DOUBLE D ELECTRONICS LTD

DDA275 MODULAR I/O UNIT

* Peripheral I/O unit for RC&M systems
* Input module - contact or voltage
* Output module - relay contacts
* RS-232/422/485 serial port for RC&M
* SNMP V1, V2c support
* 10/100Base T Network Interface
* 'TCP/IP Sockets' interface
* Networked serial port interface
* Configurable via web browser
* Single or dual mains supply
* Optional front panel indications of I/O
* Summary alarm output
* Time of day clock with SNTP support

This unit is primarily an I/O interface for RC&M systems; it can be configured to provide a mixture of inputs and outputs in blocks of 16. The modular approach gives best flexibility, since it is only necessary to populate the unit with the I/O which is actually needed. Interfaces for special applications can also be added; for example dedicated modules for two waveguide switches or a CRCA or similar phase combiner are available.

Most modules have a 37-pin D-connector; a socket for inputs, and a plug for outputs and clean contacts. This approach reduces the risk of damage to the unit or external circuitry through incorrect connection.

The input module can accept 16 inputs, which may be individually configured to accept a volt-free contact or a d.c. voltage (>3V = 'on', < 1V = 'off'). All inputs are optoisolated, and when configured to accept a voltage each input is galvanically isolated from the others. There is a configurable input debounce time to reduce transient alarms.

Output modules are available with 16 Form A relay contacts, rated 1A or 2A, and isolated from each other. A module with 12 Form C contacts can also be provided. To minimise dynamic power consumption, all relays are normally latching types, which retain their state when the unit is powered down. The physical output state of each relay can be read back, giving an assurance of correct operation. Outputs may be pulsed, as well as being set to a static state.

The waveguide switch controller and CRCA control modules have two 9-pin D-type sockets instead.

The unit is a standard 1U high rack mount case, with a choice of single or dual mains supplies. A front panel is also optional; when selected, this shows the current status of a block of sixteen I/O channels. A button cycles through the blocks.

The unit has a wide range of communications options, based round the network port and the serial port. For network communications the TCP/IP sockets or networked serial port options are most efficient, with SNMP V1 and V2c also being supported.

An integral time of day clock (battery backed) is used to log I/O state changes; SNTP support can ensure the time is accurate to a few seconds.

SPECIFICATION

Physical:	1U high 19" rack, 360mm deep
Power:	90-260V a.c. 47-63Hz single or dual supply via IEC inlet(s)
Connectors:	RJ-45 network connection 9-way D-socket (SA-Bus pinout) for serial interface 37-way D-socket(s) for I/O inputs 37-way D-plug(s) for I/O outputs 9-way D-socket for waveguide switch, CRCA interfaces 9-way D-Plug for summary alarm
Network:	10/100 BaseT on standard RJ-45 connector. Supports SNMP V1 and V2c, TCP/IP sockets, networked serial
Serial:	RS-232/422/485 4-wire. Support SA-Bus and Printable ASCII protocols.
Summary Alarm:	Two Form C relay contacts on 9-D plug. Signal PSU failure, and any configured input alarms.
I/O Options:	**1** - Input module. 16 optoisolated inputs for volt-free contact or switched 5V d.c. (Can add series resistor to support higher voltages). **4** - Output module - two 24V coaxial switch interface (requires 24V supply) **5** - Output module - 16 Form A latching relay contacts rated 30V d.c. 1A **6** - Output module - 16 Form A latching relay contacts rated 30V d.c. 2A **7** - Output module - 12 Form C latching relay contacts rated 30V d.c. 1A **8** - Output module - two waveguide switch interface (requires 24V supply) **9** - Output module - CRCA interface (requires 24V supply)
Front panel:	**P** - plain front panel with PSU status only **S** - panel including status indicators for I/O

Ordering Information
Part number: DDA275-PF-XXXXXX, where:

P - PSU type:
    1 - single PSU
    2 - dual PSU
    3 - single PSU including 24V (required for waveguide switch/CRCA options)
    4 - dual PSU including 24V (required for waveguide switch/CRCA options)
F - front panel type
    P - plain
    S - status indications
XXXXXX - I/O module type for slots 1..6 (see option numbers in specification)

Example:
DDA275-2S-571610 - has dual power supplies, front panel with status indications, and the following I/O allocations:
    Slot 1 - 16 Form A latching relay contacts rated 30V d.c. 1A
    Slot 2 - 12 Form C latching relay contacts rated 30V d.c. 1A
    Slot 3 - 16 optoisolated inputs
    Slot 4 - 16 Form A latching relay contacts rated 30V d.c. 2A
    Slot 5 - 16 optoisolated inputs
    Slot 6 - empty