

**4 Digital Inputs, 1 0-10Vdc Output Universal Control****Application**

The EVO/IF-4DI1AO monitors up to four 24Vac inputs and provides a 0-10Vdc output signal. Four onboard pots allow factory or field adjustment. The input, onboard and output functions are connected to an onboard microcontroller. A program is loaded to the microcontroller to meet the specific needs of the application. A common application allows 24Vac thermostat signals to position a proportional valve or damper actuator.

*Power*

The IF-4DI1AO is powered by a 24Vac NEC class II power source. Onboard traces connect the transformer connections to auxiliary power connections on the opposite side of the board. The auxiliary connections may be used to power other 24Vac control devices, i.e. thermostats, automation controllers, and actuators.

*Inputs*

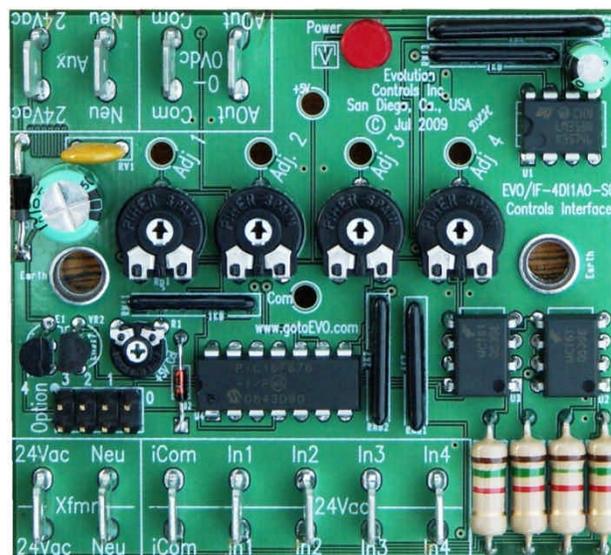
The 24 Vac inputs are optically isolated from the 24Vac powering the IF-4DI1AO. The circuit driving the inputs may be powered by the 24Vac powering the IF-4DI1AO or by another 24Vac power source. The isolated common (iCom) must be connected to the common of the circuit driving the inputs. Each input has an onboard 1.5K $\Omega$  load to prevent false firing from unloaded triac input sources.

*Output*

The 0-10V output circuit will provide up to 20 mA current to hold connected loads up to 500 $\Omega$  at signal.

*Adjustments*

Four adjust pots may be factory or field adjusted. With no option jumpers installed, adjustments may be set by connecting a 24Vac input to the same numbered input and Adj. The output voltage equals the Adj. setting. Adjustments may also be set by connecting a meter from the common test point (Com) to the adjustment test point (Adj.) associated with the adjustment. The Adjustment setting = the measured voltage x2.

*Microcontroller*

An onboard header provides a port to flash program the microcontroller and up to three option jumpers for application selection or to select application features. Application programs are provided by Evolution Controls for qualified opportunities with HVAC equipment manufacturers.

**Specifications**

Power	NEC Class II or equal 24 Vac $\pm$ 20% 50/60 Hz
Control Signal	0-10 Vdc Voltage Source 20mA Current Limited
Inputs	24 Vac $\pm$ 20% 50/60 Hz 0.4W, 0.4VA each input Isolation > 50 Vac
Thermal Stability	>0.01%/ $^{\circ}$ F
Operating Environment	0 $^{\circ}$ F to 130 $^{\circ}$ F (-18 $^{\circ}$ C to 55 $^{\circ}$ C) 10-80% rh
Connections	1/4 Quick Connects (Tabs) Euro Terminal Block (Special Order): Qty> 100 & 10 week lead time



Application Library

Application 0 0 (default)

The default application holds the output to 0Vdc when no inputs are selected. The IF-4DI1AO outputs the value of an adjust when 24Vac is applied to the same numbered input. If 24Vac is connected to more than one input, the highest numbered input with power outputs the value of the same numbered adjust.

Application 1 0

Application 1 holds the output to 0Vdc when no inputs are selected. When any combination of inputs is selected, the output equals the sum of the same numbered adjusts. If the sum is greater than 10Vdc, the output is 10Vdc.

Application 2 0

Application 3 0

Application 4 0

Application 5 0

Application 6 0

Application 7 0

