



# DOUBLE D ELECTRONICS LTD

## DDA89-02 Converter Redundancy Switch

- \* 1+4 and 1+8 Configurations standard
- \* Many special configurations available
- \* Integral 18GHz and IF switches
- \* 50 ohm or 75 ohm IF
- \* Option for separate input switch control
- \* Remote Monitoring & Control Port
- \* Network option with browser/SNMP
- \* Automatic monitoring and update of standby
- \* Supports most industry-standard up converters
- \* 3U package
- \* Redundant power feeds
- \* Front panel liquid crystal display & keyboard



The DDA89-02 is a versatile redundancy switch, intended for protecting up converters, down converters, modems, encoders and similar equipments.

Typically the RF section comprises separate IF (to 200MHz) and RF (to 18GHz) switching subsystems, and is available in 1+4 and 1+8 configurations. (Other configurations can be supplied on request, including units with all IF switches or all SHF switches, and a 4U high unit with an extra set of IF switches). Normally the input and output switches are controlled together; where the standby converter is dual fed there is an option to control the input switch separately.

The unit may be controlled locally from the front panel; this allows configuration of key unit settings, as well as mode control and manual switching. The LCD permits user-friendly prompts, as well as display of more extensive information than is possible on a conventional LED display.

The unit connects to the up converters via a local serial port. Through this it continuously monitors the settings of the main path up converters, at a configurable rate. When an automatic changeover occurs the standby is updated with the settings of the failed main path.

Switching may be performed manually from the front panel; an option determines whether the standby parameters are updated as it is switched on line.

The remote monitoring and control port allows access to all the front panel control and monitoring facilities. In addition it is possible to set the configuration of the unit via the RC&M port. The up converter settings may be obtained (and changed) either by accessing the up converter directly through a different RC&M address, or via the DDA89 in a converter-independent format.

The DDA89 can optionally be fitted with a network port instead of the serial RC&M port. With this option much of the unit can be configured using a web browser. RC&M uses either a high speed 'sockets' interface, or SNMP.

The DDA89 can also act as a protocol converter. The host RC&M port supports two industry-standard protocols, while the up converter serial port handles any protocols required by the equipment supported. It is also possible to support other protocols on the host port where this is appropriate to the application.

The DDA89 is supplied with a configuration utility program which runs on most Windows platforms. This allows configuration of many of the unit's options, as well as a number of "one-time" setup parameters. It also shows current up converter settings and allows control of the DDA89; thus it can be used to confirm correct operation of the hardware before implementing a full RC&M system.

## SPECIFICATION

- Physical: 3U 19" rack, 360mm deep (excluding connectors)
- Power: 90-250V a.c. standard; 48V d.c. option. 50VA max. Redundant power feeds.
- RF: SMA connectors. Switching system specified d.c. to 18GHz. Worst-case loss 2.0dB for main path, 6.5dB in 1+8 system with standby in use (at 18GHz).
- IF: BNC Connectors. 50Ω and 75Ω options. Specified d.c. to 200MHz. Worst-case loss 1.0dB for main path, 3.5dB in 1+8 system with standby in use.
- Converters: Up/Down Converters from the following manufacturers are supported:  
Miteq Multipoint  
Novella Satcom LNR  
Continental Microwave Peak  
Scientific Atlanta Vertex RSI  
Support for other manufacturers is planned - please contact factory.
- Modems: EF-Data/Adaptive Broadband SDM-2020  
Tandberg Television SM5600, SM6600  
Radyne Comstream DM240
- Settings: The DDA89 handles frequency, attenuator, spectrum inversion, mute and remote/local if these are supported by the converter.
- Host Serial: 4-wire RS-422/RS-485, various format options. Supports "Printable ASCII" and "STX/ETX" protocols.
- Network: Optional 10/100Base T port instead of serial, with browser, 'sockets' and SNMP
- Alarms: 9-D socket for each protected equipment (and standby). Input for volt-free contact, form C buffered alarm output.

### Converter Serial

Interface: 4-wire RS-422/RS-485. Fixed settings for each make of up converter. Converter polling interval configurable from "as fast as possible" to 99 minutes; also manual poll option. Settings stored in non-volatile memory.

### Automatic Switching:

Configurable delay before switching - 0.1 to 25 seconds.

On SDM2020 parameters which are updated on switching can be configured via supplied utility.

Multi-level prioritisation scheme allocates standby to failed path with highest priority.

Optional automatic restoration of main path when no longer failed.

Paths may be temporarily excluded from automatic switching for maintenance purposes.

Accessories: Cable sets to connect between the DDA89 and the protected units can be supplied on request.

### Ordering Information

DDA89-02/4/75 1+4 Up Converter Redundancy switch, 75Ω IF

DDA89-02/8/75 1+8 Up Converter Redundancy switch, 75Ω IF

DDA89-02/4/50 1+4 Up Converter Redundancy switch, 50Ω IF

DDA89-02/8/50 1+8 Up Converter Redundancy switch, 50Ω IF

For units with network port, add suffix 'E' to the part number. For 48V d.c. power, add "-48"

Please contact factory for other ordering options