**Wiring Rule**

These modules are intended for installation within the UL Listed enclosure model UL-ENCL for UL 294 and UL 1076.

Do not remotely ground any part of the input sensor wiring. Remote grounds connected to the return terminal could make the system operate incorrectly or damage the equipment. The signal return is not true earth ground. It is an electronic reference point necessary to interpret the sensor properly.

For reliable operation, follow these wiring guidelines:
- Never lay wires across the surface of a printed circuit board. Wires should never be within 1 in. or 25 mm of any component on a printed circuit board.
- Use shielded wire.
- Terminate the shield of the wires at one end of the run only-preferably at the end where your I/O module is located.
- Be careful when stripping wire not to drop small pieces of wire inside the cabinet.
- Don’t run your wiring in the same conduit with AC power.
- Don’t run your input wiring in the same conduit with your output wiring.

**Grounding the Modules**

Some modules include an integral ground clip. All modules include a screw terminal connection for earth ground. It is important that this connection be made as close to the module as possible.

**Caution**

Do not externally ground any input signal. This may damage the unit. Signal return terminals are not connected to earth ground.

**DM-20 (-S)**

**Digital Input/Output Module**

**DIO-20 Connection**

- DM-20 to DIO-20 Data Connection DIO-20
- DM-20 to DIO-20 Power Connection

**General Purpose I/O**

- Contact Closure
- Contact Open
- N.O. Contact
- N.C. Contact
- LED Indicators

**Technical Specifications**

- Low Capacitance
- Power Supply: Remote hookups require Listed UL 294 power limited power supply. Calculate for maximum voltage drop of 2 VDC
- Remote Cable: Bus topology requires a maximum of 32 modules to be driven by one power supply. Power supply can be reduced due to the capacity of the power supply

**I/O Bus**

I/O Modules connect in the following configurations:

- Direct Connect
- Remote Wire via Local Cable
- Remote Wire via Remote Cable

**Remote Connection Line Termination**

RS-485 Remote configuration (outside of the Continuum enclosure) requires a 120Ω resistor across pins 1 & 2 at the beginning and end of the remote cable.

**UI-8-10 (-S) / UI-8-10-10V (-S)**

**Universal Input Module**

- Contact Closure
- Contact Open
- N.O. Contact
- N.C. Contact
- LED Indicators

**Technical Specifications**

- N.O. and N.C. Input Acceptance
- Low Impedance
- Power Line: Remote hookups require Listed UL 294 power limited power supply. Calculate for maximum voltage drop of 2 VDC

**Supervised Circuits**

- Series Circuits
- Parallel Circuits

**Caution:** Earth ground (must) be connected to avoid module damage.
**DI-6 A / DI-6-A-HV**

**AC Digital Input Module**

- **AC Signal**
- **IN X**
- **DC Signal**
- **IN X**

**Voltage Range:**

- DI-6 AC: 20-122 Vrms
- DI-6-A-HV: 96-250 Vrms

**DI-8 (-S)**

**Digital Input Module**

- **Digital Input Signal**
- **IN X**
- **RET**

**A0-4-8 / A0-4-8-0**

**Analog Output Module**

- **Voltage Output**
- **Current**
- **OUT X**

**Current Output:**

- 0 - 20 mA

**Voltage Output:**

- 0 - 10 V

**DI-6**

**MilliAmp Input Module**

- **24V Loop Transmitter**
- **IN X**

**Max Current:**

- 20 mA

**Voltage Supply to Sensor:**

- 19-26 V

**DO-4-R (-S) / DO-4-R-0 (-S)**

**Triac Output Module**

- **LOAD**
- **LOAD**
- **OUT X**

**Contact Rating:**

- 5A @ 240 VAC
- 5A @ 30 VDC

**DO-6-TR**

**Voice Telecom Module**

- **RJ-11**
- **Telephone Line**

**Warning:** This product can expose you to chemicals including lead which is known to the state of California to cause cancer and which is known to the state of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

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**Notes:**

1. Refer to the UL Listed Access Control/Proprietary Burglar Alarm System's Installation Manual (IUB-294 (Access Control) and/or IUB-294 Proprietary Burglar Alarm Systems Reference, 30-3001-504) for specific wiring, operation, and compatibility information. If only these products mentioned in this document are evaluated by UL for UL 294 and UL 1076 applications:

- **UL 294**
- **UL 1076**

- **DO-4-R**
- **DO-4-R-0**
- **DI-6 (-S)**
- **DO-4-R-0 (-S)**

2. The -S versions are also acceptable.

**UL 294 1st Edition Compliance**

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For more information on these Andover Continuum products, see the Systems Reference, 30-3001-499, and the Power Supply Reference, 30-3001-702. For documentation specific to Underwriters Laboratories (UL) evaluation, see the Note below.