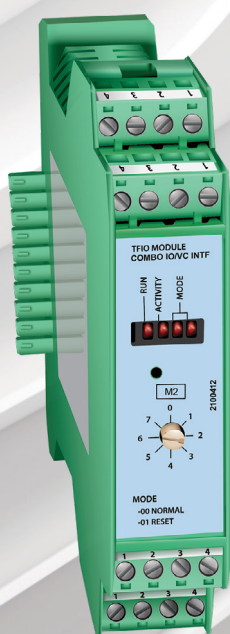


ABB MEASUREMENT & ANALYTICS | DATA SHEET

Valve control module (2100412)

XSeries products



Overview

The 2100412 TFIO module is a software-configurable combination I/O module specifically tailored for valve control applications. The module incorporates six general-purpose digital/pulse input/outputs. Two source mode digital outputs and one 4 to 20 mA sink/source mode analog output are also provided.

Point specifications

Electrical (each point)

- Open circuit voltage
- Short circuit leakage current
- Input capacitance
- Maximum allowable voltage range on input
- 5VDC (Internally up to 5VDC Nom.)
- -430uA typical
- 1000pF typical
- -0.5VDC to 26.5VDC

General digital input/outputs

6 channels

Input: Dry contact or voltage type

- Minimum contact resistance to activate input 150 K Ω
- Maximum voltage to activate the input: 3.8V (referenced to GND terminal.)
- Minimum voltage to deactivate the input: 4.75V (referenced to GND terminal.)

Output: Open Drain FET Sink

- RDS(ON): 0.060 Ω Typical
- Maximum continuous sink current: 2A @ 24VDC

Source digital outputs

2 channels

IoVBB supply @ 2A Max

Analog output

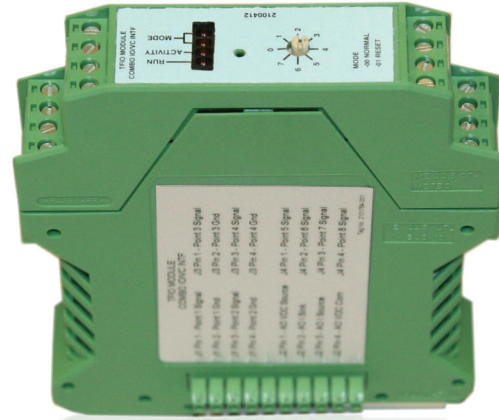
1 channel

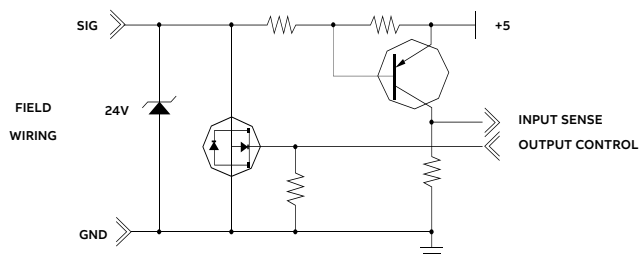
- Maximum allowable voltage range on VDC source, 1 sink or 1 source: 26.5 VDC.
- Maximum External Power Source: 26.5VDC
- Maximum load resistance (internal/external powered) 0 Ohms
- Maximum load resistance (internally powered) 350 Ohms
- Maximum load resistance RMAX (Calculated): (VDC External -4) x 50

Wiring requirements

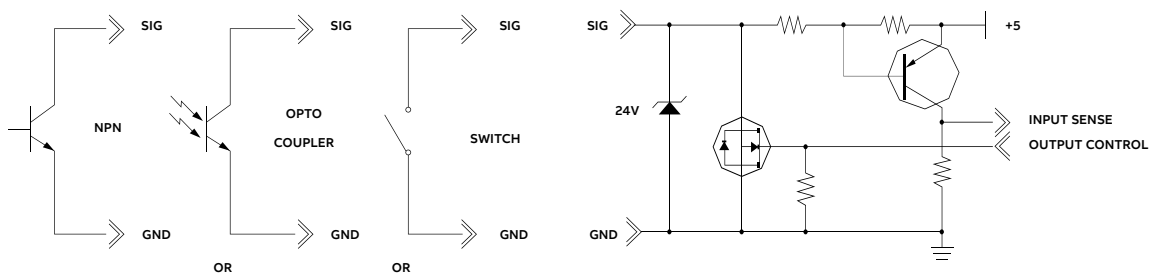
Sufficient gauge wire should be used to handle total load current. Use shielded pair or twisted pair conductors to reduce the possibility of erroneous transitions on the inputs in high EMI/RFI environments. (Ground the shield at field device only).

When digital outputs are used to sink current, the sum total sink current for all points and modules should not exceed 5A total. If more than 5A are required, separate ground wires from module output ground to power source ground terminal (bus bar) are required. Failure to do so may cause erratic system operation.

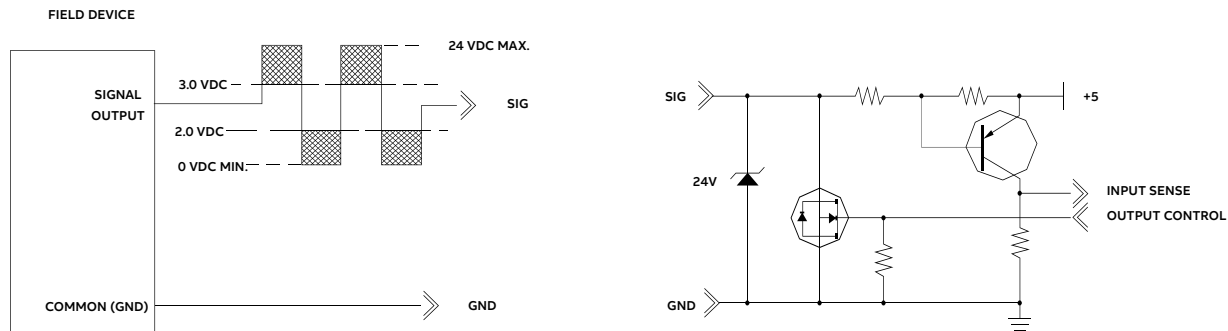




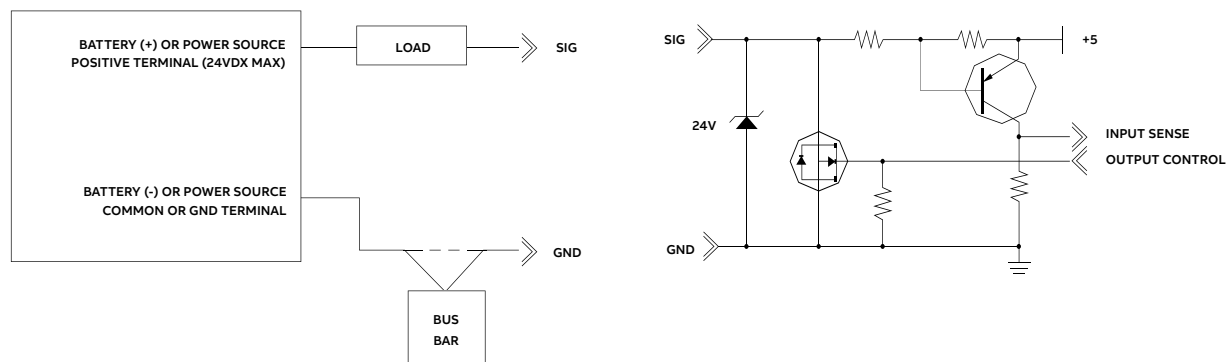
POINT CONNECTIONS

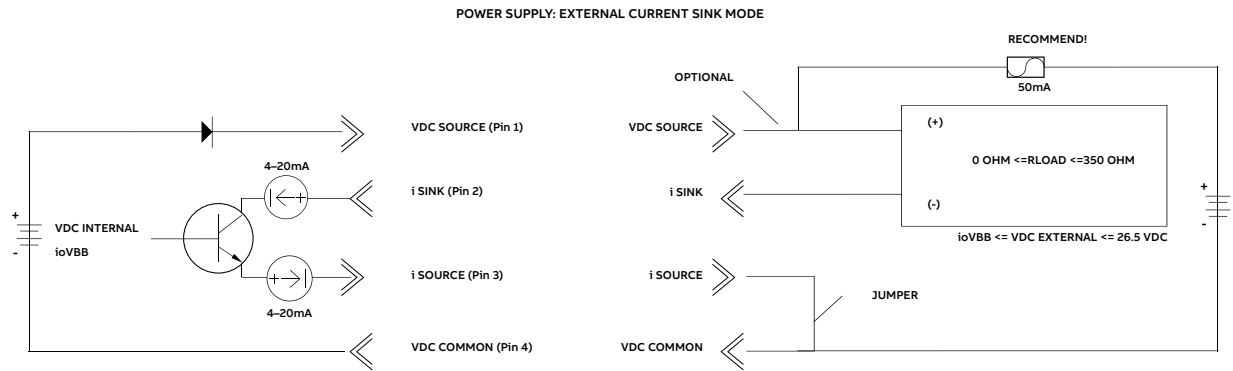
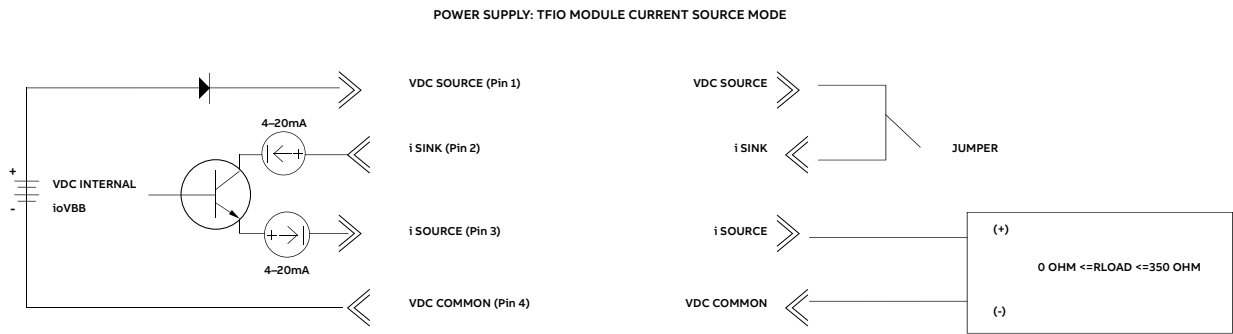
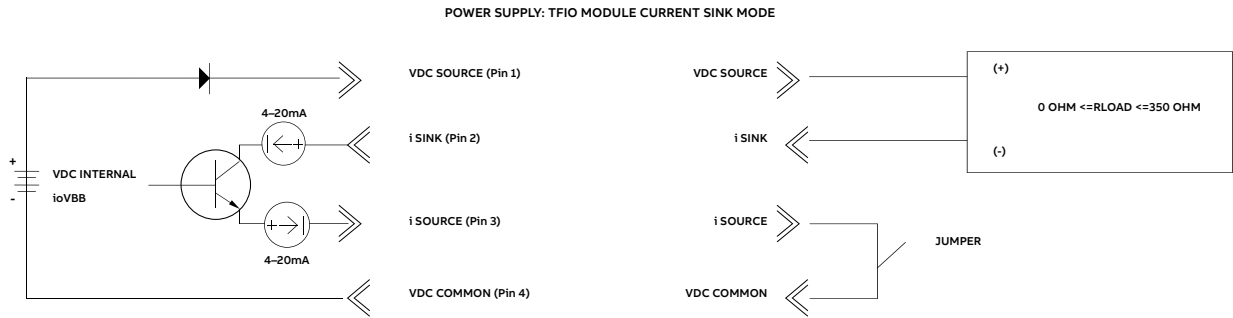


TYPICAL VOLTAGE INPUT FIELD

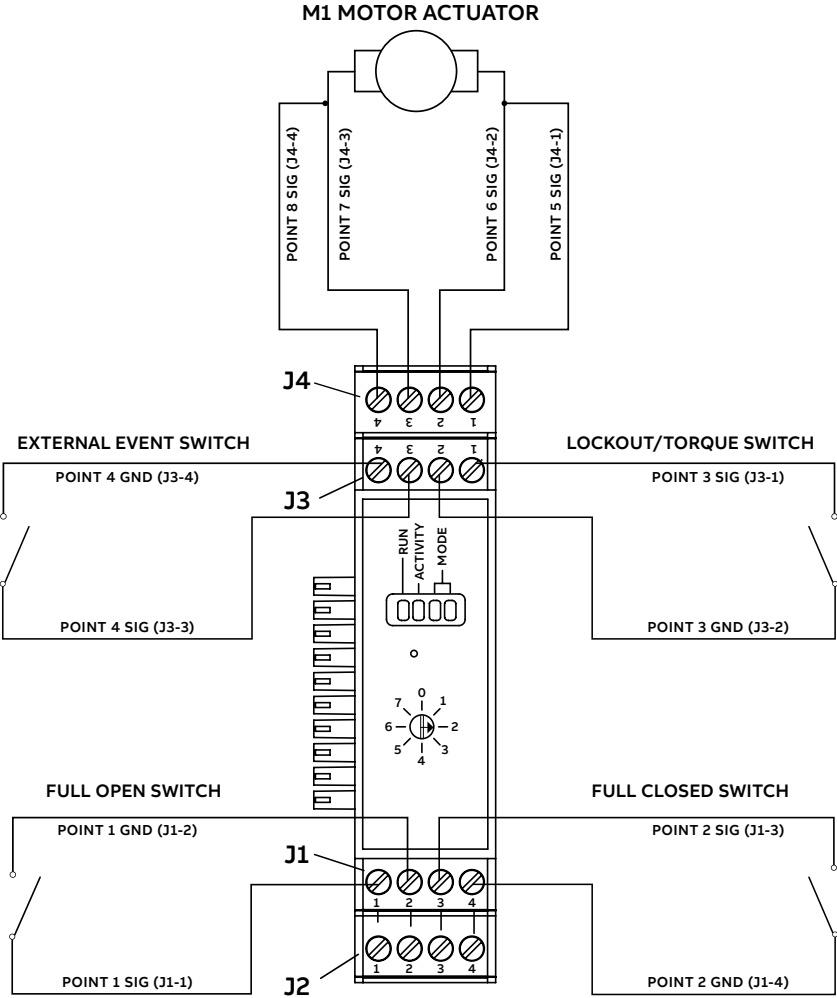


TYPICAL SINK OUTPUT FIELD WIRING





Valve control applications			
	J1	J2	J3
1	Point 1 SIG (DI or DO)	AO VDC source	Point 3 SIG (DI or DO)
2	Point 1 GND	AO I sink	Point 3 GND
3	Point 2 SIG (DI or DO)	AO I source	Point 4 SIG (DI or DO)
4	Point 2 GND	AO VDC common	Point 4 GND



Notes

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