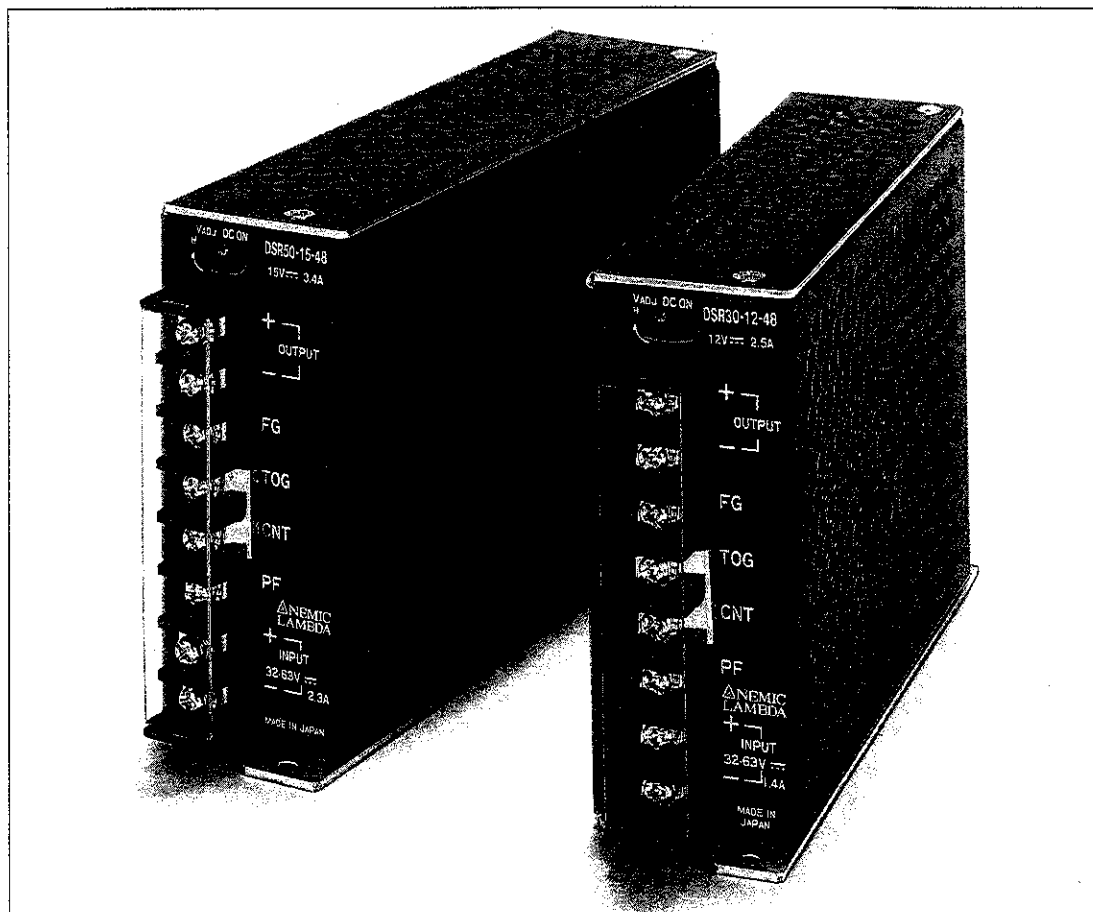


Part II – DC-to-DC Converters

LAMBDA'S DSR SERIES



Ideal for Telecommunications, Distributed Power and Battery Systems

Lambda's DSR Series convection cooled DC-to-DC converters are designed for telecommunications, distributed power and battery-backed system applications. The convection cooled, chassis mount construction simplifies system thermal design. There are 24 models – including a new 180W package. All models operate from 0 to +71°C and are available with either 24VDC nominal (18-32VDC) or 48VDC nominal (32-63VDC) inputs. The DSR Series is available from stock and is backed by Lambda's 5 Year Guarantee.

LAMBDA'S DSR SERIES

DC Input

line 18-32VDC for 24V models.
32-63VDC for 48V models.

Efficiency

Package Model	Typical Efficiency
DSR-30-5-24; DSR-50-5-24	73%
DSR-30-5-48; DSR-180-5-24	75%
DSR-50-5-48; DSR-180-12-24; DSR-180-24-24	76%
DSR-30-12-24; DSR-30-15-24; DSR-180-48-24	77%
DSR-30-24-24; DSR-30-48-24;	
DSR-50-12-24; DSR-50-15-24	78%
DSR-30-12-48; DSR-30-15-48;	
DSR-30-24-40; DSR-30-48-48	79%
DSR-50-24-24; DSR-50-12-48;	
DSR-50-15-48	80%
DSR-50-24-48; DSR-50-48-24	81%
DSR-50-48-48	82%

DC Output

Voltage range shown in tables.

Regulated Voltage

regulation, line 0.4% for variations over the entire input range.
regulation, load 0.8% for output changes from no load to full load or full load to no load.
ripple and noise 100mV pk-pk on 5V models.
170mV pk-pk on 12V models.
200mV pk-pk on 15V models.
290mV pk-pk on 24V models.
530mV pk-pk on 48V models.
temperature coefficient 0.03%/°C.

Overvoltage Protection

OV protection is standard on all models.

Overload Protection

All models have a constant current profile which will shut the set off if overcurrent exists for more than 5 seconds.

Remote Turn-On/Turn-Off

The DSR Series is capable of remote on-off via a TTL compatible signal.

Cooling

All models are convection cooled. Operation above 60° requires forced air cooling.

Operating Temperature Range

0°C to +71°C. Operation above 60°C requires forced air cooling.

Storage Temperature Range

-40°C to +85°C.

Mounting

The DSR Series has three mounting surfaces, one mounting position.

DC Output Controls

Simple screwdriver adjustment over the entire adjustable range.

Physical Data

Package Model	Lbs. Net	Lbs. Ship	Size Inches
DSR-30	0.95	1.20	5.91 × 1.5 × 3.82
DSR-50	1.10	1.50	6.69 × 1.65 × 3.82
DSR-180	3.75	4.50	8.46 × 3.15 × 3.82

Safety Agency Approvals

The DSR Series is UL recognized and CSA certified.

5 Year Guarantee

Five year guarantee includes labor as well as parts.

MIL-Environment Converter Ratings Table

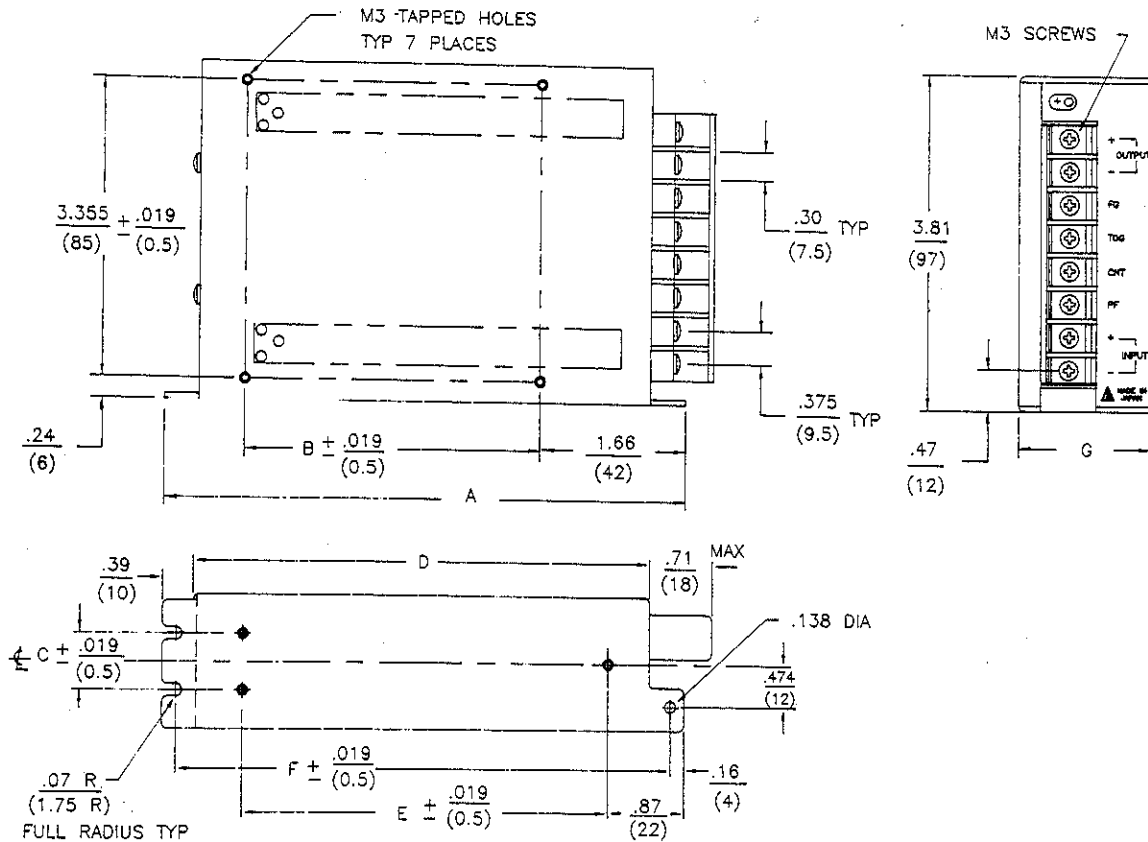
MAX CURRENT (AMPS) AT AMBIENT TEMPERATURE OF				Vout ADJ. RANGE	COMPLETE ELEC. SPEC. PG.	UNIT PRICE PER DELIVERED QUANTITY			MODEL
40°C	50°C	60°C*	71°C*			1	10	25	
SINGLE OUTPUT. 18-32VDC INPUT.									
5V OUTPUT									
6.00	6.00	4.20	3.00	4.75-5.25	103	\$275	\$260	\$250	DSR30-5-24
10.00	10.00	7.00	5.00	4.75-5.25	103	340	325	311	DSR50-5-24
36.00	36.00	25.20	18.00	4.75-5.25	103	771	732	695	DSR180-5-24
12V OUTPUT									
2.50	2.50	1.75	1.25	11.40-12.60	103	275	260	250	DSR30-12-24
4.30	4.30	3.01	2.15	11.40-12.60	103	340	325	311	DSR50-12-24
15.00	15.00	10.50	7.50	11.40-12.60	103	771	732	695	DSR180-12-24
15V OUTPUT									
2.00	2.00	1.40	1.00	14.25-15.75	103	275	260	250	DSR30-15-24
3.40	3.40	2.38	1.70	14.25-15.75	103	340	325	311	DSR50-15-24
24V OUTPUT									
1.30	1.30	.91	.65	22.80-25.20	103	275	260	250	DSR30-24-24
2.10	2.10	1.47	1.05	22.80-25.20	103	340	325	311	DSR50-24-24
7.50	7.50	5.25	3.75	22.80-25.20	103	771	732	695	DSR180-24-24
48V OUTPUT									
.70	.70	.49	.35	45.60-50.40	103	275	260	250	DSR30-48-24
1.10	1.10	.77	.55	45.60-50.40	103	340	325	311	DSR50-48-24
3.70	3.70	2.60	1.85	45.60-50.40	103	771	732	695	DSR180-48-24
SINGLE OUTPUT. 32-63VDC INPUT.									
5V OUTPUT									
6.00	6.00	4.20	3.00	4.75-5.25	103	\$275	\$260	\$250	DSR30-5-48
10.00	10.00	7.00	5.00	4.75-5.25	103	340	325	311	DSR50-5-48
12V OUTPUT									
2.50	2.50	1.75	1.25	11.40-12.60	103	275	260	250	DSR30-12-48
4.30	4.30	3.01	2.15	11.40-12.60	103	340	325	311	DSR50-12-48
15V OUTPUT									
2.00	2.00	1.40	1.00	14.25-15.75	103	275	260	250	DSR30-15-48
3.40	3.40	2.38	1.70	14.25-15.75	103	340	325	311	DSR50-15-48
24V OUTPUT									
1.30	1.30	.91	.65	22.80-25.20	103	275	260	250	DSR30-24-48
2.10	2.10	1.47	1.05	22.80-25.20	103	340	325	311	DSR50-24-48
48V OUTPUT									
.70	.70	.49	.35	45.60-50.40	103	275	260	250	DSR30-48-48
1.10	1.10	.77	.55	45.60-50.40	103	340	325	311	DSR50-48-48

* Forced air cooling required.

Part II – DC-to-DC Converters

DSR SERIES MECHANICAL DRAWINGS

DSR-30
DSR-50



MODEL	DIM	A	B	C	D	E	F	G
DSR30		5.92 (150)	3.355 (85)	.635 (16)	5.13 (130)	4.144 (105)	5.605 (142)	1.50 (38)
DSR50		6.91 (170)	4.144 (105)	.789 (20)	5.92 (150)	4.934 (125)	6.394 (162)	1.66 (42)

- NOTE:
1. ALL DIMENSIONS ARE GIVEN IN INCHES OVER MILLIMETERS.
 2. UNLESS OTHERWISE SPECIFIED TOLERANCE IS $\pm$.04 INCHES (1MM).

DSR-180

