MAXIFLEX 8VC ISO Module

Model M1431B Individually Isolated 8 way Voltage/Current Input Module.

DATASHEET

FEATURES

- **Fits in any MAXIFLEX base I/O slot**
- **8 individually Isolated Voltage/Current Inputs**
- **High interchannel isolation for industrial applications**
- **Intelligent Module provides direct conversion to either Percentage or direct voltage reading.**
- **Four Alarm/Trip setpoints per input.**
- **Removable Terminal Blocks**
- **Hot Plug-in**
- **In system automatic module detection**

DESCRIPTIONThe M1431 8VC ISO module provides 8 voltage or current inputs. The inputs are individually galvanically isolated. This intelligent module is software configurable, and allows each input to be configured for a different input type and range.

The input value can be read as either a scaled percentage value to 2 decimal places, or the actual voltage/current input value as a signed integer to 3 decimal places. eg 0.00% to 100.00% or 1.000 to 5.000V. Over-range and under-range inputs are read as –32768 and 32767 respectively.

Current inputs are converted to voltage using an external resistor placed across the input terminals. This allows the plug-in inpute terminals to be removed without breaking the current loop. The value of resistor used to configurable in the range 50Ω to 500Ω.

Each input has four software settable alarm/trip setpoints and a deadband value. The status of the alarm/trip signals is available as derived digital inputs from the module.

With the aid of an accurate DC voltage source and the M1431A calibration software, the module can be field calibrated by the user if required.

The module may be inserted into any I/O slot in a Maxiflex system.

Inputs are terminated on plug-in screw terminals.

The module can be inserted or removed while the system is powered.

Auto-detection capability allows the CPU to recognise the presence of this module in the system.

All configuration and dynamic data are made available to the system CPU through a module Data Interchange Table. The module is configured by writing the appropriate values to this table, and the dynamic values are read by reading from this table.

SPECIFICATIONS

Inputs		
Quantity	8	
Standard Voltage ranges	0-1V; 0-5V; 1-5V; 0-10V; 2-10V	
Standard Current ranges	0-20mA; 4-20mA; 0-50mA; 10-50mA	
Input Impedance	1MΩ (excl. current sense resistor)	
Linearity	0.04% of span max.	
Temperature Drift	100ppm/°C typical	
Output Reading	Direct Voltage, Current or %	
Input Resolution	1mV or 1µA	
Accuracy:	Input Range 0-10V 2-10V 0-5V 1-5V 0-1V	% Accuracy 0.017% 0.021% 0.033% 0.042% 0.17%
ResponseTime 10-90% step	Settles to within 3% in 200ms	

Isolation	
Input to system logic	100% tested to 1500Vac rms (60s)
Input to Input	100% tested to 500Vac rms (60s)
Insulatio resistance	>20MΩ at 500Vdc
Interference Rejection	
CMRR at 50/60Hz	No effect up to 400Vac rms
NMRR at 50/60Hz	50dB
LED Indication	
CPU OK	ON = operating correctly Flashing = Module failure OFF = No Power or module failure
Output Termination	
Types	Screw clamp Plug-in Terminal Blocks and 20 way ribbon header

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Screw Terminal Wire Size	2.0mm^2 maximum For manageable wiring to the module, 0.5 mm^2 is recommended with 2mm overall outside diameter

Environmental

Operating Temperature	0°C to +60°C (32°F to +140°F)
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Humidity	5 - 95% max. at 40°C (104°F) non-condensing.
Protection	Electronics conformally coated

Logic Power Consumption

From Logic Power Supply	300mA max from 5Vdc

Auto Identification Codes

Module ID	48
Scan Code	41

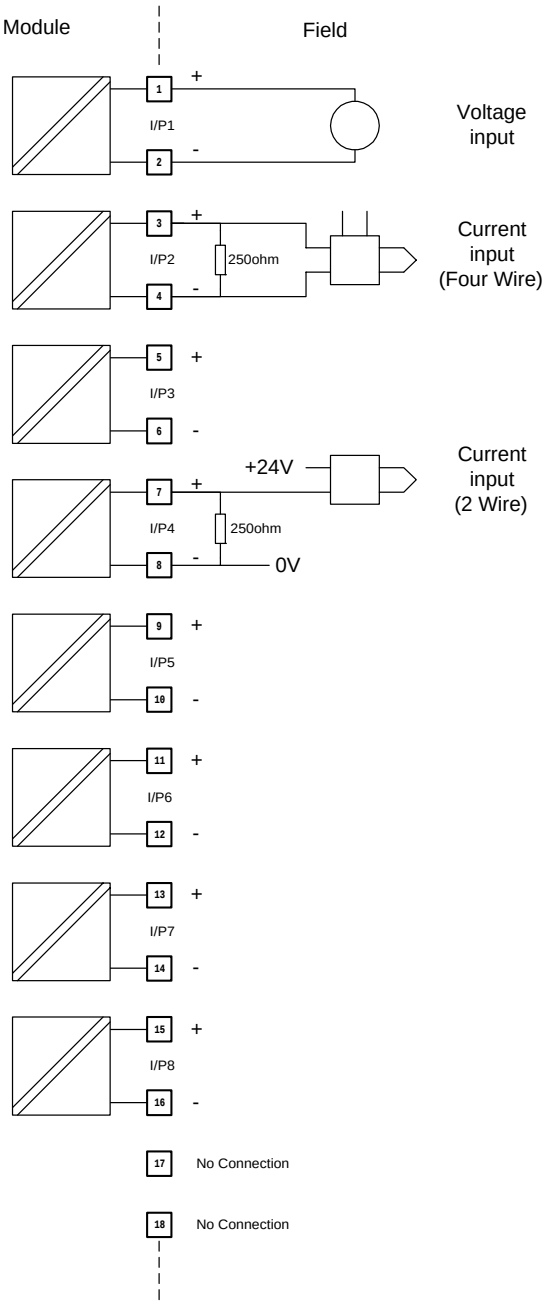
Mass

Excluding Packaging	420g (14.7oz)
Including Packaging	505g (17.8oz)

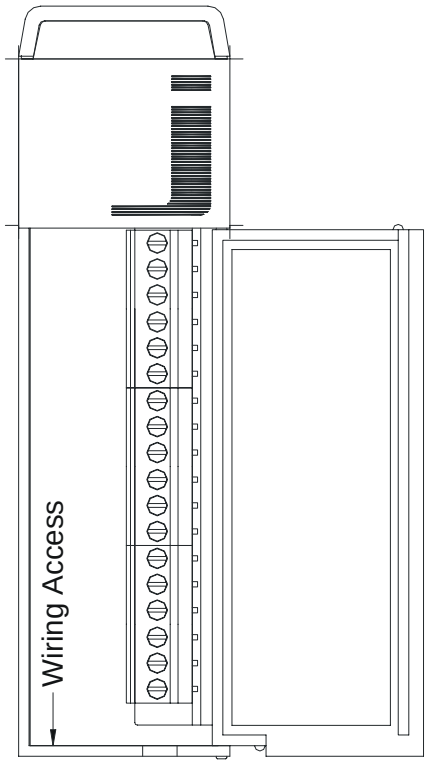
Ordering Information

Description	Order Code
Maxiflex 8VC ISO Module	M1431A

ELECTRICAL CONNECTION



MECHANICAL CONFIGURATION



Note: Module shown with door open.

http://www.omniflex.com