Redundancy Switch 1:1
RSCC-T

The WORK Microwave redundancy switch 1:1 is used for 1:1 redundancy configurations for Upconverters, Downconverters, Modulator-Upconverters, Transport Stream Modulators, Demodulators, and Modems. It comes standard with a coaxial signal switch for the input signal and a coaxial signal switch for the output signal. For IP modem applications a similar device, RSCI1 is available.

LNAs or even HPAs can be included within the system, as the switch is capable to control external waveguide transfer switches as option. DC power to LNAs can also be provided as option. The switch accepts alarm signals from two types of equipment, so that it can be used for redundancy configurations with e.g. a video encoder and a modulator within one chain.

The unit can be controlled from the front panel or remotely via RS 232, RS422/485, or IP over Ethernet.

The unit can operate in automatic mode, whereby an automatic switchover to the standby unit is performed upon detection of an alarm generated by the active unit. In addition, a manual switchover to the standby unit can be initiated.

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

The 1:1 redundancy is also available in an outdoor version, where the signal transfer relays are mounted within an outdoor switch box. The control unit is similar to the indoor redundancy controller, but does not include any signal switches. The outdoor switch box also includes interfaces for alarms and M&C of outdoor units. A control cable runs from the outdoor switch box to the indoor redundancy controller.
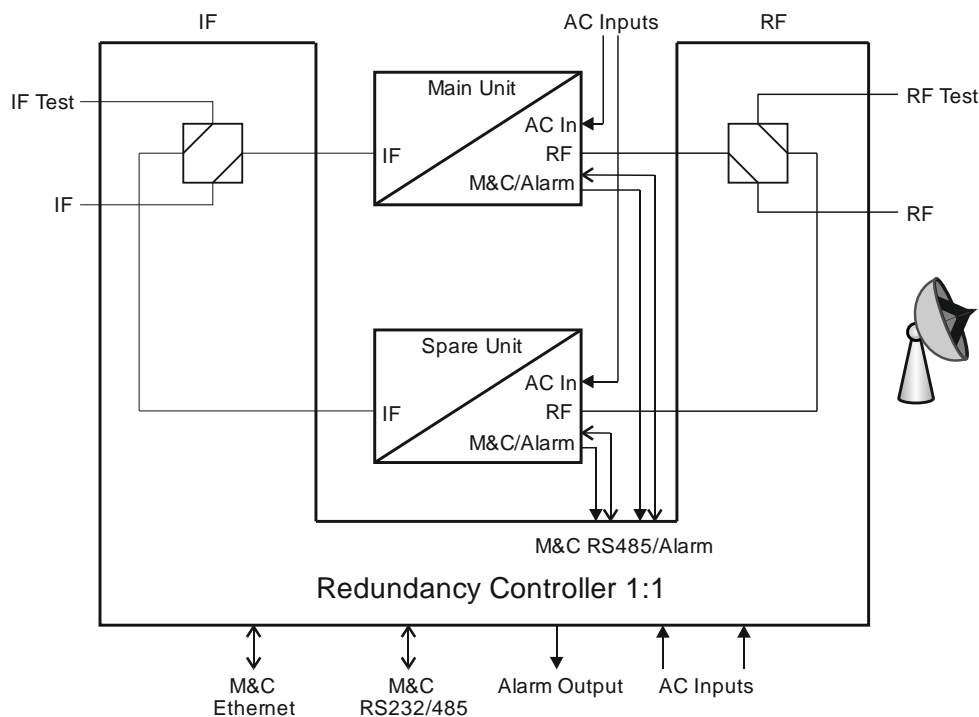
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Controller RSCC-T Common Parameters		
Monitoring and Control Interface:	Protocol: Connection:	SNMP UDP over Ethernet (10 or 100 Mbit/s, auto sensing), connector RJ-45
	Protocol: Connection:	HTTP (web browser interface) TCP/IP over Ethernet (10 or 100 Mbit/s, auto sensing), connector RJ-45
	Protocol: Connection:	Multipoint RS232 or RS422/RS485 (configurable), connector DSUB09 female or TCP/IP over Ethernet (10 or 100 Mbit/s, auto sensing), connector RJ-45
User Interface:	10 LEDs, 4 Function Keys	
Configuration:	16 DIP switches on rear side / serial interface	
Summary Alarm Interface:	Two potential free contacts (DPDT), connector DSUB09 female	
Internal M&C Interface:	RS485, connector DSUB09 male	
Switching:	Manual or Automatic	
Delay from unit alarm occurrence until IF/RF relay switching	Typical 8 ms, max. 15 ms	
Temperature Range:	-30°C … 60°C operating, - 30°C … 80°C storage	
Relative Humidity:	< 95 % non-condensing	
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: 25 VA / 7 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 Indoor Controller:	483 x 44 x 270 mm³ or with option L 483 x 44 x 470 mm³ (WxHxD), 1 RU (19") approx. 3 kg	

Controller RSCC-T Parameters	
Alarm Interface to Units:	2 Interfaces to sense contact closures or alarm signals at alarm outputs of unit or additional units, connectors DSUB15 female

Controller RSCC-T-DC Parameters	
Alarm Interface to Units:	2 Interfaces to sense contact closures or alarm signals at alarm outputs of unit or additional units, 24 V DC output, max. 0.5 A for supply of e. g. LNA, connectors DSUB15 female

Controller RSCC-T-OD Parameters	
Control Interface to Outdoor Switch Box:	Unit alarms, RS485 communication interface to units, relay control, connector MIL-C-26482: MS 3120 E 16-26 P
M&C Interface to Units:	RS485, connector DSUB09 female

Controller RSCC-T-0-0 Parameters	
Alarm Interface to Units:	2 Interfaces to sense contact closures or alarm signals at alarm outputs of unit or additional units, connectors DSUB15 female
Control Interface to Relay Panel:	Relay control, connector DSUB15 female (same as Alarm Interface to Unit)

Panel with Relays RSP-1 Parameters	
Interface to Controller:	Relay control, connector DSUB15 male
Dimension and Weight:	483 x 88 + connectors x 96 mm³ (WxHxD), 2 RU 19" + SMA/BNC connectors approx. 1 kg

Redundancy Outdoor Switch Box OSB-1 Parameters	
Interface to Indoor Controller:	Unit alarms, internal M&C interface (RS485), relay control, connector Type: MIL-C-26482: MS 3120 E 16-26 S
M&C Interfaces to Outdoor Converters:	Unit alarm, RS485 communication interface to units, connector Type: MIL-C-26482: MS 3120 E 14-19 P
Interface to External Wave Guide Switch (only with Option XWGS):	Coil control, indicator contact, connector Type: MIL-C-26482
Temperature Range:	-30°C … 60°C operating, - 30°C … 80°C storage
Relative Humidity:	100 %
Dimension and Weight:	Small: 190 x 190 x 100 mm³ (WxHxD), approx. 3 kg, Large: 300 x 150 x 400 mm³ (WxHxD), approx. 8 kg
Degree of Protection:	IP 66 (acc. IEC 60529)

Specifications are subject to change

Redundancy Switch 1:1
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IF and RF Switch Type Parameters without Cabling							
Relay 75L, 0 … 2.5 GHz	Impedance: Power handling: Connector:	75 Ω 1 W (switching) 1.6/5.6 female, adapter to BNC female provided					
	Frequency (GHz): V.S.W.R. (max.): Insertion loss (dB max.): Isolation (dB min.):	0 … 1 1.20 0.2 80	1 … 2.5 1.30 0.3 70				
Relays 50K, 50Ka26, 50Ka40	Impedance: Power handling:	50 Ω 1 W (switching)					
50K, 0 … 18 GHz:	Connector:	SMA female					
50Ka26, 0 … 26.5 GHz:	Frequency (GHz): V.S.W.R. (max.): Insertion loss (dB max.): Isolation (dB min.):	0 … 1 1.1 0.2 85	1 … 4 1.15 0.2 80	4 … 8 1.25 0.3 70	8 … 12.4 1.35 0.4 65	12.4 … 18 1.6 0.6 60	18 … 26.5 1.7 0.8 55
50Ka40, 0 … 40GHz:	Connector:	K female					
	Frequency (GHz): V.S.W.R. (max.): Insertion loss (dB max.): Isolation (dB min.):	0 … 6 1.3 0.3 70	6 … 12.4 1.4 0.4 60	12.4 … 18 1.5 0.5 60	18 … 26.5 1.7 0.7 55	26.5 … 40 1.9 0.8 50	

Specifications are subject to change

Order Information:

RSCC-T-[IF Switch Type]-[RF Switch Type]-[Options]
Redundancy Switch with integrated relays

RSCC-T-[IF Switch Type]-[RF Switch Type]-[Options]-OD
Indoor Redundancy Controller RSCC-T-OD and Outdoor Switch Box with integrated relays

RSCC-T-0-0-[Options]
Redundancy Controller without switches for external relay panel

RSP-1-[IF Switch Type]-[RF Switch Type]
Redundancy Switch Panel with up to 4 IF relays and up to 4 RF relays

RSCC-T-OD-[Options]
Redundancy Controller without switches for Outdoor Switch Box

OSB-1-[IF Switch Type]-[RF Switch Type]-[Options]
Outdoor Switch Box with integrated relays

Possible Options are:

L   housing depth of indoor controller 470 mm

DC   redundant 24V DC output, not on RSCC-T-OD

Examples:

RSCC-T-75L-50K	IF Relay 75 Ω 2.5 GHz, RF Relay 50 Ω 18 GHz
RSCC-T-0-50K	without IF part, RF Relay 50 Ω 18 GHz
RSCC-T-50K-50Ka26-L	IF Relay 50 Ω 18 GHz, RF Relay 50 Ω 26 GHz, housing depth 470 mm
RSCC-T-OD	Controller without Switches for Outdoor Switch Box
RSCC-T-50K50K-XWGS-OD	Outdoor System with Controller and Outdoor Switch Box with 2x IF 50 Ω 18 GHz IF Relays and connector for external Wave Guide Switch
RSCC-T-75L75L75L75L-50K50K50K50K	Controller with external Panel with 4x IF Relays 75 Ω 2.5 GHz and 4x RF Relays 50 Ω 18 GHz