

key features

- 30VA output power
- programmable frequency
- excellent efficiency
- low harmonic distortion
- 6 sided shielding
- remote enable pin
- 500VDC isolation
- adjustable output voltage

The DRG high power family of ring generators provide up to 30VA of output power at efficiencies of over 80%. The DRG family of converters are designed for frequency accuracy and stability, while particular attention has been paid to maintaining low total harmonic distortion. The DRG series has a remote enable pin, as well as pins for programming the ring generators output frequency. The DRG series use 100% surface mount construction and are manufactured in IPD's ISO9001 factory.

technical specifications

input

voltage range	-40 to -72 VDC
-48 VDC nominal	
input current, low line rated load	950 mA

output

setpoint accuracy	±4.0 VRMS
output power	30VA
output frequencies	16.5, 20, 25, 30 Hz
digital frequency programming	see table
output frequency setpoint accuracy	±0.5 Hz
line regulation V_{IN} min. - V_{IN} max., I_{OUT} rated	±1.0% V_O
load regulation I_{OUT} min. - I_{OUT} max., V_{IN} nom.	±3.0% V_O
total harmonic distortion	5%
overload protection, %VA rated	150%
short circuit protection characteristic	continuous
digital frequency programming	
logic level "0"	<0.7 VDC
logic level "1"	>3.5VDC
efficiency (min)	80%

general

remote shutdown	
enable pin high or floating(>3.5V)	module "on"
enable pin low (<1.8V)	module "off"
isolation	
input - output	500 VDC
temperature coefficient	±0.03%/°C
case temperature	
operating range	-25 to +100°C
storage range	-40 to +110°C
humidity max, non-condensing	95%
vibration, 3 axes, 5 min each	5 g, 10 - 55Hz
MTBF ¹ (Bellcore TR-NWT-000332)	1.01 x 10 ⁶ hours
safety	UL, CSA
weight (approx.)	9.03 oz.

thermal impedance

natural convection	4.1 C/W
100 LFM	3.9 C/W
200 LFM	2.7 C/W
300 LFM	2.6 C/W
400 LFM	1.9 C/W

Thermal impedance data is dependant on many environmental factors. The exact thermal performance should be validated for specific application.

notes

¹ Industrial temp range of -40 to +85C available, add suffix -I to P/N

[†] MTBF predictions may vary slightly from model to model.

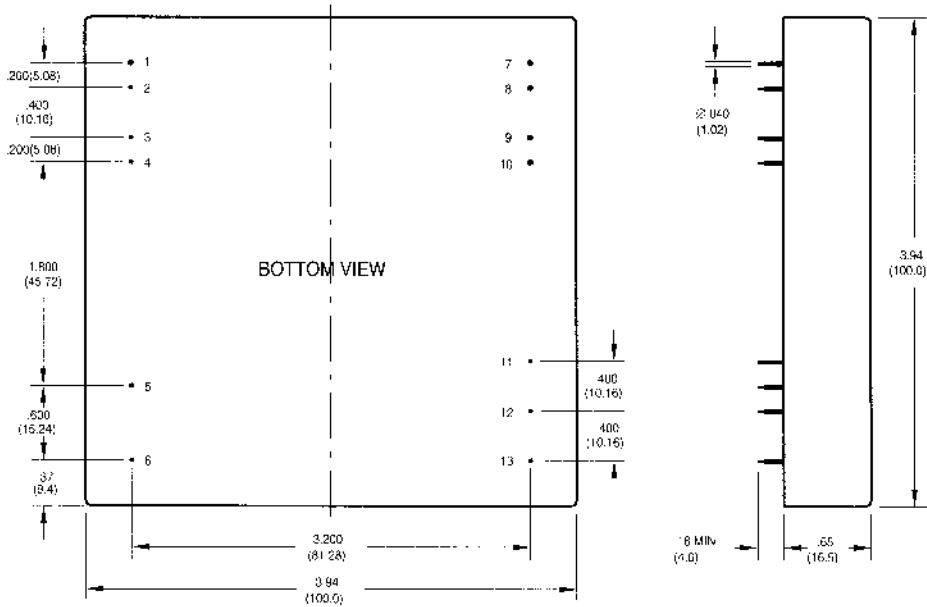
Specifications typically at 25°C, normal line, and full load - unless otherwise stated.

models

V _{IN} (Volts)	V _{IN} range (Volts)	V _{OUT} (V _{rms})	I _{OUT} rated (A)	frequency Hz	model
-48	-40 to -72	65	0.465	16.5	DRG48V65F16.5
-48	-40 to -72	65	0.465	20.0	DRG48V65F20
-48	-40 to -72	65	0.465	25.0	DRG48V65F25
-48	-40 to -72	65	0.465	30.0	DRG48V65F30
-48	-40 to -72	75	0.400	16.5	DRG48V75F16.5
-48	-40 to -72	75	0.400	20.0	DRG48V75F20
-48	-40 to -72	75	0.400	25.0	DRG48V75F25
-48	-40 to -72	75	0.400	30.0	DRG48V75F30
-48	-40 to -72	85	0.355	16.5	DRG48V85F16.5
-48	-40 to -72	85	0.355	20.0	DRG48V85F20
-48	-40 to -72	85	0.355	25.0	DRG48V85F25
-48	-40 to -72	85	0.355	30.0	DRG48V85F30
-48	-40 to -72	adjustable	(30 VA max.)	16.5	DRG48VF16.5
-48	-40 to -72	adjustable	(30 VA max.)	20.0	DRG48VF20
-48	-40 to -72	adjustable	(30 VA max.)	25.0	DRG48VF25
-48	-40 to -72	adjustable	(30 VA max.)	30.0	DRG48VF30
-48	-40 to -72	65	0.465	programmable	DRG48V65F
-48	-40 to -72	75	0.400	programmable	DRG48V75F
-48	-40 to -72	85	0.355	programmable	DRG48V85F
-48	-40 to -72	adjustable	(30 VA max.)	programmable	DRG48VF

specifications are subject to change without notice.

mechanical drawing



digital frequency programming		
pin11 logic level	pin12 logic level	output frequency, Hz
1	1	16.5
0	0	20
0	1	25
1	0	30

pin	function
1	+V _{IN}
2	+V _{in}
3	-V _{in}
4	-V _{in}
5	case
6	enable
7	V _{out} phase
8	V _{out} phase
9	V _{out} common
10	V _{out} common
11	freq set 1*
12	freq set 2*
13	V _{out} adj**

tolerances (unless otherwise specified)	
Inches	(Millimeters)
.XX ± .020	X ± 0.5
.XXX ± .010	.XX ± .25
Pin: ± .002	± .05