

# 4 Stage Digital Output Module



The IO/DOM4 is designed to provide digital (relay) control from a 0-10V signal input. A 4 way DIL switch is used to select the function/s required and a potentiometer setting is available to provide a delay On time (in sequence/step mode) before the relays are energised or to set the delay time On when in Timed Start Sequence mode (SW4 On) used for soft start applications.

A volt free digital input is also available to reverse the operation when Sequence or Step Sequence modes are selected.

## Specification

Power Supply:	24V AC/DC +/-10%
Input:	0-10V DC control (load 5mA max)
Output:	4 x Voltfree changeover relays (rated 5A 240V)
Power Consumption:	100 mA max (all relays on)
LED Indication:	Power On / Relays energised
Selectable Options:	Manual / Auto / Off (relay outputs) Sequence /Step / Binary / Time Delay Delay Time 0 – 100 secs or 0 – 10 mins
Terminals:	1.0mm recommended 2.5mm max
Operating Temperature:	0 to 50°C
Operating Humidity:	5-80% non-condensing
Dimensions:	82mm high, 91 mm wide, 50mm deep
Mounting:	DIN Rail
Country of Origin:	UK
Product Code:	IO/DOM4

## Mode Selection

SW	1				2				3				4			
	Volts	Sequence				Step										
		R1	R2	R3	R4	R1	R2	R3	R4							
Sequence	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	
Step	On	Off	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	On	Off	
Delay Time	Off	On	Off	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	
Binary	Off	Off	On	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	
Delay Start	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	On	
Note: SW2 ON Delay = 10 mins																

Four modes of operation are provided as shown below:

### Sequence 1 (all switches off)

The four relays operate in sequence (see table). The switching differential on a decreasing signal is 0.5V.

### Sequence 2 (SW1 on)

Each relay operates independently in a step sequence (see table). The switching differential on a decreasing signal is 0.5V.

### Timing Potentiometer (Range 0-100 seconds or 0-10minutes with SW2 on)

This is used to provide an adjustable time delay between relays in the sequence and step sequence modes. (See also Time Start Delay mode).

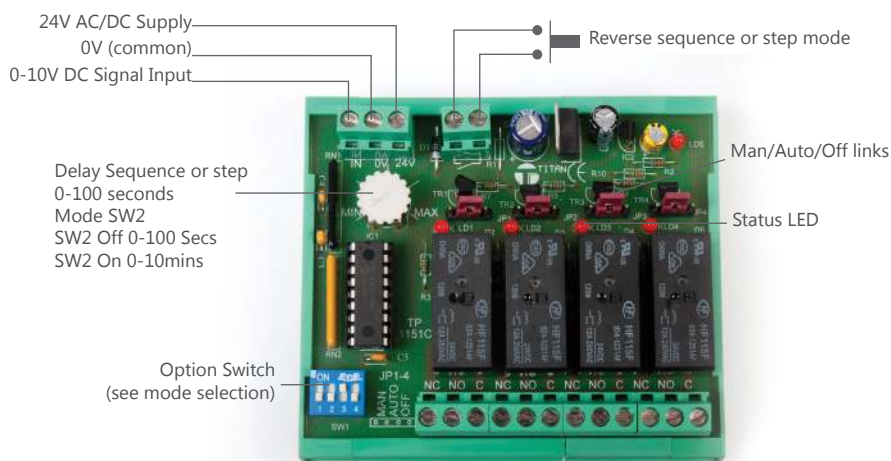
### Binary (SW3 on)

In this mode the timing potentiometer and the reverse action input switch are not used and the relay operational delay is a function of the control input voltage level being steady for 2 consecutive 1 second readings. The binary switching threshold is +/- 0.3V and any fluctuations in the signal input voltage will affect the performance of the binary switching operation.

### Time Start Delay (SW4 on range 0-100seconds)

When SW4 is on the 0-10V input signal is not required and the module operates as in a soft start (time delay sequence) across the 4 output relays on power up. The delay start time of R1 and between each relay operation is set on the potentiometer range 0-100 seconds. This mode provides an application for sequential soft start of electrical loads for 4 circuits.

## Connections



## Options

DIGITAL OUTPUT BINARY COMBINATION																
Volts <0.3V>	0	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8	8.4	9.0
R1	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On
R2	Off	Off	On	On	Off	Off	On	On	Off	Off	On	On	Off	Off	On	On
R3	Off	Off	Off	Off	On	On	On	On	Off	Off	Off	Off	On	On	On	On
R4	Off	Off	Off	Off	Off	Off	Off	Off	On	On	On	On	On	On	On	On