SMS-301 Modem Protection Switch

Modem Accessories

Overview

The SMS-301 is a fully programmable 1:1 protection switch providing complete redundancy for one prime and one backup modem. The SMS-301 switch is designed to operate with Comtech EF Data satellite modems and is a direct replacement for the SMS-651B 70/140 MHz Switch.

Programming the SMS-301 is accomplished through the front panel keyboard or the remote interface. Complete functionality control and monitoring of switch status and faults are easily accessed through the remote port connection.

The SMS-301 simultaneously switches data and IF paths, either independently or dependently. The switching type is selectable through the front panel or remote port, eliminating the need for firmware changes and allowing maximum in-use flexibility.

When a fault is detected in the online modulator or demodulator, a switch to the offline modem occurs if the backup is not in a faulted condition. The transmit data is sent to the backup modem by the 1:1 switch to prevent false indications of transmit faults. The actual switching can be accomplished in under 20 milliseconds, with programmable modulator and demodulator switching delays in the range of 0 to 127 seconds.

The front panel LEDs indicate which modulator and demodulator (prime or backup) are online. The LEDs also indicate the following:

- Active faults in the modulator or demodulator
- Status of the SMS-301's redundant power supplies
- Mode of the switch (automatic or manual)

Features

- Full feature monitor and control processor
- Remote input for configuration and status
- 1:1 configuration
- One rack unit (1RU) chassis

Other Features

- Uses standard Comtech EF Data modem as backup or prime
- Dependent or independent modulator and demodulator switching
- Local/remote, automatic/manual control
- Redundant power supplies and AC inputs
- Easy installation

Signals Monitored

- Operation mode: Automatic or manual
- Switching mode: Independent or dependent mod/demod
- Modulator/Demodulator online delay
- Modem online: A or B (dependent mode)
- Modulator/Demodulator online: A or B (independent mode)
- Remote configuration (local only): EIA-232 or EIA-485, address, baud, parity, bits per word
- Remote mode (switch)
- Clear stored faults
- Current faults
- Stored faults
- Switch status
- Equipment type
- Store/recall multiple switch configurations
- Remote access to modulator/demodulator status
- Modem configuration copy to opposite modem

Specifications

System

Data Interface	EIA-232, V.35, EIA-422, G.703, and MIL-STD-188-114
Data Rate	20 Mbps max.
IF Interface impedance	75 Ω BNC (50 Ω optional)
IF Frequency	50 to 180 MHz
Operation Modes	Auto/manual, local/remote
Power	90 to 264 VAC, 47 to 63 Hz, 30 W max.
Dimensions (1RU) (height x width x depth)	1.75” x 19”x 15.2” (4.4 x 48.2 x 38.6 cm)
Weight	9 lbs (4.0 kg) max.

Controls

Switch	Remote/local
Modulator	A/B online select or auto
Demodulator	A/B online select or auto

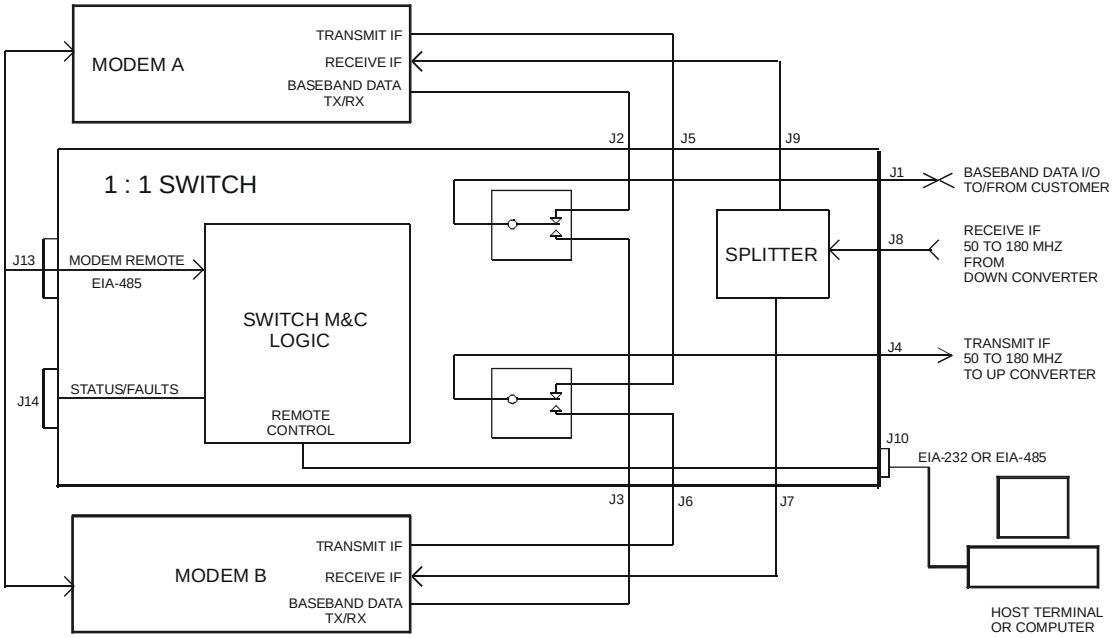
Indicators

Power Supplies	1, 2 on
Mode	Automatic or manual
Modulator	A/B online
Demodulator	A/B online
Faults	Transmit, receive, system, and stored

Monitor and Control

Remote M&C	9-pin D sub connector, EIA-232 or EIA-485 (2- or 4-wire), front panel selectable
Serial Interface	EIA-232 or EIA-485, programmable
Baud Rate	150 to 19200 bit/s, programmable
Parameters Controlled	Start/stop, parity, data bits

SMS-301 Block Diagram



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