



3101 1/4 DIN High/Low Limit Controller

- One High/Low Limit Control Output
- Two Independent Alarm Outputs
- Analog Process Output for Retransmit of Process Variable
- Peak Temperature Display
- Universal Sensor Inputs
- Switching Power Supply 100-240 Vac or 12-24 Vac/Vdc
- Digital Communications with ChromaSoft™ SpecView® Compatibility



Description

The 3101 is a compact, fully programmable high or low limit controller. It is a UL Listed Overtemperature (or Undertemperature) controller, and FM approved as a limit controller. With user programmable inputs, outputs and high/low limit features, it is flexible to most any limit control application, and can be easily reconfigured as needed.

Features

- Control Limit Output can be programmed for high or low limit control (overtemperature or undertemperature).
- Two Independent Alarm Outputs, Form C Relays, can be used to warn of impending out-of-limit process conditions, providing protection for equipment and personnel.
- Universal Sensor Input accepts thermocouple, RTD or analog signals.
- 24Vdc Output for loop power.
- Digital Input available for remote alarm reset.
- Analog Process Output option for retransmission of process variable to a remote recorder, computer or other device.
- Isolated Serial Digital Communications (RS-232/422/485) can be used to address from 1 up to 255 Chromalox controllers.
- Security Code Protection prevents unauthorized access to programmable control parameter.
- Operating Ambient up to 150°F.
- Three Year Warranty.

Peak Temperature Display



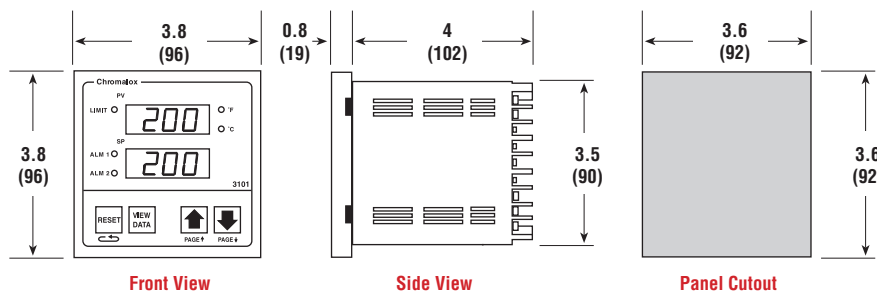
The 3101 records and displays the peak process temperature.

Over Setpoint Timer Display



The 3101 is equipped with a timer to record the total process time over setpoint.

Dimensions



SINGLE CHANNEL CONTROLLERS

All Dimensions in Inches (mm)

3101

1/4 DIN High/Low Limit Controller *(cont'd.)*

Specifications

| | | |
|--|---|---------------|
| Limit Output Automatic | Normally-energized latching relay; relay de-energizes at limit setpoint. Form C contacts, 5 Amps at 120/230 Vac | |
| Limit Control Adjustments | | |
| High/Low Limit Setpoint | Sensor Range | |
| Setpoint Limit | Sensor Range | |
| Deadband | 0-100°F | |
| Display Offset | -100 to +100°F | |
| Alarm Outputs (2) Relay | Form C contacts, 5 Amps at 120/230 Vac (resistive) | |
| Sensor Input | Field selectable Thermocouple, RTD, Current or Voltage | |
| Digital Input | Accepts dry-contact closure | |
| Input Specifications | Range °F | Range °C |
| J TC | -100 to +1400 | -73 to +760 |
| K TC | -300 to +2400 | -184 to +1316 |
| T TC | -350 to +750 | -212 to +399 |
| E TC | -100 to +1100 | -73 to +593 |
| R TC | 0-3200 | -18 to +1760 |
| S TC | 0-3200 | -18 to +1760 |
| B TC | 50-3300 | 10 to +1816 |
| 100Ω Pt RTD (α = .00385) | -200 to +1000 | -128 to +538 |
| 4-20mA | -500 to +5000 (programmable) | |
| 0-5Vdc | -500 to +5000 (programmable) | |
| 1-5Vdc | -500 to +5000 (programmable) | |
| Transmitter Power +24 Vdc Output | +24 Vdc ± 20% at 50mA maximum | |
| Digital Communications (Optional) | | |
| RS-232 | Single-drop, isolated | |
| RS-422/485 | Multi-drop, isolated, field selectable by switch | |
| Instrument Power | 100-240 Vac, +10%, -15%; 50-60 Hz; 15 VA 12-24 Vac/Vdc, ± 20% (optional); 15 VA | |
| Operating Environment | 32-150°F (0-65°C) ambient temperature, relative humidity less than 95%, non-condensing | |

Ordering Information

Complete the Model Number using the Matrix provided.

| Model | High/Low Limit Controller | | | | | | |
|-------------|---|---|--|----------|----------|----------|-----------------------------|
| 3101 | Microprocessor-Based 1/4 DIN Programmable High/Low Limit Controller. Universal Sensor Input accepts Thermocouple, RTD, Current or Voltage Inputs, One Digital Input and One Alarm Output. | | | | | | |
| | Code | Limit Output #1 | | | | | |
| | 1 | Relay—Form C Contact, 5A @ 120 or 230 Vac | | | | | |
| | | Code | Alarm #1 Output | | | | |
| | | 1 | Relay—Form C Contact, 5A @ 120 or 230 Vac | | | | |
| | | Code | Analog Process Output Option | | | | |
| | | 0 | None | | | | |
| | | 1 | Field selectable 4-20mA or 1-5Vdc | | | | |
| | | Code | Digital Comm. and Alarm #2 Options | | | | |
| | | 0 | None | | | | |
| | | 1 | RS-422/485 Digital Communications and Alarm #2 Relay - Form C Contact, 5A @ 120 or 230 Vac | | | | |
| | | 2 | RS-232 Digital Communications and Alarm #2 Relay - Form C Contact, 5A @ 120 or 230 Vac | | | | |
| | | Code | Power Supply | | | | |
| | | 0 | 100-240 Vac | | | | |
| | | 1 | 12-24 Vac or Vdc | | | | |
| 3101 | - | 1 | 1 | 1 | 2 | 0 | Typical Model Number |