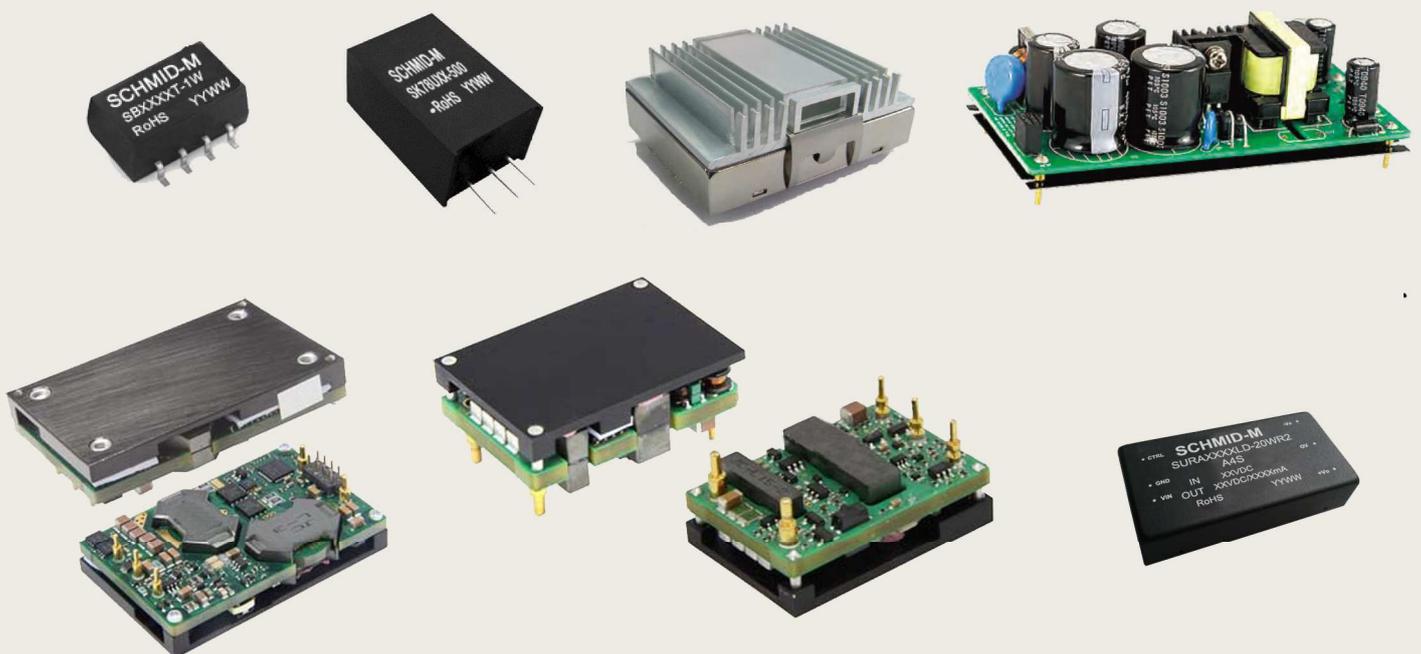


...since 1989

SCHMID-M



AC/DC & DC/DC Converter



www.schmid-m.com



Product Overview

DC/DC Converter

	<i>Model Number</i>	<i>Watt</i>	<i>Case</i>	<i>Specifications</i>
3	SB XT-2WR2	0,25 Watt	SMD	single output, also available dual output and 3kV isolation
4	SB XT-1WR2	1 Watt	SMD	single output, also available dual output and 3kV isolation
5	SB XT-2WR2	2 Watt	SMD	single output, also available dual output and 3kV isolation
6	SWRB MT-3W	3 Watt	SMD	2:1 input, single output available in 3kV isolation
7	SCW	5 Watt	SMD	2:1 Wide input, isolated & regulated, single & dual output
8	SA -1W	1 Watt	SIL4 & DIL8	Fixed input, isolated & unregulated, single output
9	S1 -1W	1 Watt	SIL7 & DIL14	Fixed input, isolated & unregulated, single & dual output
10	SWRA_S-3WR2	3 Watt	SIL8	2:1 Wide input, isolated & regulated, single & dual output
11	SRBW_SD3	3 Watt	SIL8	4:1 Wide input, isolated & regulated, single & dual output
12	SB_SD6	6 Watt	SIL8	2:1 Wide input, isolated & regulated, single & dual output
13	SBW_SD6	6 Watt	SIL8	4:1 Wide input, isolated & regulated, single & dual output
14	SD_6W	6 Watt	DIL24	2:1 Wide input, isolated & regulated, single & dual output
15	SJ_6W	6 Watt	DIL24	4:1 Wide input, isolated & regulated, single & dual output
16	SD_10W	10 Watt	DIL24	2:1 Wide input, isolated & regulated, single & dual output
17	SV_10W	10 Watt	DIL24	4:1 Wide input, isolated & regulated, single & dual output
18	SVRA / SVRB_LD-20WR2	20 Watt	DIL	2:1 Wide input, isolated & regulated, single & dual output
19	SURA / SURB_LD-20WR3	20 Watt	DIL	4:1 Wide input, isolated & regulated, single & dual output
20	ST-40W	40 Watt	DIL	2:1 Wide input, isolated & regulated, single & dual output
21	SM40A	40 Watt	DIL	4:1 Wide input, isolated & regulated, single & dual output
22	SYHD	50 - 200 Watt	Half Brick	2:1 Wide input, isolated & regulated, single output
23	SYFD	300 - 400 Watt	Full Brick	2:1 Wide input, isolated & regulated, single output
24	SYPD	600 Watt	Full Brick	2:1 Wide input, isolated & regulated, single output

Non Isolated

	<i>Model Number</i>	<i>Case</i>	<i>Specifications</i>
25	SK78T-1000	1,0 A SMD	Wide input, non-isolated & regulated, single output, also available in 0,5A
26	S01D-1A	1,0 A SIP3	Wide input, non-isolated & single output, also available in 0,5A and 2A

AC/DC Converter

	<i>Model Number</i>	<i>Watt</i>	<i>Case</i>	<i>Specifications</i>
27	SLS01-15B	1 Watt	open frame, SIP	Wide input 85-264VAC, isolated & single output
28	SLS05-15B	5 Watt	open frame, SIP	Wide input 85-264VAC, isolated & single output
29-30	SLH05-25	5 - 25 Watt	PCB Mounting	Wide input 85-305VAC, isolated & single output
31	SLI 72	72 Watt	DIN-RAIL	Wide input 165-264VAC, single output, available 120&240W

DC/DC Converter SB_XT-W2R2 Series



0.25W, Fixed input voltage, isolated & unregulated
single output



FEATURES

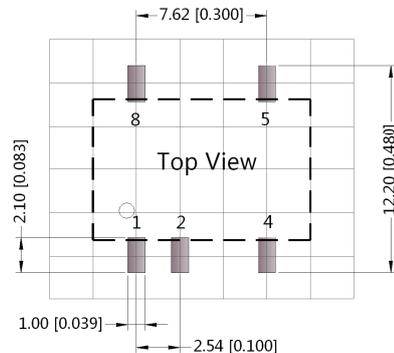
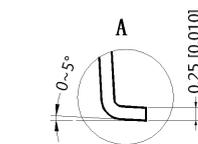
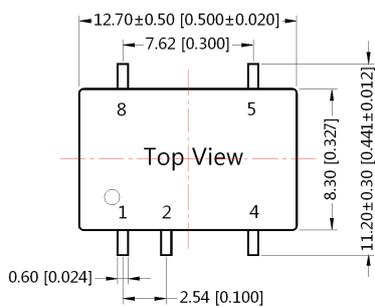
- Continuous short-circuit protection
- Operating temperature range: -40°C to +105°C
- High efficiency up to 79%
- Miniature SMD package
- Isolation: 1.5kVDC, 3kV available
- Ultra-Low ripple & noise
- International standard pin-out



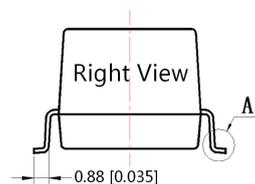
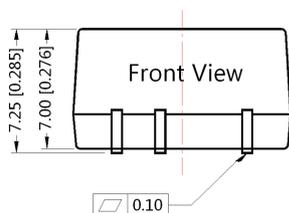
also available in dual output

Selection Guide

Part No.	Input Voltage (VDC)	Output		Efficiency (%Min./Typ.) @ Full Load	Max. Capacitive Load (μ F)
	Nominal (Range)	Output Voltage (VDC)	Output Current (mA)(Max./Min.)		
SB0305XT-W2R2	3.3 (2.97-3.63)	5	50/5	69/74	220
SB0503XT-W2R2	5 (4.5-5.5)	3.3	76/8	69/74	
SB0505XT-W2R2		5	50/5	72/77	
SB1205XT- W2R2	12 (10.8-13.2)	5	50/5	70/75	
SB1209XT- W2R2		9	28/3	74/79	
SB1212XT- W2R2		12	21/2	72/77	
SB2405XT- W2R2	24 (21.6-26.4)	5	50/5	64/69	



Note: Grid 2.54*2.54mm



Pin-Out	
Pin	Function
1	GND
2	Vin
4	0V
5	+Vo
8	NC

NC: No Connection

Note:
Unit: mm[inch]
Pin section tolerances: $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 0.25[\pm 0.010]$

DC/DC Converter SB_XT-1WR2 Series



FEATURES

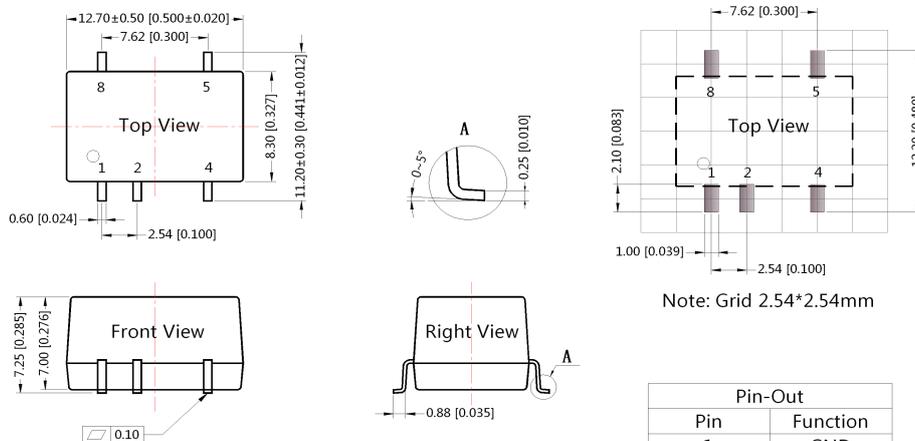
- Isolation: 1.5kV, 3kV available
- Operating temperature: -40 °C to +105 °C
- Miniature SMD package
- Internal surface mounted design
- No external component required
- International standard pin-out

also available in dual output

Selection Guide

Part No.	Input Voltage (VDC)	Output		Efficiency (% Min./Typ.) @ Full Load	Max. Capacitive Load (µF)
	Nominal (Range)	Output Voltage (VDC)	Output Current (mA) (Max./Min.)		
SB0303XT-1WR2	3.3 (2.97-3.63)	3.3	303/30	68/72	220
SB0305XT-1WR2		5	200/20	70/74	
SB0312XT-1WR2		12	84/9	76/80	
SB0324XT-1WR2		24	42/4	76/80	
SB0503XT-1WR2	5 (4.5-5.5)	3.3	303/30	70/74	
SB0505XT-1WR2		5	200/20	76/80	
SB0509XT-1WR2		9	111/12	76/80	
SB0512XT-1WR2		12	84/9	76/80	
SB0524XT-1WR2	24	42/4	76/80		
SB1203XT-1WR2	12 (10.8-13.2)	3.3	303/30	70/74	
SB1205XT-1WR2		5	200/20	76/80	
SB1209XT-1WR2		9	111/12	76/80	
SB1212XT-1WR2		12	84/9	77/81	
SB1215XT-1WR2	15	67/7	77/81		
SB2405XT-1WR2	24 (21.6-26.4)	5	200/20	76/80	
SB2409XT-1WR2		9	111/12	76/80	
SB2412XT-1WR2		12	84/9	76/80	
SB2424XT-1WR2		24	42/4	77/81	

THIRD ANGLE PROJECTION



Note:
Unit: mm[inch]
Pin section tolerances: $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 0.25[\pm 0.010]$

NC: No Connection

2BXT1WR201-A0

DC/DC Converter SB_XT-2WR2 Series



FEATURES

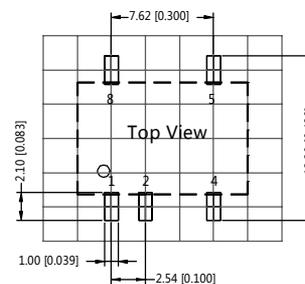
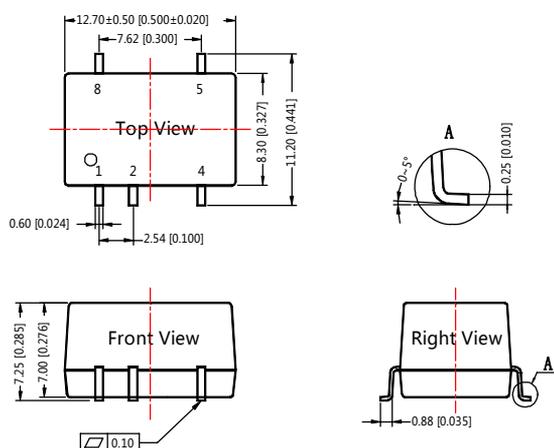
- Operating temperature: -40 °C to +105 °C
- High efficiency up to 84%
- Miniature SMD package
- Isolation: 1.5kV, 3kV available
- Internal surface mounted design
- No external component required
- International standard pin-out

also available in dual output

Selection Guide

Certification	Part No.	Input Voltage (VDC)	Output		Efficiency (%Min./Typ.) @ Full Load	Max. Capacitive Load (μ F)
		Nominal (Range)	Output Voltage (VDC)	Output Current (mA)(Max./Min.)		
CE	SB0503XT-2WR2	5 (4.5-5.5)	3.3	400/40	74/78	220
	SB0505XT-2WR2		5	400/40	75/79	
	SB0509XT-2WR2		9	222/22	78/82	
	SB0512XT-2WR2		12	167/17	78/82	
	SB0515XT-2WR2		15	133/13	79/83	
	SB1205XT-2WR2	12 (10.8-13.2)	5	400/40	75/79	
	SB1209XT-2WR2		9	222/22	78/82	
	SB1212XT-2WR2		12	167/17	78/82	
	SB1215XT-2WR2		15	133/13	79/83	
	SB1224XT-2WR2	24	83/8	80/84		
	SB1515XT-2WR2	15 (13.5-16.5)	15	133/13	79/83	
	SB2405XT-2WR2	24 (21.6-26.4)	5	400/40	75/79	
	SB2409XT-2WR2		9	222/22	78/82	
	SB2412XT-2WR2		12	167/17	78/82	
	SB2415XT-2WR2		15	133/13	79/83	
SB2424XT-2WR2	24		83/8	80/84		

THIRD ANGLE PROJECTION



Note: Grid 2.54*2.54mm

Pin-Out	
Pin	Function
1	GND
2	Vin
4	0V
5	+Vo
8	NC

NC: No Connection

Note:
Unit: mm[inch]
Pin section tolerances: $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 0.25[\pm 0.010]$



FEATURES

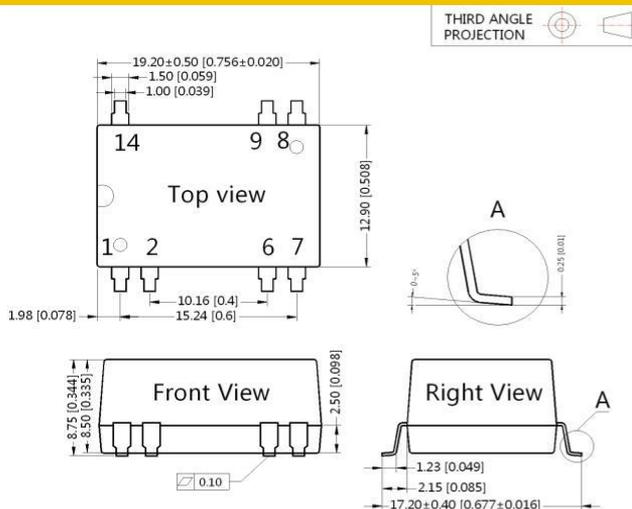
- Efficiency up to 83%
- 2:1 wide input voltage range
- Operating Temperature range: -40 ~ +85°C
- 1.5KVDC isolation
- Ultra-Miniature, SMD Package
- No Power derating ($\leq 85^\circ\text{C}$)
- Short Circuit Protection (automatic recovery)
- Low no-load power
- External On/Off control

SELECTION GUIDE

Model	Input Voltage(VDC)		Output Voltage (VDC)	Output Current (mA)		Input Current (mA)(typ.)		Reflected Ripple Current (mA,typ.)	Max. Capacitive Load (μF)	Efficiency (%. typ.) @Max. Load		
	Nominal (Range)	Max. ①		Max.	Min.	@Max. Load	@No Load					
SWRB1205MT-3W	12 (9-18)	20	5	600	30	316	20	30	2200	79		
SWRB1212MT-3W			12	250	12	309					680	81
SWRB1215MT-3W			15	200	10	305					470	82
SWRB2405MT-3W	24 (18-36)	40	5	600	30	156	7	110	2200	81		
SWRB2412MT-3W			12	250	12	152					680	82
SWRB2415MT-3W			15	200	10	152					470	82
SWRB2424MT-3W			24	125	6	157					330	80
SWRB4805MT-3W	48 (36-75)	80	5	600	30	78	7	45	2200	80		
SWRB4812MT-3W			12	250	12	74					680	83
SWRB4815MT-3W			15	200	10	74					470	83

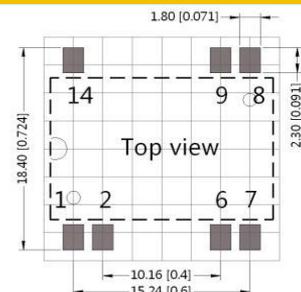
Note: ①. Absolute maximum rating without damage on the converter.

MECHANICAL DIMENSIONS



Note:
 Unit: mm[inch]
 Pin section tolerances: $\pm 0.10\text{mm}[\pm 0.004\text{inch}]$
 General tolerances: $\pm 0.25\text{mm}[\pm 0.010\text{inch}]$

RECOMMENDED FOOTPRINT DETAILS



Note : Grid 2.54*2.54mm

PIN CONNECTION

Pin	Function
1	GND
2	CTRL
6	NC
7	NC
8	+V0
9	0V
14	Vin

NC:No Connection



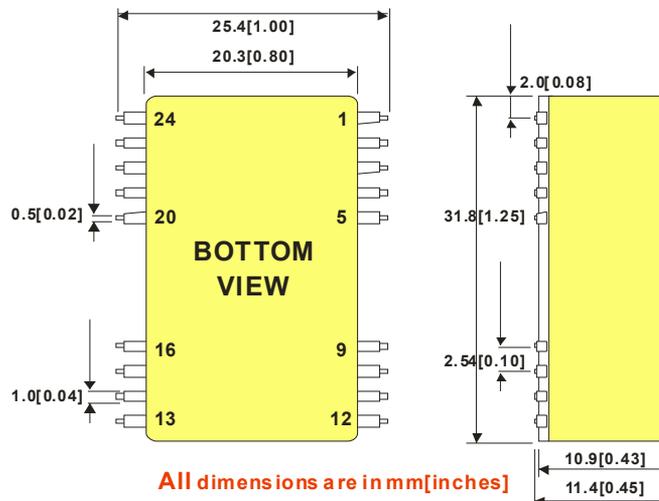
FEATURES

- 5W SMD PACKAGE
- 9-18V,18 -36V,36 -72V WIDE INPUT RANGE
- 100% BURN IN
- HIGH EFFICIENCY
- UL94 -V0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE

● **SELECTION GUIDE**
2:1 5W OUTPUT(SMD PACKAGE)

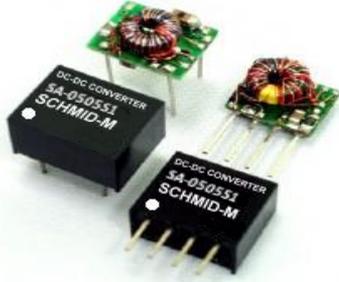
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ³⁷ CURRENT(mA)		EFF (%) ³⁸	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
SCWS-1205(ABC)5MS	9-18	5	1000	521	18	80	1500
SCWS-1212(ABC)5MS	9-18	12	470	566	18	83	1500
SCWS-1215(ABC)5MS	9-18	15	400	595	18	84	1500
SCWD-1205(ABC)5MS	9-18	+/-5	+/-500	521	18	80	1500
SCWD-1212(ABC)5MS	9-18	+/-12	+/-230	554	30	83	1500
SCWD-1215(ABC)5MS	9-18	+/-15	+/-190	565	32	84	1500
SCWS-2405(ABC)5MS	18-36	5	1000	257	10	81	1500
SCWS-2412(ABC)5MS	18-36	12	470	283	10	83	1500
SCWS-2415(ABC)5MS	18-36	15	400	294	10	85	1500
SCWD-2405(ABC)5MS	18-36	+/-5	+/-500	257	10	81	1500
SCWD-2412(ABC)5MS	18-36	+/-12	+/-230	274	15	84	1500
SCWD-2415(ABC)5MS	18-36	+/-15	+/-190	283	15	84	1500
SCWS-4805(ABC)5MS	36-72	5	1000	127	5	82	1500
SCWS-4812(ABC)5MS	36-72	12	470	138	5	85	1500
SCWS-4815(ABC)5MS	36-72	15	400	147	5	85	1500
SCWD-4805(ABC)5MS	36-72	+/-5	+/-500	127	5	82	1500
SCWD-4812(ABC)5MS	36-72	+/-12	+/-230	135	5	85	1500
SCWD-4815(ABC)5MS	36-72	+/-15	+/-190	140	5	85	1500

SMD PACKAGE



DC/DC Converter SA-1W Series

SCHMID-M

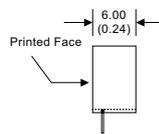
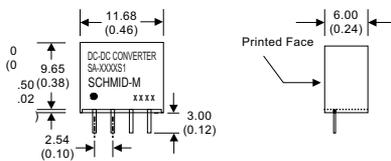


Features

- 4 Pin SIL / 8 Pin DIL Package
- 1000 VDC Isolation
- Up to 3000 VDC Isolation
- Low Ripple and Noise
- Efficiency up to 83%
- -40 ~ 85°C Operation Temperature Range
- Non-Conductive Black Plastic Case
- EMI Complies With EN55022 Class B

MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(μF)
		No-Load (mA)	Full Load (mA)		Full load (mA)			
SA-3R33R3S1	3.3	25	421	3.3	303	72	220	
SA-0505 S1	5	25	247	5	200	81	220	
SA-0509 S1	5	26	250	9	111	80	220	
SA-0512 S1	5	25	300	12	100	80	220	
SA-0515 S1	5	35	244	15	67	82	220	
SA-0524 S1	5	35	289	24	50	83	220	
SA-1205 S1	12	16	105	5	200	79	220	
SA-1209 S1	12	15	107	9	111	78	220	
SA-1212 S1	12	15	125	12	100	80	220	
SA-1215 S1	12	15	105	15	67	79	220	
SA-1218 S1	12	20	104	18	56	80	220	
SA-1224 S1	12	25	123	24	50	81	220	
SA-1505 S1	15	9	82	5	200	81	220	
SA-1509 S1	15	10	90	9	111	74	220	
SA-1512 S1	15	13	100	12	100	80	220	
SA-1515 S1	15	15	84	15	67	79	220	
SA-1524 S1	15	10	99	24	50	81	220	
SA-2405 S1	24	8	52	5	200	80	220	
SA-2409 S1	24	7	54	9	111	77	220	
SA-2412 S1	24	8	62	12	100	80	220	
SA-2415 S1	24	8	51	15	67	81	220	
SA-2424 S1	24	9	60	24	50	83	220	

MECHANICAL SPECIFICATIONS



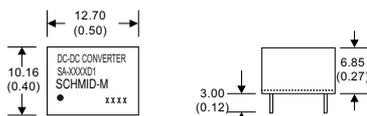
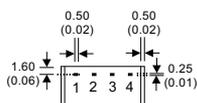
* The thickness of 48V input voltage model is 7.50(0.29)

4 Pin SIL Package

- Notes : All dimensions are typical in millimeters (inches).
1. Pin diameter: 0.5±0.05 (0.02±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Case Tolerance: ±0.5 (±0.02)

PIN CONNECTIONS	
PIN NUMBER	SINGLE
1	-V Input
2	+V Input
3	-V Output
4	+V Output

(The Pin Connection of high isolation one is the same with normal one.)



8 Pin DIL Package

- Notes : All dimensions are typical in millimeters (inches).
1. Pin diameter: 0.5±0.05 (0.02±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Case Tolerance: ±0.5 (±0.02)

PIN CONNECTIONS	
PIN NUMBER	SINGLE
1	-V Input
4	+V Input
5	+V Output
7	-V Output

(The Pin Connection of high isolation one is the same with normal one.)

DC/DC Converter S1-1W Series

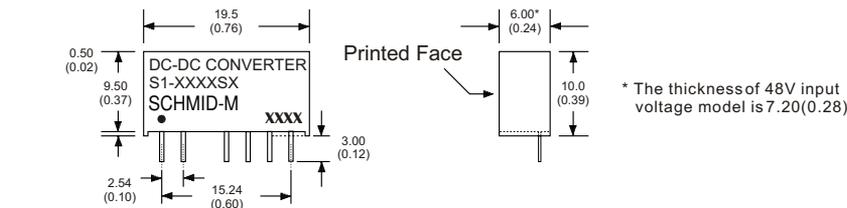


Features

- 7 Pin SIL / 14 Pin DIL Package
- 1000 VDC Isolation
- Up to 6000 VDC Isolation
- Low Ripple and Noise
- Efficiency up to 86%
- -40 ~ 85°C Operation Temperature Range
- Non-Conductive Black Plastic Case
- EMI Complies With EN55022 Class B

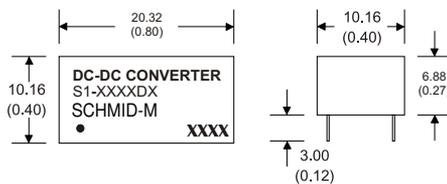
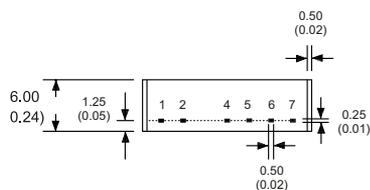
MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(μF)
		No-Load (mA)	Full Load (mA)		Full load (mA)			
S1-0505SS	5	17	247	5	200	81	220	
S1-0509SS	5	15	244	9	111	82	220	
S1-0512SS	5	17	253	12	83	79	220	
S1-0515SS	5	17	233	15	67	86	220	
S1-2405SS	24	6	54	5	200	77	220	
S1-2412SS	24	6	53	12	83	78	220	
S1-2415SS	24	5	52	15	67	80	220	
S1-0512S	5	20	250	±12	±42	80	±100	
S1-0515S	5	20	244	±15	±33	82	±100	
S1-1515S	15	20	87	±15	±33	77	±100	
S1-2405S	24	6	56	±5.0	±100	74	±100	
S1-4805D	48	6	32	±5.0	±100	65	±100	
S1-4812D	48	6	29	±12	±42	71	±100	

MECHANICAL SPECIFICATIONS



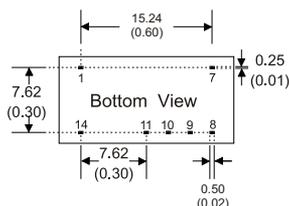
7 Pin SIL Package

- Notes : All dimensions are typical in millimeters (inches).
1. Pin diameter: 0.5±0.05 (0.02±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Case Tolerance: ±0.5 (±0.02)



14 Pin DIL Package

- Notes : All dimensions are typical in millimeters (inches).
1. Pin diameter: 0.5±0.05 (0.02±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Case Tolerance: ±0.5 (±0.02)



PIN CONNECTIONS

PIN NUMBER	SINGLE	DUAL	SINGLE-H	DUAL-H
1	+V Input	+V Input	+V Input	+V Input
2	-V Input	-V Input	-V Input	-V Input
4	-V Output	-V Output	N.P.	N.P.
5	N.P.	Common	-V Output	-V Output
6	+V Output	+V Output	N.P.	Common
7	N.P.	N.P.	+V Output	+V Output

PIN CONNECTIONS

PIN NUMBER	SINGLE	DUAL	SINGLE-H	DUAL-H
1	-V Input	-V Input	-V Input	-V Input
7	N.C.	N.C.	N.C.	N.C.
8	N.P.	Common	+V Output	+V Output
9	+V Output	+V Output	N.P.	Common
10	N.P.	N.P.	-V Output	-V Output
11	-V Output	-V Output	N.P.	N.P.
14	+V Input	+V Input	+V Input	+V Input

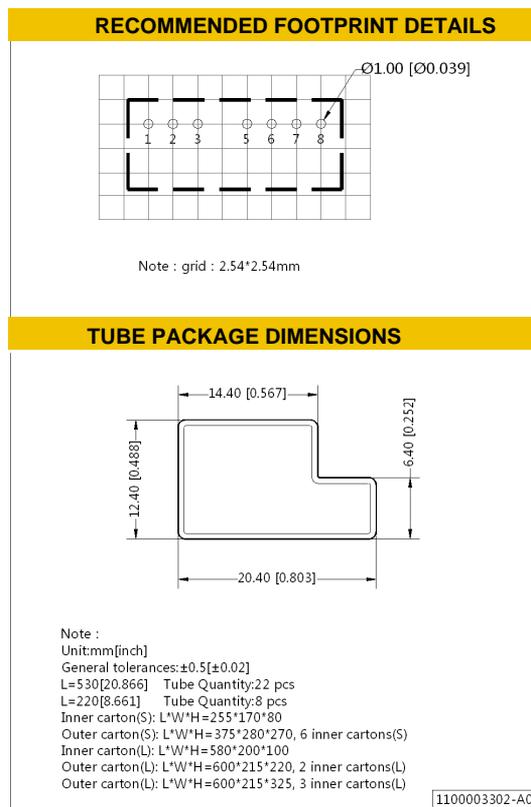
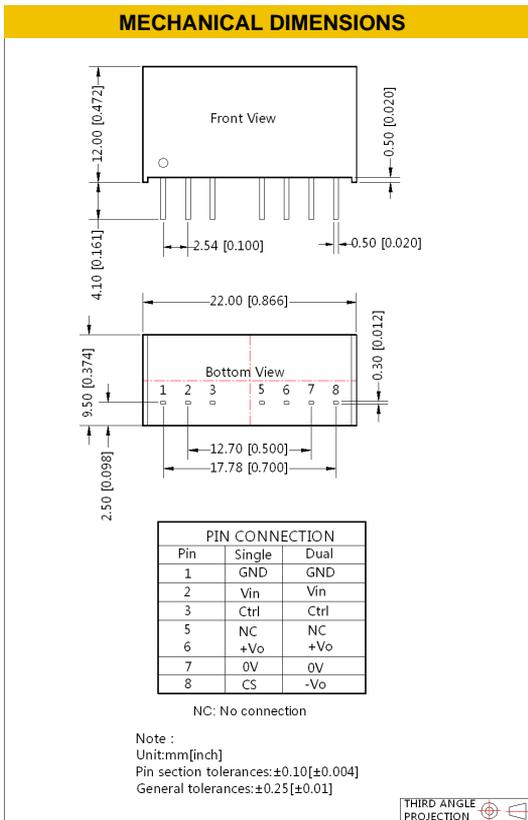


FEATURES

- Ultra-Miniature SIP Package
- 2:1 wide input voltage range
- Temperature range: -40°C ~ +85°C
- 1.5KVDC isolation
- Short Circuit Protection(automatic recovery)
- External On/Off control
- High Power Density

SELECTION GUIDE

Model	Input Voltage(VDC)		Output Voltage (VDC)	Output Current (mA)		Input Current (mA)(typ.)		Reflected Ripple Current (mA,typ.)	Max. Capacitive Load ^② (μF)	Efficiency (% , typ.) @Max. Load
	Nominal (Range)	Max. ①		Max.	Min.	@Max. Load	@No Load			
SWRA0505S-3WR2	5 (4.5-9)	11	±5	±250	±13	676	40	30	1000	74
SWRA0512S-3WR2			±12	±104	±5	650			470	77
SWRA0515S-3WR2			±15	±83	±4	650			330	77
SWRB0505S-3WR2			5	500	25	685			2200	73
SWRB0509S-3WR2			9	278	14	676			1000	74
SWRB0512S-3WR2			12	208	10	650			680	77
SWRB0515S-3WR2			15	167	8	676			470	74
SWRA1205S-3WR2	12 (9-18)	20	±5	±300	±15	321	20	30	1000	78
SWRA1212S-3WR2			±12	±125	±6	317			470	79
SWRA1215S-3WR2			±15	±100	±5	313			330	80
SWRB1203S-3WR2			3.3	758	38	278			2700	75
SWRB1205S-3WR2			5	600	30	329			2200	76
SWRB1209S-3WR2			9	333	17	317			1000	79
SWRB1212S-3WR2			12	250	13	305			680	82
SWRB1215S-3WR2			15	200	10	302			470	83
SWRB1224S-3WR2			24	125	6	309			330	81
SWRA2405S-3WR2					±5	±300			±15	158



DC/DC Converter SRBW Series



SRBW - 24 05 SD 3

Series Name
W: wide range

Input Voltage Range
12 - 4.5 ~ 18V
24 - 9 ~ 36V
48 - 18 ~ 75V

Case Type
S - SIP Single Output
SD - SIP Dual Output

Nominal Output Voltage
3R3 - 3.3V
05 - 5V
12 - 12V
15 - 15V

Watt

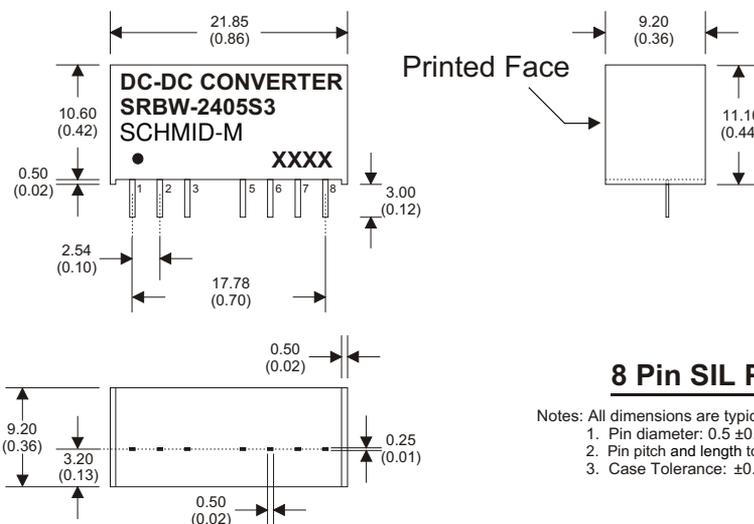
Features

- 8 Pin SIL
- Wide 4:1 Input Range
- Full SMD Technology
- 1600 VDC Isolation
- Continuous Short Circuit Protection
- Efficiency up to 82%
- -40 ~ 71°C Operation Temperature Range
- Remote on/off Control



MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL (%)	Capacitor Load (uF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SRBW-123R3S3	4.5-18	40	268	3.3	0	700	72	1760uF
SRBW-1205S3	4.5-18	40	325	5	0	600	77	1000uF
SRBW-1212S3	4.5-18	40	309	12	0	250	81	170uF
SRBW-1215S3	4.5-18	40	309	15	0	200	81	110uF
SRBW-1205SD3	4.5-18	40	325	±5	0	±300	77	±470uF
SRBW-1212SD3	4.5-18	40	313	±12	0	±125	80	±100uF
SRBW-1215SD3	4.5-18	40	313	±15	0	±100	80	±47uF
SRBW-243R3S3	9-36	25	129	3.3	0	700	75	1760uF
SRBW-2405S3	9-36	25	159	5	0	600	79	1000uF
SRBW-2412S3	9-36	30	153	12	0	250	82	170uF
SRBW-2415S3	9-36	30	153	15	0	200	82	110uF
SRBW-2405SD3	9-36	30	159	±5	0	±300	79	±470uF
SRBW-2412SD3	9-36	35	159	±12	0	±125	79	±100uF
SRBW-2415SD3	9-36	35	157	±15	0	±100	80	±47uF

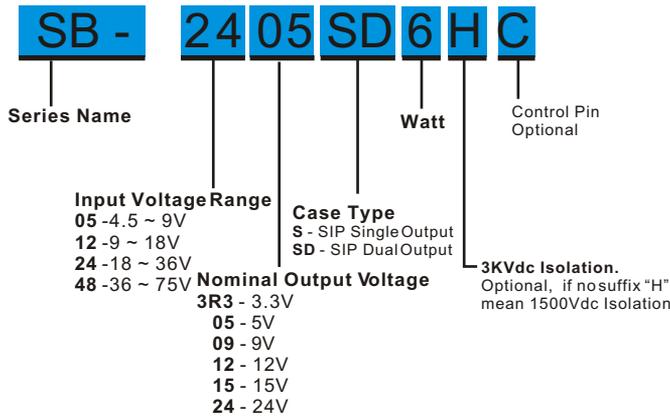
MECHANICAL SPECIFICATIONS



PIN CONNECTIONS

PIN NUMBER	SINGLE	DUAL
1	-V Input	-V Input
2	+V Input	+V Input
3	Remote On/Off	Remote On/Off
5	N.C.	N.C.
6	+V Output	+V Output
7	-V Output	Common
8	N.C.	-V Output

DC/DC Converter SB-6W Series



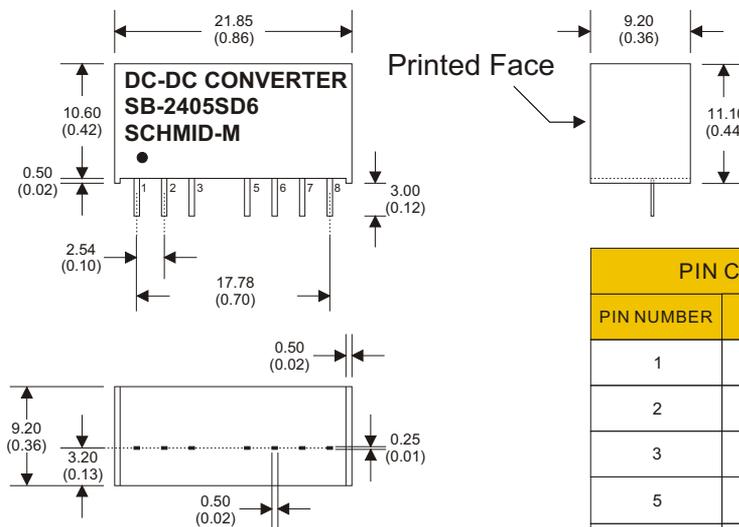
Features

- Highest Power Density In 8 Pin SIL Package
- Wide 2:1 Input Range
- Smallest Footprint 6W Converter
- No Minimum Load Required
- 1500 VDC Isolation , Up to 3000VDC
- Continuous Short Circuit Protection
- Efficiency up to 86%
- -40°C ~+ 65°C Operation Temperature Range
- Remote on/off Control (Optional)



MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(uF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SB-053R3S6	4.5-9	105	1114	3.3	0	1300	77	6600uF
SB-0505S6	4.5-9	105	1481	5	0	1200	81	3300uF
SB-0509S6	4.5-9	105	1445	9	0	666	83	2000uF
SB-0512S6	4.5-9	105	1428	12	0	500	84	1600uF
SB-0515S6	4.5-9	105	1428	15	0	400	84	1400uF
SB-0524S6	4.5-9	105	1428	24	0	250	84	680uF
SB-0505D6	4.5-9	105	1481	±5	0	±600	81	±2000uF
SB-0512D6	4.5-9	105	1428	±12	0	±250	84	±900uF
SB-0515D6	4.5-9	105	1428	±15	0	±200	84	±660uF
SB-123R3S6	9-18	55	458	3.3	0	1300	78	6600uF
SB-1205S6	9-18	55	602	5	0	1200	83	3300uF

MECHANICAL SPECIFICATIONS



8 Pin SIL Package

- Notes : All dimensions are typical in millimeters (inches).
1. Pin diameter: 0.5±0.05 (0.02±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Pin to case tolerance: ±0.5 (±0.02)
 4. Case Tolerance: ±0.5 (±0.02)
 5. Stand-off tolerance: ±0.1 (±0.004)

PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
1	-V Input	-V Input
2	+V Input	+V Input
3	N.P.	N.C.
5	N.P.	N.C.
6	+V Output	+V Output
7	-V Output	Common
8	N.C.	-V Output

PIN CONNECTIONS		
PIN NUMBER	SINGLE + C	DUAL + C
1	-V Input	-V Input
2	+V Input	+V Input
3	Remote On/Off	Remote On/Off
5	N.C.	N.C.
6	+V Output	+V Output
7	-V Output	Common
8	N.C.	-V Output

DC/DC Converter SBW-6W Series



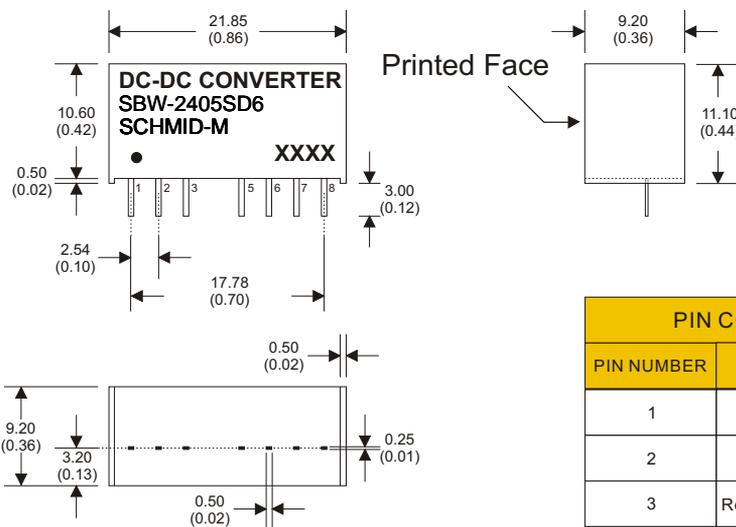
Features

- Highest Power Density In 8 Pin SIL Package
- Wide 4:1 Input Range
- Smallest Footprint 6W Converter
- No Minimum Load Required
- 1500 VDC Isolation , Up to 3000VDC (Optional)
- Continuous Short Circuit Protection
- Efficiency up to 88%
- -40°C ~+ 71°C Operation Temperature Range
- Remote on/off Control

MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(uF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SBW-243R3S6	9-36	6	261	3.3	0	1500	79	4700uF
SBW-2405S6	9-36	6	298	5	0	1200	84	2200uF
SBW-2409S6	9-36	6	290	9	0	666	86	1000uF
SBW-2412S6	9-36	6	287	12	0	500	87	470uF
SBW-2415S6	9-36	6	287	15	0	400	87	220uF
SBW-2424S6	9-36	6	287	24	0	250	87	100uF
SBW-2405SD6	9-36	6	298	±5	0	±600	84	±330uF
SBW-2412SD6	9-36	6	291	±12	0	±250	86	±220uF
SBW-2415SD6	9-36	6	287	±15	0	±200	87	±100uF
SBW-483R3S6	18-75	6	131	3.3	0	1500	79	4700uF
SBW-4805S6	18-75	6	151	5	0	1200	83	2200uF
SBW-4809S6	18-75	6	147	9	0	666	85	1000uF
SBW-4812S6	18-75	6	144	12	0	500	87	470uF
SBW-4815S6	18-75	6	144	15	0	400	87	220uF
SBW-4824S6	18-75	6	144	24	0	250	87	100uF
SBW-4805SD6	18-75	6	152	±5	0	±600	82	±330uF
SBW-4812SD6	18-75	6	147	±12	0	±250	85	±220uF
SBW-4815SD6	18-75	6	145	±15	0	±200	86	±100uF

Suffix "H" means 3KVdc isolation

MECHANICAL SPECIFICATIONS



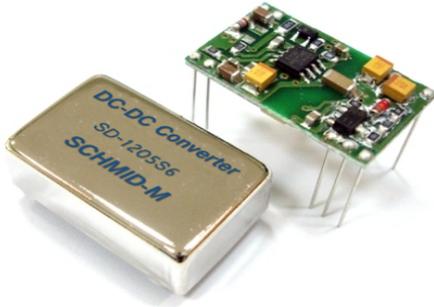
8 Pin SIL Package

- Notes : All dimensions are typical in millimeters (inches).
1. Pin diameter: 0.5±0.05 (0.02±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Pin to case tolerance: ±0.5 (±0.02)
 4. Case Tolerance: ±0.5 (±0.02)
 5. Stand-off tolerance: ±0.1 (±0.004)

PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
1	-V Input	-V Input
2	+V Input	+V Input
3	Remote On/Off	Remote On/Off
5	N.C.	N.C.
6	+V Output	+V Output
7	-V Output	Common
8	N.C	-V Output

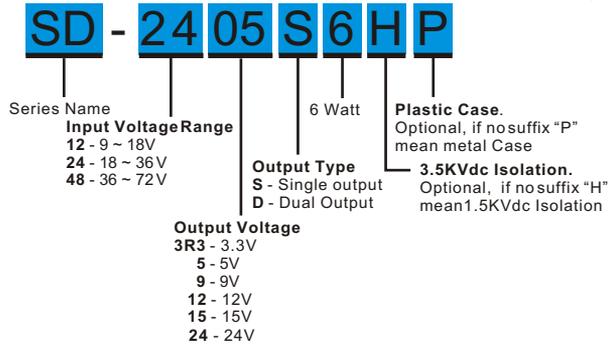
PIN CONNECTIONS		
PIN NUMBER	SINGLE + H	DUAL + H
1	-V Input	-V Input
2	+V Input	+V Input
3	Remote On/Off	Remote On/Off
5	N.P.	N.P.
6	+V Output	+V Output
7	-V Output	Common
8	N.C	-V Output

DC/DC Converter SD-6W Series



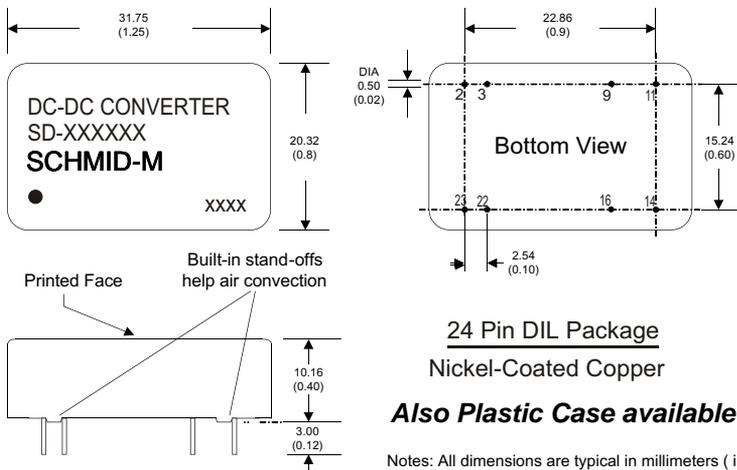
Features

- Wide 2:1 Input Range
- Full SMD Technology
- 1500 VDC Isolation, Up to 3500 VDC
- Continuous Short Circuit Protection
- Efficiency up to 83%
- -40 ~ 85°C Operation Temperature Range
- Metal Case Standard, Optional Plastic Case



MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(μF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SD-123R3S6	9-18	30	527	3.3	0	1400	73	1000
SD-1205S6	9-18	30	649	5	0	1200	77	1000
SD-1209S6	9-18	30	641	9	0	666	78	680
SD-1212S6	9-18	30	617	12	0	500	81	330
SD-1215S6	9-18	30	625	15	0	400	80	220
SD-1224S6	9-18	30	625	24	0	250	80	68
SD-123R3D6	9-18	30	527	±3.3	0	±909	73	±680
SD-1205D6	9-18	30	649	±5	0	±600	77	±330
SD-1209D6	9-18	30	625	±9	0	±333	80	±220
SD-1212D6	9-18	30	625	±12	0	±250	80	±100
SD-1215D6	9-18	30	632	±15	0	±200	79	±47
SD-1224D6	9-18	30	625	±24	0	±125	80	±33
SD-243R3S6	18-36	20	256	3.3	0	1400	75	1000
SD-2405S6	18-36	20	313	5	0	1200	80	1000

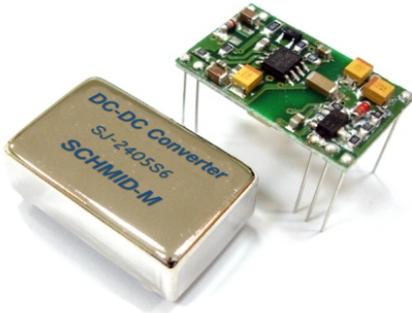
MECHANICAL SPECIFICATIONS



PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
2	-V Input	-V Input
3	-V Input	-V Input
9	N.P.	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

(The Pin Connection of high isolation one is the same with normal one.)

DC/DC Converter SJ-6W Series



Features

- Wide 4:1 Input Range
- Full SMD Technology
- 1500 VDC Isolation, Up to 3500 VDC
- Continuous Short Circuit Protection
- Efficiency up to 83%
- -40 ~ 85°C Operation Temperature Range
- Metal Case Standard, Optional Plastic Case

SJ - 24 05 S 6 H P

Series Name
Input Voltage Range
24 - 9 ~ 36V
48 - 18 ~ 72V

6 Watt

Output Type
S - Single output
D - Dual Output

Plastic Case.
Optional, if no suffix "P"
mean metal Case

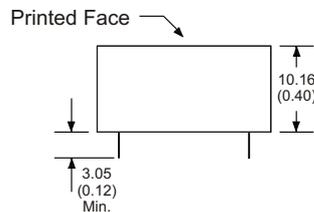
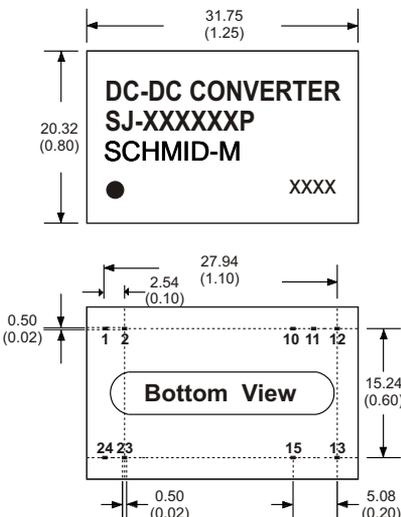
3.5KVdc Isolation.
Optional, if no suffix "H"
mean 1.5KVdc Isolation

Output Voltage
3R3 - 3.3V
5 - 5V
9 - 9V
12 - 12V
15 - 15V
24 - 24V



MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(µF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SJ-243R3S6	9-36	18	260.13	3.3	0	1400	74	1000
SJ-2405S6	9-36	18	312.5	5	0	1200	80	680
SJ-2409S6	9-36	18	308.64	9	0	666.6	81	330
SJ-2412S6	9-36	18	304.87	12	0	500	82	100
SJ-2415S6	9-36	18	301.2	15	0	400	83	100
SJ-2424S6	9-36	18	308.64	24	0	250	81	68
SJ-243R3D6	9-36	18	333.3	±3.3	0	±909	75	±470
SJ-2405D6	9-36	18	312.5	±5	0	±600	80	±330
SJ-2409D6	9-36	18	308.64	±9	0	±333	81	±100
SJ-2412D6	9-36	18	304.87	±12	0	±250	82	±68
SJ-2415D6	9-36	18	301.2	±15	0	±200	83	±68
SJ-2424D6	9-36	18	308.64	±24	0	±125	81	±22
SJ-483R3S6	18-72	15	130.06	3.3	0	1400	74	1000
SJ-4805S6	18-72	15	156.25	5	0	1200	80	680
SJ-4809S6	18-72	15	154.32	9	0	666.6	81	330
SJ-4812S6	18-72	15	152.43	12	0	500	82	100
SJ-4815S6	18-72	15	150.6	15	0	400	83	100

MECHANICAL SPECIFICATIONS



For "P" Case

24 Pin DIL Package
Non-Conductive Plastic

Notes: All dimensions are typical in millimeters (inches).
 1. Pin diameter: 0.5 ±0.05 (0.02 ±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Case Tolerance: ±0.5 (±0.02)

PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
1	+V Input	+V Input
2	+V Input	+V Input
10	N.C.	Common
11	N.C.	Common
12	-V Output	N.C.
13	+V Output	-V Output
15	N.C.	+V Output
23	-V Input	-V Input
24	-V Input	-V Input

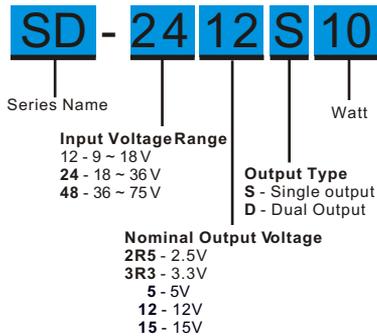
(The Pin Connection of high isolation one is the same with normal one.)

DC/DC Converter SD-10W Series



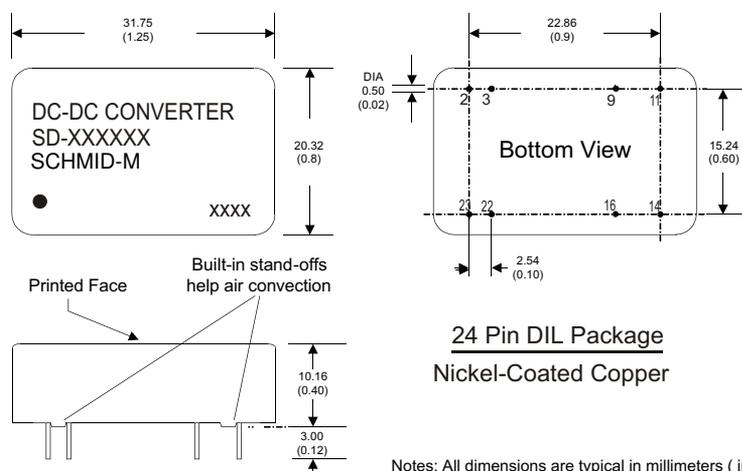
Features

- Wide 2:1 Input Range
- Full SMD Technology
- 1500 VDC Isolation
- Efficiency up to 90%
- -40 ~ 85 °C Operation Temperature Range
- Continuous Short Circuit Protection
- Over Voltage Protection
- Low no load Input Current
- Soft Start
- High Power Density: 10W in DIL-24 Package



MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(µF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SD-122R5S10	9-18	10	791	2.5	0	3000	81	2200
SD-123R3S10	9-18	10	1006	3.3	0	3000	84	2200
SD-1205S10	9-18	10	992	5	0	2000	86	2200
SD-1212S10	9-18	10	980	12	0	833	87	820
SD-1215S10	9-18	10	958	15	0	667	89	470
SD-1212D10	9-18	10	980	±12	0	±416	87	±220
SD-1215D10	9-18	10	969	±15	0	±333	88	±150
SD-242R5S10	18-36	10	381	2.5	0	3000	84	2200
SD-243R3S10	18-36	10	497	3.3	0	3000	85	2200
SD-2405S10	18-36	10	479	5	0	2000	89	2200
SD-2412S10	18-36	10	485	12	0	833	88	820
SD-2415S10	18-36	10	485	15	0	667	88	470
SD-2412D10	18-36	10	485	±12	0	±416	88	±220
SD-2415D10	18-36	10	474	±15	0	±333	90	±150
SD-482R5S10	36-75	10	191	2.5	0	3000	84	2200
SD-483R3S10	36-75	10	249	3.3	0	3000	85	2200
SD-4805S10	36-75	10	242	5	0	2000	88	2200

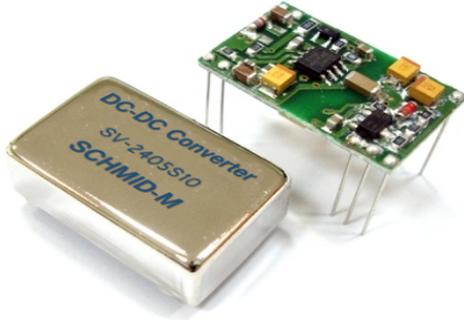
MECHANICAL SPECIFICATIONS



Notes: All dimensions are typical in millimeters (inches).
 1. Pin diameter: 0.5 ±0.05 (0.02 ±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)
 3. Case Tolerance: ±0.5 (±0.02)

PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
2	-V Input	-V Input
3	-V Input	-V Input
9	N.P.	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

DC/DC Converter SV-10W Series



SV - 2405S10

Series Name: SV
 Input Voltage Range: 24 - 9 ~ 36V
 48 - 18 ~ 75V
 Output Type: S - Single output
 D - Dual Output
 Nominal Output Voltage: 3R3 - 3.3V
 05 - 5V
 12 - 12V
 15 - 15V
 Watt: 10

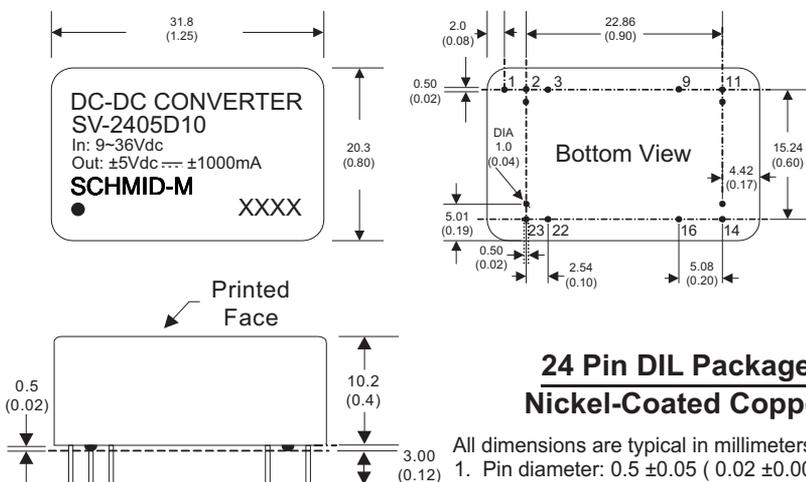
Features

- Wide 4:1 Input Range
- Full SMD Technology
- 1600 VDC Isolation
- Efficiency up to 88%
- -40 ~ 85 °C Operation Temperature Range
- No Minimum Load Required
- Continuous Short Circuit Protection
- Over Voltage Protection
- Over Load Protection
- Low no load Input Current
- Soft Start
- High Power Density: 10W in DIL-24 Package
- Remote On/Off



MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(uF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SV-243R3S10	9-36	15	440	3.3	0	2700	85	1330
SV-2405S10	9-36	15	480	5	0	2000	87	1330
SV-2412S10	9-36	15	475	12	0	833	88	288
SV-2415S10	9-36	15	475	15	0	667	88	200
SV-2405D10	9-36	15	495	5	0	1000	85	900
SV-2412D10	9-36	15	480	12	0	417	87	133
SV-2415D10	9-36	15	480	15	0	330	87	90
SV-483R3S10	18-75	15	225	3.3	0	2700	84	1330
SV-4805S10	18-75	15	240	5	0	2000	87	1330
SV-4812S10	18-75	15	240	12	0	833	87	288
SV-4815S10	18-75	15	240	15	0	667	87	200
SV-4805D10	18-75	15	250	5	0	1000	85	900
SV-4812D10	18-75	15	240	12	0	417	88	133
SV-4815D10	18-75	15	240	15	0	330	88	90

MECHANICAL SPECIFICATIONS



PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
1	Remote On/Off	Remote On/Off
2	-V Input	-V Input
3	-V Input	-V Input
9	N.P.	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input



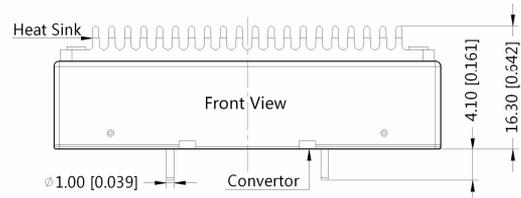
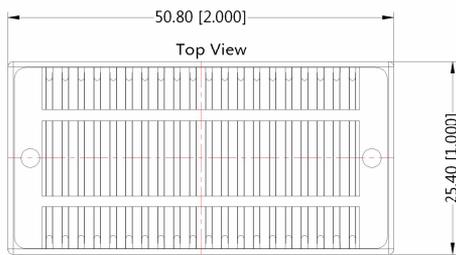
FEATURES

- Efficiency up to 90%
- 2:1 wide input voltage range
- Output short circuit protection
- Output over voltage protection
- Output over current protection
- Input under voltage protection
- 1.5KVDC isolation
- Operating temperature range: -40°C ~ +85°C
- Six-sided metal shield
- Industry standard pinout
- Meet CISPR22/EN55022 CLASS A
- A2S (chassis mounting) and A4S (DIN-Rail mounting) have the function of input reverse connection preventing

SELECTION GUIDE

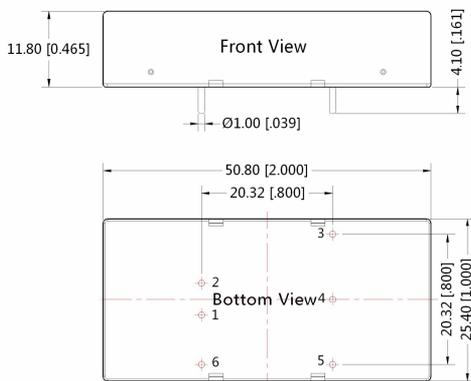
Model ①	Input Voltage(VDC)		Output Voltage (VDC)	Output Current (mA)		Input Current (mA)(typ.)		Reflected Ripple Current (mA,typ.)	Max. Capacitive Load ③ (μF)	Efficiency ④ (% , typ.) @Max. Load
	Nominal (Range)	Max ②		Max.	Min.	@ Max. Load	@ No Load			
SVRA1205LD-20WR2	12 (9-18)	20	±5	±2000	±100	1938	30		4800	86
SVRA1212LD-20WR2			±12	±834	±42	1895	25		800	88
SVRA1215LD-20WR2			±15	±667	±33	1895	25		500	88
SVRA1224LD-20WR2			±24	±417	±21	1895	20		300	88
SVRB1203LD-20WR2			3.3	5000	250	1600	65		18700	86
SVRB1205LD-20WR2			5	4000	200	1872	60		9600	89
SVRB1212LD-20WR2			12	1667	84	1872	25		1600	89
SVRB1215LD-20WR2			15	1333	67	1872	25		1000	89

MECHANICAL DIMENSIONS (WITH HEATSINK)



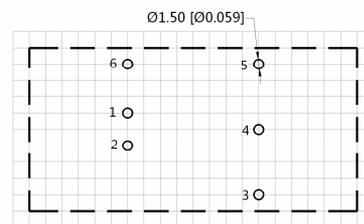
Note:
Unit :mm[inch]
General tolerances:±0.30mm[±0.012inch]
If use heatsinks,make sure there is enough space for a special size in ther above graph.

MECHANICAL DIMENSIONS



Note:
Unit :mm[inch]
Pin diameter tolerances :±0.10mm[±0.004inch]
Pin height tolerances :±0.50mm[±0.020inch]
General tolerances:±0.30mm[±0.012inch]

RECOMMENDED FOOTPRINT DETAILS



Note : Grid 2.54*2.54mm

PIN CONNECTION		
Pin	Single	Dual
1	GND	GND
2	Vin	Vin
3	+Vo	+Vo
4	Trim	0V
5	0V	-Vo
6	Ctrl	Ctrl





FEATURES

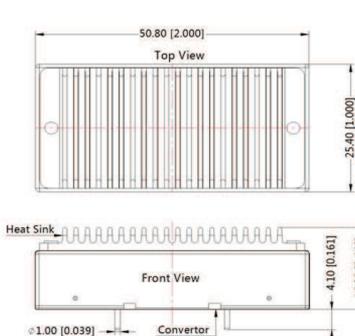
- Wide range of input voltage (4:1)
- Efficiency up to 90%
- No-load power consumption as low as 0.2W
- Isolation voltage : 1500VDC
- Operating temperature range: -40°C to +85°C
- Input under-voltage protection, output short circuit protection, over-voltage protection, Over-current protection
- Meet CISPR22/EN55022 CLASS A
- Six-sided metal shielding package
- A2S (wiring mounting) and A4S (35mm rail mounting) products featuring reverse polarity protection for input

Selection Guide

Part No. ①	Input Voltage (VDC)		Output		Efficiency ^③ (%,Min./Typ.) @ Full Load	Max. Capacitive Load ^④ (μF)
	Nominal (Range)	Max. ②	Output Voltage (VDC)	Output Current (mA)(Max./Min.)		
SURA2405LD-20WR3	24 (9-36)	40	±5	±2000/±100	84/86	4800
SURA2409LD-20WR3			±9	±1111/±56	86/88	1000
SURA2412LD-20WR3			±12	±834/±42	86/88	800
SURA2415LD-20WR3			±15	±667/±33	86/88	625
SURB2403LD-20WR3			3.3	5000/250	84/86	10000
SURB2405LD-20WR3			5	4000/200	88/90	10000
SURB2409LD-20WR3			9	2222/111	87/89	4700
SURB2412LD-20WR3			12	1667/84	87/89	1600
SURB2415LD-20WR3			15	1333/67	88/90	1000
SURB2424LD-20WR3			24	834/42	88/90	500
SURA4805LD-20WR3	48 (18-75)	80	±5	±2000/±100	84/86	4800
SURA4812LD-20WR3			±12	±834/±42	86/88	800
SURA4815LD-20WR3			±15	±667/±33	87/89	625
SURB4803LD-20WR3			3.3	5000/250	84/86	10000
SURB4805LD-20WR3			5	4000/200	88/90	10000
SURB4809LD-20WR3			9	2222/111	87/89	4700

Notes: ① Series with suffix "H" are heat sink mounting; series with suffix "A2S" are chassis mounting, with suffix "A4S" are DIN-Rail mounting, for example SURB2405LD-20WR3A2S is chassis mounting of with heat sink, SURB2405LD-20WR3A4S is DIN-Rail mounting of without heat sink; If the application has a higher requirement for heat dissipation, you can choose modules with heat sink;
 ② Absolute maximum rating without damage on the converter, but it isn't recommended;
 ③ Efficiency is measured in nominal input voltage and rated output load; A2S (wiring) and A4S (rail) Model due to input reverse polarity protection, minimum efficiency greater than Min.-2 is qualified;
 ④ The capacitive loads of positive and negative outputs are identical.

Horizontal Package (with heat sink) Dimensions

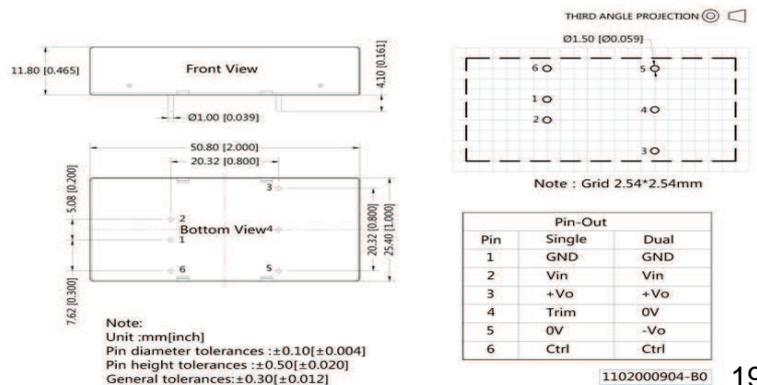


Pin	Pin-Out	
	Single	Dual
1	GND	GND
2	Vin	Vin
3	+Vo	+Vo
4	Trim	0V
5	0V	-Vo
6	Ctrl	Ctrl

Note:
 Unit: mm[inch]
 General tolerances: ±0.50[±0.020]
 If use heatsinks, make sure there is enough space for a special size in their above graph

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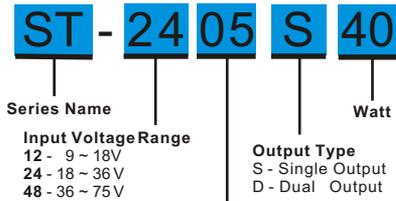
Horizontal Package (without heat sink) Dimensions and Recommended Layout



Pin	Pin-Out	
	Single	Dual
1	GND	GND
2	Vin	Vin
3	+Vo	+Vo
4	Trim	0V
5	0V	-Vo
6	Ctrl	Ctrl

1102000904-B0

DC/DC Converter ST-40W Series



Single Output Voltage
3R3 - 3.3V
05 - 5.0V
12 - 12V
15 - 15V

Dual Output Voltage
12 - ±12V
15 - ±15V

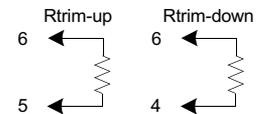


Features

- Wide 2:1 Input Range
- 1600 VDC Isolation
- Efficiency up to 92%
- Extended Operating Temperature: -40 ~ 71°C max.
- Adjustable Output Voltage
- Remote On/Off Control (CTRL)
- Continuous Short Circuit Protection
- Over Load Protection
- Over Voltage Protection
- Soft Start
- High Power Density: 40W in 2"x1"x0.4" package
- No Minimum Load Required

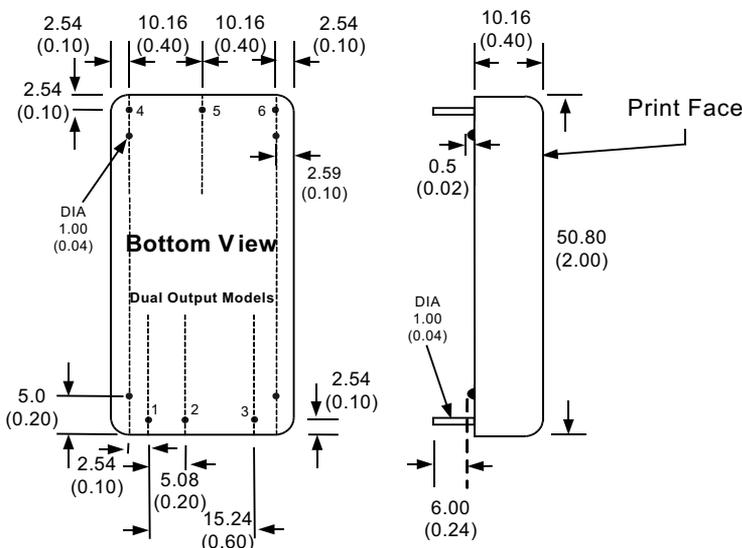
EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method as below. (single output models only)



MODEL SELECTION GUIDE

MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(µF)
		No-Load (mA)	Full Load (mA)		Min-Load (mA)	Full Load (mA)		
ST-123R3S40	9-18	100	2444	3.3	0	8000	90	21800
ST-1205S40	9-18	160	3663	5	0	8000	91	13600
ST-1212S40	9-18	40	3663	12	0	3333	91	2300
ST-1215S40	9-18	50	3663	15	0	2666	91	1500
ST-243R3S40	18-36	60	1208	3.3	0	8000	91	21800
ST-2405S40	18-36	90	1811	5	0	8000	92	13600
ST-2412S40	18-36	30	1831	12	0	3333	91	2300
ST-2415S40	18-36	40	1811	15	0	2666	92	1500
ST-483R3S40	36-75	40	604	3.3	0	8000	91	21800
ST-4805S40	36-75	60	905	5	0	8000	92	13600
ST-4812S40	36-75	20	915	12	0	3333	91	2300
ST-4815S40	36-75	20	905	15	0	2666	92	1500
ST-1212D40	9-18	50	3663	±12	0	±1666	91	±1200



All dimensions are typical in millimeters (inches).

1. Pin diameter: 1.0 ±0.05 (0.04 ±0.002)
2. Pin pitch and length tolerance: ±0.35 (±0.014)
3. Case Tolerance: ±0.5 (±0.02)
4. Stand-off Tolerance: ±0.1 (±0.004)

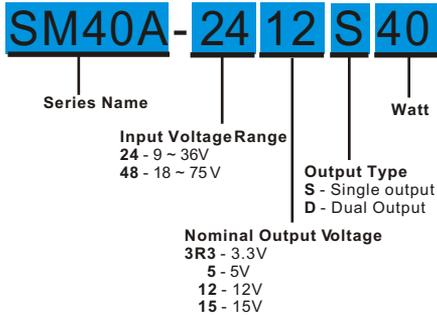
PIN CONNECTIONS

PIN NUMBER	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	CTRL	CTRL
4	+Vout	+Vout
5	-Vout	Com
6	Trim	-Vout

DC/DC Converter SM40A Series



PART NUMBER STRUCTURE

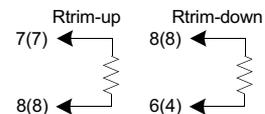


Features

- Wide 4:1 Input Range
- Full SMD Technology
- 1600 VDC Isolation
- Efficiency up to 92%
- -40 ~ 85°C Operation Temperature Range
- Adjustable Output Voltage
- Remote On/Off Control (CTRL)
- Continuous Short Circuit Protection
- Over Current Protection
- Over Voltage Protection
- Over Temperature Protection
- Soft Start

EXTERNAL OUTPUT TRIMMING

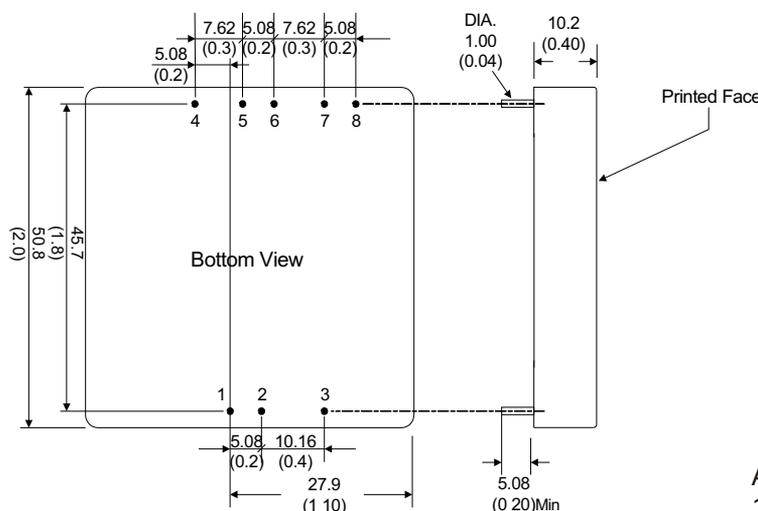
Output can be externally trimmed by using the method as below. () for dual output trim.



MODEL SELECTION GUIDE

MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(uF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
SM40A-243R3S40	9-36	80	1598	3.3	0	10000	89	25000
SM40A-2405S40	9-36	100	1893	5	0	8000	91	13000
SM40A-2412S40	9-36	50	1925	12	0	3350	90	2300
SM40A-2415S40	9-36	50	1904	15	0	2650	90	1500
SM40A-483R3S40	18-75	60	799	3.3	0	10000	89	25000
SM40A-4805S40	18-75	60	936	5	0	8000	92	13000
SM40A-4812S40	18-75	30	963	12	0	3350	90	2300
SM40A-4815S40	18-75	30	941	15	0	2650	91	1500
SM40A-2412D40	9-36	60	1919	±12	0	±1650	89	±1200
SM40A-2415D40	9-36	60	1962	±15	0	±1350	89	±750
SM40A-4812D40	18-75	30	948	±12	0	±1650	90	±1200
SM40A-4815D40	18-75	30	970	±15	0	±1350	90	±750

MECHANICAL SPECIFICATIONS



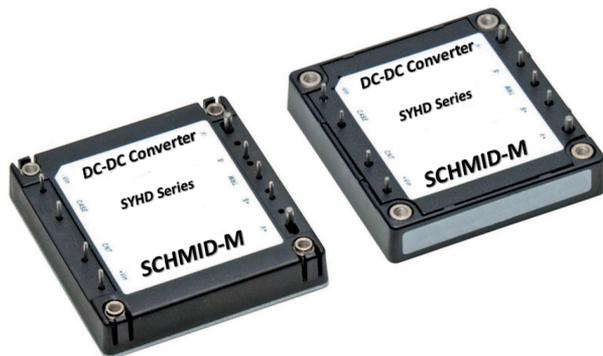
PIN CONNECTIONS

PIN NUMBER	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	CTRL	CTRL
4	-Sense	+Vout
5	+Sense	Com
6	+Vout	Com
7	-Vout	-Vout
8	Trim	Trim

All dimensions are typical in millimeters (inches).
 1. Pin diameter: 1.0 ±0.05 (0.04 ±0.002)
 2. Pin pitch and length tolerance: ±0.35 (±0.014)

DC/DC Converter

SYHD Series 50W - 200W



- Half Brick Industry Standard Footprint
- 2:1 Input Voltage Range
- Baseplate Temperature -40~+100° C
- I/O-isolation 1500Vdc
- Output Short-circuit Protection, Self recovery
- Remote On/Off Control



Model Selection Guide

Product Model	Input Voltage Range (Typical)	Output Voltage (Vdc)	Output Current (A)	Efficiency (%)
SYHD50-24S12		12	4.17	86
SYHD50-24S48		48	1.04	86
SYHD75-24S12		12	6.25	86
SYHD75-24S48		48	1.56	86
SYHD100-24S12		12	8.33	86
SYHD100-24S15	18~36	15	6.67	86
SYHD100-24S24	(24Vdc)	24	4.17	86
SYHD150-24S12		12	12.5	86
SYHD150-24S15		15	10	86
SYHD150-24S48		48	3.13	86
SYHD200-24S12		12	16.7	87
SYHD200-24S15		15	13.3	88

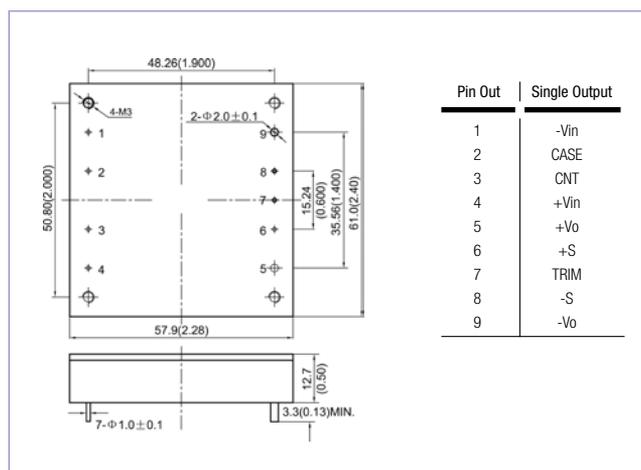
Model Selection Guide

Product Model	Input Voltage Range (Typical)	Output Voltage (Vdc)	Output Current (A)	Efficiency (%)
SYHD50-48S12		12	4.17	87
SYHD50-48S48	36~72	48	1.04	88
SYHD75-48S12	(48Vdc)	12	6.25	87
SYHD75-48S48		48	1.56	87
SYHD100-48S12		12	8.33	87
SYHD100-48S15		15	6.67	87
SYHD100-48S24		24	4.17	88
SYHD150-48S12		12	12.5	87
SYHD150-48S15		15	10	87
SYHD200-48S12		12	16.7	90
SYHD200-48S15		15	13.3	90

Model Selection Guide

Product Model	Input Voltage Range (Typical)	Output Voltage (Vdc)	Output Current (A)	Efficiency (%)
SYHD50-110S12		12	4.17	86
SYHD50-110S15	66~160	15	3.33	86
SYHD50-110S24	(110Vdc)	24	2.08	86
SYHD75-110S15		15	5	86
SYHD75-110S24		24	3.13	86
SYHD100-110S12		12	8.33	86
SYHD100-110S13V8		13.8	7.25	86
SYHD150-110S12		12	12.5	87
SYHD150-110S13V8		13.8	10.9	87
SYHD150-110S24		24	6.25	87
SYHD200-110S12		12	16.7	87
SYHD200-110S15		15	13.3	87
SYHD200-110S24		24	8.33	88

Outline Diagram And Pin Out



DC/DC Converter SYFD Series 300W - 400W



- Full Brick Industry Standard Footprint
- 2:1 Input Voltage Range
- Baseplate Temperature -40~+100°C
- I/O-isolation 1500Vdc
- Output Short-circuit Protection, Self recovery
- Remote On/Off Control



Model Selection Guide

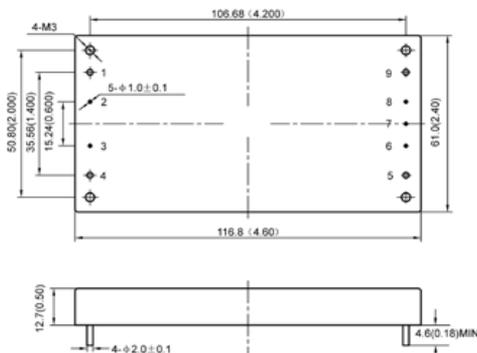
Product Model	Input Voltage Range (Typical)	Output Voltage (Vdc)	Output Current (A)	Efficiency (%)
SYFD300-24S05	18~36 (24Vdc)	5	60	85
SYFD300-24S12		12	25	86
SYFD300-24S15		15	20	87
SYFD300-24S24		24	12.5	88
SYFD300-24S28		28	10.7	88
SYFD300-24S48		48	6.25	86
SYFD400-24S05		5	80	84
SYFD400-24S12		12	33.3	86
SYFD400-24S15		15	26.7	87
SYFD400-24S24		24	16.7	88
SYFD400-24S28		28	14.3	88
SYFD400-24S48		48	8.33	86

Model Selection Guide

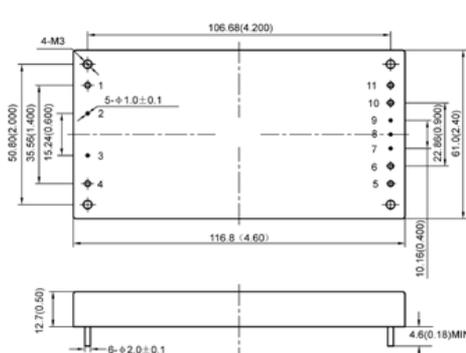
Product Model	Input Voltage Range (Typical)	Output Voltage (Vdc)	Output Current (A)	Efficiency (%)
SYFD300-48S05	36~72 (48Vdc)	5	60	87
SYFD300-48S12		12	25	88
SYFD300-48S15		15	20	88
SYFD300-48S24		24	12.5	88
SYFD300-48S28		28	10.7	88
SYFD300-48S48		48	6.25	87
SYFD400-48S05		5	80	85
SYFD400-48S12		12	33.3	86
SYFD400-48S15		15	26.7	87
SYFD400-48S24		24	16.7	92
SYFD400-48S28		28	14.3	92
SYFD400-48S48		48	8.33	92
SYFD300-110S12	66~160 (110Vdc)	12	25	87
SYFD300-110S24		24	12.5	90
SYFD300-110S48		48	6.25	90
SYFD400-110S12		12	33.3	88
SYFD400-110S24		24	16.7	91
SYFD400-110S48		48	8.33	91

D300-400 Series products are controlled by positive logic signal. If the negative logic control is preferred, the suffix "P" should be added to the part no., such as SYFD300-48S05P

Output voltage more than 5V



Output voltage less than 5V(include 5V)



Pin Out	More than 5V	Less than 5V(Include 5V)
1	-Vin	-Vin
2	CASE	CASE
3	CNT	CNT
4	+Vin	+Vin
5	+Vo	+Vo
6	+S	+Vo
7	TRIM	+S
8	-S	TRIM
9	-Vo	-S
10	-	-Vo
11	-	-Vo

DC/DC Converter SYPD Series 600W



- High Voltage Input 200~400Vdc
- Baseplate Temperature -40~+100°C
- N+1 Parallel Redundant Operation
- I/O-isolation 1500Vdc
- Output Short-circuit Protection, Self recovery
- Remote On/Off Control

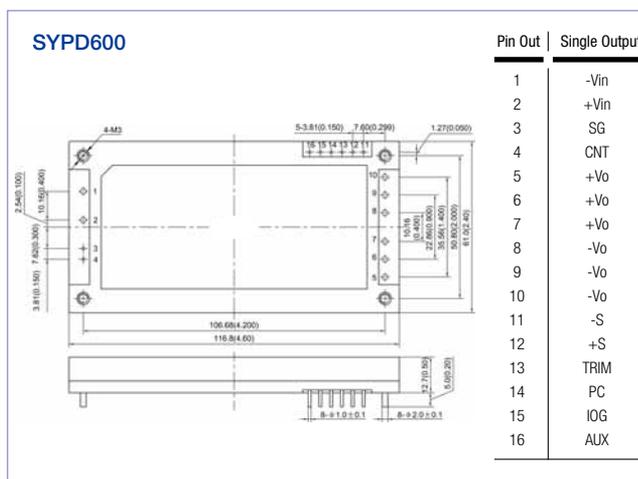


Model Selection Guide

Product Model	Input Voltage Range (Typical)	Output Voltage (Vdc)	Output Current (A)	Efficiency (%)
SYPD600-280S12		12	50	90
SYPD600-280S15		15	40	90
SYPD600-280S24		24	25	91
SYPD600-280S28		28	21.5	91
SYPD600-280S48		48	12.5	91

SYPD150-600 Series products are controlled by positive logic signal. If the negative logic control is preferred, the suffix "P" should be added to the part no. , such as SYPD600-280S28P

Outline Diagram And Pin Out



DC/DC Converter SK78XXT-1000 Series



FEATURES

- Efficiency up to 93%
- No need for heat sinks
- 1.0AMP SMD package
- Low ripple and noise
- Adjustable output voltage
- Remote ON/OFF control
- Short circuit protection
- Low shutdown current
- Operating temperature range: -40°C ~ +85°C



Non-Isolated SMD DC-DC Converter

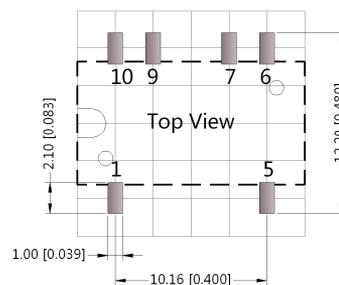
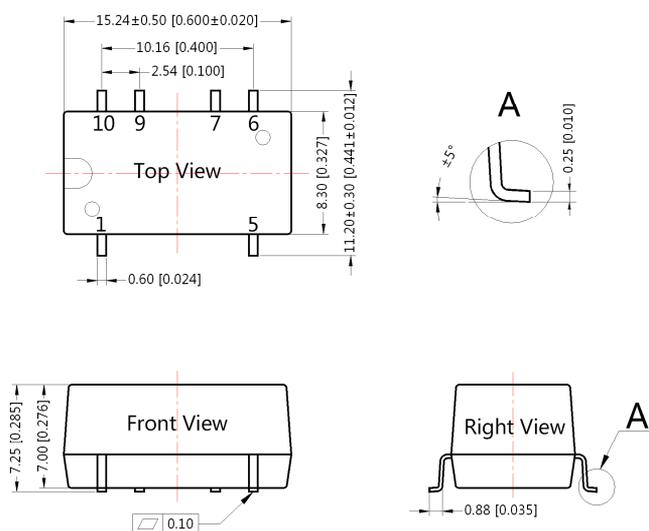
SELECTION GUIDE

Model	Input Voltage(VDC)		Input Current (mA)	Output Voltage(VDC)		Output Current (mA)	Efficiency (% , Typ.)	
	Nominal	Range		Nominal	Adjust Range		Vin(Min)	Vin (Max)
SK7801T-1000	12	4.75-15	165	1.5	fixed	1000	76	74
SK78X2T-1000		4.75-15	190	1.8	1.5-3.6		79	77
SK7802T-1000		5.0-18	245	2.5	1.5-3.9		83	81
SK7803T-1000		5.0-18	320	3.3	1.8-5.5		84	84
SK7805T-1000		7.0-18	460	5.0	2.5-6.5		90	88
SK78X6T-1000		8.5-18	580	6.5	fixed		93	91

Note: To adjust the output voltage must be met $V_{in}-V_o > 2V$. Input Current measured at nominal input voltage and rated output load.

OUTLINE DIMENSIONS, RECOMMENDED FOOTPRINT & PACKAGING

THIRD ANGLE PROJECTION



Note: Grid 2.54*2.54mm

Pin-Out	
Pin	Function
1	Vin
7,9	GND
5	Vout
6	Vadj
10	ON/OFF

NC: No Connection

Note:
Unit: mm[inch]
Pin section tolerances: $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 0.25[\pm 0.010]$

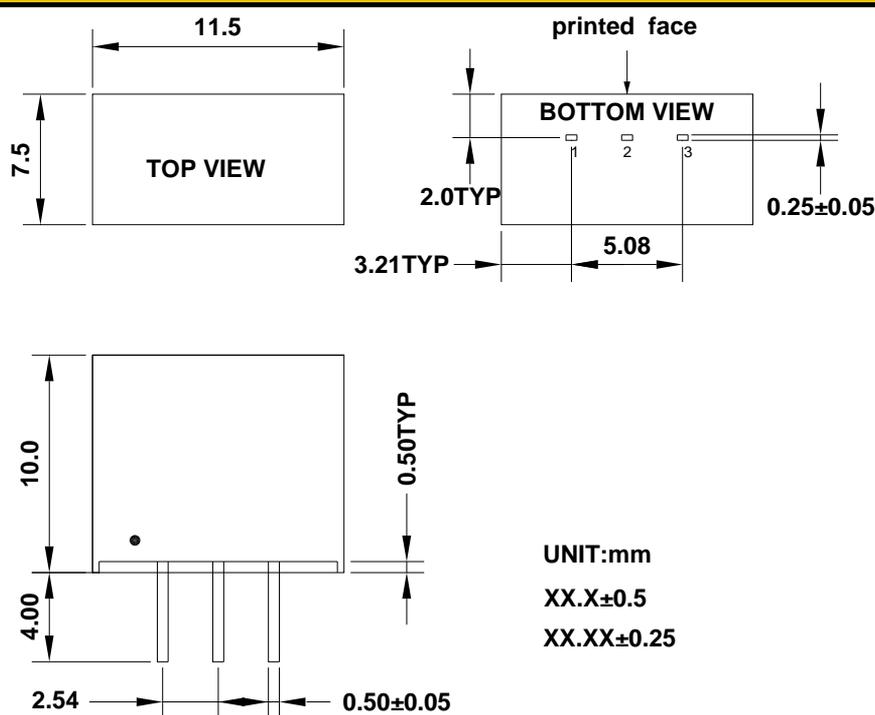
**FEATURES:**

- 3PIN SIP Package
- Pin-out compatible with LM78XX Linears
- UL94V-0 Package Material
- Operating Temperature: -40°C TO +85°C
- Efficiency up to 96%, Non isolated, no need for heatsinks
- Short circuit protection

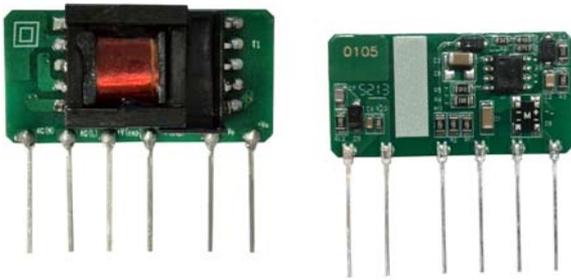


Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Input Range Vdc	Output Voltage Vdc	Output Current mA	Efficiency	
				Min. Vin(%)	Max. Vin(%)
S01D-1R2-1A	4.6-36	1.2	1000	74	62
S01D-1R5-1A	4.6-36	1.5	1000	78	65
S01D-1R8-1A	4.6-36	1.8	1000	82	69
S01D-2R5-1A	4.6-36	2.5	1000	87	75
S01D-3R3-1A	4.75-36	3.3	1000	91	78
S01D-05-1A	6.5-36	5.0	1000	92	84
S01D-6R5-1A	9.0-36	6.5	1000	93	87
S01D-09-1A	12-36	9.0	1000	95	90
S01D-12-1A	15-36	12	1000	95	92
S01D-15-1A	18-36	15	1000	96	94

Markings and Dimensions**PIN Connection**

PIN	1	2	3
SINGLE	+Vin	GND	+Vout



FEATURES

- Input voltage range: 85-264VAC/70-400VDC
- Over current protection and short circuit protection
- High efficiency, high power density
- Low power consumption, green power
- Industrial grade
- Open frame, ortal-slim SIP package
- Flexible design of peripheral circuit reduces layout problems

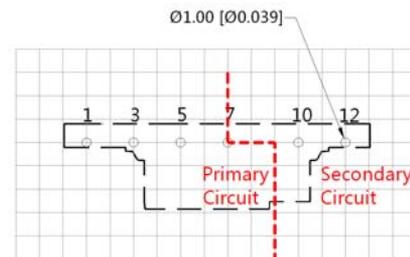
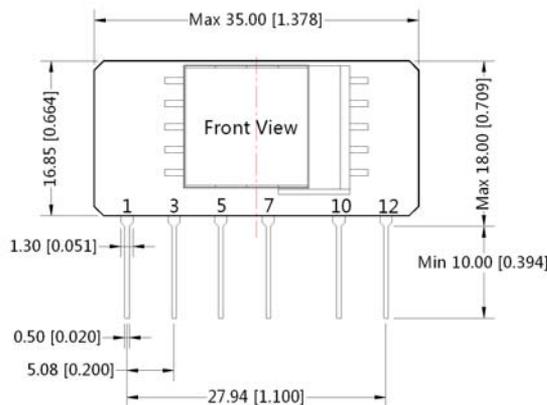


Selection Guide

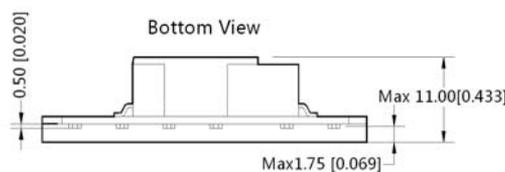
Model	Output Power	Nominal Output Voltage and Current(Vo/Io)	Efficiency (230VAC,%/Typ.)	Max. Capacitive Load (uF)
SLS01-15B05SS	1W	5V/200mA	66	220
SLS01-15B09SS		9V/111mA	67	100
SLS01-15B12SS		12V/83mA	70	100
SLS01-15B15SS		15V/67mA	69	100
SLS01-15B24SS		24V/42mA	68	100

Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



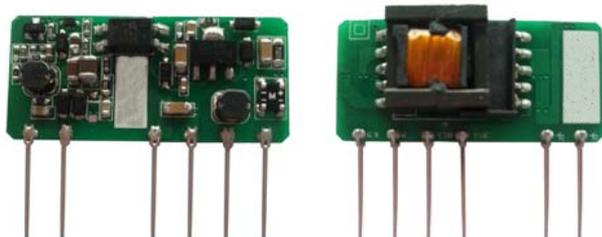
Note: Grid 2.54*2.54mm



Pin-Out	
Pin	Function
1	AC (N)
3	AC (L)
5	+V(cap)
7	-V(cap)
10	-Vo
12	+Vo

Note:
Unit :mm[inch]
Pin diameter tolerances :±0.10[±0.004]
General tolerances:±0.50[±0.020]

- 1.It is necessary to add C1 between pin5 and pin7 ;
- 2.It is necessary to add pi-type filter circuit to the output,such as the typical application of Figure 1;
- 3.It is needed to have distance ≥6.4mm for safety between external componets in primary circuit and secondary circuit.



FEATURES

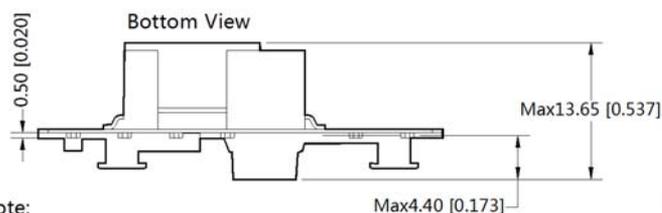
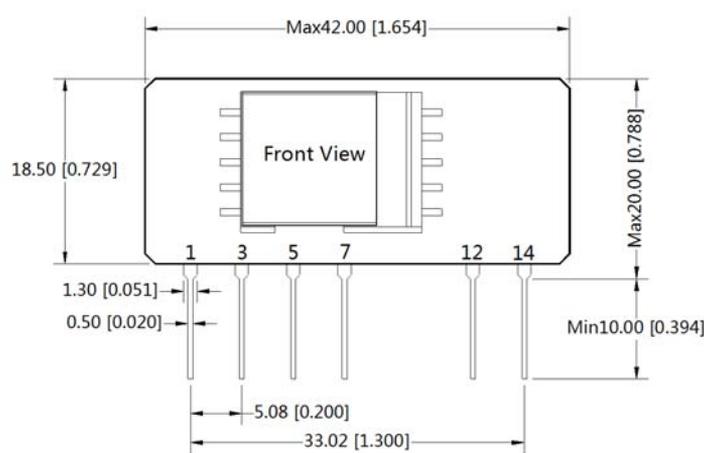
- Wide input voltage range: 85~264VAC/100~400VDC
- Over current protection and short circuit protection
- High efficiency, high safety isolation 3000VAC
- Urtal-slim SIP package
- Industrial grade
- Meet IEC60950, UL60950 and EN60950 standards
- UL60950, EN60950 approval
- 3 years of quality assurance



Selection Guide

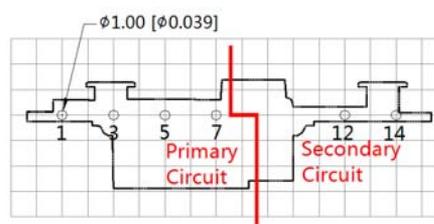
Certification	Model	Output Power	Nominal Output Voltage and Current(Vo/Io)	Efficiency (230VAC, %/Typ.)	Max. Capacitive Load (uF)
UL/CE	SLS05-15B03SS	3.3W	3.3V/1A	67	2200
	SLS05-15B05SS		5V/1A	74	1500
	SLS05-15B09SS		9V/0.56A	75	680
	SLS05-15B12SS		12V/0.42A	76	470
	SLS05-15B15SS		15V/0.34A	77	330
	SLS05-15B24SS		24V/0.21A	79	100

Dimensions and Recommended Layout



Note:
Unit :mm[inch]
Pin section tolerances :±0.10[±0.004]
General tolerances:±0.50[±0.020]

THIRD ANGLE PROJECTION



Note:Grid 2.54*2.54mm

Pin-Out	
Pin	Function
1	AC(N)
3	AC(L)
5	+V(cap)
7	-V(cap)
12	-Vo
14	+Vo

- 1.It is necessary to add C1 between pin5 and pin7.
- 2.It is necessary to add circuit to the output,such as the typical application of Figure 1.
- 3..It is needed to have distance ≥6.4mm for safety between external componets in primary circuit and secondary circuit.

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FEATURES

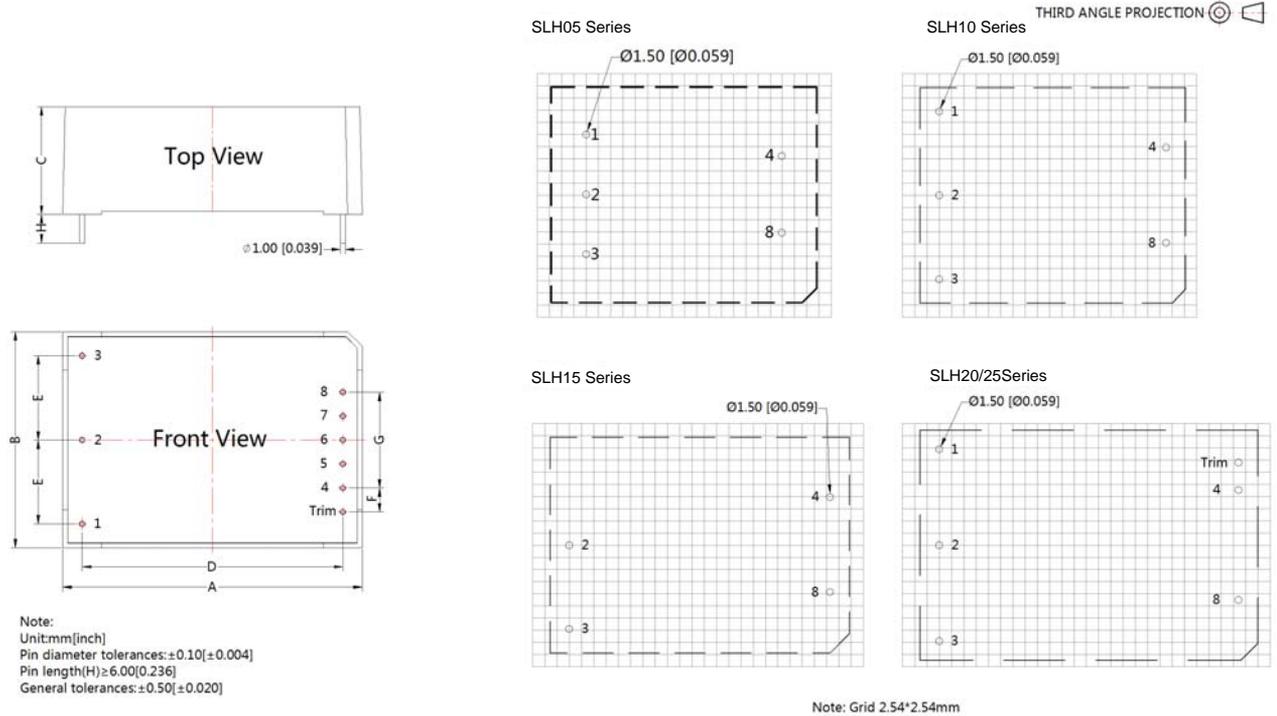
- Wide input range: 85~305VAC/120~430VDC
- Low temperature operating range of military grade: -40~70°C
- Conversion efficiency up to 87%
- Meet IEC60950, EN60950 and UL60950 standards
- Over-current, short circuit and over-voltage protection



Selection Guide

Certification	Part No.	Output Power	Nominal Output Voltage and Current(Vo/Io)	Efficiency (230VAC, %/Typ.)	Max. Capacitive Load(μF)
UL/CE (pending)	SLH05-13B03	4W	3.3V/1250mA	72	4000
	SLH05-13B05	5W	5V/1000mA	77	4000
	SLH05-13B09		9V/550mA	79	1800
	SLH05-13B12		12V/420mA	81	1800
	SLH05-13B15		15V/330mA	82	1500
	SLH05-13B24		24V/230mA	84	330
	SLH10-13B03		6.6W	3.3V/2000mA	70
	SLH10-13B05	10W	5V/2000mA	76	9400
	SLH10-13B09		9V/1100mA	78	3600
	SLH10-13B12		12V/900mA	80	2400
	SLH10-13B15		15V/700mA	81	1200
	SLH10-13B24		24V/450mA	82	370
	SLH15-13B03		9.9W	3.3V/3000mA	74
	SLH15-13B05	14W	5V/2800mA	78	20000
	SLH15-13B09	15W	9V/1600mA	79	6000
	SLH15-13B12		12V/1250mA	82	3000
	SLH15-13B15		15V/1000mA	82	3000
	SLH15-13B24		24V/625mA	84	900
	SLH15-13B48		48V/320mA	85	370
	SLH20-13B03		13.5W	3.3V/3500mA	75
	SLH20-13B05	17.5W	5V/3500mA	78	12240
	SLH20-13B09	20W	9V/2100mA	79	5600
	SLH20-13B12		12V/1600mA	83	5400
	SLH20-13B15		15V/1300mA	84	2400
SLH20-13B24	24V/850mA		85	1840	
SLH25-13B03	13.5W		3.3V/4100mA	75	48000
SLH25-13B05	20.5W		5V/4100mA	78	12240
SLH25-13B09	25W	9V/2500mA	79	5600	
SLH25-13B12		12V/2100mA	83	5400	
SLH25-13B15		15V/1600mA	84	2400	
SLH25-13B24		24V/1100mA	85	1440	
SLH25-13B48		48V/500mA	87	800	

Dimensions and Recommended Layout



Dimensions (Unit: mm)					
NO.	SLH0	SLH10	SLH1	SLH2	SLH25
A	55.00	55.00	62.00	70.00	70.00
B	45.00	45.00	45.00	48.00	48.00
C	21.00	21.00	22.50	23.50	23.50
D	40.50	47.00	54.00	62.00	62.00
E	12.50	17.50	17.50	20.00	20.00
F	--	--	--	5.75	5.75
G	16.00	20.00	20.00	23.00	23.00

Models Weight					
Weight	SLH0	SLH1	SLH1	SLH2	SLH25
(Typ.)	75g	75g	85g	120g	120g

Pin Connection	
Pin	SLHxx-13Bxx
1	
2	AC(N)
3	AC(L)
4	-Vo
5	No Pin
6	No Pin
7	No Pin
8	+Vo
Trim	Trim**

There is no pin "1" on SLH15-13Bxx
Trim**: only for SLH20/25-13Bxx Series.

AC/DC Converter SLI72-20BXX SERIES DIN-RAIL



PRODUCT FEATURES

1. Input range:165~264VAC/180~370VDC
2. AC and DC all in one (input from the same terminal)
3. Low standby power, high efficiency,4000VAC safe isolation
4. low ripple and noise
5. Protection of output short circuit, over-current, over- voltage
6. Perfect EMC performance, and surge meet $\pm 2KV/\pm 4KV$

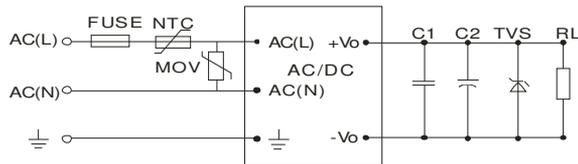


also available in 120W & 240W

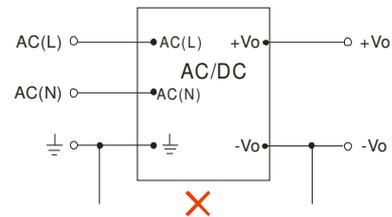
SELECTION GUIDE

Model	Package	Power	Output (Vo/Io)	Max. Capacitive Load	Ripple and Noise (Max.)	efficiency (230VAC,Typ)	Standby Power Consumption (Max)
SLI72-20B24	113*116*45mm	72W	24VDC/3A	2000 μ F	150mV	86%	0.5W

TYPICAL APPLICATIONS



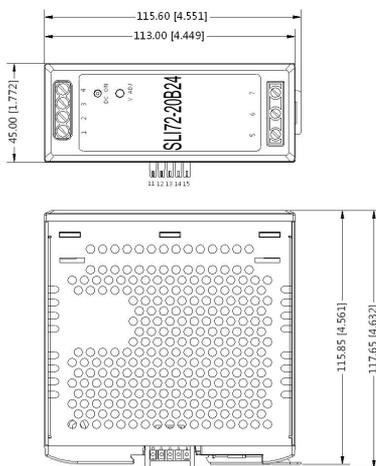
(Figure 1): Typical application circuit



(Figure 2): This application is not available for this series.
Note: If you have such application, please consult to our FAE department

DIMENSIONS, RECOMMENDED FOOTPRINT&PACKAGING

MECHANICAL DIMENSIONS



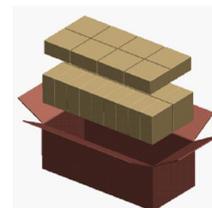
Note:
Unit:mm [inch]
General tolerances: ± 0.50 [± 0.020]
Wire range:26~10AWG
Strip length:8.0[0.32]



PIN CONNECTION

PIN CONNECTION			
Pin	Function	Pin	Function
1,2	+Vo	11	+Vo
3,4	-Vo	12	-Vo
5	\perp	13	+Vo
6	AC(N)	14	-Vo
7	AC(L)	15	+Vo

PACKAGE DIAGRAM



Note:
Unit:mm [inch]
Inner carton dimensions: L*W*H=140*135*65
Packaging quantity: 1pcs
Outer carton dimensions: L*W*H=538*418*156
Packaging quantity: 24pcs

General Converter Catalogue 2016



SCHMID-MULTITECH GMBH
Weinberbstraße 60b, 93105 Tegernheim
Tel.: +49-9403-9510-0
info@schmid-m.com
www.schmid-m.com



SCHMID-MULTITECH GMBH
Ziemendorf, Dorfstraße 49g
+49-39384-9848-0
39613 Arendsee
info@schmid-m.com
www.schmid-m.com



ATD Elektronik, s.r.o.
Luzenice 10, 344 01 Domazlice
Tel.: +420-379-723-915
info@atd-elektronik.cz
www.atd-elektronik.cz



ABC Elektronik Sp. zo.o.
ul. Kolejowa 10, 38-300 Gorlice
Tel.: +48-18-353-66-65
info@abcpol.pl
www.abcpol.pl



SCHMID-MULTITECH s.r.o.
Podjavorinski 5, 911 05 Trenčín
Tel.: +421-32-7-440-186
mkovacik@smsk.sk
www.schmid-multitech.sk



Angiela Elektronik SRL
Aleea Slanic, nr.1/3
Tel.: +40-264-403-284
info@angiela-elektronik.ro
www.angiela-elektronik.ro



ADMM kft.
Rumi u.284, H-9700 Szombathely
Tel.: +36-94-510-022
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