# SNDHS50A

SNDH S **50** Α 05





1) Series name 2) Single output 3) Output wattage 4) A: DC60-160V ⑤Output voltage

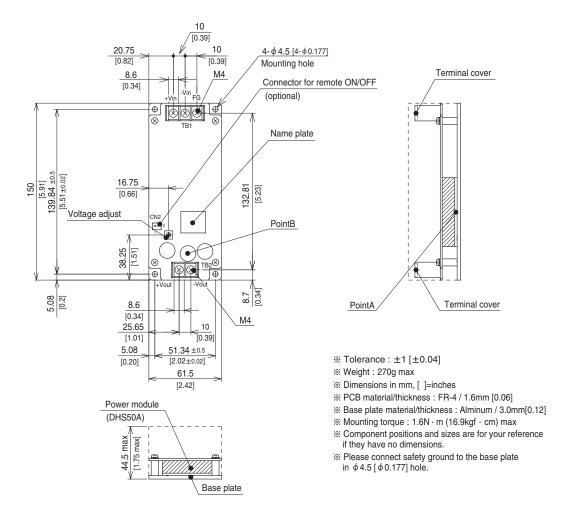
MODEL	SNDHS50A05	SNDHS50A12	SNDHS50A15	SNDHS50A24
MAX OUTPUT WATTAGE[W]	50.0	50.4	51.0	50.4
DC OUTPUT	5V 10A	12V 4.2A	15V 3.4A	24V 2.1A

### **SPECIFICATIONS**

	MODEL		SNDHS50A05	SNDHS50A12	SNDHS50A15	SNDHS50A24		
	VOLTAGE[V]		DC60 - 160					
INPUT	CURRENT[A]	*1	0.55typ	0.55typ	0.55typ	0.55typ		
NPUT   CURRENT[A]	85.0typ	85.0typ						
INPUT  CURRENT[A]  EFFICIENCY[%]  VOLTAGE[V]  CURRENT[A]  LINE REGULATION[IN  LOAD REGULATION  RIPPLE[mVp-p]  TEMPERATURE REGULATION[mV]  DRIFT[mV]  START-UP TIME[ms]  OUTPUT VOLTAGE ADJUSTMENT R  OUTPUT VOLTAGE SETT  OVERCURRENT PROT  OVERVOLTAGE PROTECT  REMOTE SENSING  REMOTE ON/OFF (R  INPUT-OUTPUT  INPUT-FG  OUTPUT-FG  OUTPUT-FG  OPERATING TEMP, HUMID.AND AND AND AND AND AND AND AND AND AND		5	12	15	24			
	CURRENT[A]		10	4.2	3.4	2.1		
	LINE REGULATION[	mV]	10max	24max	30max	48max		
	LOAD REGULATION	[mV]	150max	100max	100max	100max		
		0 to +95℃ *2	80max	120max	120max	120max		
	RIPPLE[mVp-p]	-20 to 0°C *2	120max	150max	150max	150max		
		0 to 15% Load*2	160max	240max	240max	240max		
OUTDUT		0 to +95℃ *2	160max	200max	200max	200max		
OUTPUT	RIPPLE NOISE[mVp-p]	-20 to 0°C *2	250max	280max	280max	280max		
		0 to 15% Load*2	300max	300max	300max	300max		
	TEMPERATURE REGULATION(mV)	0 to +50°C	50max	120max	150max	240max		
I	TEMPERATURE REGULATION[MV]	-20 to +95℃	100max	240max	300max	480max		
	DRIFT[mV] *3		20max	40max	60max	90max		
	START-UP TIME[ms]		200max (DCIN 110V, Io=10	0%)		21.60 - 26.40		
	OUTPUT VOLTAGE ADJUSTMENT F	RANGE[V] *4	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40		
	OUTPUT VOLTAGE SET	TING[V]	5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96		
		ECTION	Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTEC	CTION[V]	6.30 - 7.60	13.90 - 17.55	17.25 - 21.75	27.60 - 34.80		
	REMOTE SENSING		None					
	REMOTE ON/OFF (R	(C) *5	Optional (Required external	power source)				
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff of	current = 15mA, DC500V 50N	IΩ min (20±15℃)			
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff of	current = 15mA, DC500V 50N	IΩ min (20±15℃)			
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)					
	OPERATING TEMP., HUMID. AND A	LTITUDE *6	-20 to +95°C (Aluminum base plate	of the power module), 20 - 95%RH (	Non condensing) (Refer to DERATING	G CURVE), 3,000m (10,000 feet) max		
ENVIDONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE	-20 to +95°C, 20 - 95%RH (I	Non condensing), 9,000m (3	0,000 feet) max			
ENVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3i	minutes period, 60minutes ea	ach along X, Y and Z axis			
	IMPACT		196.1m/s² (20G), 11ms, onc	e each along X, Y and Z axis	3			
CAEETV	AGENCY APPROVA	LS	UL60950-1, C-UL, EN60950	)-1				
SAFEII	CONDUCTED NOISE (at only	y DC input)	Complies with FCC-A, VCC	I-A, CISPR22-A, EN55011-A	, EN55022-A			
OTHERS	CASE SIZE/WEIGHT		61.5×44.5×150mm [2.42×	×1.75×5.91 inches] (W×H	X D) / 270g max			
OTHERS	COOLING METHOD		Conduction cooling (e.g. hea	at radiation from the aluminu	m base plate to the attached	heat sink)		

- At rated input(DC280V) and rated load.
- Ripple and ripple noise is measured by using measuring board with capacitor of 22 µ F at 150mm [5.91 inches] from output terminal. Refer to the instruction manual 3.2.
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
- Refer to the instruction manual 4.6. Please contact us about optional.
- Refer to the instruction manual 6.2.
- SNDHS-2





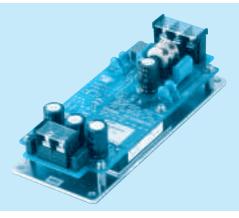
# SNDHS100A

SNDH S 100 Α 05



3





1) Series name 2) Single output 3) Output wattage 4) A: DC60-160V ⑤Output voltage

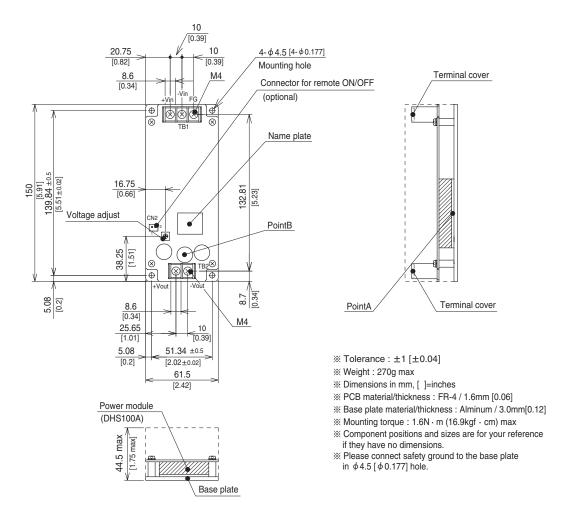
MODEL	SNDHS100A05	SNDHS100A12	SNDHS100A15	SNDHS100A24	
MAX OUTPUT WATTAGE[W]	100.0	100.8	100.5	100.8	
DC OUTPUT	5V 20A	12V 8.4A	15V 6.7A	24V 4.2A	

### **SPECIFICATIONS**

	MODEL		SNDHS100A05	SNDHS100A12	SNDHS100A15	SNDHS100A24			
	VOLTAGE[V]		DC60 - 160						
INPUT			1.1typ	1.1typ	1.1typ	1.1typ			
VOLTAGE[V]   DC60 - 160	87.0typ	87.0typ	87.0typ						
	VOLTAGE[V]  CURRENT[A]  EFFICIENCY[%]  VOLTAGE[V]  CURRENT[A]  LINE REGULATION[mV]  LOAD REGULATION[mV]  PUT  RIPPLE[mVp-p]  PUT  RIPPLE NOISE[mVp-p]  DRIFT[mV]  START-UP TIME[ms]  OUTPUT VOLTAGE SETTING[V]  OUTPUT VOLTAGE SETTING[V]  OVERCURRENT PROTECTION[UIT AND ERS]  REMOTE SENSING  REMOTE SENSING  REMOTE ON/OFF (RC)  INPUT-OUTPUT  ATION  INPUT-G  OPERATING TEMP, HUMID AND ALTITUDE  STORAGE TEMP, HUMID AND ALTITUDE  CASE SIZE/WEIGHT		5	12	15	24			
	VOLTAGE[V]  CURRENT[A]  EFFICIENCY[%]  VOLTAGE[V]  CURRENT[A]  LINE REGULATION[mV]  LOAD REGULATION[mV]  LOAD REGULATION[mV]  Oto +95°C *  RIPPLE NOISE[mVp-p]  -20 to 0°C *  Oto 55°C Load*  RIPPLE NOISE[mVp-p]  -20 to 0°C *  Oto 55°C Load*  RIPPLE NOISE[mVp-p]  -20 to 0°C *  Oto 55°C Load*  Oto 45°C *  Oto 45	20							
	LINE REGULATION[	mV]	10max	24max	30max	48max			
	LOAD REGULATION	[mV]	150max	100max	100max	100max			
		0 to +95°C *2	80max	120max	120max	120max			
	RIPPLE[mVp-p]	-20 to 0°C *2	120max	150max	150max	150max			
OUTPUT  RIPPLE N  TEMPERATUI  DRIFT[m  START- OUTPUTVOL  OUTPUT  PROTECTION CIRCUIT AND OTHERS REMOT INPUT-6  INPUT-6  OUTPUT  OUTPUT		0 to 15% Load*2	160max	240max	240max	240max			
OUTDUT		0 to +95°C *2	160max	200max	200max	200max			
OUTPUT  RIPPLE NOISE[mVp-p]  TEMPERATURE REGULATION[n]  DRIFT[mV]  START-UP TIME[m]  OUTPUT VOLTAGE ADJUSTIME  OUTPUT VOLTAGE S  OVERCURRENT PR  OVERCURRENT PR  OVERVOLTAGE PRO'  REMOTE SENSING	RIPPLE NOISE[mVp-p]	-20 to 0°C *2	250max	280max	280max	280max			
		0 to 15% Load*2	300max	300max	300max	300max			
	TEMPERATURE REGUL ATION(m)/1	0 to +50°C	50max	120max	150max	240max			
[	TEMPERATURE REGULATION[IIIV]	-20 to +95℃	100max	240max	300max	480max			
	DRIFT[mV] *3		20max	40max	60max	90max			
	START-UP TIME[ms]		200max (DCIN 110V, Io=10	0%)					
	OUTPUT VOLTAGE ADJUSTMENT F	RANGE[V] *4	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40			
	OUTPUT VOLTAGE SET	TING[V]	5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96			
	OVERCURRENT PROT	ECTION	Works over 105% of rating and recovers automatically						
	OVERVOLTAGE PROTEC	CTION[V]	6.30 - 7.60	13.90 - 17.55	17.25 - 21.75	27.60 - 34.80			
	REMOTE SENSING		None						
	REMOTE ON/OFF (R	(C) *5	Optional (Required external	power source)					
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff c	current = 15mA, DC500V 50N	IΩ min (20±15℃)				
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff of	current = 15mA, DC500V 50N	IΩ min (20±15℃)				
	OUTPUT-FG		AC500V 1minute, Cutoff cur	rrent = 100mA, DC500V 50M	Ω min (20±15°C)				
	OPERATING TEMP.,HUMID.AND A	LTITUDE *6	-20 to +95°C (Aluminum base plate	of the power module), 20 - 95%RH (I	Non condensing) (Refer to DERATING	G CURVE), 3,000m (10,000 feet) max			
ENVIDONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +95°C, 20 - 95%RH (l	Non condensing), 9,000m (3	0,000 feet) max				
ENVINONWENT	VIBRATION		10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3	Bminutes period, 60minutes e	ach along X, Y and Z axis				
	IMPACT		196.1m/s² (20G), 11ms, onc	e each along X, Y and Z axis	3				
SAFETY	AGENCY APPROVA	LS	UL60950-1, C-UL, EN60950	)-1					
JAFETT	CONDUCTED NOISE (at only	y DC input)	Complies with FCC-A, VCC	I-A, CISPR22-A, EN55011-A	, EN55022-A				
OTHERS	CASE SIZE/WEIGHT		61.5×44.5×150mm [2.42×	×1.75×5.91 inches] (W×H	X D) / 270g max				
UITIENS	COOLING METHOD		Conduction cooling (e.g. hea	at radiation from the aluminu	m base plate to the attached	heat sink)			

- At rated input(DC280V) and rated load.
- Ripple and ripple noise is measured by using measuring board with capacitor of 22 µ F at 150mm [5.91 inches] from output terminal. Refer to the instruction manual 3.2.
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
- Refer to the instruction manual 4.6. Please contact us about optional.
- Refer to the instruction manual 6.2.





# SNDHS200A

SNDH S 200 Α 05







1) Series name 2) Single output 3) Output wattage 4) A: DC60-160V ⑤Output voltage

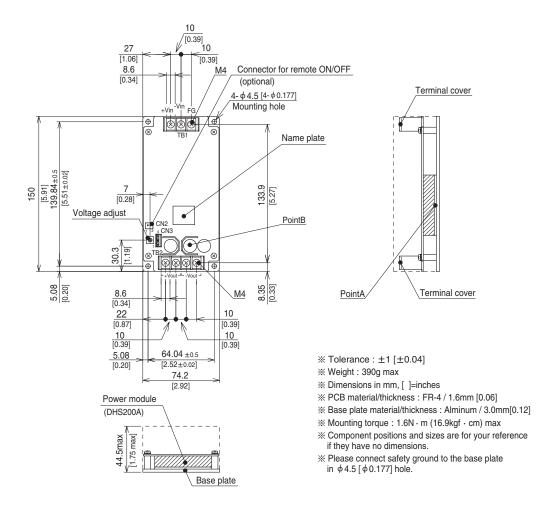
MODEL	SNDHS200A05	SNDHS200A12	SNDHS200A15	SNDHS200A24
MAX OUTPUT WATTAGE[W]	200.0	200.4	201.0	201.6
DC OUTPUT	5V 40A	12V 16.7A	15V 13.4A	24V 8.4A

### **SPECIFICATIONS**

	MODEL		SNDHS200A05	SNDHS200A12	SNDHS200A15	SNDHS200A24		
	VOLTAGE[V]		DC60 - 160					
INPUT			2.1typ	2.1typ	2.1typ	2.1typ		
VOLTAGE[V]	87.0typ	87.0typ	87.0typ	87.0typ				
	EFFICIENCY[%]   VOLTAGE[V]   CURRENT[A]   LINE REGULATION[mV]   LOAD REGULATION[mV]   010+95   PRIPPLE[mVp-p] -20100   010 195   010 4		5	12	15	24		
	CURRENT[A]		40	16.7	13.4	8.4		
	LINE REGULATION[	mV]	10max	24max	30max	48max		
	LOAD REGULATION	[mV]	150max	100max	100max	100max		
		0 to +95°C *2	80max	120max	120max	120max		
	RIPPLE[mVp-p]	-20 to 0°C *2	120max	150max	150max	150max		
		0 to 15% Load*2	160max	240max	240max	100max 120max 150max 240max 200max 280max 300max 240max 480max 90max 21.60 - 26.40 24.00 - 24.96		
OUTDUT		0 to +95°C *2	160max	200max	200max	200max		
OUTPUT	RIPPLE NOISE[mVp-p]	-20 to 0°C *2	250max	280max	280max	280max		
		0 to 15% Load*2	300max	300max	300max	300max		
	TEMPERATURE REGULATION(mV)	0 to +50°C	50max	120max	150max	240max		
ı	TEMPERATURE REGULATION[IIV]	-20 to +95℃	100max	240max	300max	480max		
	DRIFT[mV] *3		20max	40max	60max	90max		
	START-UP TIME[ms]		200max (DCIN 110V, lo=10	0%)				
	OUTPUT VOLTAGE ADJUSTMENT F	RANGE[V] *4	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40		
	OUTPUT VOLTAGE SET	TING[V]	5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96		
	OVERCURRENT PROT	ECTION	Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTEC	CTION[V]	6.30 - 7.60	13.90 - 16.35	17.25 - 20.25	27.60 - 32.40		
	REMOTE SENSING		Provided					
	REMOTE ON/OFF (R	<b>(C)</b> *5	Optional (Required external	power source)				
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff of	current = 15mA, DC500V 50N	IΩ min (20±15℃)			
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff of	current = 15mA, DC500V 50N	IΩ min (20±15℃)			
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)					
	OPERATING TEMP.,HUMID.AND A	LTITUDE *6	-20 to +95°C (Aluminum base plate	of the power module), 20 - 95%RH (	Non condensing) (Refer to DERATING	G CURVE), 3,000m (10,000 feet) max		
ENVIDONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +95°C, 20 - 95%RH (	Non condensing), 9,000m (3	0,000 feet) max			
ENVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3	minutes period, 60minutes ea	ach along X, Y and Z axis			
	IMPACT		196.1m/s² (20G), 11ms, onc	ce each along X, Y and Z axis	3			
SAFETY	AGENCY APPROVA	LS	UL60950-1, C-UL, EN60950	0-1				
JAFETT	CONDUCTED NOISE (at only	y DC input)	Complies with FCC-A, VCC	I-A, CISPR22-A, EN55011-A	, EN55022-A			
OTHERS	CASE SIZE/WEIGHT		74.2×44.5×150mm [2.92	×1.75×5.91 inches](W×H>	(D) / 390g max			
	COOLING METHOD		Conduction cooling (e.g. hea	at radiation from the aluminu	m base plate to the attached	heat sink)		

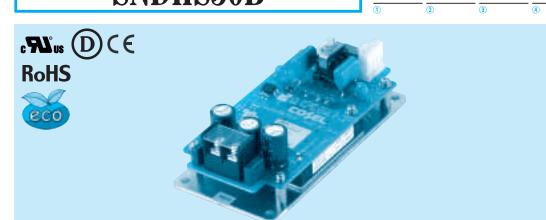
- At rated input(DC280V) and rated load.
- Ripple and ripple noise is measured by using measuring board with capacitor of 22 µ F at 150mm [5.91 inches] from output terminal. Refer to the instruction manual 3.2.
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
- Refer to the instruction manual 4.6. Please contact us about optional.
- Refer to the instruction manual 6.2.





# **SNDHS50B**

SNDH S **50** В 05



1) Series name 2) Single output 3) Output wattage 4) B: DC200-400V ⑤Output voltage

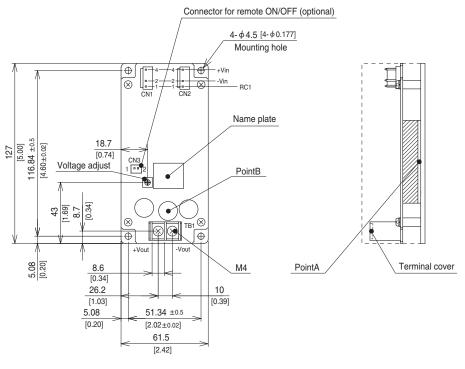
MODEL	SNDHS50B03	SNDHS50B05	SNDHS50B12	SNDHS50B15	SNDHS50B24	SNDHS50B28
MAX OUTPUT WATTAGE[W]	33.0	50.0	50.4	51.0	50.4	50.4
DC OUTPUT	3.3V 10A	5V 10A	12V 4.2A	15V 3.4A	24V 2.1A	28V 1.8A

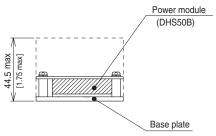
#### **SPECIFICATIONS**

	MODEL		SNDHS50B03	SNDHS50B05	SNDHS50B12	SNDHS50B15	SNDHS50B24	SNDHS50B28	
	VOLTAGE[V]		DC200 - 400 (Pre	oare another power	supply to the RC1	terminal *5)			
INPUT	CURRENT[A]	*1	0.15typ	0.22typ	0.22typ	0.22typ	0.22typ	0.22typ	
	EFFICIENCY[%]	*1	76.0typ	79.0typ	82.0typ	82.0typ	0.22typ 0.22typ 82.0typ 82.0typ 24 28 2.1 1.8 48max 56max 100max 100max 120max 120max 150max 240max 240max 240max 200max 200max 280max 280max 300max 300max 240max 240max 240max 2560max 90max 90max  15.50 21.60 - 26.40 25.20 - 30.80 5.60 24.00 - 24.96 28.00 - 29.12  1.75 27.60 - 34.80 32.20 - 40.60		
	VOLTAGE[V]		3.3	5	12	15	24	28	
	CURRENT[A]		10	10	4.2	3.4	2.1	1.8	
	LINE REGULATION[	mV]	10max	10max	24max	30max	48max	56max	
	LOAD REGULATION	[mV]	150max	150max	100max	100max	100max	100max	
		0 to +95℃ *2	80max	80max	120max	120max	120max	120max	
	RIPPLE[mVp-p]	-20 to 0℃ *2	120max	120max	150max	150max	150max	150max	
		0 to 15% Load*2	160max	160max	240max	240max	240max	240max	
OUTPUT		0 to +95℃ *2	160max	160max	200max	200max	200max	200max	
OUTFUT	RIPPLE NOISE[mVp-p]	-20 to 0°C *2	250max	250max	280max	280max	280max	280max	
		0 to 15% Load*2	300max	300max	300max	300max	300max	300max	
	TEMPERATURE REGULATION[mV]	0 to +50°C	35max	50max	120max	150max	240max	280max	
		-20 to +95℃	66max	100max	240max	300max	480max	560max	
	DRIFT[mV] *3		16max	20max	40max	60max	90max	90max	
	START-UP TIME[ms]		200max (DCIN 280V, lo=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *4		2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40	25.20 - 30.80	
	OUTPUT VOLTAGE SET	TING[V]	3.30 - 3.40	5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	28.00 - 29.12	
	OVERCURRENT PROT	ECTION	Works over 105%	of rating and recov	ers automatically				
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC	CTION[V]	4.20 - 5.70	6.30 - 7.60	13.90 - 17.55	17.25 - 21.75	27.60 - 34.80	32.20 - 40.60	
OTHERS	REMOTE SENSING		None						
	REMOTE ON/OFF (R	C1) *6	Provided (Logic H	: ON, L :OFF) Req	uired external powe	r source			
	INPUT-OUTPUT		AC3,000V 1minute	e, Cutoff current = 1	10mA, DC500V 50N	IΩ min (20±15℃)			
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15 $^{\circ}$ C)						
	OUTPUT-FG		AC500V 1minute,	Cutoff current = 10	0mA, DC500V 50M	Ω min (20±15℃)			
	OPERATING TEMP., HUMID. AND A	LTITUDE *7	-20 to +95°C (Aluminun	n base plate of the power	r module), 20 - 95%RH (I	Non condensing) (Refer t	to DERATING CURVE),	3,000m (10,000 feet) max	
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +95°C, 20 -	95%RH (Non cond	ensing), 9,000m (3	0,000 feet) max			
Z. TITIOTHILL	VIBRATION		10 - 55Hz, 19.6m/	s² (2G), 3minutes p	eriod, 60minutes ea	ach along X, Y and	Z axis		
	IMPACT		, ,,		ong X, Y and Z axis	;			
SAFETY	AGENCY APPROVA	LS	UL60950-1, C-UL,	EN60950-1					
OTHERS	CASE SIZE/WEIGHT		61.5×44.5×127n	nm [2.42×1.75×5	.0 inches] (WXHX	D) / 220g max			
J.IILIIO	COOLING METHOD		Conduction coolin	g (e.g. heat radiatio	n from the aluminu	n base plate to the	attached heat sink	)	

- At rated input(DC280V) and rated load. Ripple and ripple noise is measured by using measuring board with capacitor of 22 µ F at 150mm [5.91 inches] from output terminal.
- Refer to the instruction manual 3.2.
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output. Refer to the instruction manual 4.6.
- Refer to the instruction manual 2, 4.4
- Refer to the instruction manual 4.4 Refer to the instruction manual 6.2
- **SNDHS-8**







- X Tolerance: ±1 [±0.04]
- ※ Weight : 220g max
- % PCB material/thickness : FR-4 / 1.6mm [0.06]
- Base plate material/thickness: Alminum / 3.0mm[0.12]
- % Screw tightening torque : 1.6N  $\cdot$  m (16.9kgf  $\cdot$  cm) max
- \* Component positions and sizes are for your reference if they have no dimensions.
- $\ensuremath{\ensuremath{\%}}$  Please connect safety ground to the base plate in  $\phi 4.5 [\phi 0.177]$  hole.

# SNDHS100B

100 05 SNDH S B

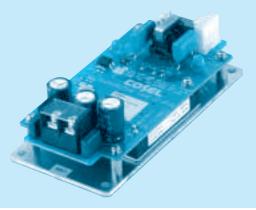


3

4







(1) Series name
②Single output
3 Output wattage
(4)B: DC200-400
(5)Output voltage

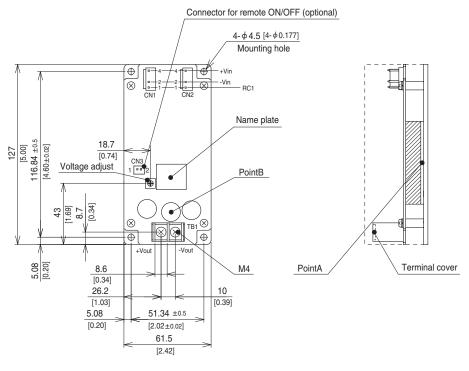
MODEL	SNDHS100B03	SNDHS100B05	SNDHS100B12	SNDHS100B15	SNDHS100B24	SNDHS100B28
MAX OUTPUT WATTAGE[W]	66.0	100.0	100.8	100.5	100.8	100.8
DC OUTPUT	3.3V 20A	5V 20A	12V 8.4A	15V 6.7A	24V 4.2A	28V 3.6A

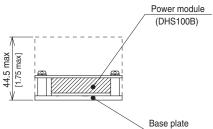
### **SPECIFICATIONS**

	MODEL		SNDHS100B03	SNDHS100B05	SNDHS100B12	SNDHS100B15	SNDHS100B24	SNDHS100B28	
	VOLTAGE[V]		DC200 - 400 (Prep	oare another power	supply to the RC1	terminal *5)			
INPUT	CURRENT[A]	*1	0.30typ	0.44typ	0.42typ	0.42typ	0.42typ	0.42typ	
	EFFICIENCY[%]	# 78.0typ	85.0typ						
	VOLTAGE[V]		3.3	5	12	15	24	28	
	CURRENT[A]		20	20	8.4	6.7	4.2	3.6	
	LINE REGULATION[I	mV]	10max	10max	24max	30max	48max	56max	
	LOAD REGULATION	[mV]	150max	150max	100max	100max	100max	100max	
		0 to +95℃ *2	80max	80max	120max	120max	120max	120max	
	RIPPLE[mVp-p]	-20 to 0°C *2	120max	120max	150max	150max	150max	150max	
		0 to 15% Load*2	160max	160max	240max	240max	240max	240max	
OUTPUT		0 to +95°C *2	160max	160max	200max	200max	200max	200max	
1	RIPPLE NOISE[mVp-p]	-20 to 0°C *2	250max	250max	280max	280max	280max	280max	
		0 to 15% Load*2	300max	300max	300max	300max	300max	300max	
	TEMPERATURE REGULATION[mV]	0 to +50°C	35max	50max	120max	150max	240max	280max	
		-20 to +95℃	66max	100max	240max	300max	480max	560max	
	DRIFT[mV] *3		16max	20max	40max	60max	90max	90max	
	START-UP TIME[ms]		200max (DCIN 280V, lo=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *4		2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40	25.20 - 30.80	
	OUTPUT VOLTAGE SET	TING[V]	3.30 - 3.40	5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	28.00 - 29.12	
	OVERCURRENT PROT	ECTION	Works over 105%	of rating and recove	ers automatically				
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC	CTION[V]	4.20 - 5.70	6.30 - 7.60	13.90 - 17.55	17.25 - 21.75	27.60 - 34.80	32.20 - 40.60	
OTHERS	REMOTE SENSING		None						
	REMOTE ON/OFF (R	C1) *6	Provided (Logic H	: ON, L :OFF) Requ	uired external powe	r source			
	INPUT-OUTPUT		AC3,000V 1minute	e, Cutoff current = 1	0mA, DC500V 50N	IΩ min (20±15℃)			
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15 $^{\circ}$ C)						
	OUTPUT-FG		AC500V 1minute,	Cutoff current = 10	0mA, DC500V 50M	Ω min (20±15℃)			
	OPERATING TEMP.,HUMID.AND A	LTITUDE *7	-20 to +95°C (Aluminum	n base plate of the power	module), 20 - 95%RH (N	Non condensing) (Refer t	o DERATING CURVE), 3	3,000m (10,000 feet) max	
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +95°C, 20 -	95%RH (Non cond	ensing), 9,000m (30	0,000 feet) max			
LIVITIONIILIVI	VIBRATION		10 - 55Hz, 19.6m/s	s <sup>2</sup> (2G), 3minutes p	eriod, 60minutes e	ach along X, Y and	Z axis		
	IMPACT		196.1m/s² (20G), 1	11ms, once each al	ong X, Y and Z axis	i			
SAFETY	AGENCY APPROVA	LS	UL60950-1, C-UL,	EN60950-1					
OTHERS	CASE SIZE/WEIGHT		61.5×44.5×127n	nm [2.42×1.75×5	0 inches] (WXHX	D) / 220g max			
	COOLING METHOD		Conduction cooling	g (e.g. heat radiatio	n from the aluminur	n base plate to the	attached heat sink)	<u> </u>	

- At rated input(DC280V) and rated load.
  Ripple and ripple noise is measured by using measuring board with capacitor of 22 µ F at 150mm [5.91 inches] from output terminal.
- Refer to the instruction manual 3.2.
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output. Refer to the instruction manual 4.6.
- Refer to the instruction manual 2, 4.4
- Refer to the instruction manual 4.4 Refer to the instruction manual 6.2







- \*\* Tolerance : ±1 [±0.04]
- ※ Weight: 220g max
- ※ Dimensions in mm, [ ]=inches
- PCB material/thickness: FR-4 / 1.6mm [0.06]
- Base plate material/thickness: Alminum / 3.0mm[0.12]
- % Screw tightening torque : 1.6N · m (16.9kgf · cm) max
- \* Component positions and sizes are for your reference
- if they have no dimensions.
   ※ Please connect safety ground to the base plate in φ4.5 [φ0.177] hole.

# SNDHS250B

SNDH S 250 05 В



1) Series name 2) Single output 3) Output wattage 4) B: DC200-400V ⑤Output voltage

MODEL	SNDHS250B03	SNDHS250B05	SNDHS250B07	SNDHS250B12	SNDHS250B15	SNDHS250B24	SNDHS250B28	SNDHS250B48
MAX OUTPUT WATTAGE[W]	165.0	250.0	247.5	252.0	247.5	252.0	252.0	249.6
DC OUTPUT	3.3V 50A	5V 50A	7.5V 33A	12V 21A	15V 16.5A	24V 10.5A	28V 9.0A	48V 5.2A

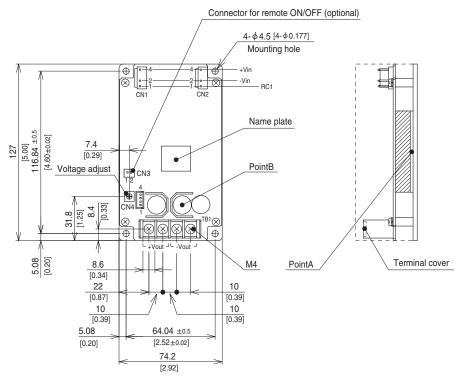
#### **SPECIFICATIONS**

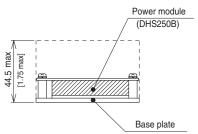
	MODEL		SNDHS250B03	SNDHS250B05	SNDHS250B07	SNDHS250B12	SNDHS250B15	SNDHS250B24	SNDHS250B28	SNDHS250B48
	VOLTAGE[V]		DC200 - 400 (Prepare another power supply to the RC1 terminal *5)							
INPUT	CURRENT[A] *1		0.67typ	1.0typ	1.0typ	1.0typ	1.0typ	1.0typ	1.0typ	1.0typ
	EFFICIENCY[%] *1		86.0typ	88.0typ	86.0typ	86.0typ	86.0typ	86.0typ	86.0typ	87.0typ
	VOLTAGE[V]		3.3	5	7.5	12	15	24	28	48
OUTPUT	CURRENT[A]		50	50	33	21	16.5	10.5	9.0	5.2
	LINE REGULATION[mV]		10max	10max	20max	24max	30max	48max	56max	96max
	LOAD REGULATION[mV]		150max	150max	150max	100max	100max	100max	100max	100max
	RIPPLE[mVp-p]	0 to +95℃ *2	80max	80max	100max	120max	120max	120max	120max	200max
		-20 to 0°C *2	120max	120max	130max	150max	150max	150max	150max	250max
		0 to 15% Load*2	160max	160max	200max	240max	240max	240max	240max	400max
	RIPPLE NOISE[mVp-p]	0 to +95℃ *2	160max	160max	200max	200max	200max	200max	200max	250max
		-20 to 0°C *2	250max	250max	280max	280max	280max	280max	280max	400max
		0 to 15% Load*2	300max	300max	300max	300max	300max	300max	300max	500max
	TEMPERATURE REGULATION[mV]	0 to +50°C	35max	50max	70max	120max	150max	240max	280max	480max
		-20 to +95℃	66max	100max	140max	240max	300max	480max	560max	960max
	DRIFT[mV] *3		16max	20max	30max	40max	60max	90max	90max	180max
	START-UP TIME[ms]		200max (DCIN 280V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *4		2.97 - 3.63	4.50 - 5.50	6.75 - 8.25	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40	25.20 - 30.80	43.20 - 52.80
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	7.50 - 7.80	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	28.00 - 29.12	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically							
	OVERVOLIAGE PROTECTION[V]		4.20 - 4.85	6.30 - 7.30	8.70 - 10.20	13.90 - 16.35	17.25 - 20.25	27.60 - 32.40	32.20 - 37.80	55.20 - 64.80
	REMOTE SENSING		Provided							
	REMOTE ON/OFF (RC1) *6		Provided (Logic H : ON, L :OFF) Required external power source							
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15 $^{\circ}$ C)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15 $^{\circ}$ C)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50M $\Omega$ min (20±15 $^{\circ}$ C)							
ENVIRONMENT -	OPERATING TEMP.,HUMID.AND ALTITUDE *7		-20 to +95°C (Aluminum base plate of the power module), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +95°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each along X, Y and Z axis							
SAFETY	AGENCY APPROVALS		UL60950-1, C-UL, EN60950-1							
OTHERS	CASE SIZE/WEIGHT		74.2×44.5×127mm [2.92×1.75×5.0 inches](W×H×D) / 310g max							
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)							

- At rated input(DC280V) and rated load.

  Ripple and ripple noise is measured by using measuring board with capacitor of 22 µ F at 150mm [5.91 inches] from output terminal.
- Refer to the instruction manual 3.2.
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output. Refer to the instruction manual 4.6.
- Refer to the instruction manual 2, 4.4
- Refer to the instruction manual 4.4 Refer to the instruction manual 6.2







- ※ Tolerance: ±1 [±0.04]
- ※ Weight : 310g max
- ※ Dimensions in mm, [ ]=inches
- ※ PCB material/thickness: FR-4 / 1.6mm [0.06]
- Base plate material/thickness: Alminum / 3.0mm[0.12]
- % Screw tightening torque : 1.6N · m (16.9kgf · cm) max
- \*\* Component positions and sizes are for your reference if they have no dimensions.
- ※ Please connect safety ground to the base plate in  $\phi 4.5 [\phi 0.177]$  hole.