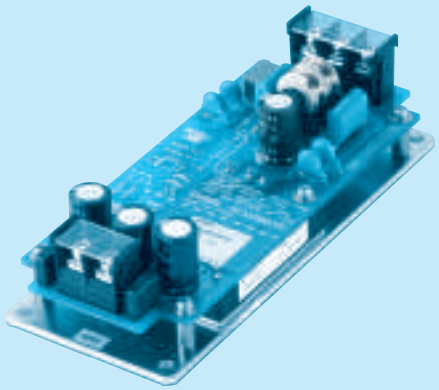
COSEL DC-DC Converters Value-added type

SNDHS50A

Ordering information

SNDH S 50 A 05

① ② ③ ④ ⑤



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

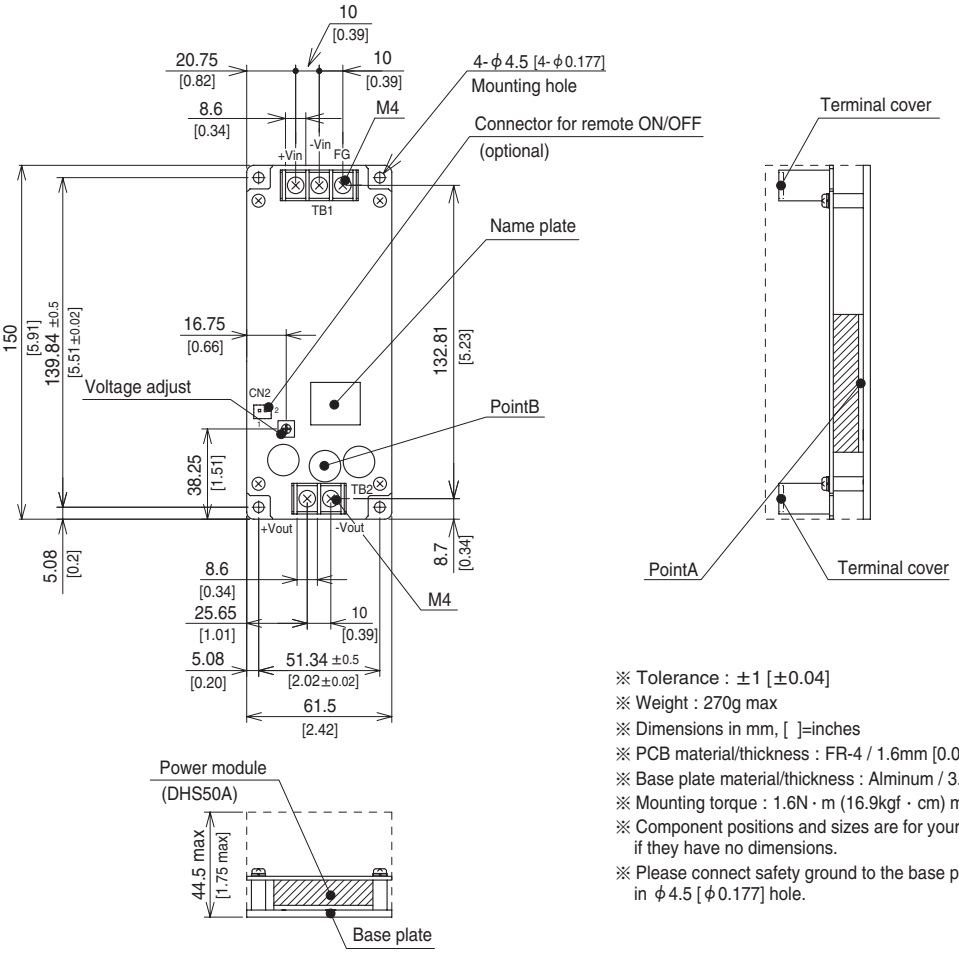
MODEL	SNDHS50A05	SNDHS50A12	SNDHS50A15	SNDHS50A24
MAX OUTPUT WATTAGE[W]	50.0	50.4	51.0	50.4
DC OUTPUT	5V 10A	12V 4.2A	15V 3.4A	24V 2.1A

SPECIFICATIONS

	MODEL		SNDHS50A05	SNDHS50A12	SNDHS50A15	SNDHS50A24
INPUT	VOLTAGE[V]		DC60 - 160			
	CURRENT[A]	*1	0.55typ	0.55typ	0.55typ	0.55typ
	EFFICIENCY[%]	*1	83.0typ	85.0typ	85.0typ	85.0typ
OUTPUT	VOLTAGE[V]		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
	RIPPLE[mVp-p]	0 to +95℃ *2	80max	120max	120max	120max
		-20 to 0℃ *2	120max	150max	150max	150max
		0 to 15% Load *2	160max	240max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to +95℃ *2	160max	200max	200max	200max
		-20 to 0℃ *2	250max	280max	280max	280max
		0 to 15% Load *2	300max	300max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max	240max
		-20 to +95℃	100max	240max	300max	480max
	DRIFT[mV]	*3	20max	40max	60max	90max
	START-UP TIME[ms]		200max (DCIN 110V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	*4	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40
	OUTPUT VOLTAGE SETTING[V]		5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically			
	OVERVOLTAGE PROTECTION[V]		6.30 - 7.60	13.90 - 17.55	17.25 - 21.75	27.60 - 34.80
	REMOTE SENSING		None			
	REMOTE ON/OFF (RC)	*5	Optional (Required external power source)			
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 15mA, DC500V 50MΩ min (20±15℃)			
	INPUT-FG		AC2,000V 1minute, Cutoff current = 15mA, DC500V 50MΩ min (20±15℃)			
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	*6	-20 to +95℃ (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℃, 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			
	CONDUCTED NOISE (at only DC input)		Complies with FCC-A, VCCI-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×D) / 270g max			
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)			

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

External view



※ Tolerance : ±1 [±0.04]
※ Weight : 270g max
※ Dimensions in mm, [ ]=inches
※ PCB material/thickness : FR-4 / 1.6mm [0.06]
※ Base plate material/thickness : Alminum / 3.0mm[0.12]
※ Mounting 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.

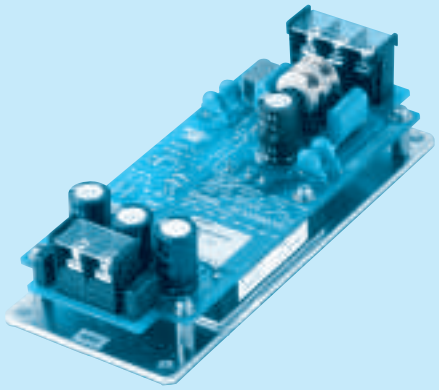
COSEL DC-DC Converters Value-added type

SNDHS100A

Ordering information

SNDH S 100 A 05

① ② ③ ④ ⑤



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

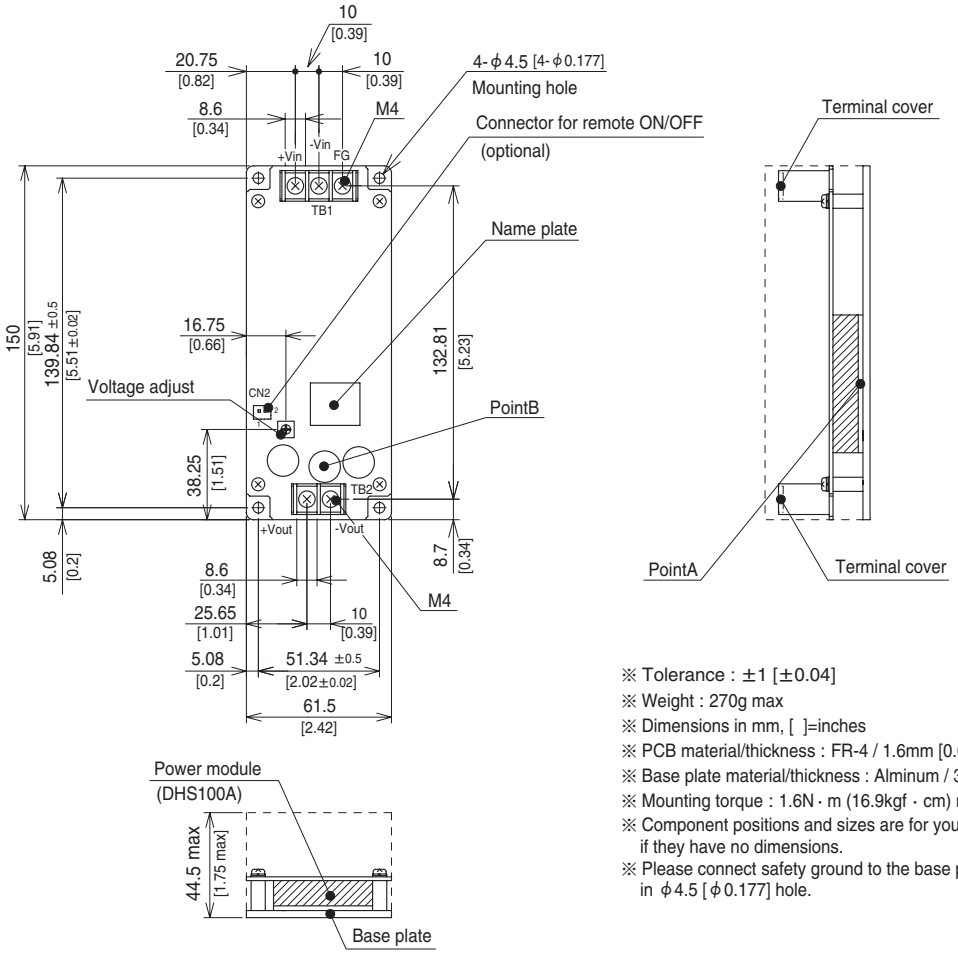
MODEL	SNDHS100A05	SNDHS100A12	SNDHS100A15	SNDHS100A24
MAX OUTPUT WATTAGE[W]	100.0	100.8	100.5	100.8
DC OUTPUT	5V 20A	12V 8.4A	15V 6.7A	24V 4.2A

SPECIFICATIONS

	MODEL		SNDHS100A05	SNDHS100A12	SNDHS100A15	SNDHS100A24
INPUT	VOLTAGE[V]		DC60 - 160			
	CURRENT[A]	*1	1.1typ	1.1typ	1.1typ	1.1typ
	EFFICIENCY[%]	*1	84.0typ	87.0typ	87.0typ	87.0typ
OUTPUT	VOLTAGE[V]		5	12	15	24
	CURRENT[A]		20	8.4	6.7	4.2
	LINE REGULATION[mV]		10max	24max	30max	48max
	LOAD REGULATION[mV]		150max	100max	100max	100max
	RIPPLE[mVp-p]	0 to +95℃ *2	80max	120max	120max	120max
		-20 to 0℃ *2	120max	150max	150max	150max
		0 to 15% Load *2	160max	240max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to +95℃ *2	160max	200max	200max	200max
		-20 to 0℃ *2	250max	280max	280max	280max
		0 to 15% Load *2	300max	300max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max	240max
		-20 to +95℃	100max	240max	300max	480max
	DRIFT[mV]	*3	20max	40max	60max	90max
	START-UP TIME[ms]		200max (DCIN 110V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	*4	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40
	OUTPUT VOLTAGE SETTING[V]		5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically			
	OVERVOLTAGE PROTECTION[V]		6.30 - 7.60	13.90 - 17.55	17.25 - 21.75	27.60 - 34.80
	REMOTE SENSING		None			
	REMOTE ON/OFF (RC)	*5	Optional (Required external power source)			
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 15mA, DC500V 50MΩ min (20±15℃)			
	INPUT-FG		AC2,000V 1minute, Cutoff current = 15mA, DC500V 50MΩ min (20±15℃)			
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	*6	-20 to +95℃ (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℃, 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			
	CONDUCTED NOISE (at only DC input)		Complies with FCC-A, VCCI-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×D) / 270g max			
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)			

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

External view



※ Tolerance : ±1 [±0.04]
※ Weight : 270g max
※ Dimensions in mm, [ ]=inches
※ PCB material/thickness : FR-4 / 1.6mm [0.06]
※ Base plate material/thickness : Alminum / 3.0mm[0.12]
※ Mounting 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.

COSEL DC-DC Converters Value-added type

SNDHS200A

Ordering information

SNDH S 200 A 05

① ② ③ ④ ⑤

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

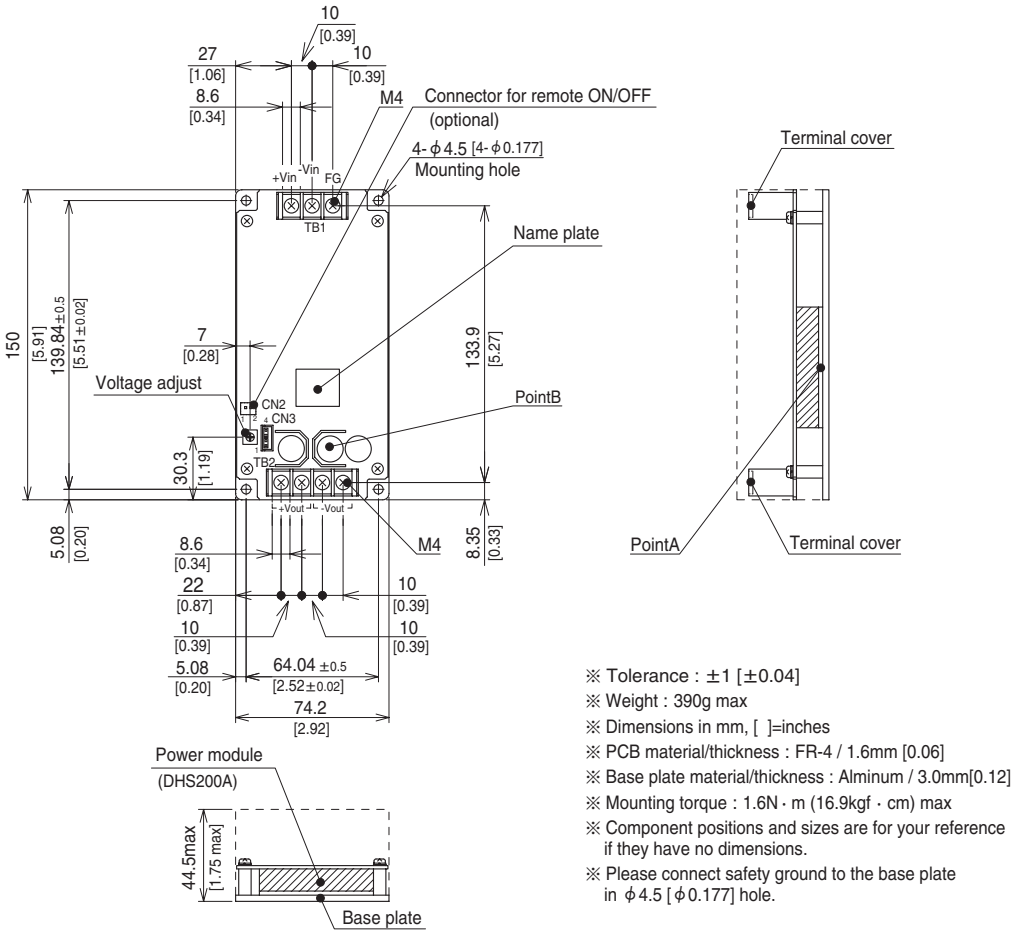
MODEL	SNDHS200A05	SNDHS200A12	SNDHS200A15	SNDHS200A24
MAX OUTPUT WATTAGE[W]	200.0	200.4	201.0	201.6
DC OUTPUT	5V 40A	12V 16.7A	15V 13.4A	24V 8.4A

SPECIFICATIONS

	MODEL		SNDHS200A05	SNDHS200A12	SNDHS200A15	SNDHS200A24
INPUT	VOLTAGE[V]		DC60 - 160			
	CURRENT[A]	*1	2.1typ	2.1typ	2.1typ	2.1typ
	EFFICIENCY[%]	*1	87.0typ	87.0typ	87.0typ	87.0typ
OUTPUT	VOLTAGE[V]		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
	RIPPLE[mVp-p]	0 to +95℃ *2	80max	120max	120max	120max
		-20 to 0℃ *2	120max	150max	150max	150max
		0 to 15% Load *2	160max	240max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to +95℃ *2	160max	200max	200max	200max
		-20 to 0℃ *2	250max	280max	280max	280max
		0 to 15% Load *2	300max	300max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max	240max
		-20 to +95℃	100max	240max	300max	480max
	DRIFT[mV]	*3	20max	40max	60max	90max
	START-UP TIME[ms]		200max (DCIN 110V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	*4	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50	21.60 - 26.40
	OUTPUT VOLTAGE SETTING[V]		5.00 - 5.15	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically			
	OVERVOLTAGE PROTECTION[V]		6.30 - 7.60	13.90 - 16.35	17.25 - 20.25	27.60 - 32.40
	REMOTE SENSING		Provided			
	REMOTE ON/OFF (RC)	*5	Optional (Required external power source)			
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 15mA, DC500V 50MΩ min (20±15℃)			
	INPUT-FG		AC2,000V 1minute, Cutoff current = 15mA, DC500V 50MΩ min (20±15℃)			
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	*6	-20 to +95℃ (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℃, 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			
	CONDUCTED NOISE (at only DC input)		Complies with FCC-A, VCCI-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. heat radiation from the aluminum base plate to the attached heat sink)			

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

External view



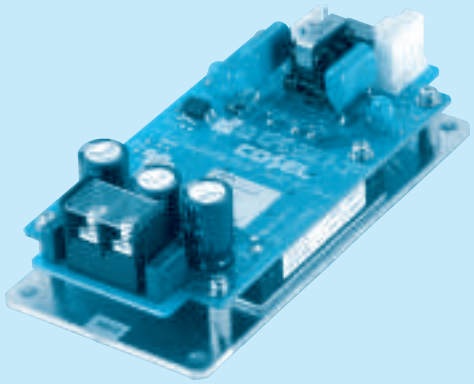
※ Tolerance : ±1 [±0.04]
※ Weight : 390g max
※ Dimensions in mm, [ ]=inches
※ PCB material/thickness : FR-4 / 1.6mm [0.06]
※ Base plate material/thickness : Alminum / 3.0mm[0.12]
※ Mounting torque : 1.6N · m (16.9kgf · cm) max
※ Component positions and sizes are for your reference if they have no dimensions.
※ Please connect safety ground to the base plate in φ4.5 [φ0.177] hole.

COSEL DC-DC Converters Value-added type

SNDHS50B

Ordering information

SNDH	S	50	B	05	
①	②	③	④	⑤	



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

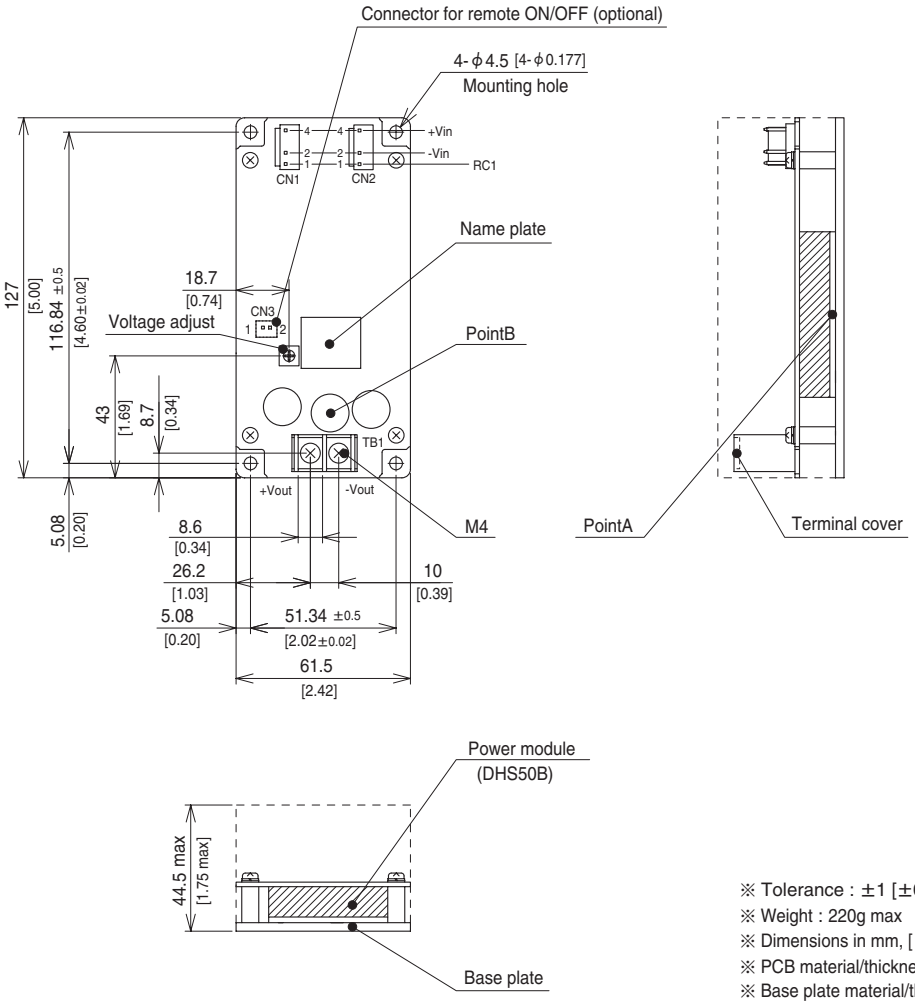
MODEL	SNDHS50B03	SNDHS50B05	SNDHS50B12	SNDHS50B15	SNDHS50B24	SNDHS50B28
MAX OUTPUT WATTAGE[W]	33.0	50.0	50.4	51.0	50.4	50.4
DC OUTPUT	3.3V 10A	5V 10A	12V 4.2A	15V 3.4A	24V 2.1A	28V 1.8A

SPECIFICATIONS

	MODEL		SNDHS50B03	SNDHS50B05	SNDHS50B12	SNDHS50B15	SNDHS50B24	SNDHS50B28
INPUT	VOLTAGE[V]		DC200 - 400 (Prepare another power supply to the RC1 terminal *5)					
	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	82.0typ	82.0typ
OUTPUT	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
	RIPPLE[mVp-p]	0 to +95℃ *2	80max	80max	120max	120max	120max	120max
		-20 to 0℃ *2	120max	120max	150max	150max	150max	150max
		0 to 15% Load *2	160max	160max	240max	240max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to +95℃ *2	160max	160max	200max	200max	200max	200max
		-20 to 0℃ *2	250max	250max	280max	280max	280max	280max
		0 to 15% Load *2	300max	300max	300max	300max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	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, Io=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 SETTING[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
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION[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
	REMOTE SENSING		None					
	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 50MΩ min (20±15℃)					
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)					
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)					
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	*7	-20 to +95℃ (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℃, 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		61.5×44.5×127mm [2.42×1.75×5.0 inches] (W×H×D) / 220g max					
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)					

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

External view



※ 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.

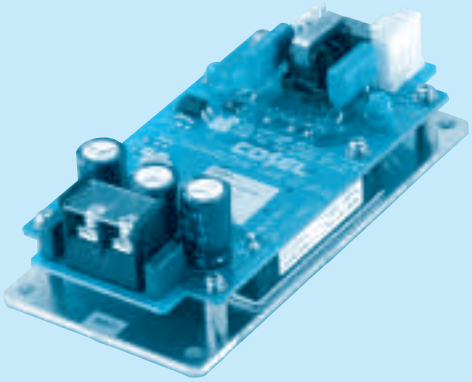
COSEL DC-DC Converters Value-added type

SNDHS100B

Ordering information

SNDH S 100 B 05

① ② ③ ④ ⑤



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

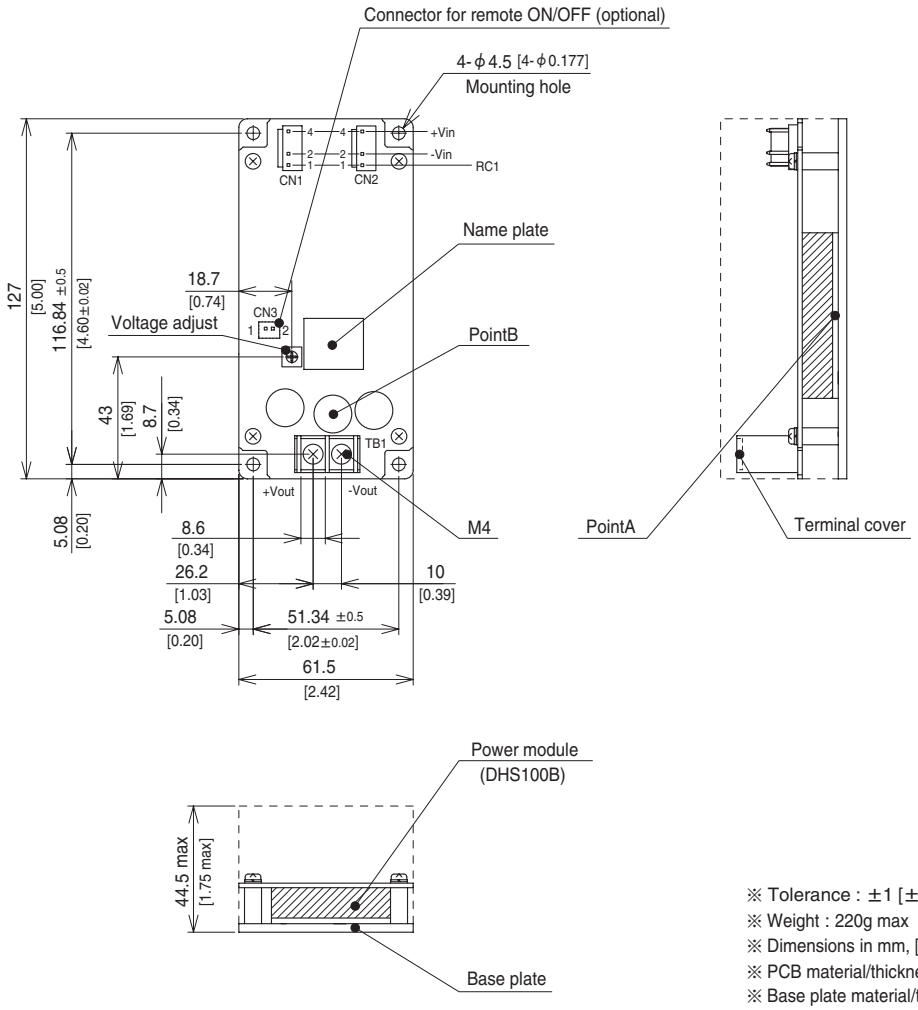
MODEL	SNDHS100B03	SNDHS100B05	SNDHS100B12	SNDHS100B15	SNDHS100B24	SNDHS100B28
MAX OUTPUT WATTAGE[W]	66.0	100.0	100.8	100.5	100.8	100.8
DC OUTPUT	3.3V 20A	5V 20A	12V 8.4A	15V 6.7A	24V 4.2A	28V 3.6A

SPECIFICATIONS

	MODEL		SNDHS100B03	SNDHS100B05	SNDHS100B12	SNDHS100B15	SNDHS100B24	SNDHS100B28
INPUT	VOLTAGE[V]		DC200 - 400 (Prepare another power supply to the RC1 terminal *5)					
	CURRENT[A]	*1	0.30typ	0.44typ	0.42typ	0.42typ	0.42typ	0.42typ
	EFFICIENCY[%]	*1	78.0typ	81.0typ	84.0typ	85.0typ	85.0typ	85.0typ
OUTPUT	VOLTAGE[V]		3.3	5	12	15	24	28
	CURRENT[A]		20	20	8.4	6.7	4.2	3.6
	LINE REGULATION[mV]		10max	10max	24max	30max	48max	56max
	LOAD REGULATION[mV]		150max	150max	100max	100max	100max	100max
	RIPPLE[mVp-p]	0 to +95℃ *2	80max	80max	120max	120max	120max	120max
		-20 to 0℃ *2	120max	120max	150max	150max	150max	150max
		0 to 15% Load *2	160max	160max	240max	240max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to +95℃ *2	160max	160max	200max	200max	200max	200max
		-20 to 0℃ *2	250max	250max	280max	280max	280max	280max
		0 to 15% Load *2	300max	300max	300max	300max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	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, Io=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 SETTING[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
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION[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
	REMOTE SENSING		None					
	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 50MΩ min (20±15℃)					
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)					
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)					
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	*7	-20 to +95℃ (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℃, 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		61.5×44.5×127mm [2.42×1.75×5.0 inches] (W×H×D) / 220g max					
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)					

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

External view



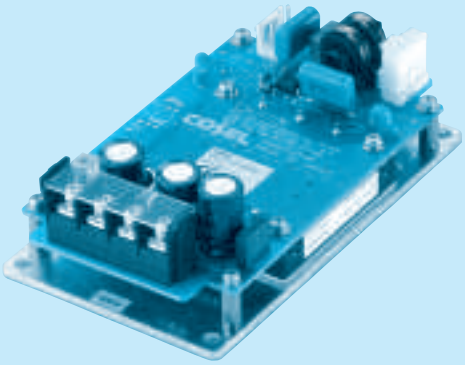
※ Tolerance : ±1 [±0.04]
※ Weight : 220g max
※ Dimensions in mm, [ ]=inches
※ PCB material/thickness : FR-4 / 1.6mm [0.06]
※ Base plate material/thickness : Alminum / 3.0mm[0.12]
※ Screw tightening torque : 1.6N · m (16.9kgf · cm) max
※ Component positions and sizes are for your reference if they have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

COSEL DC-DC Converters Value-added type

SNDHS250B

Ordering information

SNDH	S	250	B	05	
①	②	③	④	⑤	



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

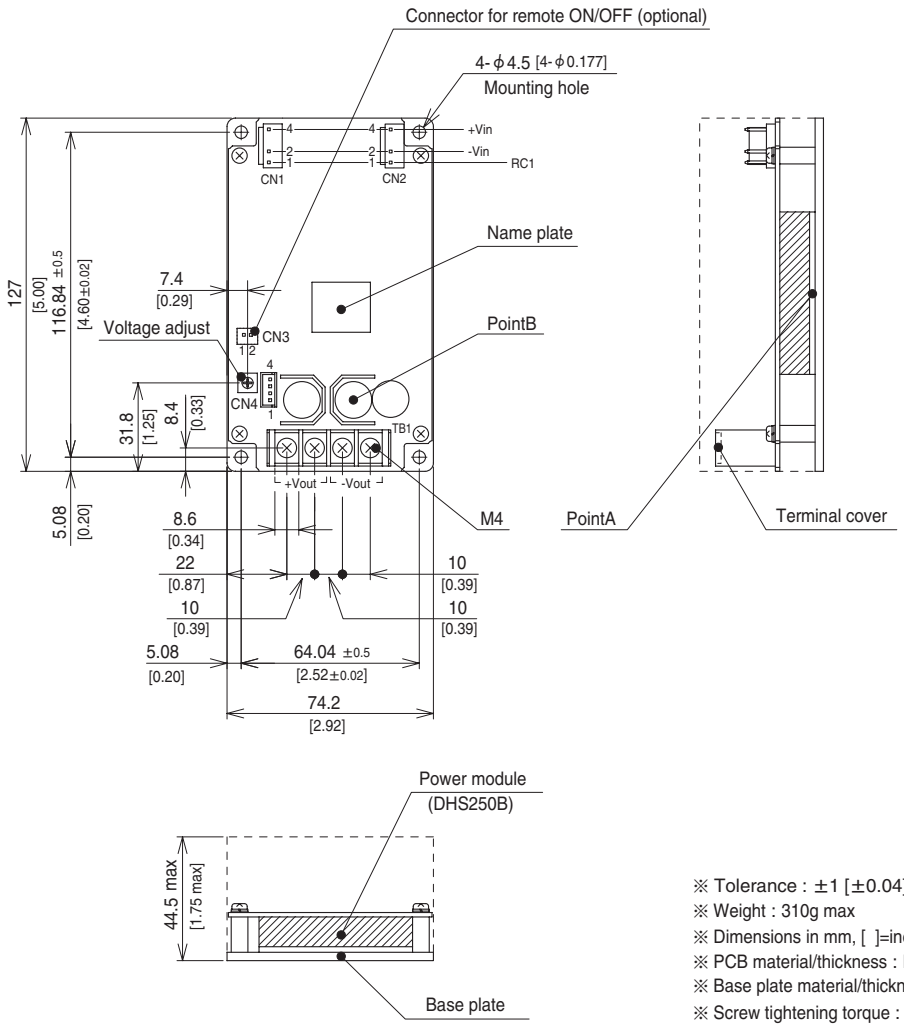
MODEL	SNDHS250B03	SNDHS250B05	SNDHS250B07	SNDHS250B12	SNDHS250B15	SNDHS250B24	SNDHS250B28	SNDHS250B48
MAX OUTPUT WATTAGE[W]	165.0	250.0	247.5	252.0	247.5	252.0	252.0	249.6
DC OUTPUT	3.3V 50A	5V 50A	7.5V 33A	12V 21A	15V 16.5A	24V 10.5A	28V 9.0A	48V 5.2A

SPECIFICATIONS

	MODEL		SNDHS250B03	SNDHS250B05	SNDHS250B07	SNDHS250B12	SNDHS250B15	SNDHS250B24	SNDHS250B28	SNDHS250B48
INPUT	VOLTAGE[V]		DC200 - 400 (Prepare another power supply to the RC1 terminal *5)							
	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
OUTPUT	VOLTAGE[V]		3.3	5	7.5	12	15	24	28	48
	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℃ *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℃ *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℃	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							
	OVERVOLTAGE 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 50MΩ min (20±15℃)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	*7	-20 to +95℃ (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℃, 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)							

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

External view



※ 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 φ4.5 [φ0.177] hole.