C and Ku Band



AnaSat® PS

GENERAL DESCRIPTION

AnaCom's Protection Switch System provides a high reliability 1 for 1 Hot Standby configuration for the ANASAT C and Ku-Band transceivers. The Protection Controller is designed for simple, intuitive operation. TX and RX switches function independently.

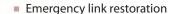
The Protection System consists of a Protection Controller outdoor box, and WR-229 and WR-137 waveguide switches for C-Band applications, or a pair of WR-75 waveguide switches for Ku-Band applications. Both switches include waveguide terminations for the off-line equipment.

FEATURES

- Easy to install and operate
- No indoor equipment is needed
- No extra power source is required
- Built in test facilities for improved maintainability and reduced dependence on external test equipment
- No external power required
- Serial port for remote control
- Simple, low cost installation

APPLICATIONS

- Anywhere high reliability requirements necessitate immediate switching action to a spare equipment
- Rural Telecommunications Expansion
- Data distribution and collection
 - Conventional Voice Traffic



- Remote Surveillance
- Distance Learning
- Broadcast
- Video Teleconferencing
- Industrial Networking
- LAN and WAN extensions

COMPACT, FUNCTIONAL DESIGN

AnaCom's Protection System integrates all necessary functions into a small outdoor package. The Protection Controller is fully contained in a small box with manual over-ride controls. Although normally intended for unmanned, automatic operation, the switch can be locally (or remotely) overridden to place a TX or RX switch (or both) on line and defeat the normal "switch-on-alarm" mode of operation. A single push-button (or remote command) returns the unit to completely automatic operation.

BUILT IN TEST EQUIPMENT

To improve and simplify maintenance routines, an external terminal (or computer) can be connected to monitor a number of critical parameters without use of additional test equipment. These include:

- Transceiver alarm status (TX, RX; A and B)
- Switch alarm and position status

CONTROLLABLE FUNCTIONS FROM THE TERMINAL

- Force TX switch to the A or to the B side
- Force RX switch to the A or to the B side
- Restore AUTOmatic operation

COMPREHENSIVE MONITOR & CONTROL

The M&C feature allows you to monitor and control the Protection Controller on the same RS485 M&C bus with most indoor equipment such as modems and multiplexers. If desired, the serial port can be configured as an RS-232.

BENEFITS

- High reliability with independent TX and RX switching
- Simple, intuitive operation requires minimum training
- "Last Touch" controls allow for remote or local (manual) operation







RICAL	ALARM SENSE	OPEN connection for alarm SHORT for normal (non-alarm state)
	ALARM TYPE	TX and RX independent
	RESPONSE TIME	< 1 Second
	TX MUTE	Active during a TX switch (0.5 seconds)
	TX IF IMPEDANCE	50 ohms (75 ohms optional); type N
	TX IF LEVEL	±20 dBm MAX
	TX IF INSERTION LOSS	3.5 dB typical
ELEC	RX IF IMPEDANCE	50 ohms (75 ohms optional); type N
	RX IF INSERTION LOSS	0.5 dB MAX
	TX RF INSERTION LOSS	0.02 dB MAX (switch only)
	TX RF VSWR	< 1.05:1 MAX (switch only); WR-137 or WR-75
	RX RF INSERTION LOSS	0.02 dB MAX (switch only)
	RX RF VSWR	< 1.05:1 MAX (switch only); WR-229 or WR-75

SYSTEM	MANUAL OPERATION	Five push-button switches
	SERIAL PORT	1 RS-232 or 1 RS-485
	PROTOCOL	RS-232 port supports any "dumb terminal" or ASCII interface RS-485 port supports addressed packetized data per ANACOM Supervisor™ software specifications
	ALARM RELAY	FORM C summary switch alarm; isolated
	VISUAL INDICATORS	GREEN LEDs indicate switch position RED LEDs indicate active alarms
	POWER	NONE (+12 volts @ 1 amp derived from transceivers)
	MECHANICAL — C-BAND INCLUDES — Ku-BAND INCLUDES TWO	Switch Controller box WR-137 and WR-229 waveguide switches WR-75 waveguide switches

TEMPERATURE	-40 to +50°C operational -60 to +75°C storage
≜ ALTITUDE	15,000 ft (5,000 meters) MAX
E RAIN	20 inches per hour
₹ WIND	150 miles per hour
VIBRATION	1.0 g random operational 2.5 g random survival
SHOCK	10 g operational 40 g survival

		SIZE / WEIGHT	8.5" x 9.5" x 4.0" (216 x 241 x 102 mm) / 3 lbs (1.36 kg) Mounting: 1/2" holes spaced 5" apart each end
E	WR-75 SWITCH (KU Band)	SIZE / WEIGHT	4.5" x 2.1" x 2.1" (114 x 53 x 53 mm) / 1.5 lbs (.68 kg)
౼	WR-137 SWITCH (C Band)	SIZE / WEIGHT	5.2" x 2.3" x 2.3" (132 x 58 x 58 mm) / 2.5 lbs (1.14 kg)
O	WR-229 SWITCH (C Band)	SIZE / WEIGHT	8.2" x 3.5" x 3.5" (208 x 89 x 89 mm) / 6.0 lbs (2.73 kg)
			Other selections are available upon request.

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