High Resolution Isolated Analog Modules Cat. No. 1771-N Series

This release note contains information on:

- agency certification
- calculating power requirements for the I/O chassis
- simplified schematics
- series change from A to B
- revised backplane power consumption specification
- revised Figure 2.6, Connecting a 4-Wire Sensor to the Remote Termination Panel

Use this release note with the High Resolution Isolated Analog Module user manual, publication 1771-6.5.64, dated October 1994.

European Union Directive Compliance

If this product is installed within the European Union or EEA regions and has the CE mark, the following regulations apply.

EMC Directive

This apparatus is tested to meet Council Directive 89/336/EEC Electromagnetic Compatibility (EMC) using a technical construction file and the following standards, in whole or in part:

- EN 50081-2 EMC – Generic Emission Standard, Part 2 – Industrial Environment
- EN 50082-2 EMC – Generic Immunity Standard, Part 2 – Industrial Environment

The product described in this manual is intended for use in an industrial environment.

Low Voltage Directive

This apparatus is also designed to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131–2 Programmable Controllers, Part 2 – Equipment Requirements and Tests.

For specific information that the above norm requires, see the appropriate sections in this manual, as well as the following Allen-Bradley publications:

- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1
- Guidelines for Handling Lithium Batteries, publication AG-5.4
- Automation Systems Catalog, publication B111

Addition to "Calculating the Power Requirements for the I/O Chassis" on page 2–2

Add the following attention after the second paragraph on page 2–2.

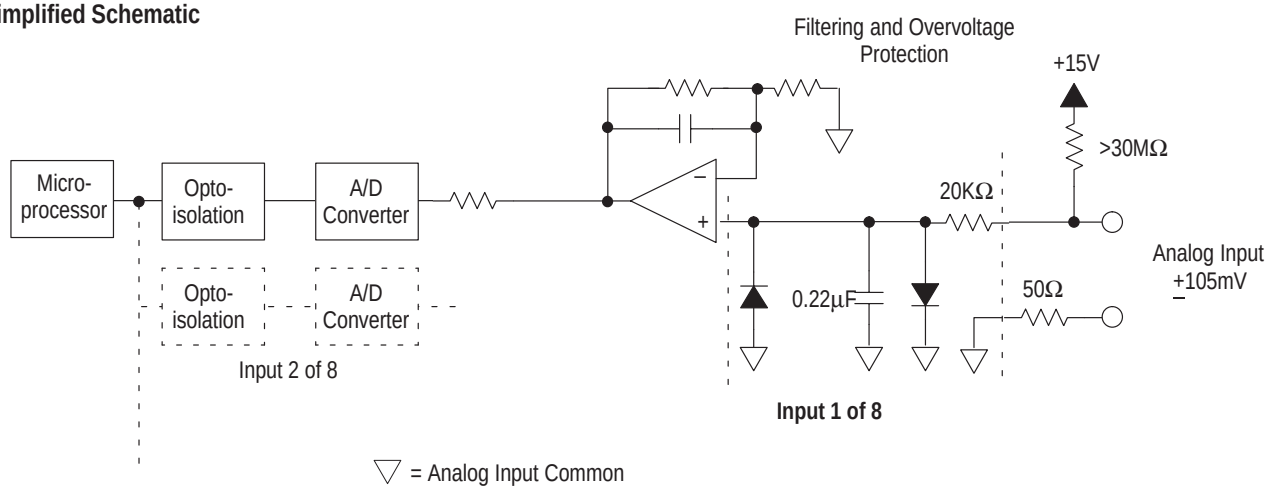
ATTENTION: An inrush current of up to 1.5A may occur during powerup or power down of the 1771-N series modules. When calculating the power requirements for your chassis, use either 1.5A or the actual backplane current specification, whichever is larger. Failure to do this can result in 1.) the power supply not powering up at power up, or 2.) a drop in backplane voltage during the powerdown sequence.

Simplified Schematics of 1771-N Series Modules

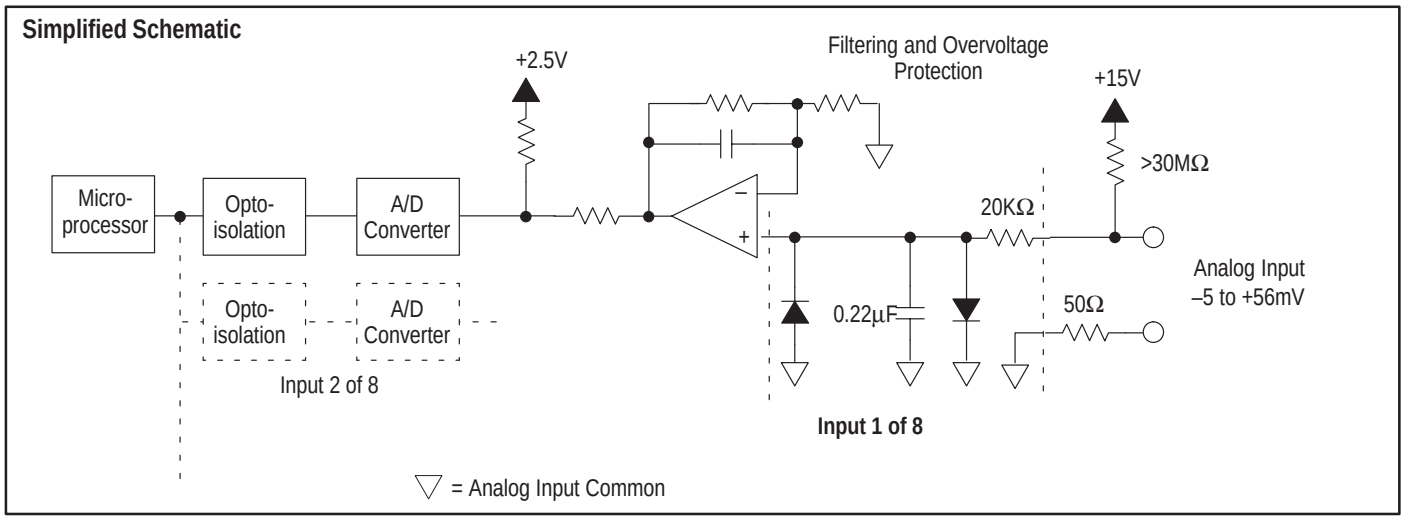
These simplified schematics represent modules containing only 1 type of input or output circuit. An example of a module with more than 1 type of input or output circuit is also shown.

100mV Input

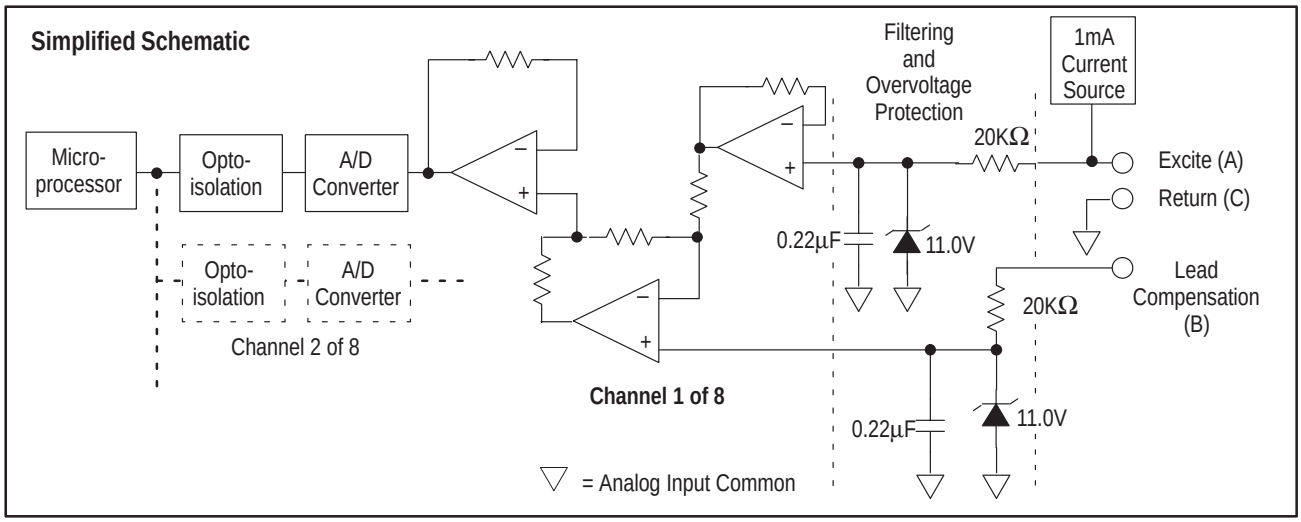
Simplified Schematic



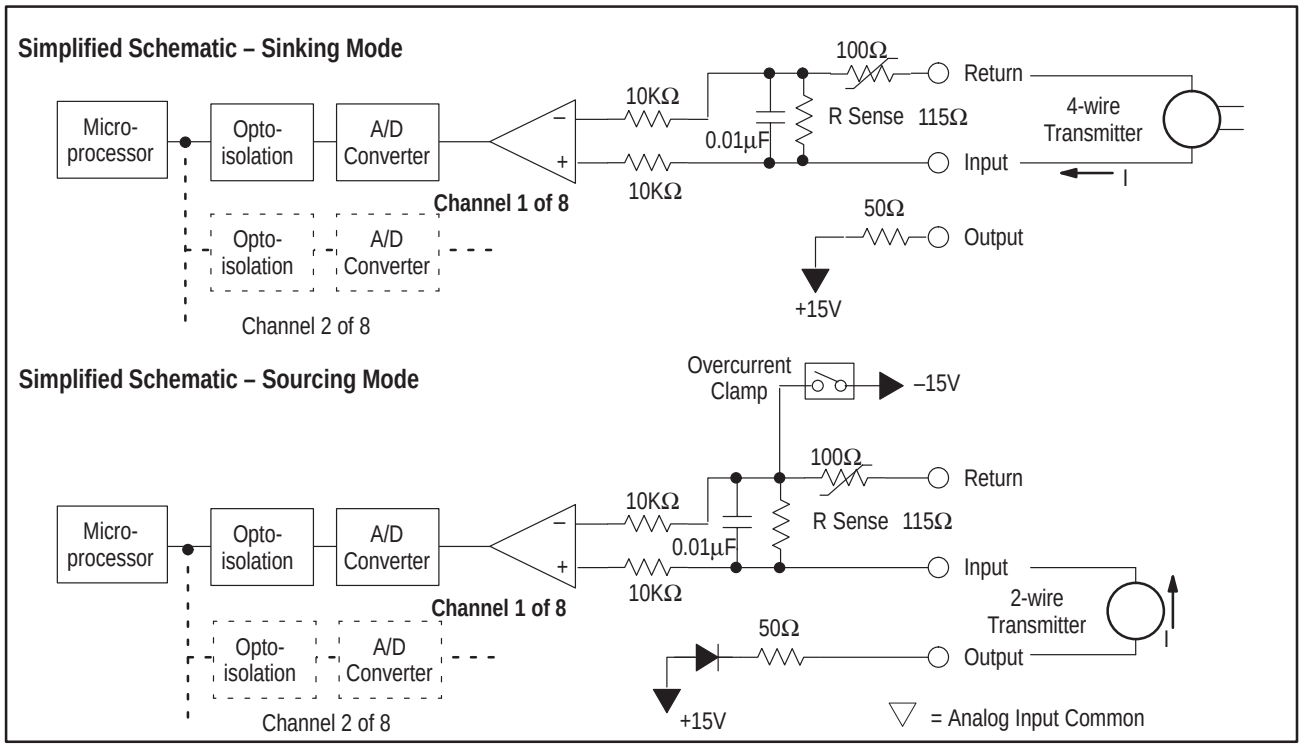
–5 to +56mV Input



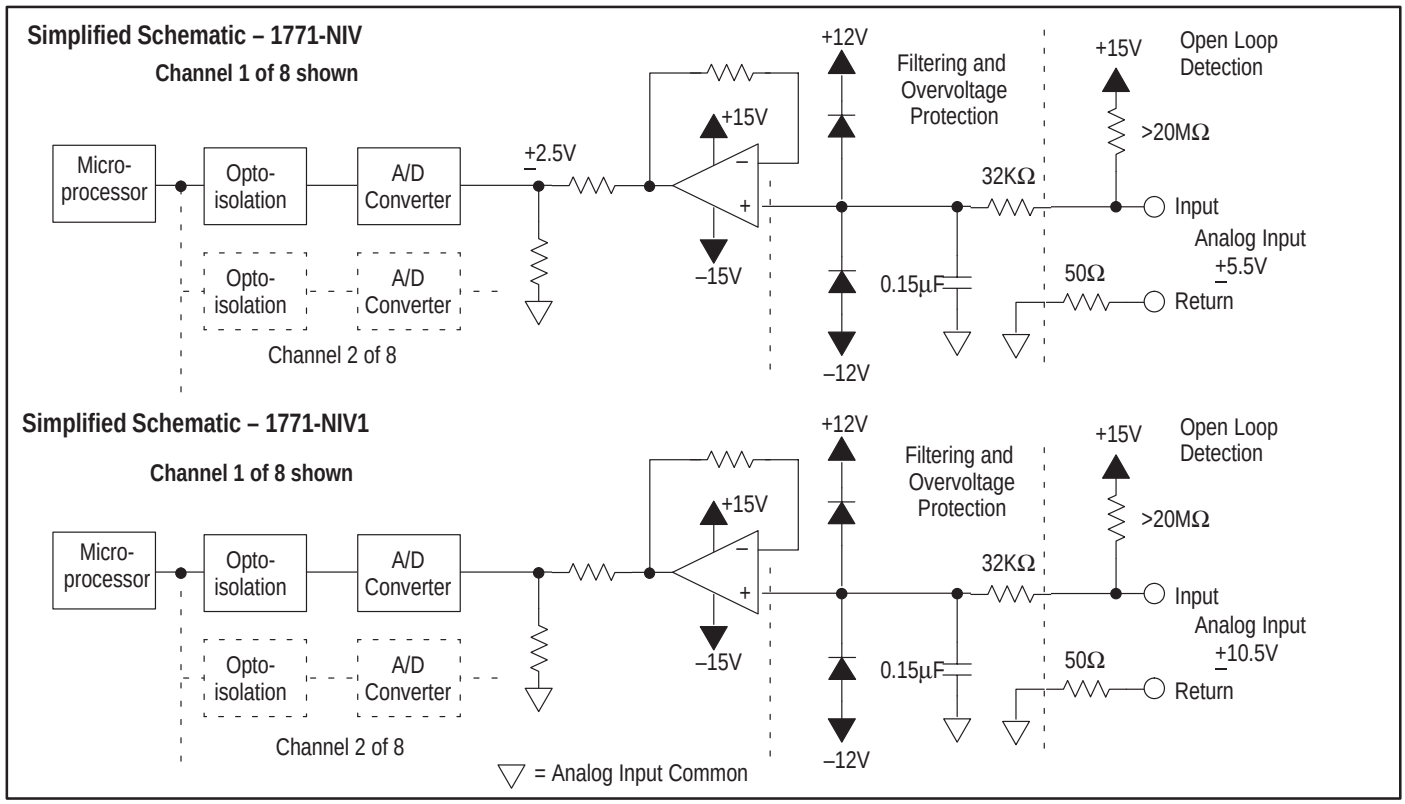
RTD Input



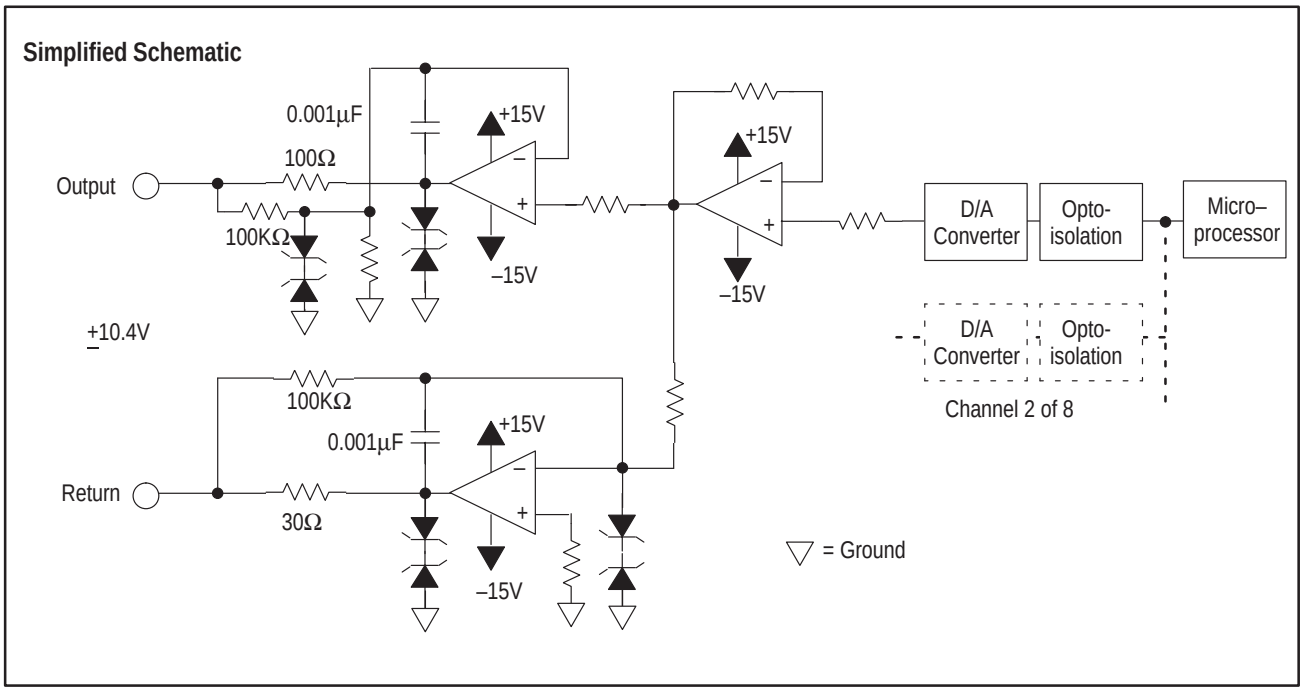
mA Input



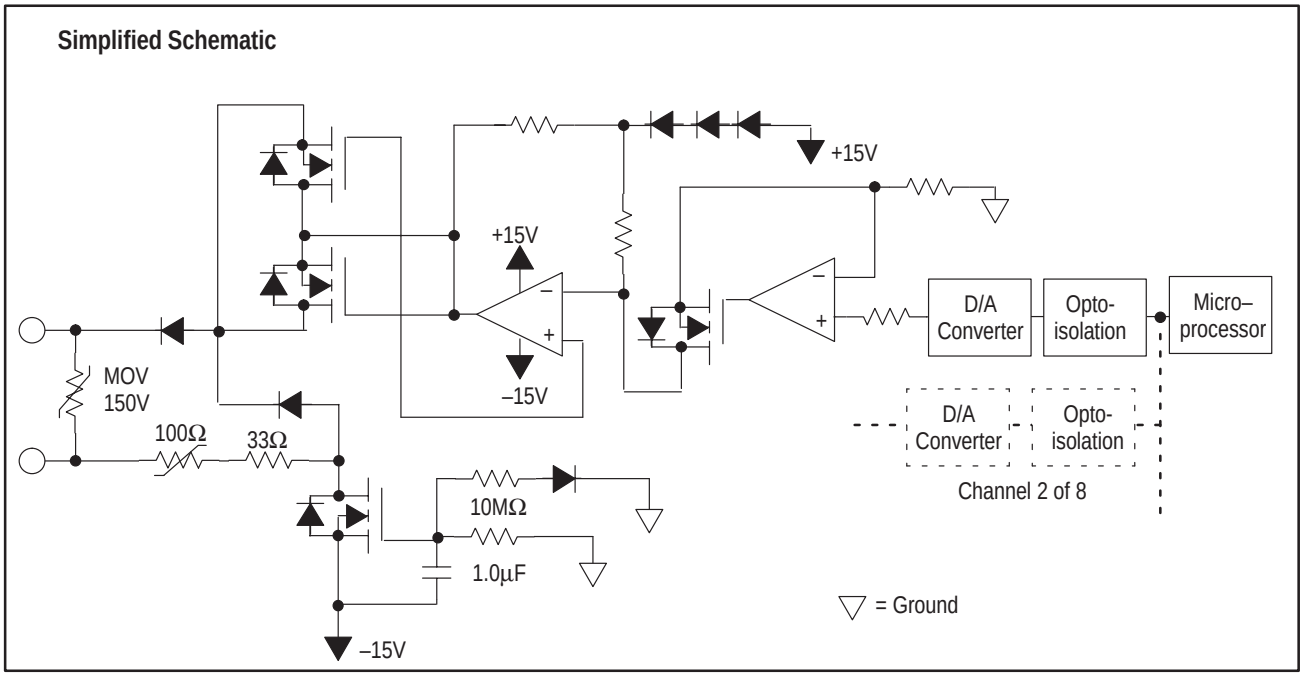
V/mA Input



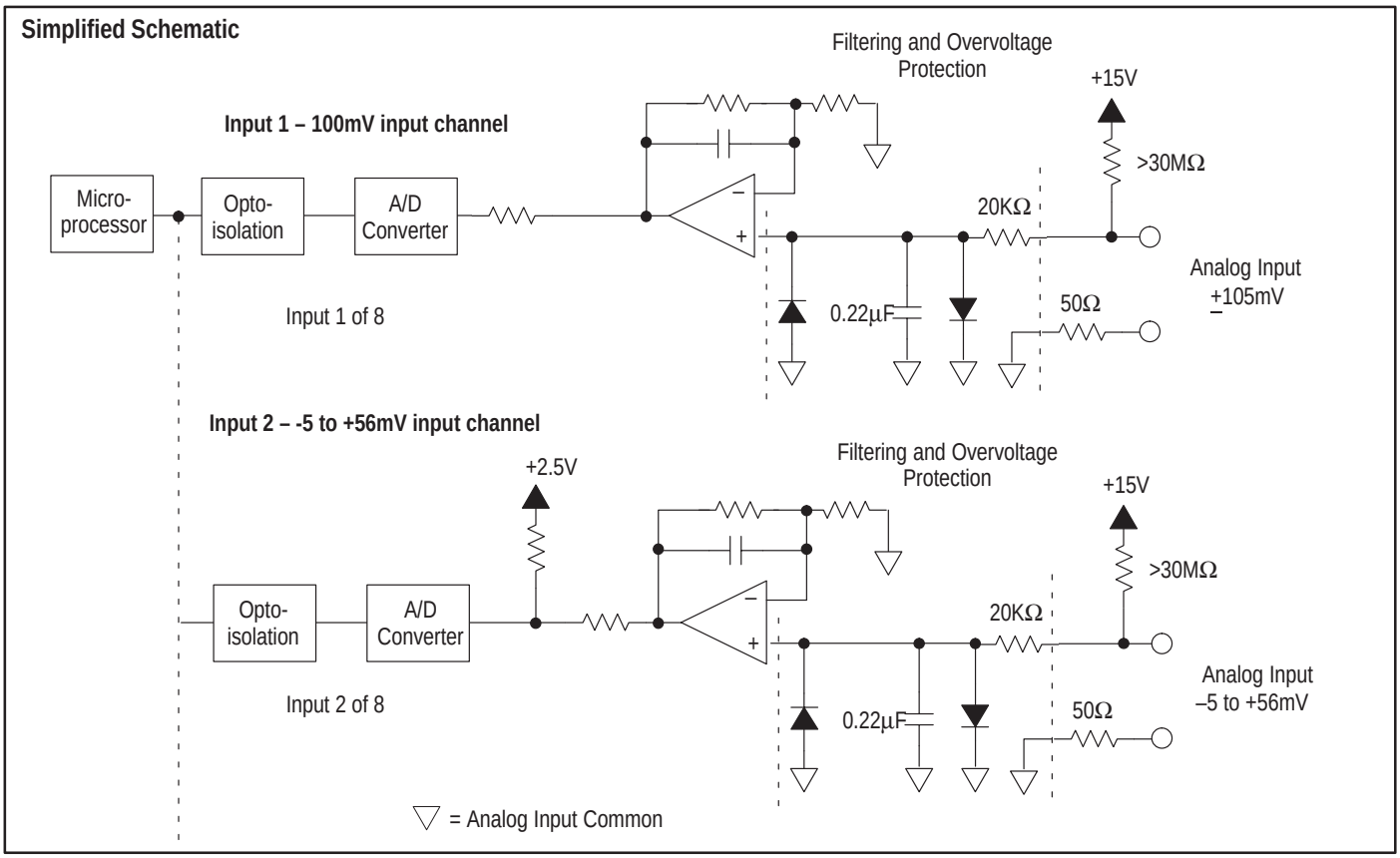
10V Output



0-25mA Output



Example of a Schematic for a Mixed Input Module



Changes to Specifications

Specification changes reflect circuit changes made to meet CE requirements. In addition, Agency Certification has been added.

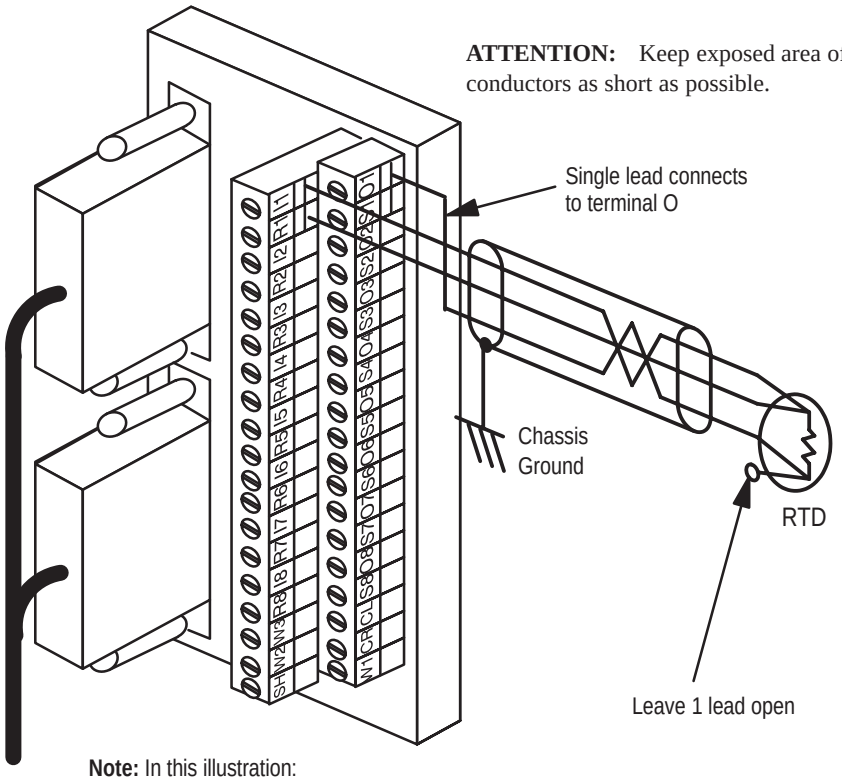
General Specifications

Number of Channels (depends on specific module)	8 individually isolated, or 4 individually isolated
I/O Chassis Location	any single I/O module slot
A/D Resolution	16 bits or 15 bits plus sign bit
D/A Resolution	14 bits or 13 bits plus sign bit
Input Filtering	6 pole, low pass hardware filter
Calibration Interval	1 year
Isolation Voltage	Designed to withstand 1000V dc continuous between input and output channels and between input and backplane connections. Modules are 100% tested at 1200V dc for 1 second between input channels and backplane connections.
Maximum Backplane Current and Power Dissipation @ 5V	<table><tr><th></th><th>Series</th><th>Current</th><th>Power</th></tr><tr><td>1771-NBRC</td><td>B</td><td>1.8A</td><td>9.0W</td></tr><tr><td>1771-NB4S</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NB4T</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NBSC</td><td>B</td><td>2.7A</td><td>13.5W</td></tr><tr><td>1771-NBTC</td><td>B</td><td>1.6A</td><td>8.0W</td></tr><tr><td>1771-NBV1</td><td>B</td><td>1.6A</td><td>8.0W</td></tr><tr><td>1771-NBVC</td><td>B</td><td>1.8A</td><td>9.0W</td></tr><tr><td>1771-NIS</td><td>B</td><td>2.5A</td><td>12.5W</td></tr><tr><td>1771-NIV</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NIV1</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NIVR</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NIVT</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NOC</td><td>B</td><td>2.9A</td><td>14.5W (20mA)</td></tr><tr><td></td><td></td><td>3.3A</td><td>16.5W (25mA)</td></tr><tr><td>1771-NOV</td><td>B</td><td>2.1A</td><td>10.5W</td></tr><tr><td>1771-NR</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NT1</td><td>B</td><td>1.5A</td><td>7.5W</td></tr><tr><td>1771-NT2</td><td>B</td><td>1.5A</td><td>7.5W</td></tr></table> For Customer-Special-Order modules, refer to 1771-6.5.64–CSO1 for your particular module.
Environmental Conditions Operating Temperature Rate of Change Storage Temperature Relative Humidity	 0 to 60°C (32 to 140°F) Ambient changes > 0.5°C per minute may temporarily degrade performance during periods of change. –40 to 85°C (–40 to 185°F) operating: 5 to 95% (without condensation) ; non-operating: 5 to 80% (without condensation)
Connecting Cable(s)	1771-NC6 = 1.8m (6ft) 1771-NC15 = 4.6m (15ft)
Keying	Between 26 and 28 Between 32 and 34
Agency Certification (when product or packaging is marked)	• CSA certified • CSA Class I, Division 2, Groups A, B, C, D certified • UL listed • CE marked for all applicable directives

Revised Figure 2.6

The following revised figure replaces figure 2.6 in the user manual.

Figure 2.6
Connecting a 4-Wire Sensor to the Remote Termination Panel



Note: In this illustration:
Terminal O is the 1mA excitation (A) sourcing current
Terminal I is the lead compensation (B) sense input
Terminal R is common (C)

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