4AO Analog Output Module
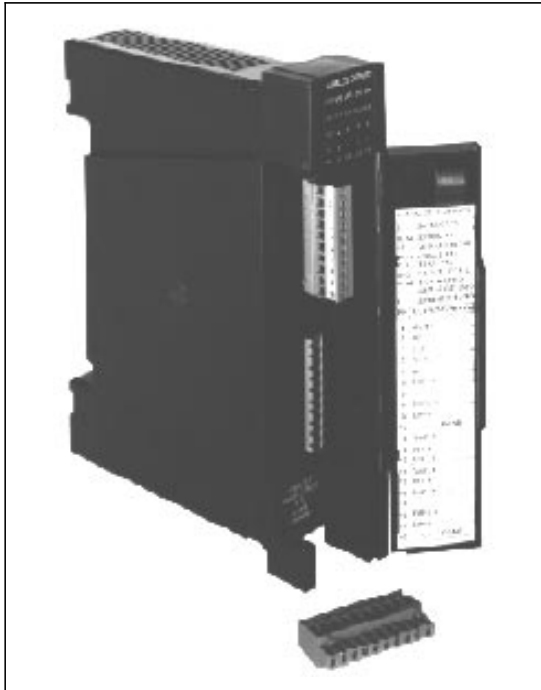## for the MOSCAD RTU

The 4AO Analog Output module is an accessory to the MOSCAD RTU family that allows up to 4 other on-site pieces of equipment to be connected to, and controlled by, the RTU. Examples include variable speed motors, proportional gate valves,and chart recorders.

Data Output

Under the control of the defined Application Program, the CPU module will move the current data value of one or more logic variables from the CPU module into the 4AO module via the motherboard. The 4AO module will pass that data through on-module digital-to-analog converters (DAC), one converter for each output event, to the controlled device.

◆ *The application in the CPU module determines the voltage or current output allowing the system to control valves, chart recorders, etc.*

Dual Outputs per Channel

Each of the 4 independent output channels provides both 4-20 ma and 0-5 Vdc outputs. All outputs are protected against surges and other disturbances.

◆ *Appropriate signal outputs are provided for virtually all system needs.*
◆ *Surge Withstand Capability (SWC) conformance is assured for the safety of the equipment and technicians.*

Packaging

The module is packaged in a plastic housing that plugs and locks into the motherboard. Wire connections (up to 14 ga. wire) are made to removable connectors on the face of the module. No jumpers, calibration pots, etc. are located on the module (any calibration is done electronically via software from the ToolBox program.)

◆ *Modularity allows the MOSCAD RTU to be easily expanded as system wants and needs change and makes field module replacement quick and easy.*
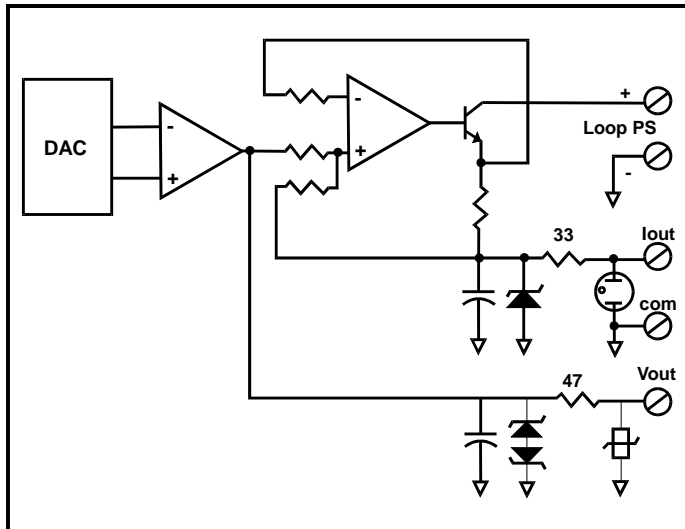
Ⓜ MOTOROLA

Specifications

Order	Plant Installed:	V118
	Field Installed:	FRN1489

Resolution	12 bits (including sign)
Overall Accuracy	0.1% of FS, 1 bit

Output Load	<250Ω when loop P.S. < 20 Vdc; <750Ω when loop P.S. > 20 Vdc

Output Isolation	On-board DC/DC converter; Optical isolation
Output Protection	5 kV fast-transient surge and 2.5 kV oscillatory SWC per ANSI C37.90.1-1989

Diagnostic	20 LEDs:	Separate voltage or current output in use, uncalibrated, and update; 1 each for Calibration Fail, Module Fail, and No Clock

Power	5 Vdc:	20 ma
	12 Vdc:	50 ma (90 ma when LEDs are on) plus output loop currents

Environment	Humidity:	0 to 90% @ +50°C
	Temperature:	-30 to +60°C

Typical Output Circuit

Connections Chart

Term	Function		Term	Function
1	Vout1 (+)		11	Vout3 (+)
2	com1		12	com3
3	Iout1 (+)		13	Iout3 (+)
4	Vout2 (+)		14	Vout4 (+)
5	com2		15	com4
6	Iout2 (+)		16	Iout4 (+)
7	n/c		17	n/c
8	Loop PS (+)		18	Loop PS (+)
9	Loop PS (–)		19	Loop PS (–)
10	P. Gnd		20	P. Gnd

Quality Means the World To Us™