RCUH021 series

1+1 IF /L-Band Redundancy Switch Unit for 3rd Party Products (Modulators etc.)

RCUH021 single channel 1+1 switch

RCUH021D dual channel 1+1 switch

The **RCUH021 series** redundancy switch units are designed to operate with third party modulators, up converters, IRD's, down converters, antenna feeds etc., maintaining maximum availability whilst allowing routine maintenance and repair work to be carried out on the standby unit without the normally associated down-time.

They include latching switches which maintain the RF path configuration in the event of a power failure, rather than pin diode switches which are common in lower grade designs.

In AUTO mode, the unit monitors the unit alarm signals and if a fault condition develops within the on-line unit, automatically switches traffic to the standby unit.

Optional RF input power detection along with user settable threshold levels provides further enhancements and ultimate system versatility.

The redundancy unit is ideal for unmanned facilities and can be controlled from the front panel user interface (local mode) or remotely via the RS232/ 485 or optional Ethernet link to a host computer (remote mode).

Peak Features

- L-Band or optional IF operation
- Dual mains input & redundant power supplies fitted as standard
- Full user interface and remote control fitted as standard (Ethernet optional)
- Summary alarm inputs & optional RF level detection with user settable threshold
- Transfer switching option for convenient off-line unit monitoring/ test
- Optional, high quality matched cable sets to interface to third party units

RCUH021 series – Typical Specification

Switch Performance

Switch type	latching
Switching speed	150ms (from fault detection)
Frequency	950-2150MHz
Option 3;	70 /140MHz (50-180MHz)
Insertion loss	2.5dB ±1dB nom
Gain flatness	±1dB across full band
	±0.25dB across any 40MHz
Input power	+10dBm max.
Isolation	80dB typ. (between any two input ports)
Input return loss	15dB
Output return loss	15dB

RF Power Detection (Option 6)

Input signal power detection, supporting user settable threshold 'high' & 'low' power alarms, adjustable via front panel & remote control and summarised with discrete alarm inputs to trigger automatic switching.

Note; power detection fitted to both inputs.

Input level range	-50 to 0dBm, adjustable

RF Interfaces

Input connections	SMA (f), 50Ω
Option 1a;	BNC (f), 50Ω
Option 1b;	N-Type (f), 50Ω
Option 1c;	BNC (f), 75Ω
Output connections	SMA (f), 50Ω
Option 1d;	BNC (f), 50Ω
Option 1e;	N-Type (f), 50Ω
Option 1f;	BNC (f), 75Ω

DC Blocking (Option 8)

Provides DC blocking facility for switch inputs

Transfer Switching (Option 13)

Transfer switching for convenient offline unit test/ monitoring

Output 'Monitor' (Option 2a, 2b)

Connected directly to front panel (Option 2a) or rear panel (Option 2b) to provide an appropriately terminated monitor port.

Level	-20dBc ±3dB

Note; connection type, impedance and level offered will be identical to the main rear panel interfaces, unless otherwise requested.

Electronically Variable Attenuation (Option 10)

Attenuation range	30dB
Step size	0.1dB or 0.5dB
Control	Electronically variable via local front panel & remote control

Note; attenuator typically fitted to common output. Input power, Noise Figure & Flatness degraded with this option, please contact factory for details.

Mechanical

Width	19", standard rack mount
Height	1RU (1.75")
Depth	420mm (16.5"), plus connectors
Construction	Aluminium chassis
Weight	Approx. 4kgs (8.8lbs)

Environmental

Operating temp	-10^{0}C to +50^{0}C
EMC	EN55022 part B & EN50082-1
Safety	EN60950

Power supply (dual redundant)

Connection	IEC (dual feed cables provided)
Voltage	90-264VAC
Frequency	47-63Hz
Power	30 Watts max.

Control System Interface

Remote Control	RS232/RS485 port
Option 9;	Ethernet; embedded web server & SNMP network management support
Discrete 'alarms interface'	PSU failure
Alarm inputs	Summary alarm input via D-Type connections

Options

1a) Input's BNC (f), 50Ω connections
1b) Input's N-Type (f), 50Ω connections
1c) Input's BNC (f), 75Ω connections
1d) Output's BNC (f), 50Ω connections
1e) Output's N-Type (f), 50Ω connections
1f) Output's BNC (f), 75Ω connections
2a) Output front panel monitor port
2b) Output rear panel monitor port
3) IF 70 /140MHz
4) High quality, matched IF/ L-Band and control cables to interface to the third-party products, when mounted adjacent to the unit
5) DC & 10MHz pass-through (L-Band only)
6) RF power detection
8) DC blocking for switch inputs
9) Ethernet interface with embedded web server & SNMP
10a) Electronic attenuator, 0-30dB (0.5dB steps), at IF/ L-Band
10b) Electronic attenuator, 0-30dB (0.1dB steps), at IF/ L-Band
13) Transfer switching for offline unit monitoring

Note; the addition of options can modify the typical specification, for details please consult the factory

Rear Panel – shows dual channel version