

Set the cold-junction enable bit on the 1734-IT2I module to enable or disable the cold-junction linearization. If enabled, the proper cold-junction compensation value is applied to the selected thermocouple. If disabled, the data (CJ temperature) is still available but is not applied to the input. If the 1734-TBCJC is not available, this parameter should be set to disabled. A cold-junction value can be added using the cold-junction offset parameter.

Noise Filtering (1734-IR2)

You can select the type and amount of noise filtering on each individual channel.

- Notch filter of analog to digital converter
- First-order, low-pass digital filter

Choose the filter that provides you with the update and step response that most closely matches your system requirements.

1734 Analog Temperature Input Modules Technical Specifications

	1734-IR2	1734-IR2E	1734-IT2I
Number of inputs	2 RTD	2 high resolution RTD	2 thermocouple
Input signal range	0...600 Ω	0...220 Ω	± 75 mV
Input resolution	16 bits 9.5 m Ω /cnt 0.03 $^{\circ}\text{C}$ /cnt (pt 385 @ 25 $^{\circ}\text{C}$)	16 bits 2.4 m Ω /cnt 0.006 $^{\circ}\text{C}$ /cnt (Pt385 @ 25 $^{\circ}\text{C}$)	15 bits + sign 2.5 mV/cnt ⁽¹⁾
Data format	Signed integer		
Thermocouple resolution	— Type B, 30...1820 $^{\circ}\text{C}$ (86...3308 $^{\circ}\text{F}$) 3 counts/ $^{\circ}\text{C}$ Type C, 0...2315 $^{\circ}\text{C}$ (32...4199 $^{\circ}\text{F}$) 6 counts/ $^{\circ}\text{C}$ Type E, -270...1000 $^{\circ}\text{C}$ (-454...1832 $^{\circ}\text{F}$) 24 counts/ $^{\circ}\text{C}$ Type J, -210...1200 $^{\circ}\text{C}$ (-454...2192 $^{\circ}\text{F}$) 21 counts/ $^{\circ}\text{C}$ Type K, -270...1372 $^{\circ}\text{C}$ (-454...2502 $^{\circ}\text{F}$) 13 counts/ $^{\circ}\text{C}$ Type N, -270...1300 $^{\circ}\text{C}$ (-454...2373 $^{\circ}\text{F}$) 11 counts/ $^{\circ}\text{C}$ Type R, -50...1768.1 $^{\circ}\text{C}$ (-58...3214 $^{\circ}\text{F}$) 4 counts/ $^{\circ}\text{C}$ Type S, -50...1768.1 $^{\circ}\text{C}$ (-58...3214 $^{\circ}\text{F}$) 4 counts/ $^{\circ}\text{C}$ Type T, -270...400 $^{\circ}\text{C}$ (-454...752 $^{\circ}\text{F}$) 15 counts/ $^{\circ}\text{C}$		
Cold junction compensation	—		Included in 1734-RTBCJC Remote Termination Block
Cold junction compensation range	—		0...70 $^{\circ}\text{C}$

1734 Analog Temperature Input Modules Technical Specifications

	1734-IR2	1734-IR2E	1734-IT2I
Accuracy	Current Input: 0.1% Full Scale @ 25 °C Voltage Input: 0.1% Full Scale @ 25 °C		
Input update rate, per module	20 ms @ Notch = 50 Hz 17 ms @ Notch = 60 Hz (default) 10 ms @ Notch = 100 Hz 8 ms @ Notch = 120 Hz 5 ms @ Notch = 200 Hz 4 ms @ Notch = 240 Hz 3 ms @ Notch = 300 Hz 3 ms @ Notch = 400 Hz 2 ms @ Notch = 480 Hz		
Step response, per channel	60 ms @ Notch = 50 Hz 50 ms @ Notch = 60 Hz 30 ms @ Notch = 100 Hz 25 ms @ Notch = 120 Hz 15 ms @ Notch = 200 Hz 13 ms @ Notch = 240 Hz 10 ms @ Notch = 300 Hz 8 ms @ Notch = 400 Hz 6 ms @ Notch = 480 Hz		
Input impedance	—		100 k Ω
Input resistance	—		1 M Ω
Input conversion type	Delta Sigma		
Common mode rejection ratio	120 dB		
Normal mode rejection ratio	-100 dB, -3 dB Notch filter: 13.1 Hz @ Notch = 50 Hz 15.7 Hz @ Notch = 60 Hz 26.2 Hz @ Notch = 100 Hz 31.4 Hz @ Notch = 120 Hz 52.4 Hz @ Notch = 200 Hz 62.9 Hz @ Notch = 240 Hz 78.6 Hz @ Notch = 300 Hz 104.8 Hz @ Notch = 400 Hz 125.7 Hz @ Notch = 380 Hz		-60 dB, -3 dB Notch filter: 13.1 Hz @ Notch = 50 Hz 15.7 Hz @ Notch = 60 Hz 26.2 Hz @ Notch = 100 Hz 31.4 Hz @ Notch = 120 Hz 52.4 Hz @ Notch = 200 Hz 62.9 Hz @ Notch = 240 Hz 78.6 Hz @ Notch = 300 Hz 104.8 Hz @ Notch = 400 Hz 125.7 Hz @ Notch = 380 Hz
Overvoltage protection, inputs	No input protection		Input not overvoltage protected
Input calibration	Factory calibrated		
POINTBus current	220 mA @ 5V DC		175 mA @ 5V DC
Power dissipation, max	1.0 W		
Thermal dissipation, max	3.3 BTU/hr		
Isolation voltage	50V (continuous), Basic Insulation Type Type tested at 2200V DC for 60 s, I/O to system		
External DC supply voltage, nom	24V DC		—
External DC supply voltage range	10...28.8V DC		—

1734 Analog Temperature Input Modules Technical Specifications

	1734-IR2	1734-IR2E	1734-IT2I
External DC supply current, nom	15 mA @ 24V DC		—
Terminal base unit	1734-TB, 1734-TBS, 1734-TOP, or 1734-TOPS		1734-TBCJC
Keyswitch position	6		

⁽¹⁾ Includes offset, gain, non-linearity and repeatability error terms.

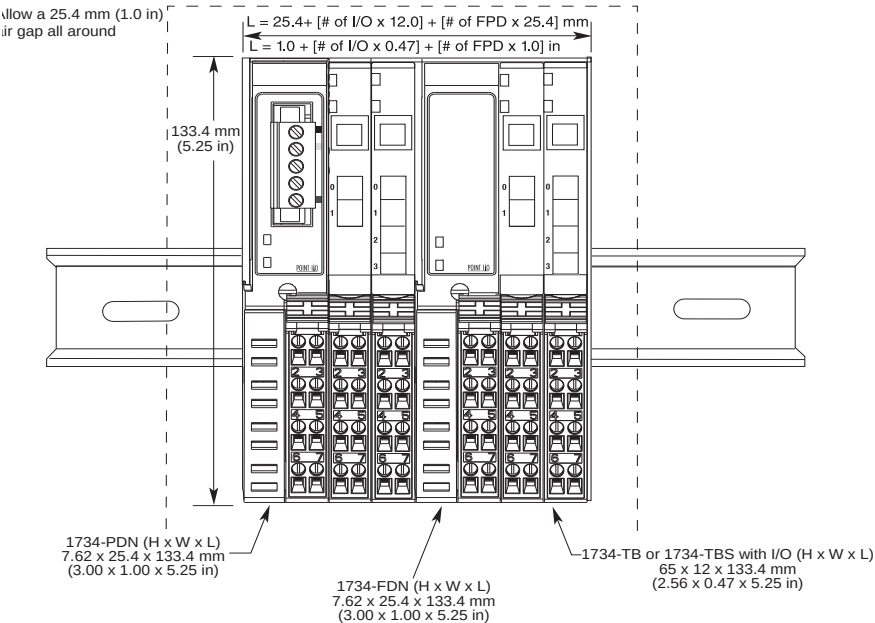
Analog Output Modules**1734 Analog Output Modules Technical Specifications**

	1734-OE2C	1734-OE2V	1734-OE4C
Number of outputs	2		4
Output signal range	4...20 mA 0...20 mA	0...10V ±10V	4...20 mA 0...20 mA
Output resolution	13 bits - over 0...21 mA 2.5 µA/cnt	14 bits (13 plus sign) 1.28 mV/cnt in unipolar or bipolar mode	16 bits - over 0...21 mA 2.5 µA/cnt
Data format	Signed integer		
Accuracy	Current output: 0.1% Full Scale @ 25 °C ⁽¹⁾	Voltage output: 0.1% Full Scale @ 25 °C ⁽¹⁾	Current output: 0.1% Full Scale @ 25 °C ⁽¹⁾
Accuracy drift w/temp.	Current output: 30 ppm/°C	Voltage output: 5 ppm/°C	Current output: <50 ppm/°C
Step response to 63% of FS, output	Current output: 24 µs	Voltage output: 20 µs	Current output: 40 µs
Output conversion rate	16 µs	20 µs	1 µs
POINTBus current	75 mA @ 5V DC		
Power dissipation, max	750 Ω load on each output - 1.23W 0 Ω load on each output - 1.83W	1.0W	750 Ω load on each output - 1.86W 0 Ω load on each channel - 2.15W
Thermal dissipation, max	750 Ω load on each output - 4.19 BTU/hr 0 Ω load on each output - 6.24 BTU/hr	3.4 BTU/hr	750 Ω load on each output - 6.34 BTU/hr 0 Ω load on each channel - 7.33 BTU/hr
Terminal base unit	1734-TB, 1734-TBS, 1734-TOP, or 1734-TOPS		
Keyswitch position	4		

⁽¹⁾ Includes offset, gain, non-linearity and repeatability error terms.

Approximate Mounting Dimensions

POINT I/O with 1734-PDN Mounting Dimensions



IMPORTANT

When mounting the 1734-IB8S, 1734-OB8S, and 1734-IE4S modules, ensure that there is 2 in. of clearance space above the POINT rail.