1:N PROTECTION SWITCHES FOR CONVERTERS & VIDEO

The CPS Series are versatile microprocessor-based redundancy switches for 1:N protection of upconverters, downconverters, video exciters and receivers. These cost effective switches save rack space while offering the flexibility of controlling multiple 1:N configurations. The switch needs only be equipped with switch modules for present requirements. Expansion to higher order configurations is easily accomplished in the field by adding switch modules and reprogramming via front panel.

The Smart Switch™ is fully programmable adding intelligence to the protection function. Priorities may be assigned to each converter so that the most critical links are favored for protection. A single Smart Switch™ can provide independent protection for up to 4 on-line up or down links.

For example: the switch can accommodate 4 (1:2) TRIDUNDANT*, 2 (1:4) redundant or a single (1:8) redundant system. Any combination of these configurations can be realized for up to 4 links. Each converter may be individually addressed for monitoring (status) and control (frequency and attenuation*) through the Smart Switch™. This permits a simplified method of local system control via Smart Switch front panel. Remote control is accomplished via Form C contact closures or as an option a single serial bus interface.

A front panel liquid crystal display clearly shows system configuration and status for local M&C. Remote M&C is accomplished via RS485 bus with optional PC based Earth Station M&C System.

UPCONVERTER SMART SWITCH™ MODEL UCPS (M)
DOWNCONVERTER SMART SWITCH™ MODEL DCPS (N)
UP/DOWNCONVERTER SMART SWITCH™ MODEL CPS8 (M + N)

FEATURES

- Fully programmable for multiple independent 1:N protection systems
- Field expandable with IF and RF switch modules.
- Fully programmable priority settings
- Compact, 3 1/2" high (plus 5 1/4" RF switch chassis for uplinks)
- Complete control and monitoring of the 1:N system through a single interface
- LCD viewing of system status and control
- Front panel control of frequency and attenuation of each converter*
- Contact closure type remote interface monitor and control
- Rear test ports

OPTIONS

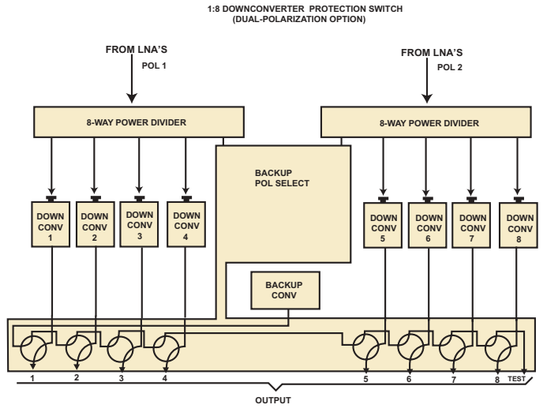
- Dual Polarization
- Auto level adjust for backup converter
- RS-422/485 and IEEE-488 remote interface

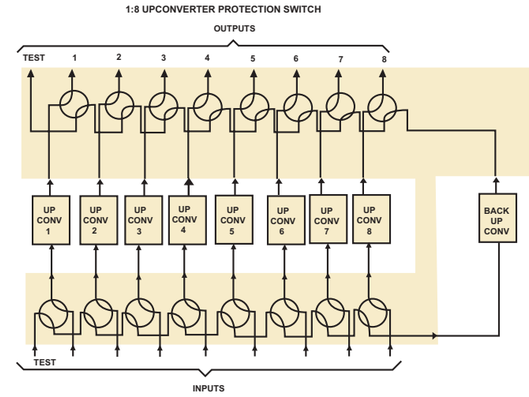
*Converter must include remote interface option

PERFORMANCE SPECIFICATIONS

Display (LCD)	Units in service Units in backup System Status (Red/Green LED)
Operating Modes	Manual/Automatic Local/Remote
Controls	System Configuration Priority Converter Frequency* Converter Gain*
Remote Inputs/Outputs	Contact Closure Output Momentary Closure Command Input RS422/485 (option) IEEE-488 (option)
Connectors	RF: SMA** IF: BNC
Test Points	Rear panel
RF Impedance	50 ohms
IF Impedance	75 ohms
Switching Time	100 msec (max.)
Dimensions/Weight	IF Switch/Control Panel": 3.5" x 19" x 22" 10lbs. RF Switch (Uplink only): 5.25" x 19" x 22" 10lbs.
Operating Temperature	0° to 50 C°

*Converter must include remote interface option
**TYPE N Optional





CONFIGURATION SAMPLES FOR A SINGLE SMART SWITCH

Configuration	Maximum Number of Independent Up and/or Down Links	Maximum Protection Configuration
Single	1	1:8
Dual	2	1:4
Quad	4	1:2

Any combination of these configurations can be realized for up to 4 links

BASIC ORDERING INFORMATION

- Upconverter Smart Switch™ ..... Model UCPS-(M)
  ..... Specify M = 1 to 8 Upconverters
- Downconverter Smart Switch™ ..... Model DCPS-(N)
  ..... Specify M = 1 to 8 Downconverters
- Upconverter Smart Switch™ ..... Model CPS8-(M + N)
  ..... Specify M = 1 to 8 Upconverters
  ..... N = 1 to 8 Downconverters

(Note: M + N $\leq$ 8 for Model CPS)