ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

AC/DC SWITCHING POWER SUPPLY
SINGLE CHANNEL OUTPUT
100 WATTS
UNIVERSAL INPUT

ESS100 *SERIES*

RoHS

General Description

Features

1. Smaller than competitors by 15-20%
2. Operating temp shows full load at 50° C (122° F), can operate at temperatures up to 71°C
3. Five-year guarantee
4. Over-current protection
5. Over-voltage protection
6. Remote Sensing (sense line) available
7. Can meet medical and appliance standards
8. Low leakage < 500μA

Application

Broad needs

Input

Input Voltage:		AC100~240V
Input Voltage Range:		AC85~264V (DC110~350V)
Frequency:		50/60Hz
Frequency Range:		47~440Hz
Phase:		Single
Inrush Current:	*1	14A at 100V; 28A at 200V

ETA USA
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037
Phone: 1-800-ETA-POWR, (408) 778-2793 Fax: (408) 779-2753
Visit us at: www.e ta-usa.com
email at: sales@eta-usa.com

Output Characteristic	Unit	Models						
		ESS100-3.3	ESS100-05	ESS100-12	ESS100-15	ESS100-24	ESS100-36	ESS100-48
Output Voltage	Vdc	3.3	5.0	12	15	24	36	48
Output Current	A	20	20	8.5	7	4.5	2.8	2.1
Ripple &Noise(max)	mVpp	120	120	150	150	150	250	250
Voltage adjust range	V	2.97~3.63	4.50~5.50	10.8~13.2	13.5~16.5	21.6~26.4	32.4~39.6	43.2~52.8
Rise time	mS	30 mS Typ.						
Hold up time	mS	30mS max						
Regulation								
a. Line Regulation [max]	mV	20	20	48	60	96	144	192
b. Load Regulation	mV	40	40	100	120	150	240	240
c. Temperature Coefficient	0 to 50°C	50	50	120	150	240	360	480
	-10 to 0°C	60	60	150	180	290	450	600
d. Drift(maximum)	mV	20	20	48	60	96	144	192

Efficiency *1	%	**At AC100V 79%-87% At AC 200V 82%-89%**
Power Factor *1		**0.89-0.99**

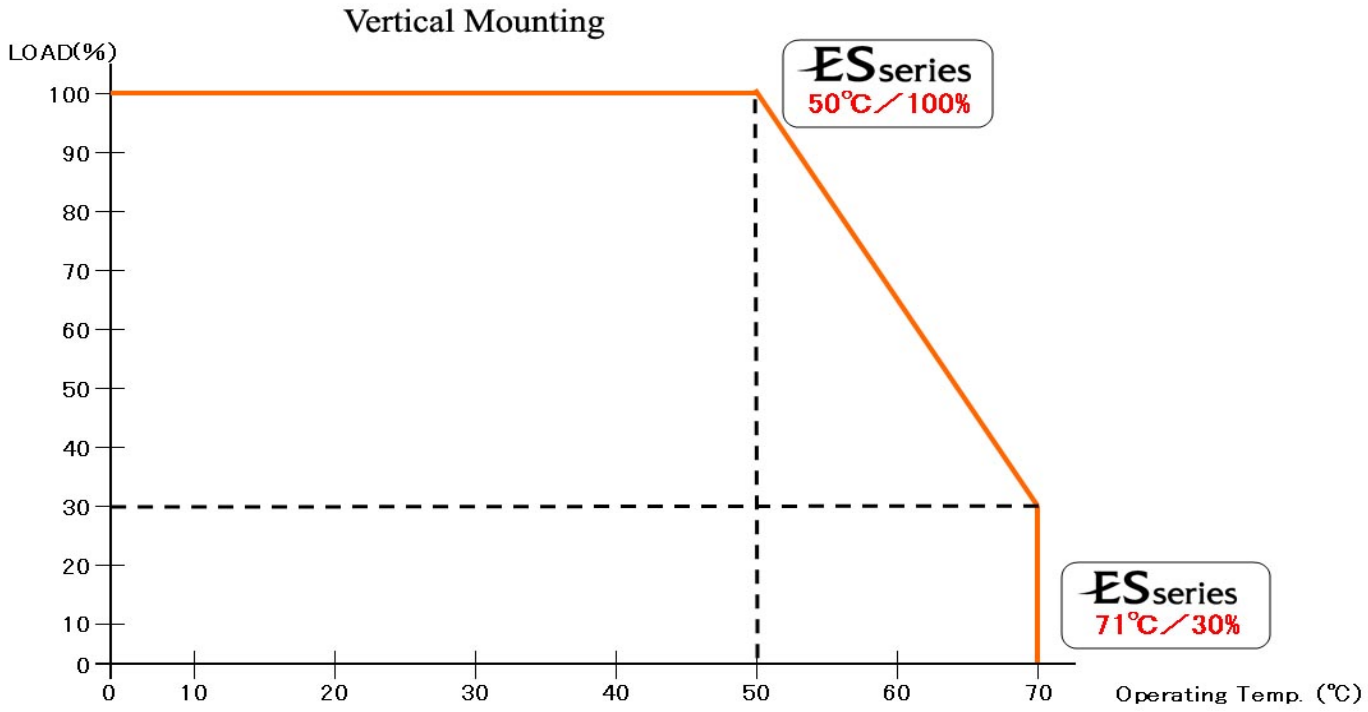
ETA USA
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037
Phone: 1-800-ETA-POWR, (408) 778-2793 Fax: (408) 779-2753
Visit us at: www.e ta-usa.com
email at: sales@eta-usa.com

Environmental Specification	
Operating Temperature*3	-10 to +71 °C
Operating Humidity	20~90% RH
Storage Temperature	-30 to +85 °C
Storage Humidity	10~95% RH [non-condensing]
Withstanding Voltage	Primary-Secondary AC3,000V for 1minute Primary-Frame Ground AC2,500V for 1minute Secondary-Frame Ground AC1,000V for 1minute *Sensory Current: Secondary Frame Ground (20[mA])/Others (10[mA])
Isolation Resistance	Primary-Secondary-Frame Ground 100MΩ(minimum) by DC500V insulation tester
Vibration	5~10Hz:10mm double amplitude,10-55Hz:19.6m/s^2,30 minute cycle each along X,Y,Z axes(non-operating)
Shock	196 m/s^2 on x,y,z axis
Cooling	Convection
Leakage current	500µA
MTBF	>190,000 hours
Environmental Agencies	
Line Conducted Noise [EMI]	Built to meet FCC part 15 class B, VCCI-B, CISPR22-B, EN55022-B
Line Harmonic Distortion/Current	IEC61000-3-2 Compliant
Safety	CAN/CSA C22.2 No.60950-1-03 Approved CAN/CSA C22.2 No.107.1-01 Approved EN60950-1:2001+A11:2004 Approved CE Marking：EN60950-1:2001+A11:2004(LVD) Declared
Function/Protection	
Over current Protection	Operate at 105% min of rated current, automatic return
Over voltage Protection	Input reentry at shutdown
Remote Sense	Available
Remote Control	Applicable by Option(External signal input is required)
Series Operation	Available
Parallel Operation	Not Available (N+1 Operation is Applicable by Diode-OR)
Driving Indicator	Power Source on LED indication; Green
Mechanical	
Dimension [mm]	33 W × 146.5 L × 81.5H
Weight [g](typical)	420

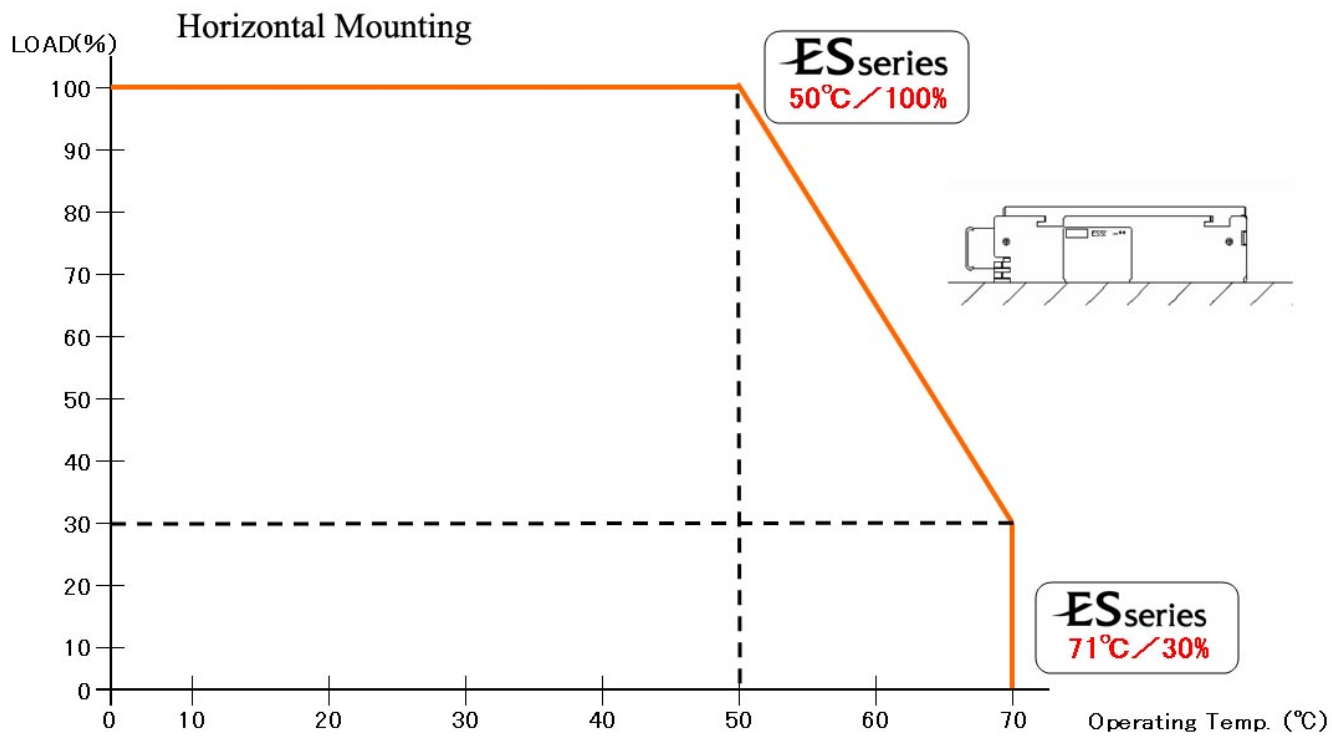
Conditions:
*1 Rated input and Rated output
*2 at Output current quick change 25% to 75%
*3 At 100% load (convection cooling)

ETA USA
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037
Phone: 1-800-ETA-POWR, (408) 778-2793 Fax: (408) 779-2753
Visit us at: www.e ta-usa.com
email at: sales@eta-usa.com

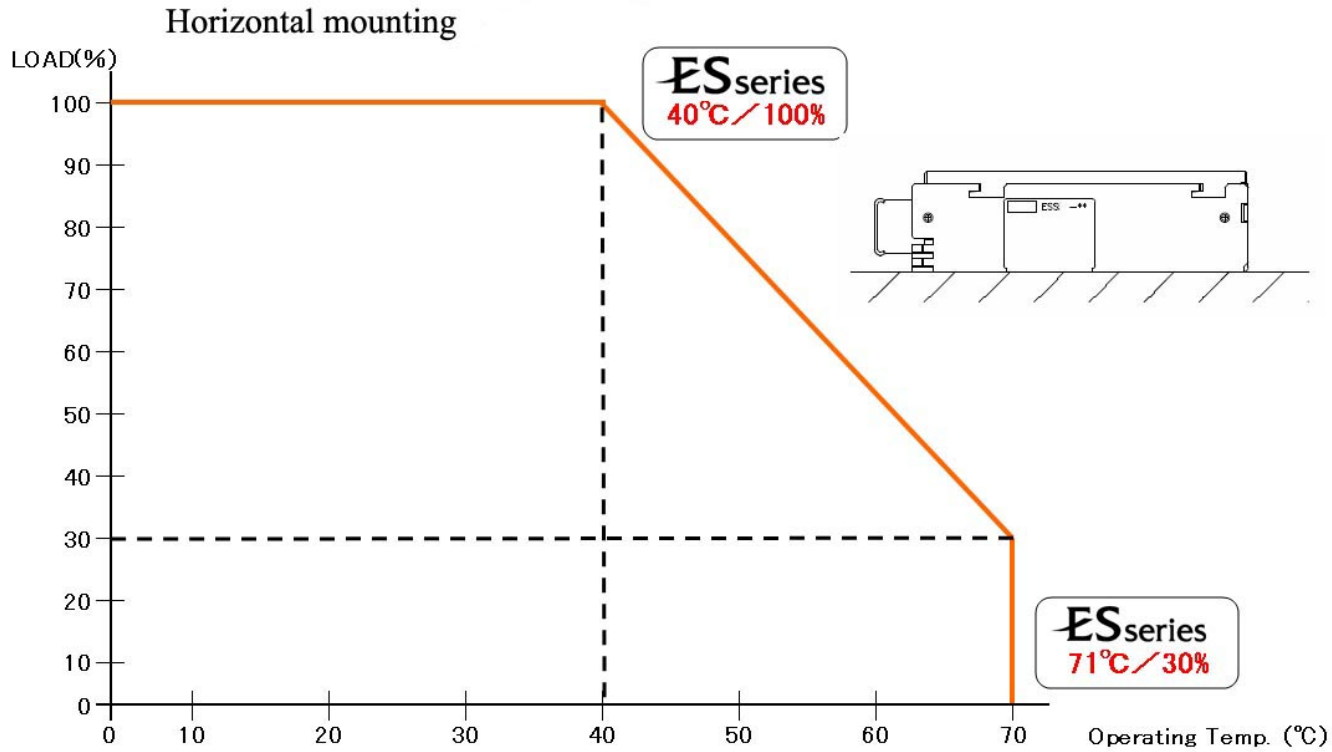
Derating Curves



Horizontal Mounting 3.3 and 5V



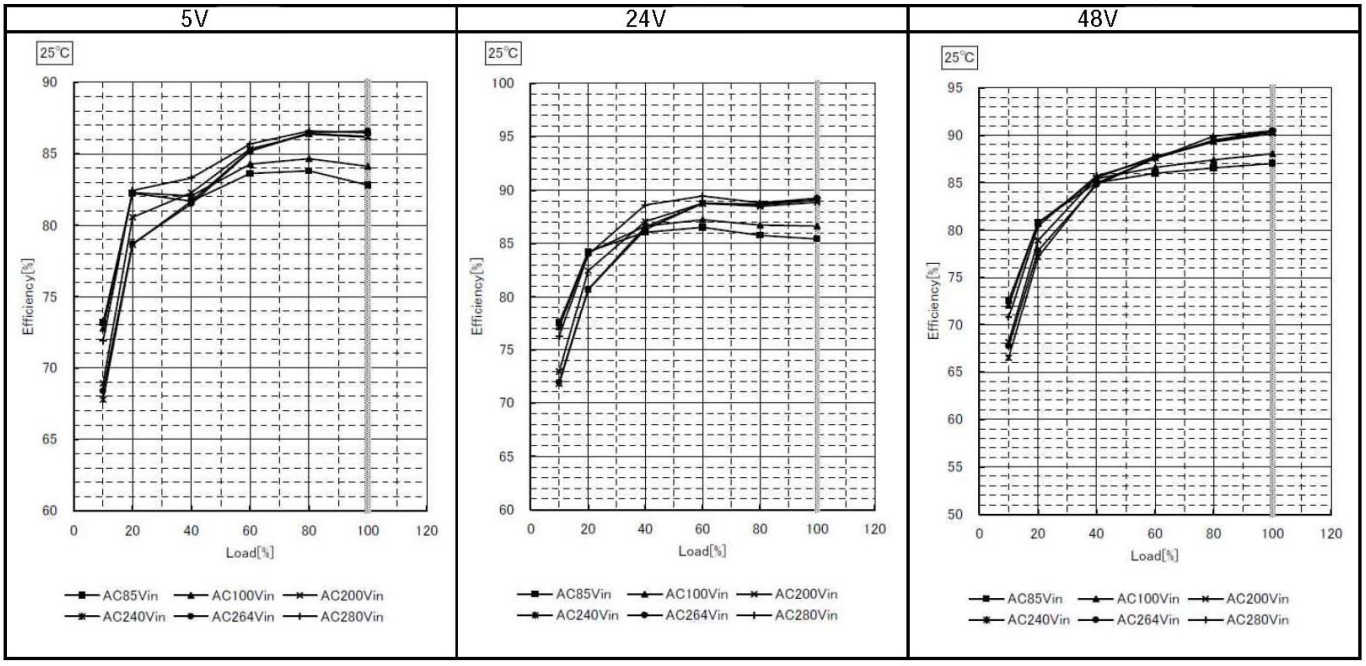
Horizontal Mounting 12 to 48V



ETA USA
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037
Phone: 1-800-ETA-POWR, (408) 778-2793 Fax: (408) 779-2753
Visit us at: www.eta-usa.com
email at: sales@eta-usa.com

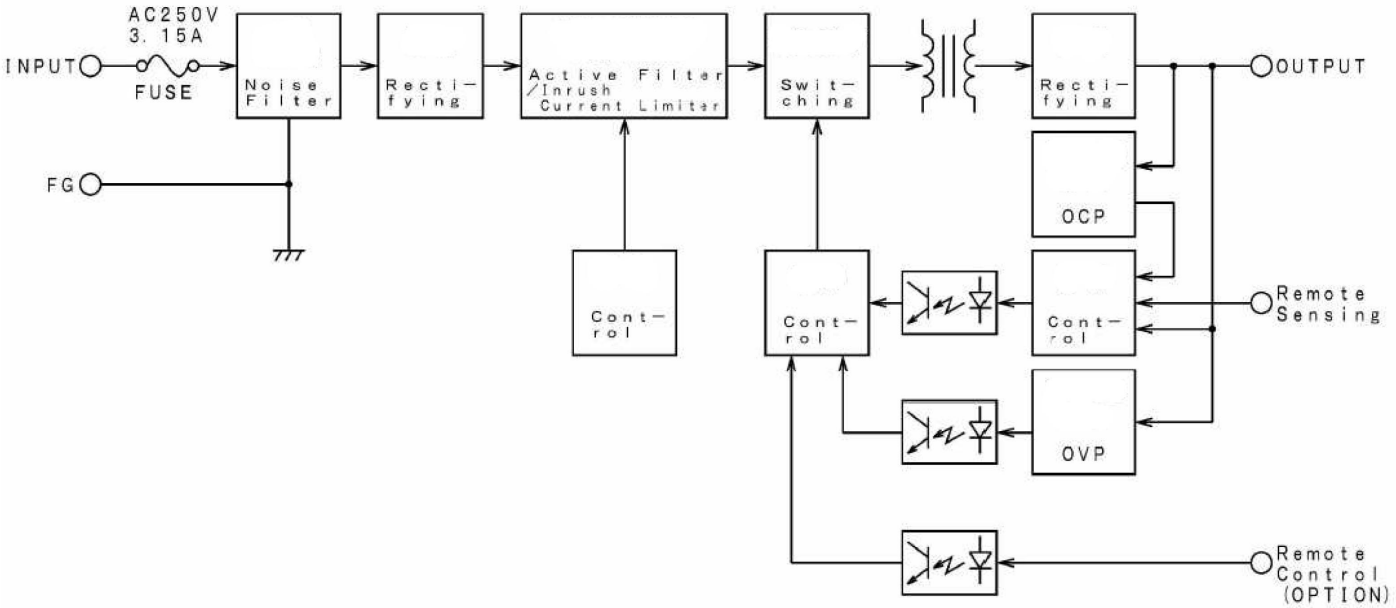
Efficiency Curves

■ESS100-**

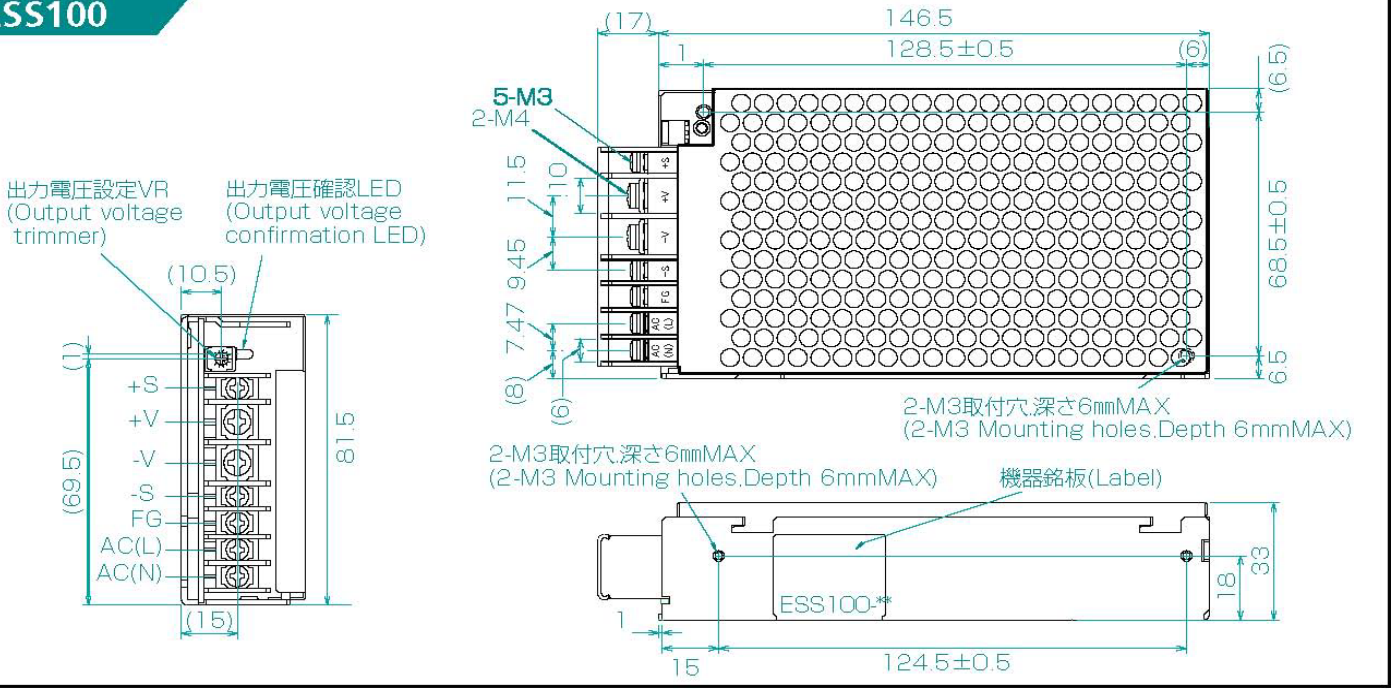


ETA USA
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037
Phone: 1-800-ETA-POWR, (408) 778-2793 Fax: (408) 779-2753
Visit us at: www.e ta-usa.com
email at: sales@eta-usa.com

Block Diagram



ETA USA
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037
Phone: 1-800-ETA-POWR, (408) 778-2793 Fax: (408) 779-2753
Visit us at: www.e ta-usa.com
email at: sales@eta-usa.com

Mechanical Drawings

ESS100