ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

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

ESS100 *SERIES*

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

Options

Remote Control optional

Remote sensing available

DIN Rail available

"-J" Molex connector option (except 3.3V/5V)

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

Note: If you would like to buy a wire harness with this power supply, you may either order the wire harness through Molex or directly through ETA-USA. Please observe the following table:

ETA POWER SUPPLY	INPUT HOUSING -MOLEX	OUTPUT HOUSING -MOLEX	TERMINAL	ETA WIRE HARNESS # ; input/output
ESS100-3.3J ESS100-05J ESS100-12J ESS100-15J ESS100-24J ESS100-36J ESS100-48J	0010-63-3044- (5199-0)	0009-50-1063-(5196-06)	5194PBT(L)	WH-ESS100-J; 40cm WIRE HARNESS

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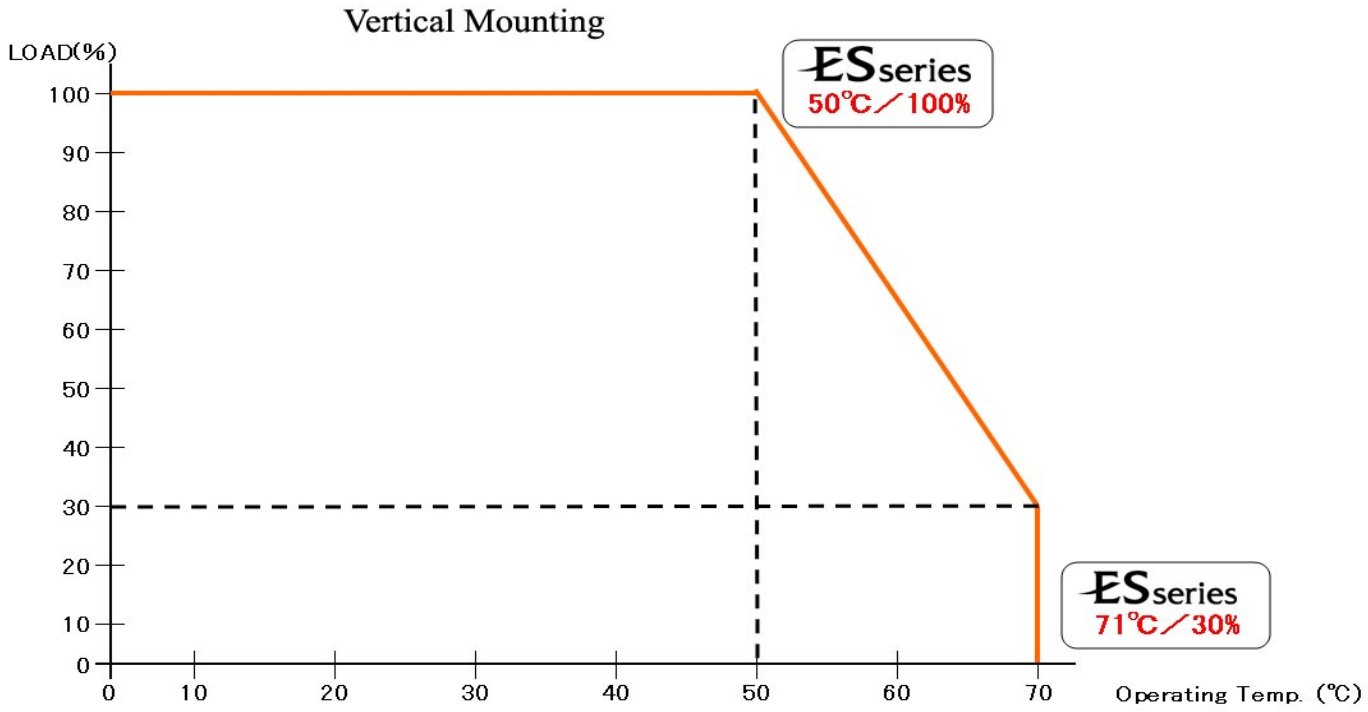
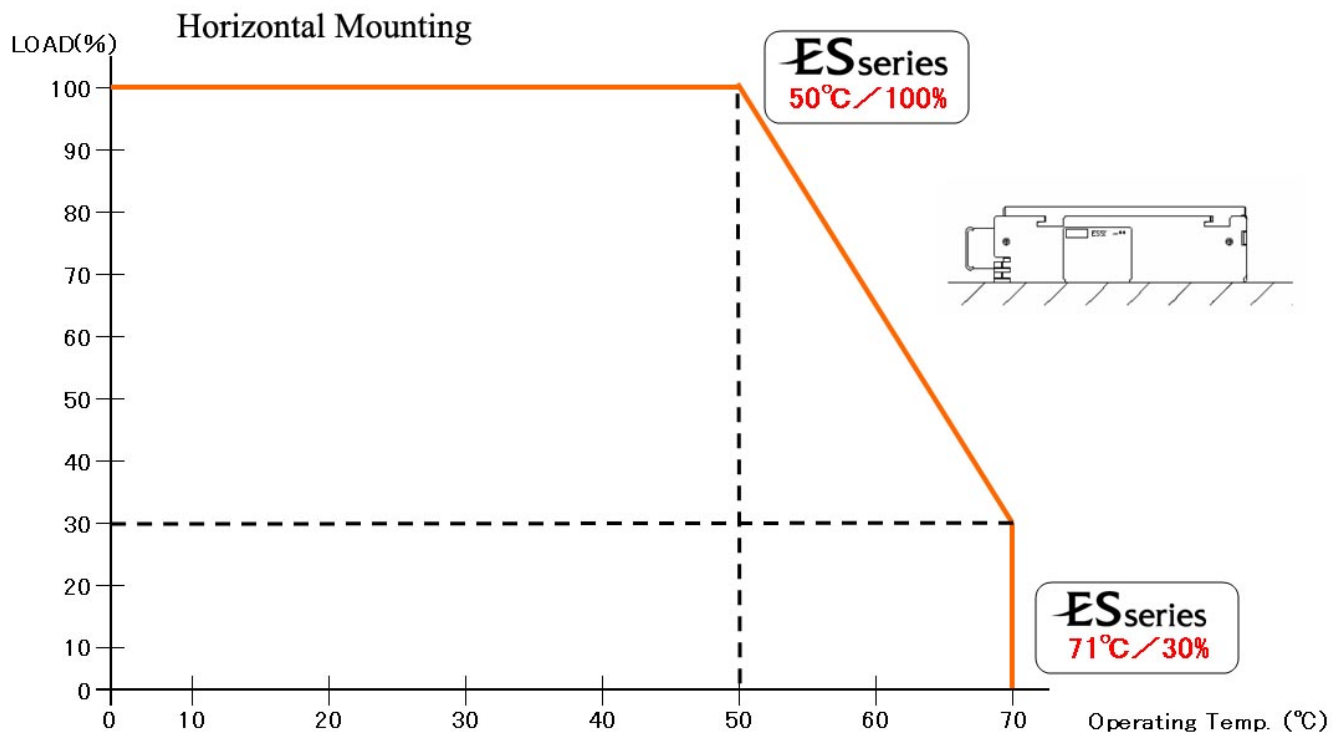
Environmental Specification	
Operating Temperature*3	-10 to +71 °C
Operating Humidity	20~90% RH
Storage Temperature	-30 to +85 °C
Storage Humidity	10~95% RH [non-condensing]
Withstanding Voltage	Primary-Secondary AC3,000V for 1minute Primary-Frame Ground AC2,500V for 1minute Secondary-Frame Ground AC1,000V 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	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	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)

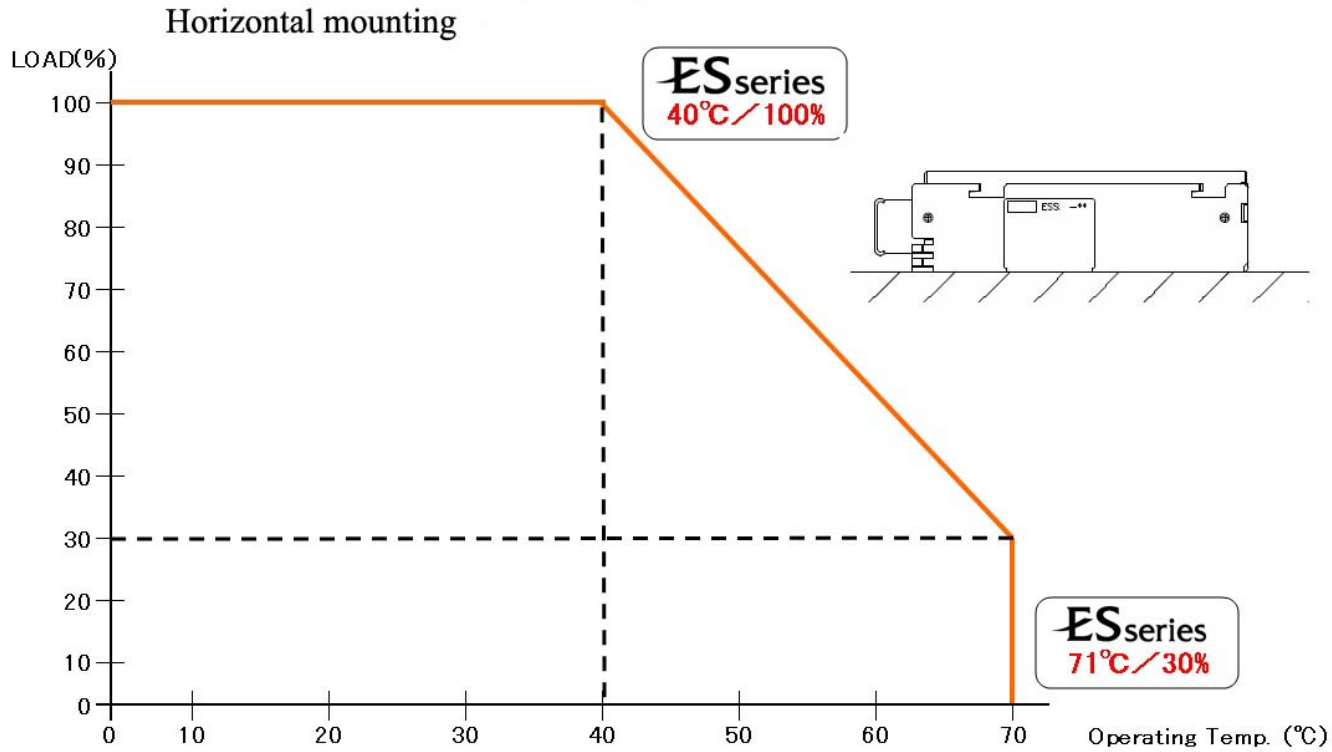
Derating Curves



Horizontal Mounting 3.3 and 5V



Horizontal Mounting 12 to 48V



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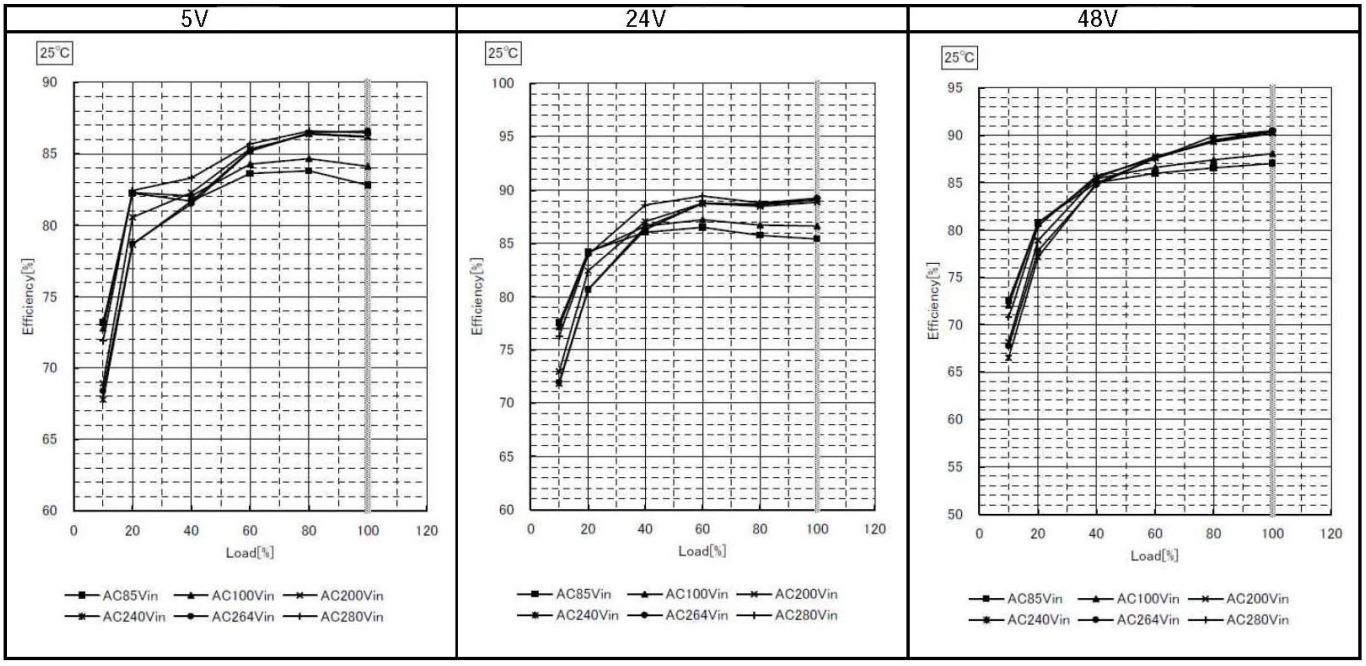
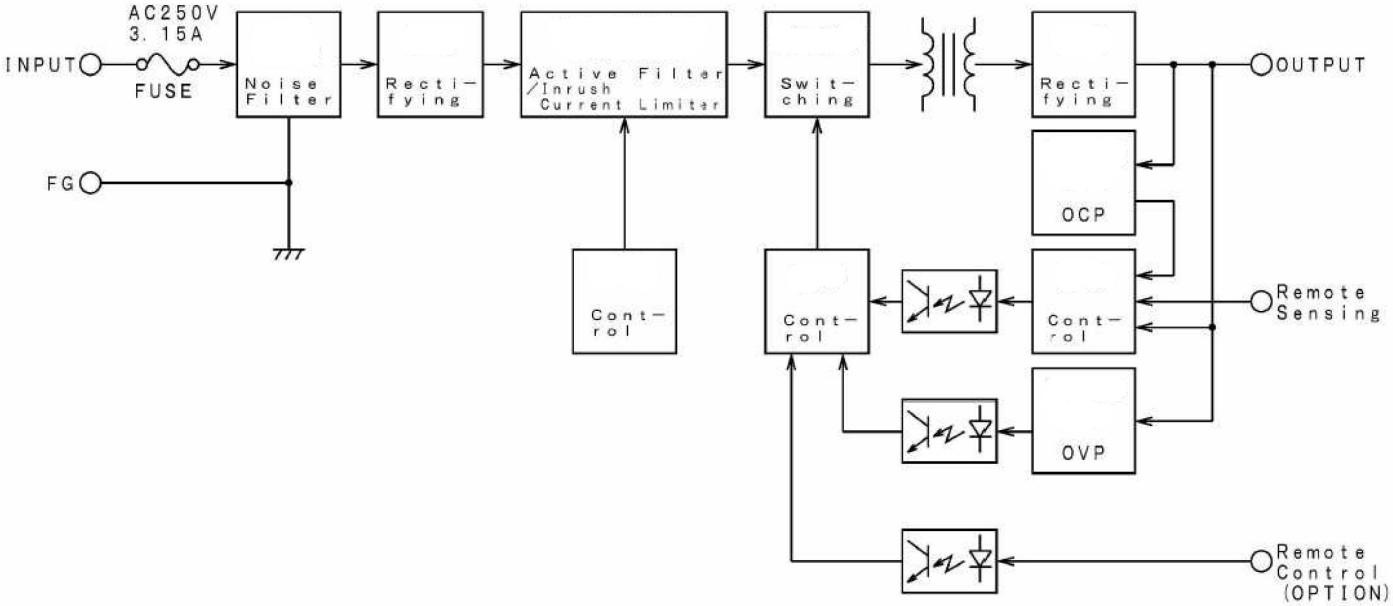
Efficiency Curves

■ESS100-**



Block Diagram



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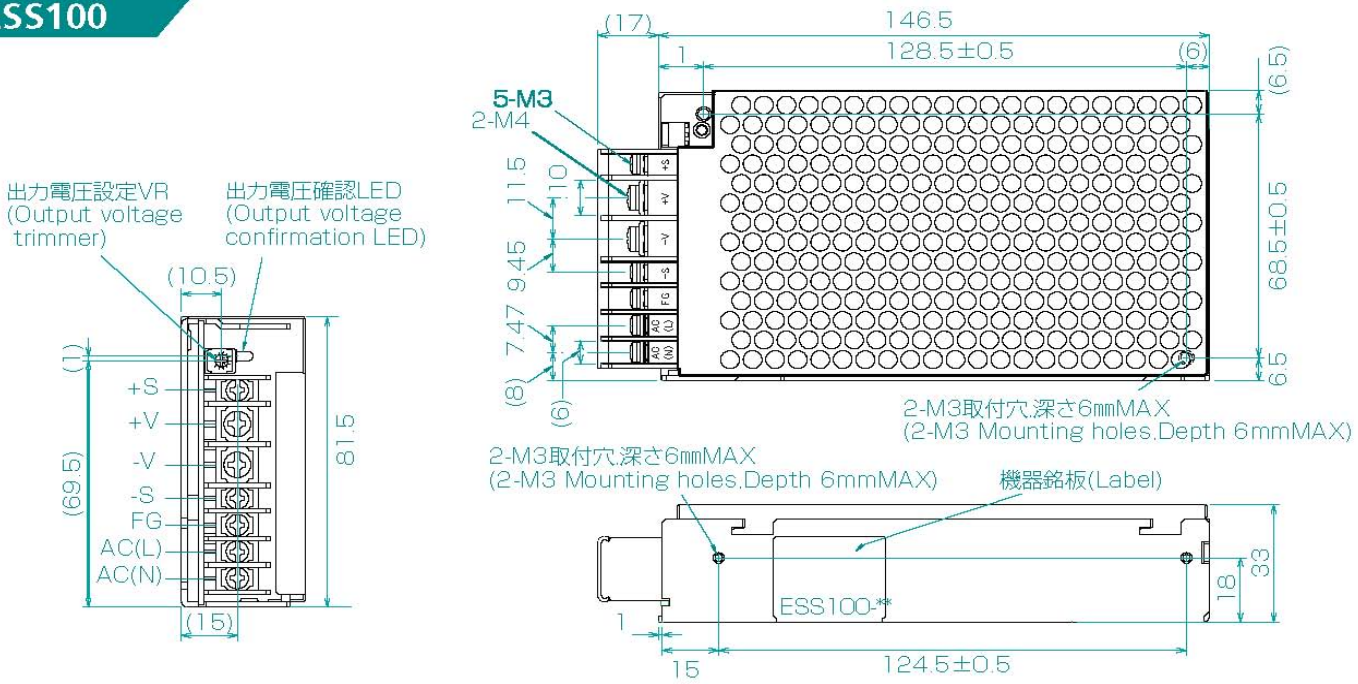
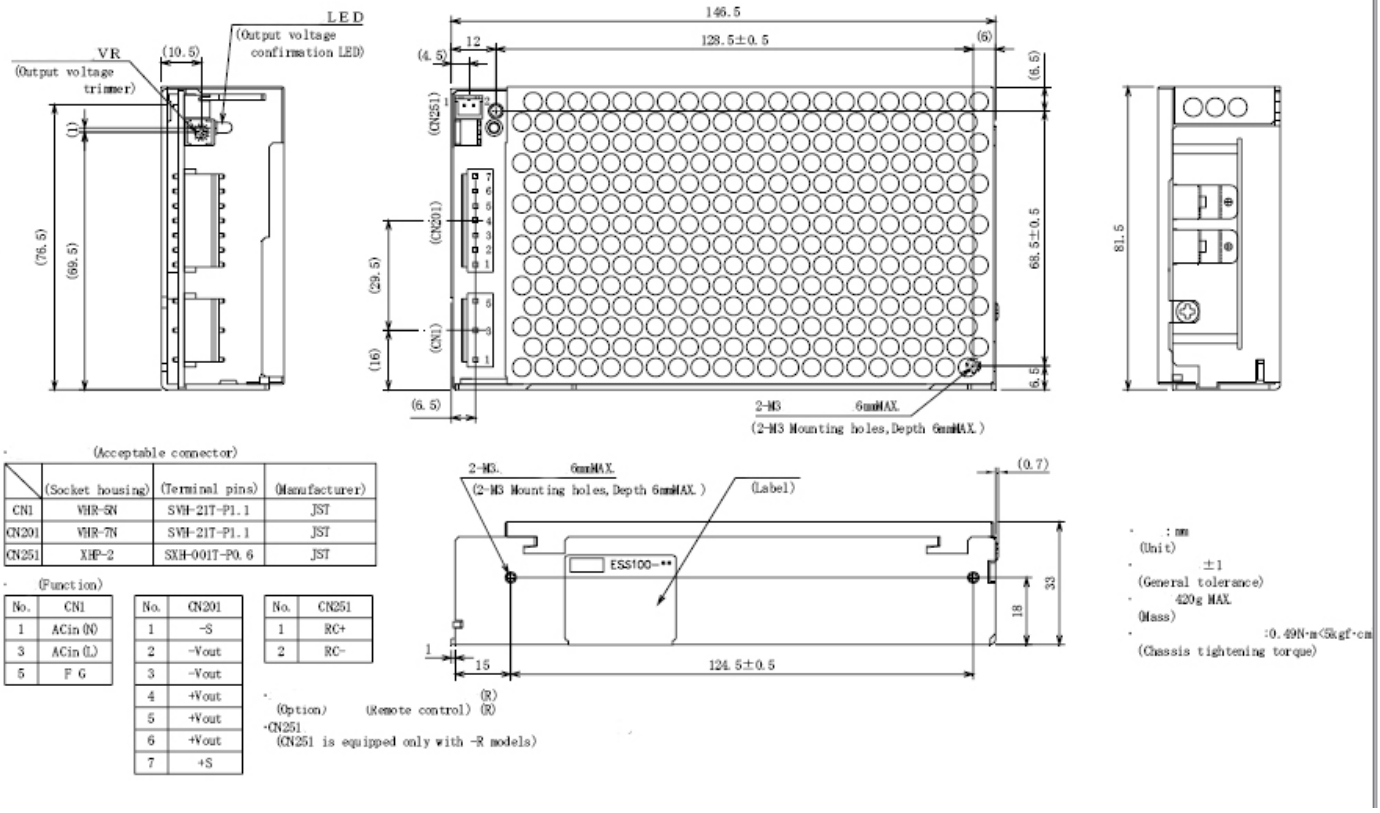
Mechanical Drawings

ESS100



"-J" connector



- (Acceptable connector)

	(Socket housing)	(Terminal pins)	(Manufacturer)
CN1	VHR-5N	SVH-21T-P1.1	JST
CN201	VHR-7N	SVH-21T-P1.1	JST
CN251	XHP-2	SXH-001T-P0.6	JST

- (Function)

No.	CN1
1	ACin (N)
3	ACin (L)
5	F G

No.	CN201
1	-S
2	-Vout
3	-Vout
4	+Vout
5	+Vout
6	+Vout
7	+S

No.	CN251
1	RC+
2	RC-

- (Option) (Remote control) (R)

-CN251
(CN251 is equipped only with -R models)

- : mm
(Unit)
- ±1
(General tolerance)
- 420g MAX.
(Mass)
- :0.49N·m(5kgf·cm
(Chassis tightening torque)

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ETA-USA:

ESS100-24 ESS100-15 ESS100-12 ESS100-48 ESS100-36 ESS100-05 ESS100-3.3