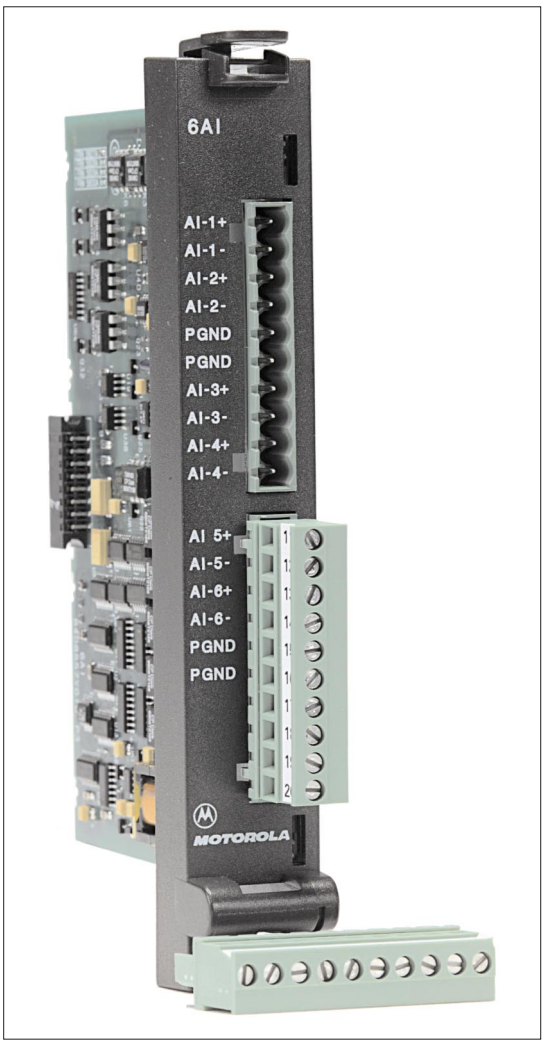
6AI Analog Input Module

for the MOSCAD-L RTU

The 6AI Analog Input module is an accessory to the MOSCAD-L RTU. It allows 6 dc analog currents, from other on-site equipment, to be connected to the RTU. Examples include tank level sensors, flow-rate sensors, and RPM sensors.

Features / Benefits



Data Input

The analog currents applied to the module are multiplexed to an on-module analog-to-digital converter (ADC), all under the control of the MOSCAD-L CPU module.

◆ *As controlled by the defined application program, the 6AI module will read the instantaneous value of one or more of the inputs and move that data from the 6AI module into the CPU module via the motherboard. This data may then be used by the application program to perform the desired functions.*

Self-Calibrating

The 6AI module also multiplexes two additional on-module inputs to the ADC, namely logic ground and a calibration voltage.

◆ *These digitized signals are used to:*

↖ *Eliminate any ADC offset (drift), thereby stabilizing the ADC output.*

↖ *Check the ADC and other common circuit components for proper operation.*

Isolated Inputs

All inputs are protected by optical isolators that also function as the multiplex switches. An on-module power supply further isolates the field-side circuits from the RTU.

◆ *Surge Withstand Capability (SWC) conformance is assured for the safety of the equipment and technicians.*

Packaging

The module plugs and locks into the module rack. Wire connections (up to 14 ga. wire) are made to removable connectors on the front of the module. No jumpers, calibration pots, etc. are located on the module — any calibration is done electronically with software contained in the Programming ToolBox.

◆ *Modularity allows the MOSCAD-L RTU to be easily expanded as systems wants and needs change, and makes field module replacement quick and easy.*

MOTOROLA

6AI Module

for the MOSCAD-L RTU

SPECIFICATIONS

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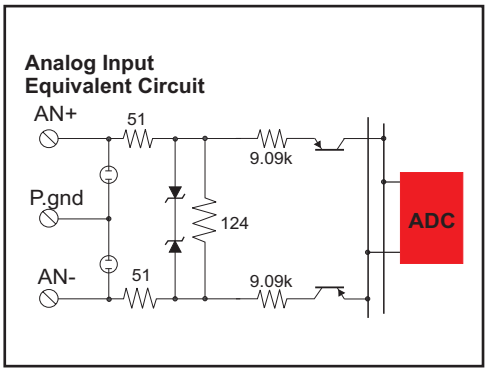
Analog Inputs	**Type:**	Six, 4-20 ma
	Input Resistance:	226 ohm
	Resolution:	12 bit (11 bit + sign)
	Accuracy and Stability:	±0.1% of full scale @ +25°C; ±50 ppm/°C
	Conversion Time:	120 millisecond (per channel)
	Common Mode Rejection:	60 dB minimum @ 60 Hz
	Input Isolation:	Per IEC 255-5: between logic and analog input = 2.5 kV; insulation resistance = 300 Mohm @ 500V
	Input Protection:	Per ANSI/IEEE C37.90.1-1989: oscillatory wave = 2.5 kV; fast transient = 4 kV Per IEC 801-2, air discharge: 8 kV; contacts: 4 kV Per IEC 801-3, radiation immunity: 3 V/m Per IEC 801-4, fast transient: 0.5 kV
	Radiated Emission:	Per EN55022 and FCC Part 15
	Diagnostics:	LEDs on CPU module: 6 AI underflow, 6 AI overflow
	Power Consumption:	5 Vdc: 10 ma; 12 Vdc: 35 ma
	Humidity:	0 to 90% @ +50°C without condensation
	Temperature:	-30 to +60°C

Specifications subject to change without notice.

Connections Chart

Term	Function	Term	Function	Term	Function	Term	Function
1	AN1 (+)	6	Pgnd	11	AN5 (+)	16	Pgnd
2	AN1 (-)	7	AN3 (+)	12	AN5 (-)	17	unused
3	AN2 (+)	8	AN3 (-)	13	AN6 (+)	18	unused
4	AN2 (-)	9	AN4 (+)	14	AN6 (-)	19	unused
5	Pgnd	10	AN4 (-)	15	Pgnd	20	unused



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