

Compact Redundancy Switch 2:1 RSCC-2



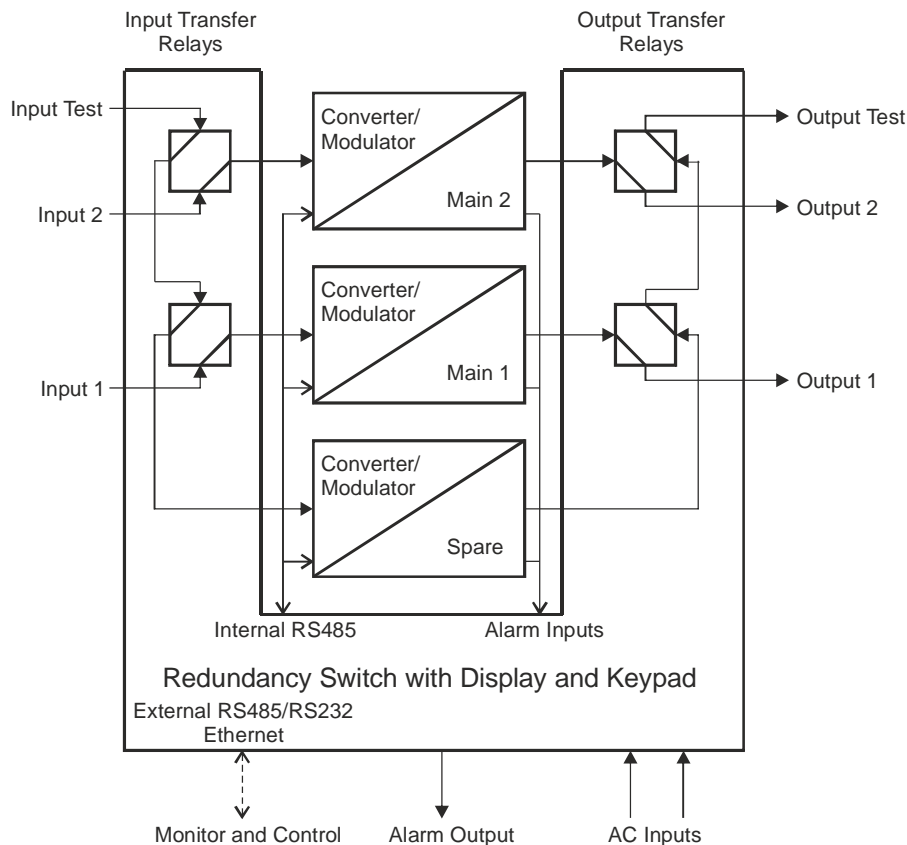
The WORK Microwave Redundancy Switch RSCC-2 is a compact solution for a 2:1 redundancy system. It can be used for upconverters, downconverters and with special firmware for modulators, and modulator-upconverters. The system includes four coaxial transfer switches, which are integrated into the housing.

The system can be configured from the front panel or remotely via RS232, RS422/485, or TCP/IP over Ethernet.

The switching system can be set in automatic mode, whereby an automatic switchover to the spare unit is performed upon detection of an alarm generated by the main unit. In addition, a manual switchover to the spare unit and back can be initiated.

Two power supplies and two AC input connectors within the unit guarantee high availability.

The Redundancy Switch RSCC-2 is also available with integrated uplink power control (Option UPC). For functional details see separate datasheet for Remote Control Unit / Satellite Uplink Power Control Unit.



2:1 Redundancy Switch System with RSCC-2

Modular Redundancy Switch N:1 RSCM



The WORK Microwave Redundancy Switch System N:1 can be configured for redundancy configurations with a maximum of eight main units and one spare unit. The redundancy system can be used for upconverters, downconverters and with special firmware for modulators, modulator-upconverters, LNAs, and HPAs.

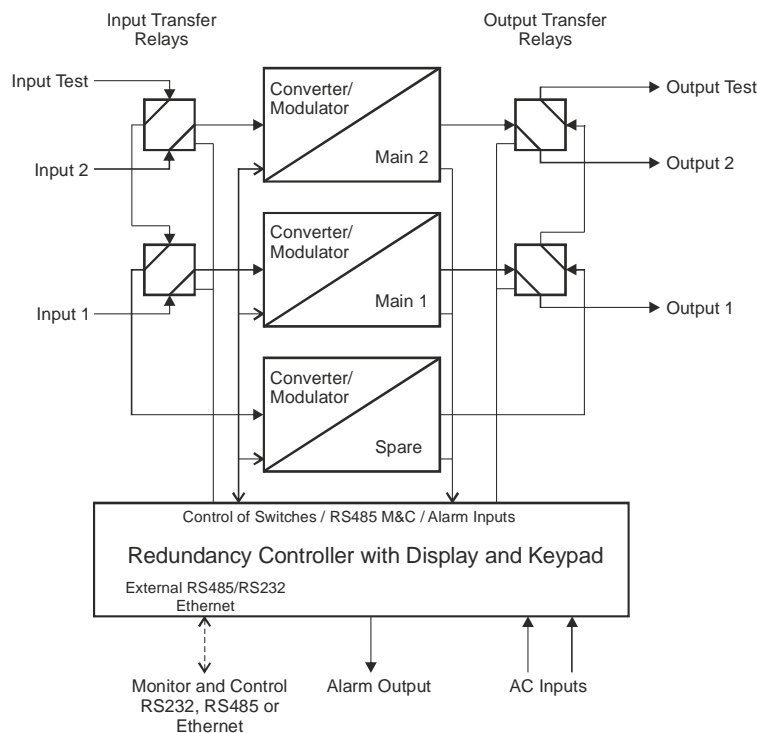
The core of the solution is based on a highly flexible control unit. The required coaxial transfer switches, waveguide transfer switches, and signal splitters are mounted on separate panels or within an outdoor housing. When used in a rack mount installation, redundant switching panels can be added to the system in a modular way if the number of required channels increases over time. In addition, DC power to LNAs can be provided, if required.

The system can be configured from the front panel of the controller or remotely via RS232, RS422/485, or TCP/IP over Ethernet.

The switching system can be set in automatic mode, whereby an automatic switchover to the spare unit is performed upon detection of an alarm generated by the main unit. In addition, a manual switchover to the spare unit and back can be initiated.

Two power supplies and two AC input connectors within the controller unit guarantee high availability.

The Redundancy Switch System is also available with integrated uplink power control (Option UPC). For functional details see separate datasheet for Remote Control Unit / Satellite Uplink Power Control Unit.

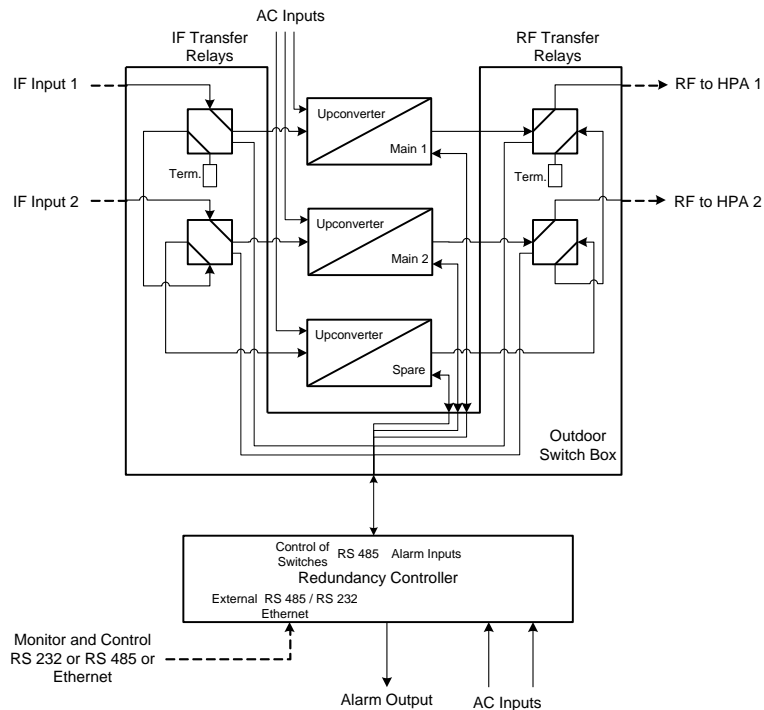


2:1 Modular Redundancy Switch System with RSCM-2

Outdoor Redundancy Switch Unit 2:1



This picture shows an outdoor switching unit of a 2:1 redundant switching system. The switching unit is connected to the control unit, which is installed indoors. The outdoor switch unit includes alarm and status indication via LEDs, manual switchover and easy access to the serial control interfaces of the converter units. The picture below shows a typical 2:1 configuration with upconverters, built as an outdoor solution.



2:1 Redundancy Switch System with Outdoor Switch Unit

Redundancy Switch System (N:1)

Remote M&C Interface:	Protocol: Connection:	SNMP UDP over Ethernet (10 or 100 Mbps, auto sensing), connector RJ-45
	Protocol: Connection:	HTTP (web browser interface) TCP/IP over Ethernet (10 or 100 Mbps, auto sensing), connector RJ-45
	Protocol: Connection:	Multipoint RS232 or RS422/RS485 (configurable), connector DSUB09 female or TCP/IP over Ethernet (10 or 100 Mbps, auto sensing), connector RJ-45
Maximum number of switches per each switch panel:	4 (Indoor switch panel)	
Signal Transfer Switches (Input and/or Output) RSCC-2-xx-50K RSCM-n-xx-50K RSCC-2-50K-xx RSCM-n-50K-xx	Connector Type: Impedance: Power Handling: Frequency Range: Insertion Loss (max.): Isolation (min.): Return Loss (min.):	4 x SMA female (Indoor switch panel) (N female on IF interfaces, SMA female on RF interfaces of outdoor switch unit) 50 Ω 1 W (switching) 0 ... 18 GHz 0.2 dB (0 ... 1 GHz) 0.3 dB (1 ... 4 GHz) 0.3 dB (4 ... 8 GHz) 0.4 dB (8 ... 12 GHz) 0.6 dB (12 ... 18 GHz) 85 dB (0 ... 1 GHz) 80 dB (1 ... 4 GHz) 70 dB (4 ... 8 GHz) 65 dB (8 ... 12 GHz) 60 dB (12 ... 18 GHz) 26 dB (0 ... 1 GHz) 20 dB (1 ... 4 GHz) 17 dB (4 ... 8 GHz) 15 dB (8 ... 12 GHz) 14 dB (12 ... 18 GHz) (waveguide switches and other transfer switches on request)
Signal Transfer Switches (Input and/or Output) RSCC-2-xx-75L RSCM-n-xx-75L RSCC-2-75L-xx RSCM-n-75L-xx	Connector Type: Impedance: Power Handling: Frequency Range: Insertion Loss (max.): Isolation (min.): Return Loss (min.):	4 x 1.6/5.6 female (Indoor switch panel) (Adapters to external BNC female connectors are provided) 75 Ω 1 W (switching) 0 ... 2.5 GHz 0.2 dB (0 ... 1 GHz) 0.3 dB (1 ... 2.5 GHz) 80 dB (0 ... 1 GHz) 70 dB (1 ... 2.5 GHz) 20 dB (0 ... 1 GHz) 18 dB (1 ... 2.5 GHz)
Temperature Range:	-30 °C ... 60 °C operating -25 °C ... 60 °C operating (for RSCM-n-75L..) (the LCD display is operational: -20 °C ... 60 °C) -30 °C ... 80 °C storage	
Relative Humidity:	<95% non condensing	
User Interface:	LCD, 2 x 40 characters, 4 cursor keys, 2 function keys	
Mains Power Input:	2 x 100 ... 240 V AC nominal, 90...264 V AC max, 50...60 Hz, Redundant Power Supply, Hot swap	
Mains Power Consumption:	Max: 16 VA / 8 W Typ: 10 VA / 5 W	
Mains Power Input Connector:	2 x IEC C14	
Mains Fuse:	2 x 2 x 2.0 A time-lag fuse	
Dimension and Weight of Redundancy Controller:	483 x 44 x 270 mm ³ or with option L 483 x 44 x 470 mm ³ (WxHxD), 1 RU (19") approx. 4 kg	
Dimension and Weight of Outdoor Redundancy Switch Unit 2:1:	300 x 150 x 400 mm ³ (WxHxD) approx. 7 kg	

Specifications are subject to change

Redundancy Switch System (N:1)

Order Information:

RSCC-2-[Input Switch Type]-[Output Switch Type]-[Options]

Compact Redundancy Switch:

RSCM-[Number of signal channels]-[Input Switch Type]-[Output Switch Type]-[Options]

Modular Redundancy System:

Possible Options are:

OD with outdoor switch unit, available only for two channels on RSCM

UPC Uplink Power control included

MOD Firmware for Modulator Upconverters

L Controller housing depth 470 mm

Examples:

RSCC-2-50K-50K-L Compact Switch with 50 Ω 18 GHz Input and Output Transfer Switches, housing depth 470 mm

RSCM-2-50K50K-50K Modular 2:1 System for converters with two 50 Ω inputs

RSCM-2-50K-50K-OD 2:1 Outdoor system with 50 Ω 18 GHz Input and Output Transfer Switches

RSCM-8-75L-50K-MOD 8:1 Redundancy System for Modulators with 75 Ω Input switches (for ASI signals)