

Single Remote Waveguide Switch Controller

- Remotely control a single Waveguide Switch
- DIN-Rail mount
- 24-28V d.c. Power Supply
- RS-422/485 or RS-232 Serial Port
- Optional Summary alarm output



The DDA235/DDA251 may be used to remotely control waveguide switches over a serial link, eliminating the problems of voltage drop associated with long cable runs. The unit is in a DIN-Rail mount format, reflecting the need for such units to be mounted in equipment cabinets adjacent to the waveguide network rather than being rack mounted.

The DDA235/DDA251 is powered from 24-28V d.c. to give maximum flexibility.

On the DDA235, a summary alarm output reports both power supply and waveguide switch faults.

The waveguide switch interface can be used with virtually any industry-standard switch having at least one set of tellbacks. Switch lock status inputs are also available.

For monitoring and control the units supports two industry-standard serial protocols, and the command set is compatible with the DDA70 and other waveguide switch controllers. On the DDA235 the address is set via DIP switches, while for the DDA251 it is set in software.

The units support 4-wire RS-422/485 serial connections, which allow connection of multiple units onto a single cable.

Selection Guide

DDA235-01	Single Remote Waveguide Switch controller, including manual
DDA251-01	Single Remote Waveguide Switch controller, including manual

Single Remote Waveguide Switch Controller (cont.)

Specification	
Physical:	DIN Rail Mount ("Top Hat") type DDA235 - 110 (H) x 135 (D) x 54 (W) mm excluding connectors, clip. DDA251 - 70 (H) x 90 (D) x 30 (W) mm excluding connectors, clip.
Power:	24-28V d.c. <100mA quiescent. Up to 3A peak when switching, dependent on waveguide switch being controlled.
Host Serial:	4-wire RS-422/RS-485, fixed 9600,7,e,1. Supports "Printable ASCII" and "STX/ETX" protocols.
Connectors:	Power - Binder 2-pole 680 series (DDA235) Serial - 9-pin D-socket (DDA235) Summary Alarm - 9-pin D-plug (DDA235) Power and Serial - Mixed contact-D plug (DDA251) Waveguide Switch - 9-pin D-socket
Control:	Any industry standard waveguide switch 24-28V d.c. common negative coils 3A max. One set tellback contacts used. Inputs for normally open and normally closed lock inputs.
Summary Alarm (DDA235 only):	DPDT relay output - 2 sets Form C contacts rated 30V d.c. 0.25A. De-energised on fault.
Accessories:	Cables to connect to waveguide switches can be supplied on request.

TWTA RC&M INTERFACE - CIM

- Compatible with CPI CIM
- VZU-2740 series compatible
- 1U 19" rack mount
- One TWTA per CIM
- CIM and CPI "Compact" compatible command sets

The DDA236 provides an RC&M interface to older CPI TWTAs, such as the VZU-2740 series. It can also be used (with suitable cables) with other TWTAs having a compatible interface.

Each DDA236 provides an interface to one TWTA in 1U rack height; two units can therefore replace a CPI CIM in many systems, giving a more flexible system partitioning. In many cases the existing cables between the HPA and the CIM can be reused.

The DDA236 has a serial port which may be configured for RS-232 or 4-wire RS-422/485.

As standard the DDA236 supports the commands and status polls of the CPI CIM. It may also be configured to provide an interface compatible with the CPI "compact" range of TWTAs.

A variety of configuration options give additional flexibility in configuring the system.

TWTA RC&M INTERFACE - CIM (cont.)

Specification	
Physical:	1U 19" Rack mount, 250mm deep
Power:	90-250V a.c. 48-62Hz. 20VA max.
Host Serial:	Selectable RS-232 or 4-wire RS-422/RS-485 9600 or 19200 baud. 8,n 7,e 7,o data/parity Supports "Printable ASCII" and "STX/ETX" protocols.
Connectors:	Power - IEC mains inlet Serial - 9-pin D-socket Summary Alarm - 9-pin D-plug TWTA Analog - 9-pin D-socket TWTA Status & Control - 50-pin D-socket
RC&M:	Supports status polls and commands for TWTA interface as CPI CIM. Also supports CPI Compact compatible command set. (Selectable)
Summary Alarm:	DPDT relay output - 2 sets Form C contacts rated 30V d.c. 0.25A. De-energised on fault. Configurable to include/exclude faults from connected HPA
TWTA Analog:	Two analogue inputs 0-6V full scale representing 0..full power
TWTA Control & Status:	Inputs for volt-free contacts or NPN open collectors - status signals Outputs NPN open collector or equivalent for control
Accessories:	Cables to connect to CPI TWTA can be supplied on request
Selection Guide	
DDA236-01	Single channel TWTA interface, including manual

RF Amplifiers including I+I Redundancy Controller

- Two RF amplifiers - various gain options
- Options on RF connectors
- Integral I+I redundancy controller
- Generic front panel
- Remote Monitoring & Control Port
- Redundant Power Supplies
- Amplifier fault monitoring
- RS-232 and RS-422/485 serial ports for RC&M
- 1U 19" rack mount
- Summary alarm output

The DDA237 is a rack mount amplifier with inbuilt redundancy switching. It is based on the DDA219 redundancy controller, offering compatible interfaces and the same serial protocol.

The DDA237 includes two RF amplifiers; their gain and performance, as well as the RF connectors used, depends on the option chosen. In most configurations each amplifier has its own regulated power supply, derived from the internal dual-fed power bus. Each amplifier is monitored for faults (power supply current); fault status for each amplifier is available on a relay contact.

RF Amplifiers including I+I Redundancy Controller (cont.)

A wide range of amplifiers can be incorporated into the unit; including IF coaxial (50Ω or 75Ω BNC), L-Band, wideband or SHF with SMA or N-type connectors. Two integral transfer switches connect the internal amplifiers into a symmetrical I+I redundant configuration; both main and standby paths are available through the rear panel coaxial connectors.

Local control is available through the front panel; this also gives status.

The DDA237 includes a remote monitoring & control port supporting 4-wire RS-485 and RS-232. It uses the same protocol and command set as the DDA219, which is compatible with the larger DDA70 family as well as the DDA69/DDA78 I+I controllers.

Specification	
Physical:	19" rack, 1U high, 360mm deep (excluding connectors).
Power:	90-254V a.c., 48-62Hz, 150VA max (when switching). Redundant power feed (dual power supplies) via two IEC mains inlets
Host Serial:	9-pin D-socket; RS-232 and 4-wire RS-422/RS-485, fixed 9600,7,e,1. Supports "Printable ASCII" and "STX/ETX" protocols.
Summary Alarm:	9-pin D-plug; volt-free relay contact signals alarm on any detected fault.
RF Switching:	As appropriate to amplifier frequency range
RF Amplifiers:	See options below
RD connectors:	See list below

DDA237 ORDERING OPTIONS

	-02	-03	-04
Frequency Range	20-250 MHz	10 – 2000 MHz	
Impedance	50Ω	50Ω	
RF Connectors	BNC	N-type	
Amplifier gain - min	20dB	30dB	
Amplifier gain - typ		33.5dB	
Amplifier + 1dB compression	+25dBm	+15dBm	
Amplifier noise figure (typ)	4.5dB	4.0dB	