

1030

Temperature & Over-temperature Controller

- DIN Rail Mount
- Universal Input
- 2 or 3 Outputs—SSR Drive, Relay or Analog / DC Linear
- Bright Text / Icon OLED Matrix Display
- 3 Button Operation
- 3 Status LEDs
- Digital input
- Sensor Break Function
- High/low, warning, or deviation alarms
- Fast Front Panel Setup
- Intuitive Configuration Software
- Optional Low Voltage Supply
- Optional Modbus RTU/RS485 Communications
- Narrow Footprint
- UL, cUL, CE, FM



Description

The 1030 DIN Rail Over Temperature Controller is an ideal complement in both design and aesthetics to its cousin, the Chromalox 1020 Temperature/Process Controller. This fail-safe protection device may be used to shut down a process when the preset parameter threshold is realized. The controller cannot be reset until the process has returned to an acceptable parameter condition.

The 1030 is cost effective, easy to install, extremely fast to configure and comes equipped with the most desirable standard or optional advanced control features. The 1030 offers a bright OLED text / icon matrix display, 3 LED output/event indicators, 3 tactile input buttons and it occupies only 0.9" (22.5mm) of width on the DIN rail. Controller design choices include 2 or 3 outputs, Modbus RTU/RS485 digital communications and standard or low supply voltage choices.

Complete Process Control Package

In many thermal control applications, it is recommended, and often required, to employ an over temperature or Limit Controller to shut down the heater, or load, in the event that the system is in a runaway condition. In both design and aesthetics, Chromalox offers the perfectly matching 1030 model Over Temperature Controller that provides the necessary system safety that your process requires. Please see the 1030 pages in the Over Temperature Controller section in this catalog.

Additional Features

Although competitively priced, the 1030 is not short on thermal process control capability. The advanced features that the 1030 offers, such as a universal input, DC linear (analog) process output, sensor break detection, Modbus communications, digital input, and latching/non-latching process, band, deviation and loop alarms, are typically not available in control units of this size or cost point.

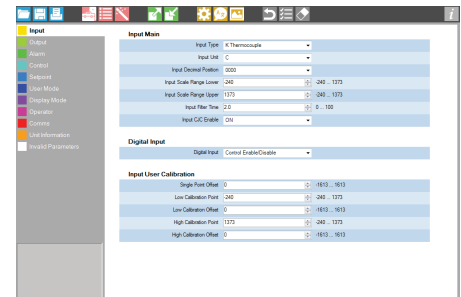
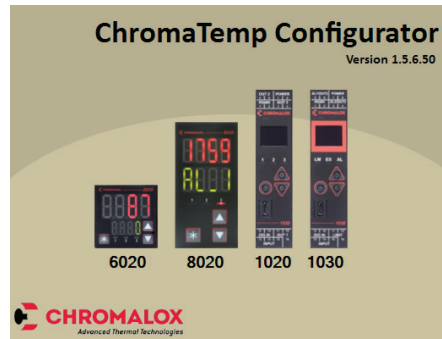
Traditional Applications

- Packaging
 - Testing
 - Food and Beverage
 - Kilns & Ovens
 - Fluid Baths
 - Autoclaves
 - Chillers, Cooling Towers
 - Thermal Bonding & Sealing
 - Micro-brewing
 - Incubators
 - Warming / Chilled Cabinets
 - Heat Presses
 - Tempering
 - Plastic & Rubber Extrusion
 - General Thermal Processes
- And many more...

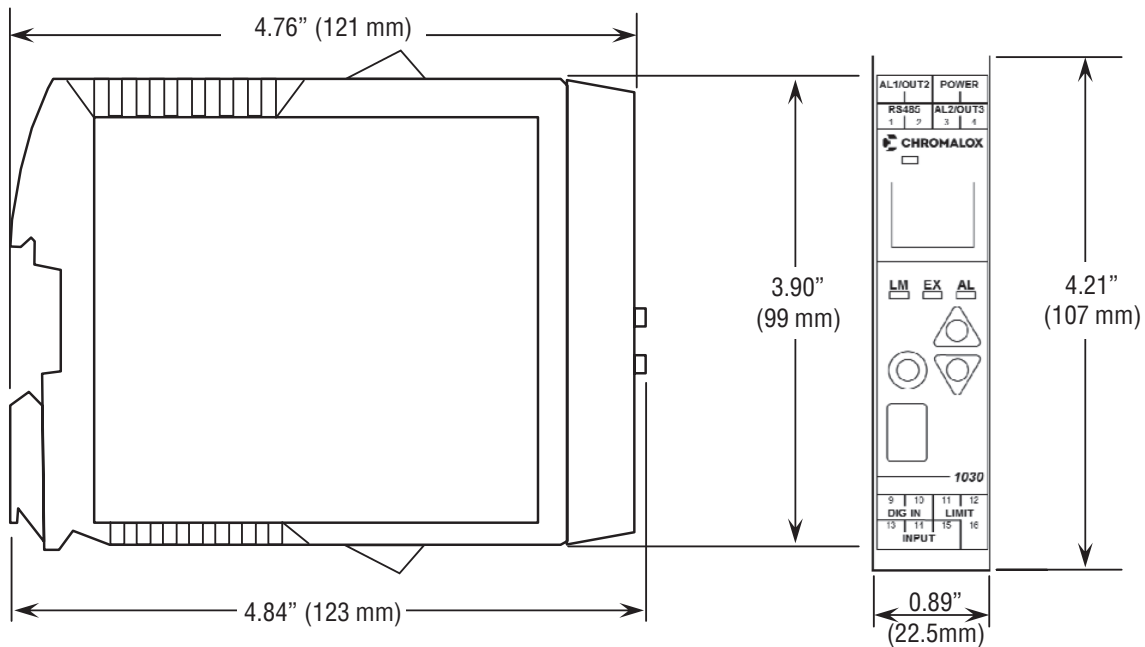
1030 Temperature & Over- temperature Controller *(cont'd.)*

Configuration Software

The ChromaTemp Series Configurator is an extremely intuitive programming tool for fast commissioning. It also facilitates the cloning of multiple controllers and fast parameter file uploads and downloads to and from the controller or PC. This configurator program includes a Setup Wizard that is designed for the most novice users. This wizard removes the guesswork by methodically walking you through the most basic wiring, input considerations and programming requirements.



Dimensions



1030

Temperature & Over-temperature Controller (cont'd.)

Specifications

INPUTS

Thermocouple	J, K, C, R, S, T, B, L, N.
RTD	3 Wire PT100
DC Linear	0 to 20 mA, 4 to 20 mA, 0 to 50 mV, 10 to 50 mV, 0 to 5 V, 1 to 5 V, 0 to 10V, 2 to 10V. Scalable -1999 to 9999, with adjustable decimal point.
Accuracy	Thermocouple $\pm 0.25\%$ of full range ± 1 LSD ($\pm 1^\circ\text{C}$ for thermocouple CJC). PT100 $\pm 0.25\%$ of full range, ± 1 LSD, Linear $\pm 0.25\%$ of full range, ± 1 LSD.
Sampling	4 per second
Impedance	>10M Ω resistive, except DC mA (5 Ω) and V (47K Ω)
Sensor Break Detection	<2 seconds (except zero based DC ranges), high alarms activate for T/C, RTD and mV ranges, low alarms activate for mA or V ranges
Digital Input	Reset Alarm, Control enable/disable, Auto/Manual control. Volt Free or TTL compatible, 24 VDC

OUTPUTS

Relay	OUT1 (Fixed): SPDT Form C, OUT2 / 3: SPST Form A; current capacity 2A at 250Vac. >150,000 operations at rated voltage/current (resistive load).
SSR	OUT2: Drive capability >10V DC @ 20mA
Linear DC	OUT3: 0 to 20 mA, 4 to 20 mA, 0 to 5 V, 0 to 10 V or 2 to 10 V; Current output 500 Ω max, Voltage output 500 Ω min
Serial Communications	2 Wire RS485, 1,200 to 38,400 bps, Modbus RTU

OPERATING CONDITIONS & ENVIRONMENTAL

Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95% RH non-condensing
Altitude	< 2,000m
Power Supply	100 to 240V 50/60Hz (standard version) 24V DC/AC +10%/-15%, AC 50/60Hz (low voltage option)
Enclosure Protection	IP20
Standards	CE, UL, cUL, FM
EMI	Complies with EN61326-1 (Susceptibility & Emissions)
Safety Considerations	Complies with EN61010-1 & UL61010-1 Pollution Degree 2, Installation Category II
Weight	0.20kg excluding packaging
Communications	Modbus RTU/RS485 communication option

1030

Temperature & Process Controller (*cont'd.*)

Ordering Information

To Order — Complete the Model Number using the Matrix provided.

Model	Series	DIN Rail Over Temperature Controller				
1030	DIN Rail Mountable Over Temperature Controller. Universal Input, Fixed Relay Output 1 with up to 2 additional Alarms/Outputs (SSR Drive, Relay or Analog/DC Linear), Bright OLED Display, Digital Input, Latching/Non-Latching Alarms and Configuration via Front Panel or Software. Options: ModBus RTU/RS485 Digital Communications, Low Voltage Supply. Operating Temperature: 32°-131°F (0°-55°C), IEC IP20 Enclosure Protection. CE, UL, CUL & 2-Year Warranty					
	Code	Output 1				
	1	Relay - SPDT Form C, 2A at 250VA (Resistive)				
		Code	Alarm 1 / Output 2			
		S	SSR Drive (>10VDC @ 20mA)			
		R	Relay (SPST, Form A, 2A at 250VAC)			
			Code	Alarm 2 / Output 3		
			0	None		
			R	Relay (SPST, Form A, 2A at 250VAC)		
			A	Analog (Linear DC: 0/4-20mA, 0-5V, 0/2-10V)		
			Code	Digital Communications		
			0	None		
			1	Modbus RTU/RS485 Digital Communications		
				Code	Power Supply	
				0	100 to 240VAC 50/60Hz	
				1	24VDC/VAC +10%/-15%, AC 50/60Hz	
1030-	1	R	A	0	0	Typical Model Number

Accessories

Description	PCN
Universal Converter & PC Cable - Configuration Software	309112
Cable From Universal Converter to Controller - 20/30 Series Only	309120
Snubber	314448
ChromaTemp Configuration Software: Go to Chromalox website for free download: www.chromalox.com	

Stocked Items

Part Number	PCN
1030-1R000	318801
1030-1R010	318810
1030-1RR00	318844
1030-1RA00	318852
1030-1RR10	318887
1030-1RA01	318895