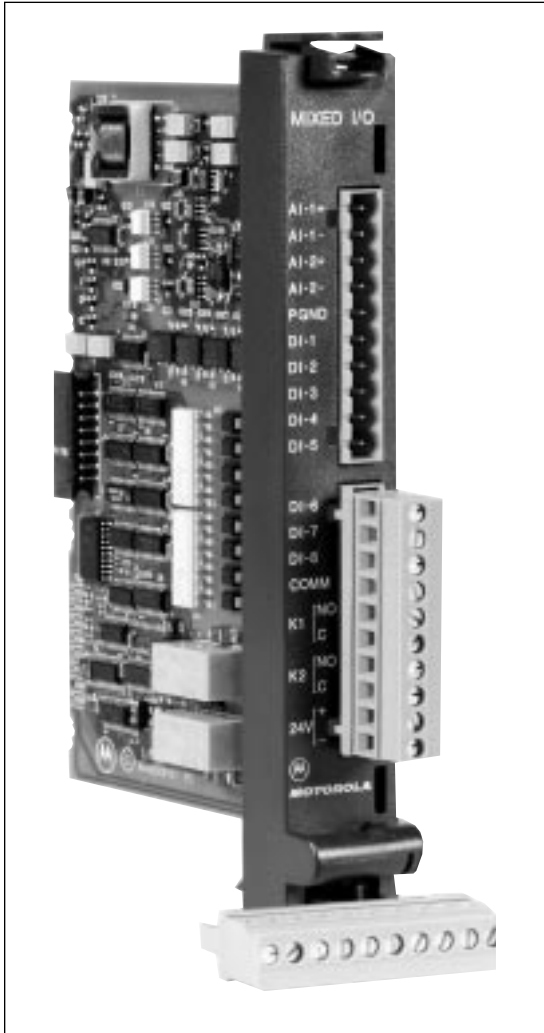


# MIXED I/O MODULE

for the MOSCAD-L RTU

The Mixed Input/Output (I/O) module is an accessory to the MOSCAD-L RTU family that permits up to eight dry contact closures, from switches or relays in other on-site equipment, to be connected to the RTU. Plus up to two 4-20 ma analog inputs, from on-site tank level or flow-rate sensors, can also be connected to the RTU. It also provides two relay outputs that may control on-site electrical devices.

## FEATURES/BENEFITS



### Digital Data Input

Under the control of the defined application program, the CPU module in the RTU will read the current instantaneous status of one or more of the eight status inputs or two analog inputs. It moves that data from the module into the CPU module via the motherboard.

► This data may then be used by the application program. Similarly, the CPU module will move data associated with the two relays into the module and may control the state of those relays.

### Low Speed Counters

Each of the eight digital inputs may be used as low-speed counter inputs if desired. The totalizing will be done within the CPU module under application control. The application must read the associated input(s) in a timely manner to assure not missing any input event.

► Any number of counter inputs are easily obtained.

### Time-Tagging

Any of the eight digital inputs may be defined to tag the time of the input event with one millisecond accuracy.

► This time may then be read and used in sequence-of-event actions, etc. or used later for historical reports.

### Wet or Dry Inputs

Each digital input accepts input currents from external 12 or 24 Vac/dc sensors. The module provides a floating 24 Vdc output to wet the contacts on dry-contact sensors.

► A single module provides a universal interface to most of the sensors likely to be encountered.

### Relay Outputs

Different modules are available with two electrically-energized (EE) relays or with two magnetically-latched (ML) relays.

► The EE relay version should be used when it is mandatory that the relays open when power is lost or control otherwise disrupted. The ML relay version should be used when prolonged operation from the backup battery power source is expected.

### Optical Isolation

All inputs are protected by optical isolators on the module.

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

# Mixed I/O Module

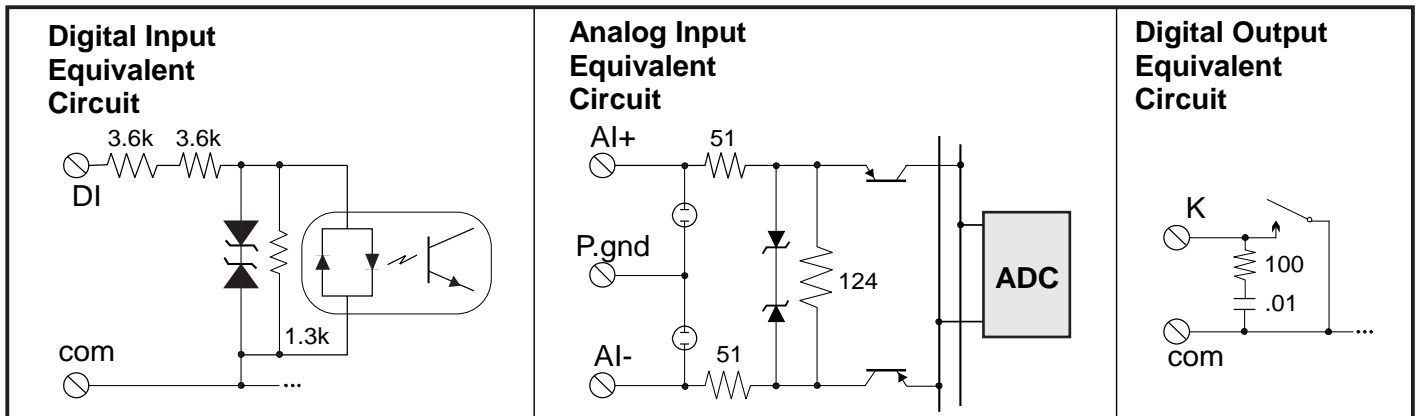
for the MOSCAD-L RTU

## SPECIFICATIONS

SPECIFICATIONS	
<b>Digital Inputs:</b>	<p><b>Type:</b> 8 wet inputs; 24V dc source available to wet dry-contact sensors</p> <p><b>Input Signal:</b> On: <math>V_{in} &gt; 9V</math> or <math>I_{in} &gt; 1.0</math> ma Off: <math>V_{in} &lt; 3V</math> or <math>I_{in} &lt; 0.3</math> ma</p> <p><b>Protection:</b> Per ANSI/IEEE C37.90.1-1989: oscillatory wave = 2.5 kV; fast transient = 4 kV Per IEC 801-2: air discharge = 8 kV Per IEC 801-3: radiation immunity = 10V/m Per IEC 801-4: fast transient = 500V</p>
<b>Analog Inputs:</b>	<p><b>Type:</b> Two, 4-20 ma</p> <p><b>Input Resistance:</b> 226 ohm</p> <p><b>Resolution:</b> 12 bit (11 bit + sign)</p> <p><b>Accuracy &amp; Stability:</b> <math>\pm 0.2\%</math> of full scale @ <math>+25^{\circ}C</math>; <math>\pm 100</math> ppm/<math>^{\circ}C</math></p> <p><b>Protection:</b> Per ANSI/IEEE C37.90a-1989: oscillatory wave = 2.5 kV; fast transient = 4 kV</p>
<b>Digital Outputs:</b>	<p><b>Type:</b> Two, electrically-energized (EE) or magnetically-latched (ML)</p> <p><b>Contact Rating:</b> SPST; 0.6 amp @ 110V ac or 2 amp @ 30V dc</p> <p><b>Protection:</b> Per ANSI/IEEE C37.90a-1989: oscillatory wave = 2.5 kV; fast transient = 4 kV Per IEC 801-3: radiation immunity = 10 V/m Per IEC 801-4: fast transient = 500V</p>
<b>Diagnostics:</b>	LEDs on CPU module: 8 DI status, 2 DO status, 2 AI underflow, 2 AI overflow

Connections Chart	Term	Function	Term	Function	Term	Function	Term	Function
	1	AN1+	6	DI-1	11	DI-6	16	K1-com
2	AN1-	7	DI-2	121	DI-7	17	K2-NO	
3	AN2+	8	DI-3	31	DI-8	18	K2-com	
4	AN2-	9	DI-4	41	DI-com	19	+24V dc	
5	P.gnd	10	DI-5	15	K1-NO	20	-24V dc	

Specifications subject to change without notice.



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