Dynisco

From lab to production,
providing a window into the process

Dynisco 1496 & 1498 Series Temperature Controllers

DIN Mounted Temperature Controllers

Description

The Dynisco 1496 & 1498 Series Temperature Controllers are an economic solution to precision temperature control of extruders. With two DIN sizes and multiple output configurations, the controller is suitable for twin and single screw extruders, both heat only die and adapter zones, in addition to heat/cool for barrel zones. The 1496 (1/16 DIN format) & 1498 (1/8 DIN format) Series can also be used in an indicator-only mode, allowing one instrument to be used for all applications. With three default parameter sets for Indicator, heat and heat/cool modes, The 1496 & 1498 Series controllers offer the ultimate in flexibility for the control of industrial plastic extruders. The 1496 & 1498 Series was designed for fast configuration to match specific settings and default parameters of the extruder. Three alarm settings are standard and can be used for process high, process low, SP deviation, band, logical OR / AND, loop alarm for process control security. Process alarms have adjustable hysteresis.

Features

- Easy to configure, simple to operate
- Single device for heat control-only, heat/cool control, or indicator-only
- Universal input
- Selectable controller or indicator modes
- Heat only or heat/cool control type
- Process & loop alarms
- Available in 1/16 & 1/8 DIN formats
- Modbus RS485 communications
- Ramping setpoint

Performance Characteristics	
Thermocouple Input Types:	J, K, C, R, S, T, B, L, N & PtRh20% vs. PtRh40%
RTD 3 Wire Input:	PT100, 50Ω per lead maximum (balanced)
Accuracy:	±0.1% of input range ±1 LSD (T/C CJC better than 1°C)
Device Modes:	PID controller or indicator
Control Types:	Full PID with pre-tune, self-tune, manual-tune, or on/off control
Control Operations:	Heat-only or heat & cool
Control SSR Driver Outputs:	Drive capability >10V DC in 5000Ω minimum
Output Configuration:	Up to 3 possible, for control and alarm
Alarm Types, 3 Available:	Process high, process low, SP deviation, band, logical OR / AND
Control & Alarm Relays:	Contacts SPDT 2 Amp resistive at 240VAC, >500,000 operations
Communications:	2 Wire RS485, 1200 to 19200 Baud, Modbus
DC Linear:	0-20mA, 4-20mA, 0-50mV, 10-50mV, 0-5V 1-5V, 0-10V, 2-10V
Triac Outputs:	0.01-1 Amp AC, 20 to 280Vrms, 47 to 63Hz
Sampling:	4 per second, 14 bit resolution (approximately)
Impedance:	>10MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 5Ω for mA ranges,
Sensor Break Detection:	<2 seconds (except zero based DC ranges); control O/P's turn off; high alarms activate for T/C and mV ranges; low alarms activate for RTD, mA, or V ranges
Mechanical & Packaging	
Power Supply:	100 to 240V 50/60Hz 7.5VA; 20 to 48VAC 7.5VA; 22 to 65V DC 5W
Auto or Manual Operation:	Selectable from panel with bumpless transfer
Control Enable:	Control ON/OFF selectable from keypad
Human Interface:	4 button operation
LED Display:	4 digital 10mm red upper & 8mm green lower plus 5 indicators
Scaling:	-1999 to 9999, with adjustable decimal point
Front Panel Protection:	IEC IP66 (Behind panel protection is IP20)
Temperature, Operating:	32 to 130°F (0 to 55°C)
Temperature, Storage:	-4 to 17°F (-20 to 80°C)
Relative Humidity:	20% to 95% RH non-condensing
Approvals & Self Certifications	
CE:	Directive 2004/108/EC
ISO:	ISO 9001:2008 production environment
UL, ULc:	Underwriters Laboratory (USA & Canada)

Ordering Guide

149X-X-X-X-X-X

DIN Format
6 = 1/16 DIN format (1496)
8 = 1/8 DIN format (1498)

Output 1
1 = Relay
2 = DC driver for Solid State Relay
8 = Triac

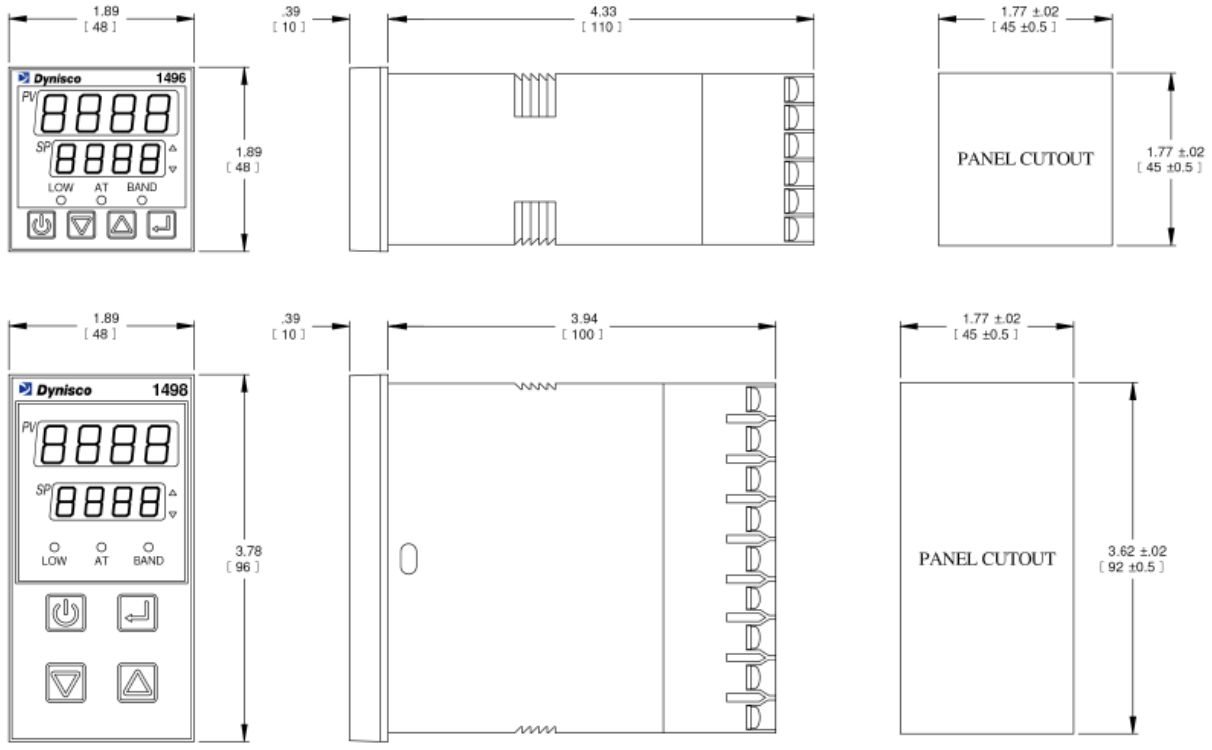
Output 2
1 = Relay
2 = DC driver for Solid State Relay
8 = Triac

Power Supply
0 = 100-240V AC
2 = 24-48V AC or DC

Digital Communications
0 = No digital communications
1 = RS485 communications

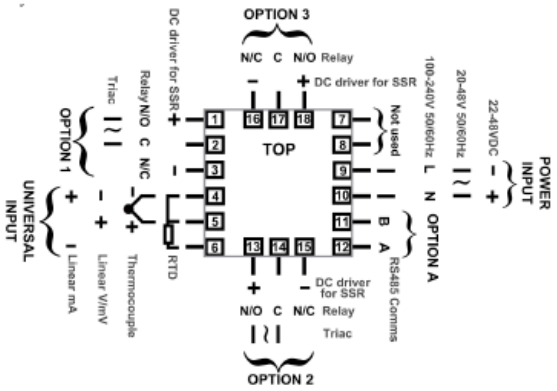
Output 3
1 = Relay

Dimensions

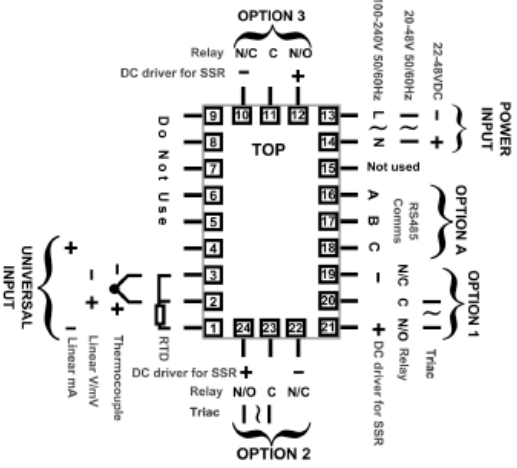


NOTES:
1. DIMENSIONS ARE IN INCHES [MILLIMETERS].
2. DIMENSIONS ARE NOMINAL AND FOR REFERENCE ONLY.

Wiring Diagram: Model 1496



Wiring Diagram: Model 1498



All dimensions are in inches (millimeters).
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Refer to www.dynisco.com for access to Operator Manual and other support documentation.
DDS276104 DOC031615

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