



# ETD\*\*SC300

DC/DC Converter  
Single Output

# 100W

The revolutionary new generation of DC-DC converters, setting the standard in best-in-class topology! Highly efficient at 95%, with minimised conversion loss. Its ultra compact size reflects a super-high density. Available in 100W, 300W and 600W. Easy mounting and connecting (plug & run), no need for auxiliary circuit design (cost & time saving), fan-less cooling = noiseless (silent) running.



### Features

Wide input voltage range: 200-400V  
High efficiency: +94%  
Superb reliability  
Output voltage: 8 different single outputs available  
adjustable +/- 10%

### Mechanical features

Dimensions (WxLxH): 56x86x30mm  
Weight: 200g  
Connector: input JST  
output M4 screw terminal

### Possible applications

Process control  
Office equipment  
Computer peripherals  
Telecommunications  
Industrial electronics&machines  
Transport/Automotive  
Lab & Test Equipment  
Air & Space

### Control features

Over voltage protection: integrated  
Over current protection: integrated

**Warranty:** 2 years

### Standards

Safety Approvals: UL60950-1; C-UL: (CSA60950-1), EN 60950-1

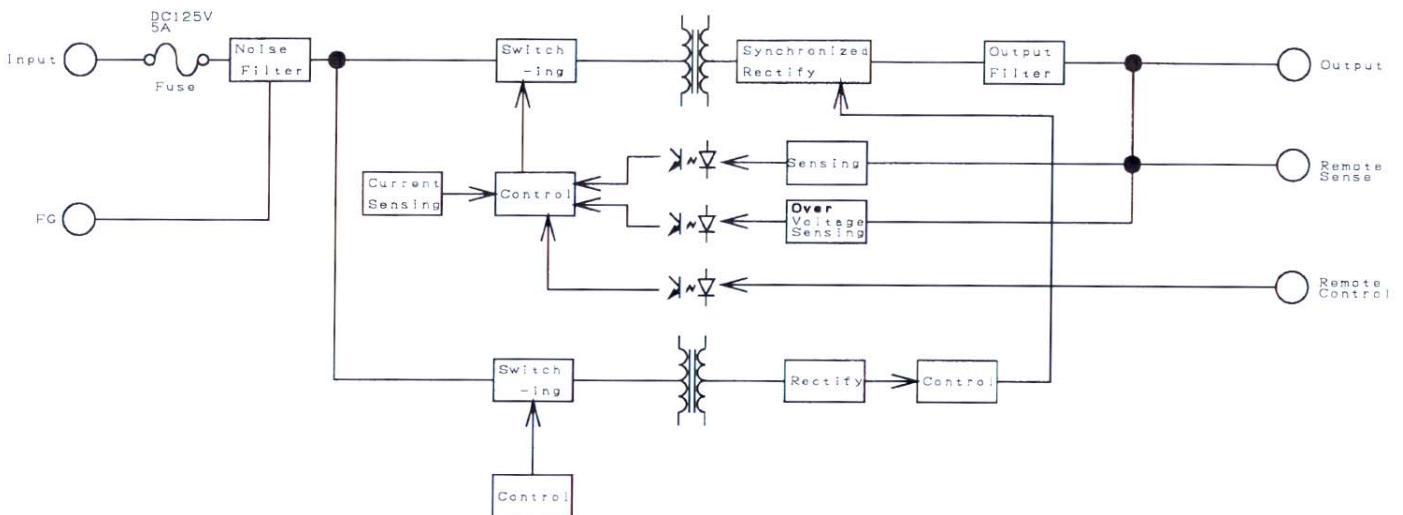


<b>ETD**SC300 100W</b>	ETD 1.8 SC300	ETD 2.5 SC300	ETD 3.3 SC300	ETD 05 SC300	ETD 12 SC300	ETD 15 SC300	ETD 24 SC300	ETD 48 SC300
<b>Input Characteristics</b>								
Rated Voltage [V]	DC300							
Allowable input voltage range [V]	DC200 ~ 400							DC 220~400
Inrush Current [A] Typ. *1	-----							
Efficiency [%] Typ. *2	90.5	92.5	92.2	94.5	94.5	94.5	94.5	94.5
<b>Output Characteristic</b>								
Rated Output Voltage [V]	1.8	2.5	3.3	5	12	15	24	48
Rated Output Current [A]	25	25	25	20	8.4	6.7	4.2	2.0
Output Voltage variable range	+/- 10%							
Ripple and Noise [mVp-p]Max. *3	150	150	150	150	220	250	340	580
<b>Regulation</b>								
a. Static Input Regulation[Mv]Max.	15	20	26	40	100	120	120	120
b. Static Load Regulation[mV]Max.	16	23	30	45	110	135	135	135
c. Temp. reg. [mV/ C°] *4	0.54	0.75	1.0	1.5	3.6	4.5	7.5	15
d. Drift [mV]Max. *5	24	28	32	32	75	90	135	260
e. Dynamic Load Reg.[mV] Typ. *6	200	200	250	250	600	750	1200	1200
Rise-Up Time	500[mS]Typ. Under the rated Input/Output conditions							
Hold-Up Time	--							
<b>Functions</b>								
Over Current Protection ( <i>Operates at rated current x 105% or more [A]</i> )	Output is shut down when voltage drops to appr. 90% of rated output voltage. Turn on 1 minute after shut down to restart.							
Over voltage Protection ( <i>Operates at rated voltage x 115% or more [V]</i> )	Turn on 1 minute after shut down to restart.							
Remote Sensing *7	Available (connect + and – or the sensing terminal to + and – or the load wire)							
Remote Control *8	Available (5-12 [V] applied between RC terminals, out off, open or 0[V], output on)							
Power Fail	N.A							
Power Factor Correction	N.A.							
<b>Environmental</b>								
Operating Temperature	-10~50[°C] ,no heat impact							
Operating Humidity	20 ~90[%RH], no condensation							
Storage Temperature	-20 ~ 85[°C], no heat impact							
Storage Humidity	20 ~ 90[%RH], no condensation							
Withstanding Voltage	Primary-Secondary: 3000Vac 1min. (at faradic current 20[mA]), no fault Primary-Chassis: 2000Vac 1min. (at faradic current 20[mA]), no fault Secondary-Chassis: 1000Vac 1min. (at faradic current 20[mA]), no fault							
Insulation Resistance	Each 100[MΩ]Min. by DC500[V] megger							
Vibration Proof	5 ~ 10[Hz] total amplitude 10[mmp-p], 10 ~ 55[Hz] Acceleration 19.6 [m/S <sup>2</sup> ] Durable with amplitude each along X, Y and Z axes (not operating)							
reference MTBF [H]	270'000	270'000	270'000	270'000	264'000	264'000	289'000	288'000
Reference – frequency [kHz] typ.	110 Fix.	130 Fix.	130 Fix.	130 Fix.	160 Fix.	160 Fix.	130 Fix.	100 Fix.
Shock proof	Impact strength 196 [m/S <sup>2</sup> ]							
Cooling	Natural Air Cooling							
Appearance	Open frame							
Weight (typical)	200g							

## Notes to Specifications

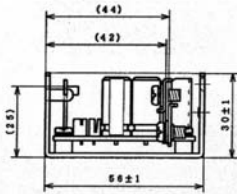
- \*1 Varies depending on the output impedance of the input power, input connection wire, and power circuit impedance
- \*2 At rated input and output
- \*3 Measured by a bayonet probe at the end of 150 (mm) long wires terminated with a 100 [ $\mu$ F] film capacitor at 100 [ MHz ] oscilloscope not to affect exotic noise.
- \*4 Within the operating ambient temperature
- \*5 For 8 hour period after 1 hour from when the power supply ist turned on, at rated input / output.
- \*6 When output current is changed between 25% and 75% of rated output current rapidly at rated output.
- \*7 Use of proper length wire is necessary between power supply and load. Line drops respectively less than 0.1V (1.8 V output), 0.15 V (2.5V output), 0.2V (3.3V output) and 0.3 V (5V/12V/24V/48V output).
- \*8 Inflow current when voltage is applied to the RC terminal is 10 [ mA ] max.

## Block Diagram:



Dimensions:

CN1	VHR-5N	SVH-21T-P1.1
CN2	PHR-2	SPH-001T-P0.5S
CN3	EHR-2	SEH-001T-P0.6



No.	CN1
1	+Vin
3	-Vin
6	F G

No.	CN2
1	-S
2	+S

No.	CN3
1	RC+
2	RCG

