2020

1/4 DIN Ramp/Soak Controller

- **Cost Effective, Advanced Control**
- **4 Ramp/Soak Programs, 32 Intervals**
- **Indicators and Pushbuttons Designed for Ramp/Soak Program Operation**
- **Bimodal Heat/Cool Control**
- **Compact 1/4 DIN Package**
- **Remote Ramp/Soak Operation Capability**
- **Built-In Digital Communications and Automatic Data Logging Software**

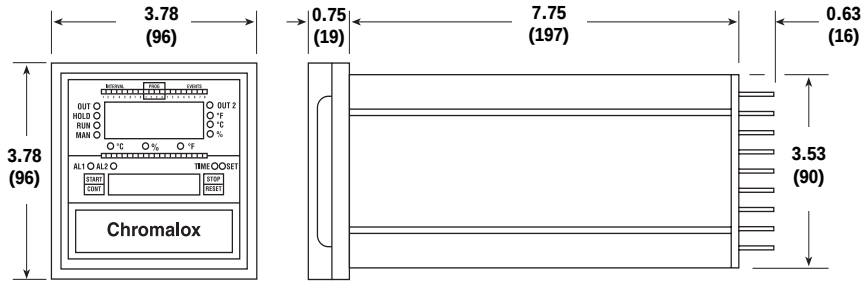
Description

The Chromalox 2020 is a sophisticated, powerful controller in an easy-to-use, compact 1/4 DIN package. The Chromalox 2020 features 4 Ramp/Soak Programs, each having 8 intervals. The Programs can be linked to each other, allowing up to 254 repetitions, and looping intervals within a program (up to 10,000 times) facilitating repetitive temperature cycling applications. A total of 10 Event Outputs are possible by configuring alarms 1 and 2 as Event Outputs.

Features

- Automatic Data Logging provides a printout and/or display of up to 10 different control parameters and variables.
- The Digital Communications option accommodates RS-232/422/485 serial interfaces and operates using Chromalox's communication protocol and running software on a computer. ChromaSoft™, Chromalox's remote operator interface software, communicates with up to 255 controllers in any combination and gives you simple access to all control parameters. Using ChromaSoft™, the process can be graphically displayed and parameters saved into and retrieved from data files.
- Remote Ramp/Soak Operation is easily implemented through 8 logic inputs that can be connected to simple pushbuttons or switches:
  - STOP/RESET
  - START/CONT
  - HOLD
  - SELECT PROGRAMS 1, 2, 3 and 4
  - INITIATE REMOTE SETPOINT
  - TRACKING
- Auto/Manual control for optional manual output adjustment.
- Heat/Cool (Bimodal), Heat or Cool Control with up to 3 outputs.
- 6 Levels of Security for preventing unauthorized or accidental access to programming.
- Field programmable PID or ON/OFF control modes.
- Process Signal Output—retransmits the process variable to external printer, recorder or device.
- Auxiliary Remote Setpoint to transmit the setpoint to a remote controller.
- Remote Setpoint Input to receive program setpoints from an external computer or other device.
- Separate Pushbuttons for:
  - START
  - STOP
  - HOLD
- Separate Indicators for:
  - INTERVAL
  - PROGRAM
  - EVENT STATUS
  - PROGRAMMABLE BAR
  - RUN
  - HOLD

Dimensions



All Dimensions in Inches (mm)

2020
1/4 DIN Ramp/Soak Controller *(cont'd.)*

Ordering Information

Complete the Model Number using the Matrix provided.

Model	Microprocessor-Based Ramp/Soak Temperature and Process Controller
2020	Ramp/Soak Controller with Programs, 8 Segments per Program, Dual LED Display, Analog Bar Graph LED; Single Output PID or ON/OFF

Code	Output #1—Heat or Cool Control Output
1	Relay—1 NO. Form A Contact, 5A at 120 Vac, 2.5A at 230 Vac
2	Triac—1 Amp at 120 or 230 Vac
4	Current—4-20 mA into 0-800 Ohm load
7	Solid State Relay Drive—20 Vdc at 40 mA

Code	Output #2—Cool Control, Alarm or Event Output
0	None
1	Relay—1 NO. Form A Contact, 5A at 120 Vac, 2.5A at 230 Vac
2	Triac—1 Amp at 120 or 230 Vac
4	Current—4-20 mA into 0-800 Ohm load
7	Solid State Relay Drive—20 Vdc at 40 mA

Code	Output #3—Alarm or Event Output
0	None
1	Relay—1 NO. Form A Contact, 5A at 120 Vac, 2.5A at 230 Vac
2	Triac—1 Amp at 120 or 230 Vac
4	Current—4-20 mA into 0-800 Ohm load
7	Solid State Relay Drive—20 Vdc at 40 mA

Code	Auxiliary Analog and Digital Inputs/Outputs and Digital Communications Options
X	Select option from list and specify following product model number. (See 2020 PDS for details) Remote Setpoint Input Process or Ramp Profile Analog Output (4-20 mA or 1-5 Vdc) 8 Event Outputs, 8 Inputs Digital Communications: RS-232, RS-422A, RS-485*, Non-Isolated and Isolated

Code	Sensor Type	Range °F	Range°C
1	Thermocouple:		
	J	-100 to +1400°F	-73 to +760°C
	K	-100 to +2100°F	-73 to +1149°C
	E	-100 to +1100°F	-73 to +593°C
	T	-350 to +750°F	-212 to +399°C
2	Thermocouple:		
	R	50-3000°F	10-1649°C
	S	50-3000°F	10-1649°C
3	Current or Voltage Input: 4-20mA or 1-5 Vdc, 0.0 -100.0% (field programmable range)		
4	RTD 100 Ohm Pt:	-200 to +1000°F	-129 to +538°C
5	Thermocouple (Isolated Input Circuit):		
	J	-100 to +1400°F	-73 to +760°C
	K	-100 to +2100°F	-73 to +760°C
	E	-100 to +1100°F	-73 to +593°C
	T	-350 to +750°F	-212 to +399°C
6	Thermocouple (Isolated Input Circuit):		
	R	50-3000°F	10-1649°C
	S	50-3000°F	10-1649°C
7	Current or Voltage Input (Isolated Input Circuit) 4-20 mA or 1-5 Vdc, 0 to 100% (field programmable range) = Contact factory for availability.		

2020	**7**	**1**	**1**	**0**	**1**	Typical Model Number

* Terminal Mode—Utilizes any ASCII terminal. No software is necessary for the terminal mode.
Computer Mode—Utilizes a computer to communicate in either Single Drop or Multi-Drop with the aid of the ChromaSoft™ software package (IBM compatible) or customer developed software.