PRG Series

Remote Mounted, Reference Generation Units.

The **PRG series** remote mounted reference generation & distribution units from Peak Communications are designed to provide highly stable reference generation coupled with multi-way fan-out, primarily for satellite earth station applications.

Reference signal fan-out distribution has many advantages over cascade methods, including: no down-stream equipment loss of lock or mismatches associated with in-service cabling modifications, optimised & balanced signal levels presented to each connected unit, no loss of signal level when compared to a passive cascade approach.

These units can be provided to give reference signals of 5, 10, 50 or 100MHz and are supplied with an optional external reference input to synchronise to the station clock, in which case the internal reference generation circuitry provides a back-up which detects the absence (in the event of a station clock failure or disconnection of the external reference) of the external reference and automatically switches back to the internal reference system.

The **PRG series** units are DC powered and are constructed of high-grade components to give the ultimate stability performance.

The **PRG series** units utilise a sealed chassis and are designed for mounting in outdoor, exposed locations and are fully weatherproof.

Reference Generator Products;

PRG01 Single output
PRG02 Dual outputs
PRG04 Quad outputs
PRG06 Six outputs
PRG08 Eight outputs

For equivalent rack mount units, please see IRG series.

Peak Features

- High stability internal reference, with automatic external reference detection & locking
- Compact with up to 8-way fan-out
- Ideal signal levels presented to connected equipment
- Rugged weatherproof housing

PRG series - Typical Specification

Performance (PRGxx)

Ways (xx)	1 to 8-way available
	Note; 8-way and above offered in a larger chassis size, please contact the factory for details
Frequency	10MHz
Option 3a;	5MHz
Option 3b;	50MHz
Option 3c;	100MHz
Stability	$<5x10^{-10}$ over 1s, $<5x10^{-9}$ per day
Ageing	$<5 \times 10^{-7}$ per year
Temp stability	$<5 \times 10^{-8}$ over 0 to 50^0C
Phase noise	-110dBc/Hz at 10Hz
	-130dBc/Hz at 100Hz
	-145dBc/Hz at 1kHz
	-150dBc/Hz at ≥10kHz
Output level	0dBm nominal
	Note; for higher GCP options please contact the factory
Output connections	TNC (f), 50Ω

High stability (Option 4)

Stability	$<2x10^{-12}$ over 1s, $<2x10^{-10}$ per day
Ageing	$<2 \times 10^{-8}$ per year
Temp stability	$<2 \times 10^{-9}$ over 0 to 50^0C
Phase noise	-130dBc/Hz at 10Hz
	-140dBc/Hz at 100Hz
	-155dBc/Hz at 1kHz
	-160dBc/Hz at ≥10kHz

External Reference Input

Frequency	10MHz (5MHz factory settable)
Level	0dBm ±5dB
Connector	TNC (f), 50Ohm

Mechanical

Width	123mm (4.85”)
Height	172mm (6.8”), plus connections & mounting flanges
Depth	48mm (1.89”)
Construction	Die-cast Aluminium, IP66 rated
Weight	1.4kgs (3lbs) approx

Environmental

Operating temp	-25°C to +55°C (less solar gain)
Option 12;	-40°C to +55°C (less solar gain), with extended warm-up time for cold start operation & higher current
Humidity	0-100% condensing
EMC	EN 55022-part B & EN 50082-1
Safety	EN 60950

Power Supply

Voltage	+16.5 to +35VDC
Current	500mA max
Connection	Fed in on 5-pin control interface connection

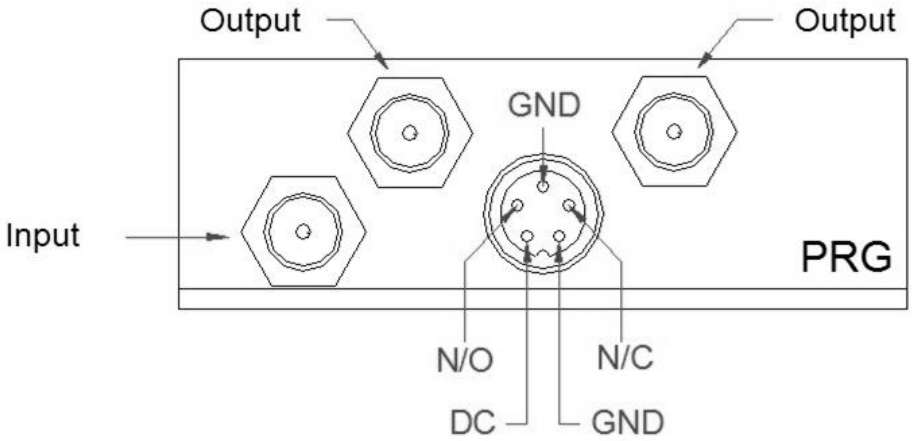
Control System Interface

Alarms	Summary alarm contacts
Connection	5-pin circular weatherproof (mating part supplied)

Options

3a) 5MHz reference system
3b) 50MHz reference system
3c) 100MHz reference system
4) High stability internal reference
12) Low temperature operation to -40°C

Connector panel view (sample)



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