

DR SERIES

Single and dual output

Recommended for new design-ins



- Hybrid technology
- 3 Watts in D.I.L. package
- 18-36V and 36-72V input
- Typical efficiency 80%
- Isolated outputs
- Regulated outputs
- Low profile, 12.7mm height
- No derating to 70°C

The DR Series is a family of dual in line packaged DC/DC converters. It has a unique combination of three high performance features wide input voltage range, high efficiency, and high power density. In addition to this, all outputs are regulated and isolated from the input. This performance is made possible by implementing a 200kHz switching design in hybrid technology. With input voltage ranges of 18-36V, 36-72V and 80% typical efficiency, these devices are ideally suited for on-board logic or analog circuits supplied by telecom distributed power voltages, and for cellular and portable telecommunications systems.

[2 YEAR WARRANTY]

SPECIFICATION

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS		
Voltage accuracy		±1.0%
Line regulation	LL-HL, single output LL-HL, dual output	±1.5% ±1.5%
Load regulation	FL to 0.25%FL, dual outputs loaded equally	±2.5%
Ripple and noise	5Hz to 20MHz	150mV pk-pk, max.
Voltage balance	Duals	±2.0%
Temperature coefficient	All outputs	±0.02%/°C, max.
Overvoltage protection	All outputs	125% Vout, Nom.
Short circuit protection		10s, max.
INPUT SPECIFICATIONS		
Input voltage range	24VDC 48VDC	18 to 36VDC 36 to 72VDC
Input filter	See Note 7	Pi type
No load input current		5mA

GENERAL SPECIFICATIONS		
Efficiency	See table	80% typical 78%, min.
Isolation voltage	Input/output	500VDC, min.
Switching frequency	Fixed	200kHz
Case material		Non-conductive black plastic
Material flammability		UL94V-0
Weight		14.2g (0.5oz)
MTBF	MIL-HDBK-217D	266,000 Hours
ENVIRONMENTAL SPECIFICATIONS		
Thermal performance	Operating ambient Non-operating Case Cooling Derating	-25°C to +71°C -40°C to +125°C +95°C max Free air convection None required

3 Watt Wide input DC/DC converters

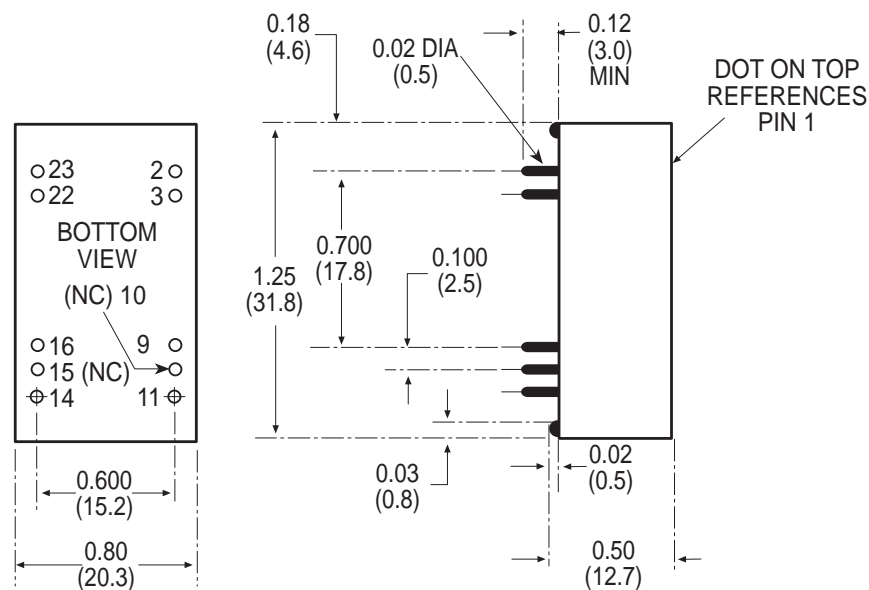
INPUT VOLTAGE (1)	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT (2)	TYPICAL EFFICIENCY	REGULATION (3)		MODEL NUMBER
					LINE (4)	LOAD (5)	
18-36VDC	5VDC	500mA	134mA	78%	±1.5%	±2.5%	DR24S05/500G
18-36VDC	12VDC	250mA	151mA	83%	±1.5%	±2.5%	DR24S12/250G
18-36VDC	15VDC	200mA	153mA	81%	±1.5%	±2.5%	DR24S15/200G
18-36VDC	±5VDC	±250mA	150mA	83%	±1.5%	±2.5%	DR24D05/250G
18-36VDC	±12VDC	±125mA	152mA	82%	±1.5%	±2.5%	DR24D12/125G
18-36VDC	±15VDC	±100mA	152mA	82%	±1.5%	±2.5%	DR24D15/100G
36-72VDC	5VDC	500mA	66mA	79%	±1.5%	±2.5%	DR48S05/500G
36-72VDC	12VDC	250mA	81mA	78%	±1.5%	±2.5%	DR48S12/250G
36-72VDC	±5VDC	±250mA	65mA	80%	±1.5%	±2.5%	DR48D05/250G
36-72VDC	±12VDC	±125mA	75mA	83%	±1.5%	±2.5%	DR48D12/125G

Notes

- Nominal input voltages are 24VDC and 48VDC.
- Maximum figure, at full load.
- Maximum.
- Low line to high line.
- Full load to 0.25% full load; dual outputs loaded equally.
- Standard specifications are conservative and can be optimised for specific applications. In particular, converter start-up at lower than specified temperature, wider input voltage range and output voltage adjustment are all relatively simple modifications to the standard product. Consult factory for details.
- Fixed frequency design provides for easier input filtering and better noise performance.

PIN CONNECTIONS		
SINGLE OUTPUT	DUAL OUTPUT	FUNCTION
Pins 22 and 23	Pins 22 and 23	+ Input
Pins 2 and 3	Pins 2 and 3	- Input
Pin 14	Pin 14	+ Output
No Connection	Pins 9 and 16	Common
Pin 16	Pin 11	- Output

CASE G



ALL DIMENSIONS IN INCHES (mm)

Tolerance .xx = ±0.02

.xxx = ±0.005