

Product Line: Distributed I/O
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Features & Benefits

A list of the key features & benefits for the POINT I/O 1734-IR2 RTD/Resistance Input Module

1734-IR2 Two Channel RTD/Resistance Input Module

Allen-Bradley Automation



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Features & Benefits

Contents

<i>Direct interface to Resistance Temperature Detectors (RTDs) and resistance inputs.....</i>	<i>3</i>
<i>Ability to mix different RTD types and resistance sensors on one module.....</i>	<i>3</i>
<i>Low channel density module.....</i>	<i>3</i>
<i>On-module scaling to engineering units, plus other scaling options.....</i>	<i>3</i>
<i>Ability to interface with all three RTD wiring configurations.</i>	<i>4</i>
<i>Selectable input filters.....</i>	<i>4</i>
<i>Over and under range detection and indication.....</i>	<i>4</i>
<i>Broken input (open or short circuit) detection and indication.....</i>	<i>4</i>

Direct interface to Resistance Temperature Detectors (RTDs) and resistance inputs

Feature:

The 1734-IR2 allows the customer to directly interface to platinum, nickel, and copper RTD sensors. In addition, the module can be used with sensors that provide direct resistance such as manual or electronic potentiometers.

Benefit:

This greatly reduces the system cost and increases reliability by eliminating expensive RTD-to-analog (e.g. 4 to 20 mA) transmitters. In addition, eliminating the transducer will likely improve accuracy, due to the inaccuracy of most typical transducers.

Ability to mix different RTD types and resistance sensors on one module

Feature:

Each channel of the module can use a different type RTD or resistance sensor.

Benefit:

Broadens the application spectrum that can be addressed by a single module. Reduces the need for to stock several modules to interface with various RTDs. Reduces training needs.

Low channel density module

Feature:

The module has two input channels.

Benefit:

Provides just enough channel granularity for many temperature measurement applications. Reduces the possibility of “unused” channels on the module, lowering application cost.

On-module scaling to engineering units, plus other scaling options

Feature:

The 1734-IR2 allows users to select, on a per-channel basis, several scaling options. The user can select scaling of RTD inputs in °C or °F, in tenths of degrees. For resistance inputs, the module can be scaled to tenths of ohms (default) or user configured (see Users Manual). In addition, the module can be scaled proportional scale ($\pm 32,767$). For a complete scaling description see the Users Manual.

Benefit:

This feature eliminates the need to perform scaling in the control program, saving controller memory and improving performance. Various options allow the user to select the best scale based on their application.

Ability to interface with all three RTD wiring configurations

Feature:

The 1734-IR2 can interface with 2, 3 or 4-wire RTDs, selectable on a per-channel basis.

Benefit:

This feature enables one module type to be used in various applications, reducing the user learning curve, and spare part inventory. The ability to individually configure each channel allows the user the ability to interface with of various sensors. The different RTD wire configurations allows the user to select the RTD that best suits his application's cost and accuracy targets.

Selectable input filters

Feature:

The 1734-IR2 module allows the user to select from 6 different input filters (50Hz, 60Hz, 100Hz, 120Hz, 200Hz, 240Hz, 300Hz, 400Hz, 480Hz) on a per-channel basis.

Benefit:

This feature allows the user to select the input filter that best meets the performance needs of his application based on environmental limitations. Since the sensor filter environment can change due to differences in wire routing, providing this feature on a per channel basis is a key benefit.

NOTE: A lower filter setting (e.g. 60 Hz) provides greater noise rejection & effective data resolution, but at lower channel update time (performance). Input filtering provides high normal mode rejection.

Over and under range detection and indication

Feature:

The 1734-IR2 module provides individual channel over and under-range detection and indication.

Benefit:

Eliminates the need to perform the comparison function as part of the control program, saving valuable processing power of the controller. In addition, since alarms are handled by the module, the speed of response is faster and the user only needs to monitor a single bit to determine if an error condition has occurred.

Broken input (open or short circuit) detection and indication

Feature:

The 1734-IR2 module provides individual channel open or short circuit detection and indication for RTD inputs. Since zero (0) ohms (short) is a valid reading for the resistance inputs they do not have short circuit indication.

Benefit:

This feature provides bit-per-channel feedback to the controller that the input is not operating, due to a lead wire being broken, or the device not being wire to a channel. This allows the user to take corrective action based on the condition.