RCU50R Series

1+1, 2+1 Remote Mounted BUC/BDC/LNB/LNA Redundancy Control

The RCU50R 1+1 & RCU52R 2+1 remote mounted units provide a fully outdoor BUC, BDC, LNB or LNA redundancy switching control & L-Band switching solution, which minimises cross-site control and drive cables, costs and complexity whilst improving antenna isolation. The units can also be configured for antenna selection switching (VHF and above).

The units are designed to drive and monitor remote mounted BUC’s, BDC’s, LNB’s & LNA’s (legacy systems or see Peak PNB series RF assemblies). A range of 10MHz reference signal generation, locking and pass through options as well as DC supply can also be provided to drive the BUC, BDC & LNB units.

For LNB’s & LNA’s, waveguide switch drive and monitoring are provided along with optional internal or external L-band coaxial switches (for non-ganged LNB WGS applications). For BUC’s & BDC’s, external SHF co-axial switch units can be provided.

The RCU50R, 52R units are designed for remote control via Ethernet, but are also offered with basic local controls. Remote control includes an embedded web-browser with SNMP network management support. In remote mode, the on-line unit can be selected and monitored whilst keeping switch-over automatic in case of failure. Peak can offer dedicated indoor rack mounted user interface units (Ethernet based), see FPC100.

In AUTO mode, the unit monitors the alarm signals or DC current (with user settable alarm levels) and if a fault condition develops within the on-line unit, traffic is automatically switched to the standby unit.

The flexibility of the design allows for customization, so please consult the factory if the features that you require are not shown on this data sheet. Peak can supply external switches and cabling, for more details please consult the factory.

Peak Features

- External waveguide or co-axial switch control
- Internal (or external) L-Band latching co-axial switching
- Comprehensive remote control, plus local manual controls and indicators
- Minimises capex through reduced cross-site control and drive cable costs
- Improves electromagnetic antenna isolation
- DC drive with current sensing and user settable alarm levels
- Dual-Voltage & 22kHz tone capability for multi-range LNB switching
- Compatible with most makes of outdoor units and waveguide switches for legacy system upgrades
- Optional reference generation, external reference locking or ‘pass-through’
- Fibre-optic L-Band interfaces available
- Compatible with Peak PNB series 1+1 & 2+1 outdoor RF assemblies
RCU50R, S2R Units – Typical Specification

External waveguide switch interface

Peak can supply waveguide switches etc. (please consult factory for details)

WGS Voltage

Code 2: +12VDC
Code 4: +24VDC
Code N: None (for use with BUC, BDC & coaxial based LNA’s)

Note: other voltage options available, please consult the factory.

WGS type

Pulsed, latching with indicators

Code P: Positive pulse
Code N: Negative pulse (may not require tel-backs)

Code x: None (when no WGS drive facility fitted)

Connection

Circular multi-pole, weatherproof (mating part supplied)

L-Band switching

Type

Code G: Ganged with waveguide switch
Code 2: External +12V
Code 4: External +24V

Voltage & 22kHz tone switching, please consult the factory.

Code Is/d: Internal, latching, single or dual (for dual-range devices only)

Code N-Type(f), 500Ohm (for internal switching only)

Primary unit interface (BUC/ BDC/ LNB/ LNA)

Many types of primary units are supported, for assistance with ordering please contact factory stating primary unit type & required configuration

Unit type

Code U: BUC
Code D: BDC
Code L: LNB
Code A: LNA

Band

Code S: S-Band
Code C: C-Band
Code X: X-Band

Ku-Band

Code D: DBS-Band
Code Ka: Ka-Band

Unit output

Code S: Single range
Code V: Switched range (see ‘unit voltage’ below)
Code D: Dual simultaneous range

Unit alarms

Fault detection method to trigger automatic switch-over

Code D: External dry contact closure
Code N: None, in which case current monitoring with user settable alarm levels will be provided

Unit Voltage

Factory settable, regulated to ±0.5V nominal

Code 2: +12VDC
Code 8: +18VDC
Code 4: +24VDC

Code 7: +27VDC (for some BUC & BDC units)

Note: other voltage options available, please consult the factory.

Code X: Switched range (please state voltage requirements)

Code X: Switched range (see ‘unit voltage’ below)

Code 7: +27VDC (for some BUC & BDC units)

Note: other voltage options available, please consult the factory.

Code X: Switched range (please state voltage requirements)

Unit current

Please state maximum current (in mA) on order code

DC bias

Code E: External supply, requiring bias-tee
Code I: Internal, multiplexed onto L-Band
Code L: Internal, separate connection; multipole (mating half supplied)
Code N: None, no DC bias provided

Ordering Code (for help or clarifications please contact the factory)

L-Band Switching:

WGS Voltage:

+12VDC: G
+24VDC: D

Code 2: +12VDC
Code 4: +24VDC
Code N: None

Code x: None

Code P: Positive

Code N: Negative

Unit Current:

Please state in mA

DC Bias (with L mon & D mon):

Switched = V
Dual = D

Note: please blank if not required

Options

Offline monitor

Code T

Ref gen.

Code 10MHz: 1
50MHz: 5
0MHz: None

Code N

Remote control

Ethernet

Web server & SNMP network

Management support

Control System

Alarms

LED indicator & summary failure relay (form C)

Connection

See power supply section

Local control

Weatherproof switches with indicators for local / remote & source selection/ condition

Remote control

Ethernet; embedded web server & SNMP network

Manufacturer support

Reference generation

Internal, fed via a separate discrete TNC(t),-Series 50Ohm

connection, or via L-Band (primary unit & option dependent)

Code 1: 10MHz at 0dBm nominal
Code 5: 50MHz at 0dBm nominal

Code N: No internal reference generator

Stability:

Alpha deviation

<5 x 10^-12 over 1s

Ageing

<3 x 10^-6 per day, <3 x 10^-6 per year

Temp stability

<2 x 10^-6 over -10 to 50ºC

External ref. input

with automatic detection & locking facility

Code P: 10MHz at 0dBm nominal via TNC(f), 50Ω

Code N: not required

Mechanical

Dimensions

290 x 230 x 95mm (11.4 x 9.1 x 3.7inch)

Construction

Die-cast Aluminium, weatherproof, IP66 rated

Weight

Approx. 4kgs (9lbs)

Environmental

Operating temp

-10ºC to +50ºC (less solar gain)

Option 13: -40ºC to +50ºC (less solar gain)

Humidity

0-100% condensing

EMC

EN50022: part B & EN50082-1

Safety

EN60950

Power Supply (dual input)

Voltage

+24V to +27VDC

Power

20 Watts nom (option dependent)

Connection

Multi-pin circular, weatherproof (mating part supplied)

Connection Panels (1+1, dual range LNB controller shown, with reference & DC drive)

Peak Communications reserves the right to alter the specifications of this equipment without prior notice. RCU50Rseries-200120.

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