



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

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

ESS30 SERIES



ES Series

ESS15 15W ESS75 75W
ESS30 30W ESS100 100W
ESS50 50W ESS150 150W
Closed Frame



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. Can meet medical and appliance standards
7. Low leakage < 500µA

Application

Broad needs

Input

Input Voltage:	AC100~240V
Input Voltage Range:	AC85~264V; (DC110~370V) with 70V derating possibility
Frequency:	50/60Hz
Frequency Range:	47~440 Hz
Phase:	Single
Inrush Current:	*1 14A at 100V; 28 at 200V



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

Output Characteristic		Models						
		Unit	ESS30-3.3	ESS30-05	ESS30-12	ESS30-15	ESS30-24	ESS30-36
Output Voltage	V _{dc}	3.3	5.0	12	15	24	36	48
Output Current	A	6	6	2.5	2	1.3	0.8	0.65
Ripple & Noise(max)	mV _{pp}	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	20mS Typ.						
Hold up time	mS	20mS Typ.						
Regulation								
a. Line Regulation [max]	mV	30	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 73%-88.5% At AC 200V 73.5%-90.5%						
Power Factor *1		No power factor needed						



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

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 (no condensation)
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	>300,000 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	N/A
Safety	UL60950-1 1st ed. , CAN/CSA C22.2 No.60950-1-03 Approved UL508 17th ed. , 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	Not Available
Remote Control	Not Available
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]	33W x 98L x 68H
Weight [g] (typical)	220g

Conditions:

*1 Rated input and Rated output

*2 at Output current quick change 25% to 75%

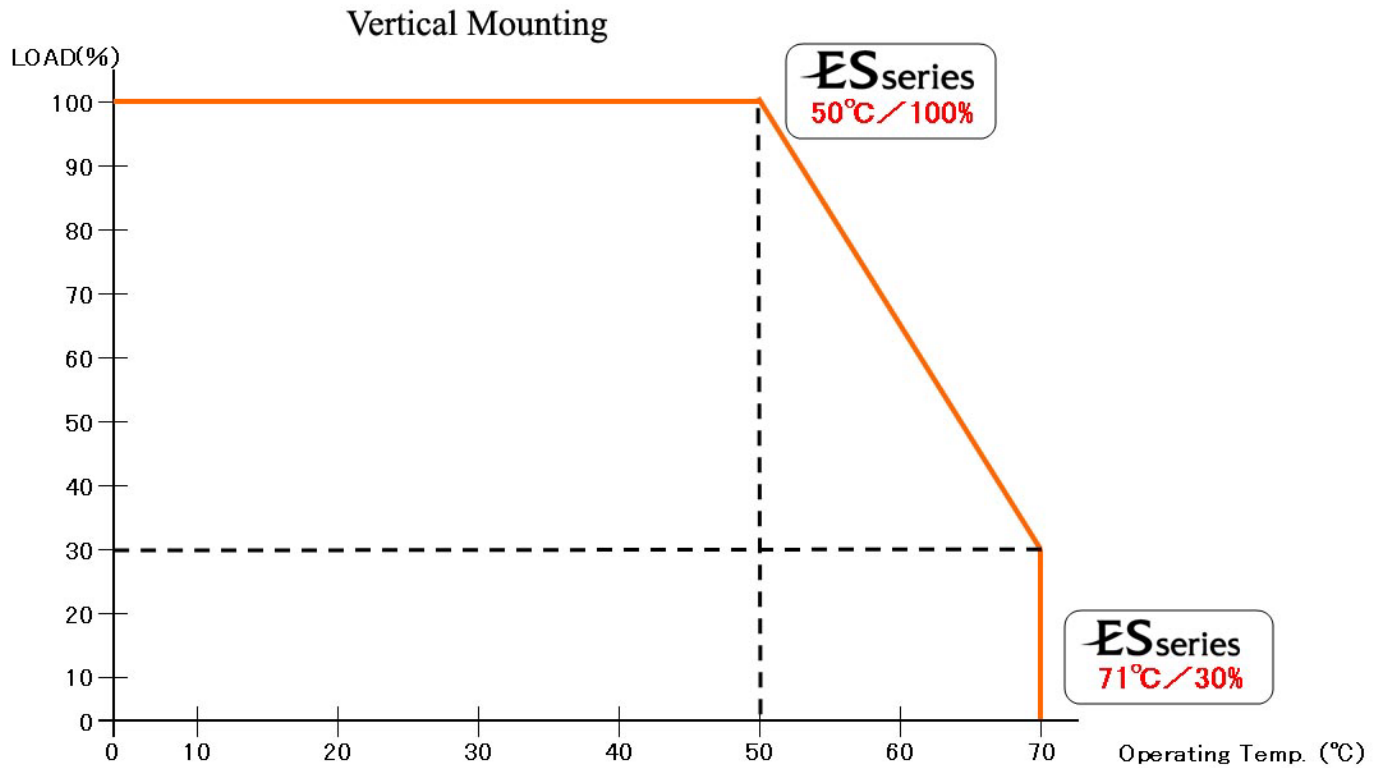
*3 At 100% load (convection cooling)



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

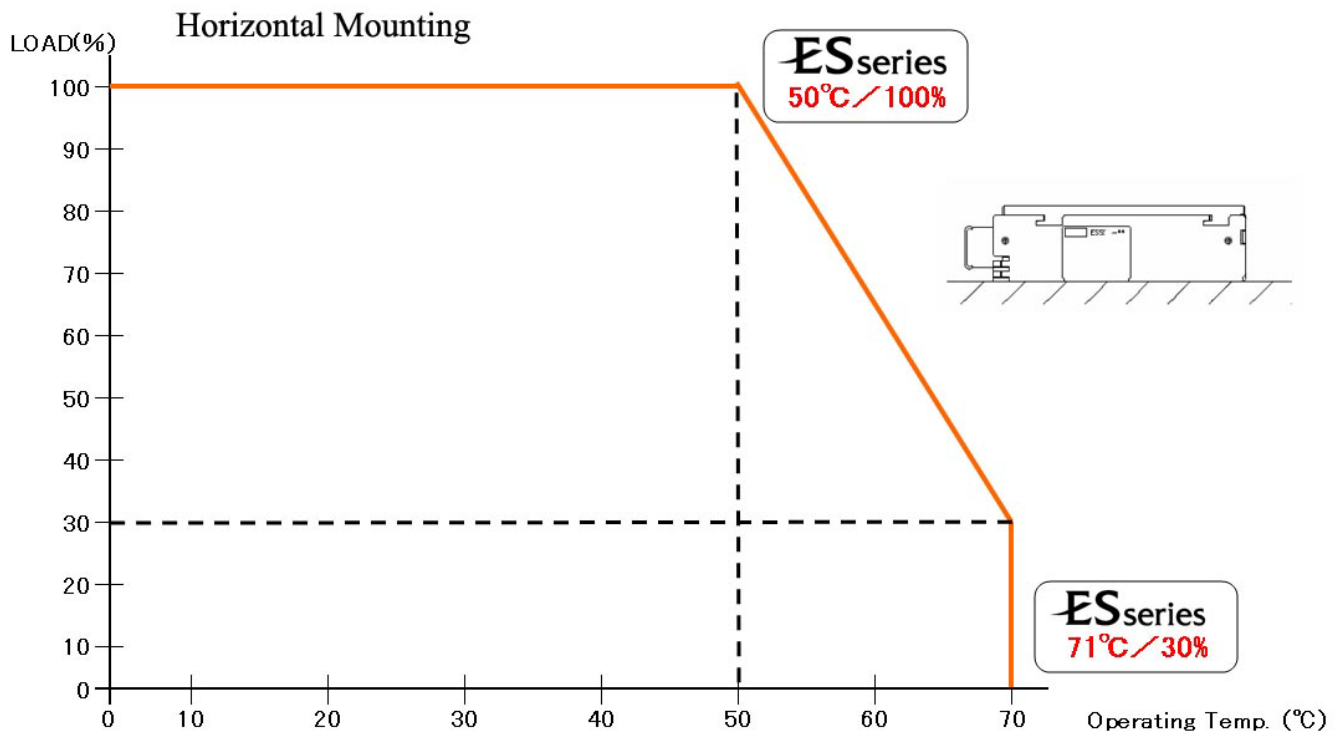
Derating Curves





ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

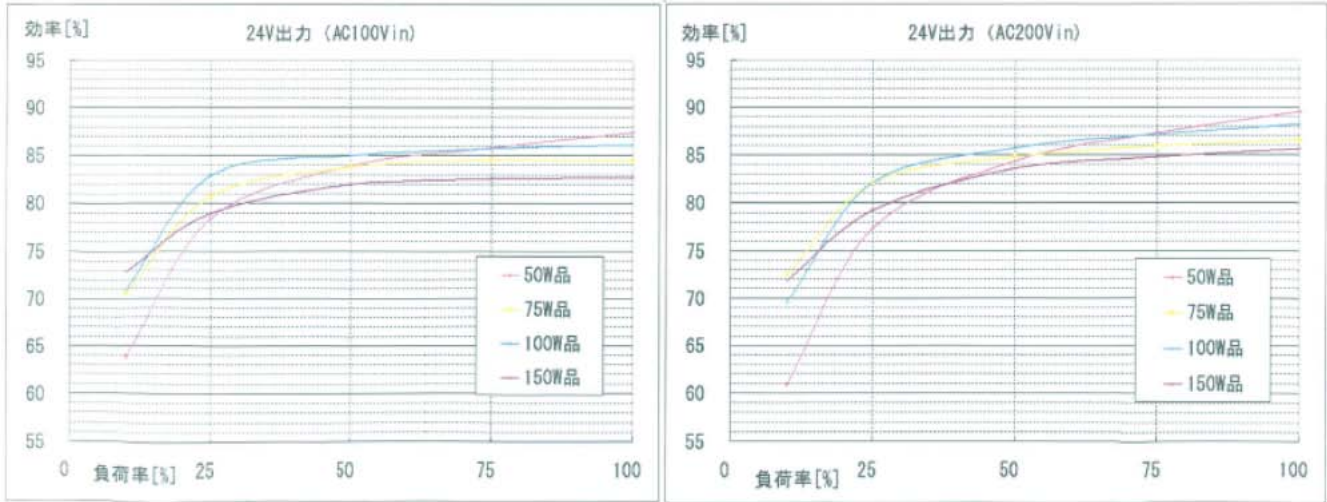




ETA-USA

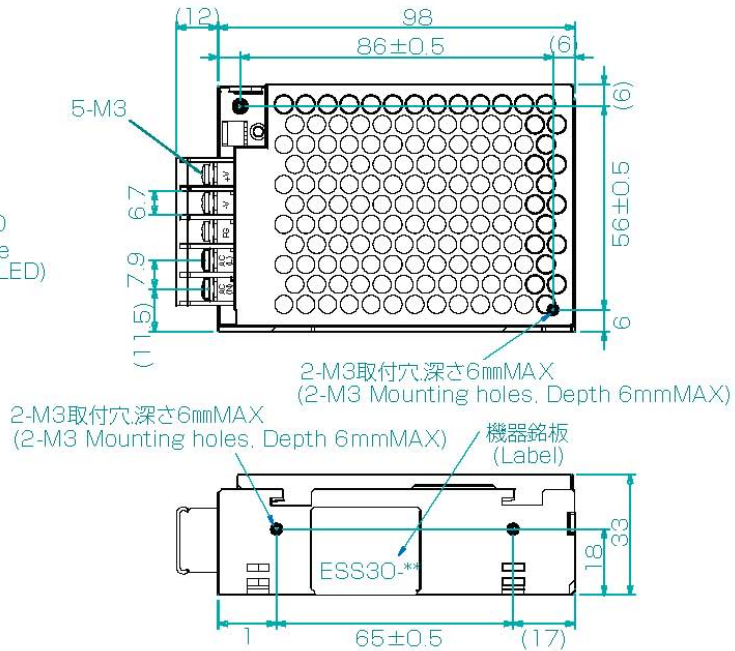
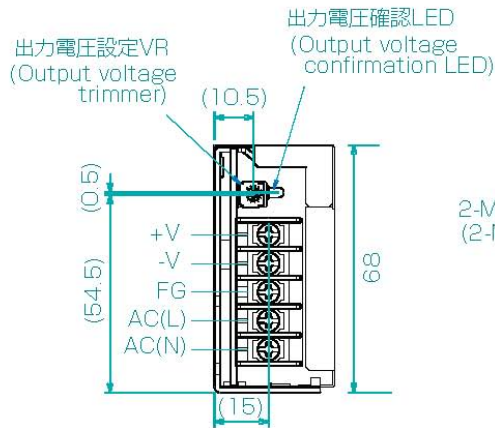
HIGH QUALITY SWITCHING POWER SUPPLIES

Efficiency Curves



Mechanical Drawing

ESS 30





ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

Block Diagram

