

**SM****LAMBDA** 

An Invensys company

**10-20****WATTS****DC/DC CONVERTERS****SINGLE, DUAL OR TRIPLE OUTPUT****Non moulded case****Low profile****Natural convection****Input 24VDC or 48VDC (2:1)****EN55022-B with external filter****Fast start up capability****Guarantee 2 years**

(a) As a result of a breakthrough in heat dissipation technology the SM series offers improved thermal management, where the need for heavy thermal potting has been eliminated. The result is a lighter product, more applicable for SMT pick and place and enabling higher packing densities.

(b) 48V input models comply with EN55022 and FCC part 15 level B (with external low ESR capacitor).

**INPUT**

Input voltage range	24V nom-18 to 36VDC 48V nom-36 to 75 VDC
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**OUTPUT**

Power (convection cooled)	10 to 20 W
Output adjustable	±10%
Line regulation	0.2%
Load regulation	1% (10% to 100% load change)
Ripple and noise (value peak to peak)	75mV p-p ~ 100mV p-p
Temperature coefficient	±0.015% for °C
Over voltage protection	Prefixed threshold.

**GENERAL**

Remote on/off	Yes
Switch on time	≤10ms
Efficiency (type)	80%
Voltage isolation : Input-output	1500VDC in input 48VDC 700VDC in input 24VDC

**ENVIRONMENTAL**

Operating temperature range at full load	SM10	-40°C to +70°C
	SM20	-40°C to +60°C
Derating	Linear until 105°C (P=0W)	
Storage temperature	-55°C to +125°C	
Relative humidity in utilisation	5% ~ 95%	
Shock	70G on the 6 faces	
Vibration	2.5G RMS, 10HZ ~ 500HZ, 1 hour each axis	
EMI	EN55022/B with external filter	

EDITION 2001

# TABLE OF MODELS

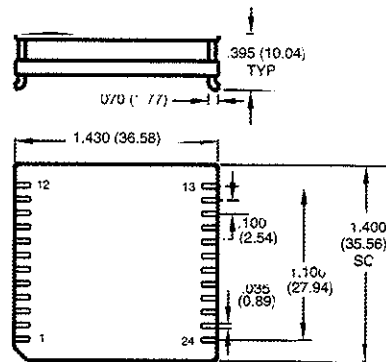
Volts	Amp.	Watts	Model	Model
			Input 24V	Input 48V
<b>Single output</b>				
3.3	2.55	8.40	SM10-24S03	SM10-48S03
3.3	5.00	16.50	SM20-24S03	SM20-48S03
5	2.00	10.00	SM10-24S05	SM10-48S05
5	4.00	20.00	SM20-24S05	SM20-48S05
12	0.83	10.00	SM10-24S12	SM10-48S12
12	1.67	20.00	SM20-24S12	SM20-48S12
15	0.67	10.00	SM10-24S15	SM10-48S15
15	1.33	20.00	SM20-24S15	SM20-48S15

Volts	Amp.	Watts	Model	Model
			Input 24V	Input 48V
<b>Dual output</b>				
±12	0.42	10.00	SM10-24D12	SM10-48D12
±12	0.83	20.00	SM20-24D12	SM20-48D12
±12	1.25	30.00	SM30-24D12	SM30-48D12
±15	0.33	10.00	SM10-24D15	SM10-48D15
±15	0.67	20.00	SM20-24D15	SM20-48D15

# PHYSICAL SPECIFICATION

## SM 10

(Weight : 14 gms)



### Single output

PIN	FUNCTION
1	THERMAL
2	THERMAL
3	-V IN
4	-V IN
5	THERMAL
6	THERMAL
7	THERMAL
8	+V IN
9	+V IN
10	THERMAL
11	THERMAL
12	REM ON/OFF

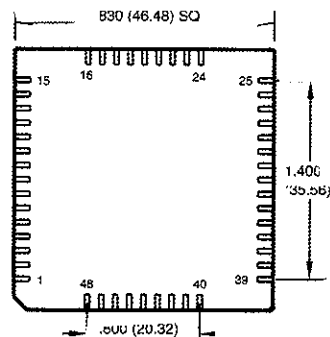
PIN	FUNCTION
13	REM PROG
14	THERMAL
15	THERMAL
16	+V OUT
17	+V OUT
18	+V OUT
19	THERMAL
20	-V OUT
21	-V OUT
22	-V OUT
23	THERMAL
24	THERMAL

### Dual output

PIN	FUNCTION
1	THERMAL
2	THERMAL
3	-V IN
4	-V IN
5	THERMAL
6	THERMAL
7	THERMAL
8	+V IN
9	+V IN
10	THERMAL
11	THERMAL
12	REM ON/OFF
13	REM PROG
14	THERMAL
15	+V OUT
16	+V OUT
17	THERMAL
18	COMMON
19	COMMON
20	COMMON
21	THERMAL
22	-V OUT
23	-V OUT
24	THERMAL

## SM 20

(Weight : 22 gms)



### Single output

PIN	FUNCTION
1	N/C
2	N/C
3-6	-V IN
7-10	+V IN
11-14	N/C
15	REM ON/OFF
16-24	THERMAL
25	REM PROG
26-32	+V OUT
33-39	-V OUT
40-48	THERMAL

### Dual output

PIN	FUNCTION
1	N/C
2	N/C
3-6	-V IN
7-10	+V IN
11-14	N/C
15	REM ON/OFF
16-24	THERMAL
25	REM PROG
26-29	+V OUT
30-33	COMMON
34-37	-V OUT
38	N/C
39	N/C
40-48	THERMAL

NB. Products viewed from below, not above.

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**Series SM**