-p*6	mV	100max.	600max.				
Noise Ep-p*6	mV	150max.	800max.				
Start up time	s	1.5max.[Rise time: 20ms max.]			Normal temperature, input and output ratings, load capacitance 100μF max.		
Hold up time	ms	20min.					
Accessory equipment							
Operation indicator		—					
Overvoltage protection		Only V1 protected by built-in overvoltage prevention switch inhibition. Recovery when input reset(restart requires roughly 5min wait).					
Overcurrent protection*7		Entirely shuts off output upon overcurrent detection(load shorted) or signal lamp operation.					
Remote ON-OFF		None					
Remote sensing		None					
Current balance		None					
Standards							
Safety standards		—					
Noise terminal voltage		—					
Construction							
External dimensions H×W×L	mm	30×95×160					
Weight	g	500max.					
Mounting method		Can be attached to 2 sides.					
Case and cover		Without cover(With frame)					
Input and output cables		—					

*¹ Rated output current was determined at 40°C. Use 75% load derating at 50°C, 50% load derating at 60°C.

V₂ peak current should occur within a less than 10s time interval. Effective current should be kept below the current rating.

*² The product is shipped set for 200V input. For use of the product with 100V input, attach the input voltage switching connector.

*³ A power thermistor is used as the current surge control element.

*⁴ Determined for 10 to 100% load variation range.

*⁵ V₂ output voltage becomes 30V max. when V₂ output drops below 10%.

*⁶ Ripple and noise were determined at 0 to +40°C and rated input and output conditions.

*⁷ Output overcurrent protection is only effective during a short.

Power Supplies

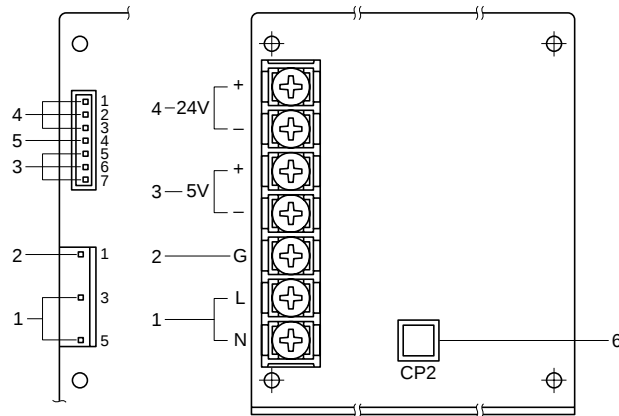
AC Input

Multi Output, General-Purpose

ECX-002, -004, -006 Series

TERMINAL DESIGNATIONS AND FUNCTIONS

ECX-002



Output connector	1	24V+	Reference: Applicable housing: XHP-7(JST) Applicable contact: SXH-001T-P0.6
	4	2	
	3	24V+	
	5	4	
	5	NC	
	3	6	
	7	5V+	
Input connector	2	1	Reference: Applicable housing: VHR-5N(JST) Applicable contact: SVH-21T-P1.1
	3	L	
	5	N	

Terminal No. 1: AC input terminals(L, N)

Connect to AC.100 or 200V single phase power lines. The product is shipped set for AC.200V input. If AC.100V power supply is to be used, attach the input voltage switching connector to CP2.

Terminal No. 2: Ground terminal(G)

Connect to earth ground.

Terminal No. 3: DC output terminals(5V, +, -)

Connect to load.

Terminal No. 5: Not connected(NC)

Do not connect. This should not be used.

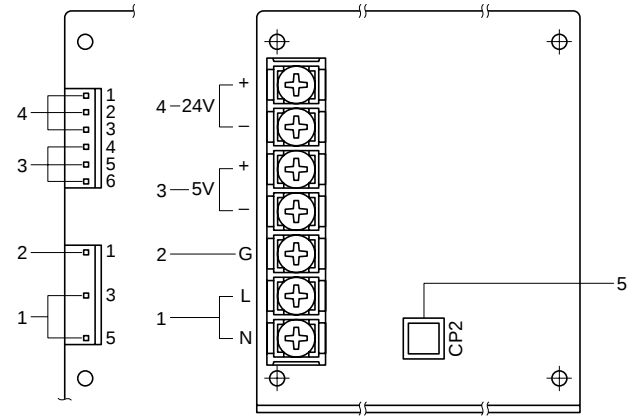
Terminal No. 6: Input voltage switching connector(CP2)

This is used for switching between input AC voltages.

No CP2 connector: 200V input

CP2 connector in place:100V input

ECX-004, 006



Output connector	1	24V+	Reference: Applicable housing: VHR-6N(JST) Applicable contact:SVH-21T-P1.1
	4	2	
	3	24V+	
	4	5V+	
	3	5	
	6	5V-	
Input connector	2	1	Reference: Applicable housing: VHR-5N(JST) Applicable contact: SVH-21T-P1.1
	3	L	
	5	N	

Terminal No. 1: AC input terminals(L, N)

Connect to AC.100 or 200V single phase power lines. The product is shipped set for AC.200V input. If AC.100V power supply is to be used, attach the input voltage switching connector to CP2.

Terminal No. 2: Ground terminal(G)

Connect to earth ground.

Terminal No. 3: DC output terminals(5V, +, -)

Connect to load.

Terminal No. 5: Input voltage switching connector(CP2)

This is used for switching between input AC voltages.

No CP2 connector: 200V input

CP2 connector in place:100V input

SUNSTAR 商斯达实业集团是集研发、生产、工程、销售、代理经销、技术咨询、信息服务等为一体的高科技企业，是专业高科技电子产品生产厂家，是具有 10 多年历史的专业电子元器件供应商，是中国最早和最大的仓储式连锁规模经营大型综合电子零部件代理分销商之一，是一家专业代理和分销世界各大品牌 IC 芯片和电子元器件的连锁经营综合性国际公司，专业经营进口、国产名厂名牌电子元件，型号、种类齐全。在香港、北京、深圳、上海、西安、成都等全国主要电子市场设有直属分公司和产品展示展销窗口门市部专卖店及代理分销商，已在全国范围内建成强大统一的供货和代理分销网络。我们专业代理经销、开发生产电子元器件、集成电路、传感器、微波光电元器件、工控机/DOC/DOM 电子盘、专用电路、单片机开发、MCU/DSP/ARM/FPGA 软件硬件、二极管、三极管、模块等，是您可靠的一站式现货配套供应商、方案提供商、部件功能模块开发配套商。商斯达实业公司拥有庞大的资料库，有数位毕业于著名高校——有中国电子工业摇篮之称的西安电子科技大学（西军电）并长期从事国防尖端科技研究的高级工程师为您精挑细选、量身订做各种高科技电子元器件，并解决各种技术问题。

微波光电部专业代理经销高频、微波、光纤、光电元器件、组件、部件、模块、整机；电磁兼容元器件、材料、设备；微波 CAD、EDA 软件、开发测试仿真工具；微波、光纤仪器仪表。欢迎国外高科技微波、光纤厂商将优秀产品介绍到中国、共同开拓市场。长期大量现货专业批发高频、微波、卫星、光纤、电视、CATV 器件：晶振、VCO、连接器、PIN 开关、变容二极管、开关二极管、低噪晶体管、功率电阻及电容、放大器、功率管、MMIC、混频器、耦合器、功分器、振荡器、合成器、衰减器、滤波器、隔离器、环行器、移相器、调制解调器；光电子元件和组件：红外发射管、红外接收管、光电开关、光敏管、发光二极管和发光二极管组件、半导体激光二极管和激光器组件、光电探测器和光接收组件、光发射接收模块、光纤激光器和光放大器、光调制器、光开关、DWDM 用光发射和接收器件、用户接入系统光收发器件与模块、光纤连接器、光纤跳线/尾纤、光衰减器、光纤适配器、光隔离器、光耦合器、光环行器、光复用器/转换器；无线收发芯片和模组、蓝牙芯片和模组。

更多产品请看本公司产品专用销售网站：

商斯达微波光电产品网：[HTTP://www.rfoe.net/](http://www.rfoe.net/)

商斯达中国传感器科技信息网：<http://www.sensor-ic.com/>

商斯达工控安防网：<http://www.pc-ps.net/>

商斯达电子元器件网：<http://www.sunstare.com/>

商斯达消费电子产品网：<http://www.icasic.com/>

商斯达实业科技产品网：<http://www.sunstars.cn/> 射频微波光电元器件销售热线：

地址：深圳市福田区福华路福庆街鸿图大厦 1602 室

电话：0755-83396822 83397033 83398585 82884100

传真：0755-83376182 (0) 13823648918 MSN: SUNS8888@hotmail.com

邮编：518033 E-mail:szss20@163.com QQ: 195847376

深圳赛格展销部：深圳华强北路赛格电子市场 2583 号 电话：0755-83665529 25059422

技术支持：0755-83394033 13501568376

欢迎索取免费详细资料、设计指南和光盘；产品凡多，未能尽录，欢迎来电查询。

北京分公司：北京海淀区知春路 132 号中发电子大厦 3097 号

TEL: 010-81159046 82615020 13501189838 FAX: 010-62543996

上海分公司：上海市北京东路 668 号上海赛格电子市场 D125 号

TEL: 021-28311762 56703037 13701955389 FAX: 021-56703037

西安分公司：西安高新开发区 20 所(中国电子科技集团导航技术研究所)

西安劳动南路 88 号电子商城二楼 D23 号

TEL: 029-81022619 13072977981 FAX:029-88789382