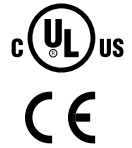


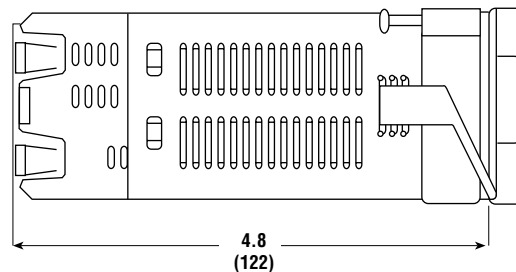
1605 1/16 DIN Ramp/Soak Controller



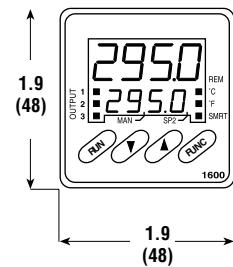
- One 4-Segment Ramp/Soak Program
- SMART Self-Tuning with Fuzzy Logic
- Ramp Tracking and Guaranteed Soak Functions
- IP65 and NEMA 4X Faceplate
- Universal Inputs: TC, RTD, Voltage and Current
- Two Independent Programmable Alarms
- Three Year Warranty



Dimensions



Side View



Front View

All Dimensions in Inches (mm)

Description

The 1605 Ramp/Soak Controller provides a sophisticated, programmable 4-segment ramp/soak profile (program) in a compact 1/16 DIN package. With its expansive memory and flexible programming capabilities, the 1605 can be cost-effectively applied to a wide range of applications requiring time and temperature profiling. Advanced ramp/soak features such as Guaranteed Soak and Ramp Tracking assure optimum performance. Outputs 2 and 3 can be programmed as “Event” output and “End of Cycle” indicators to further enhance ramp/soak operator capabilities.

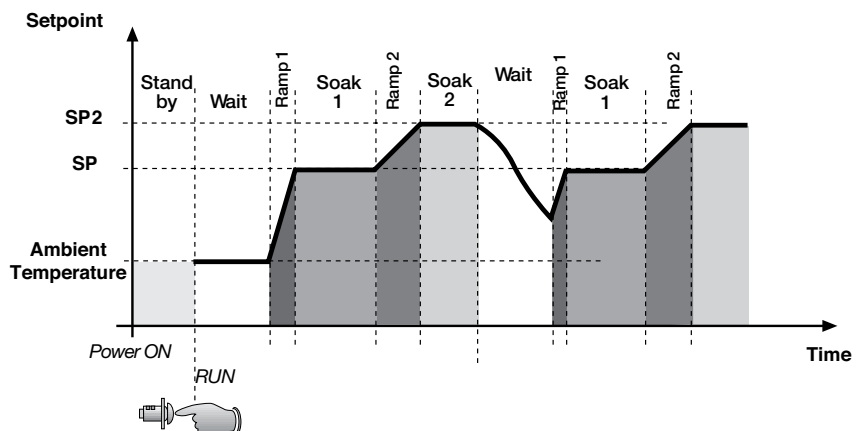
Control Features

- Ramp tracking function to assure a correct ramp to setpoint execution.
- Guaranteed soak function to assure exact soak time once setpoint is reached.
- SMART self-tuning algorithm allows the controller to self-adjust automatically and rapidly to all process changes, load changes, setpoint changes and more. SMART control features include:
 - Start-up and continuous in-process tuning
 - Continuous self-tuning without artificial upset
- Two independent outputs programmable as alarms, or Event output and “End-of-Cycle” indicator.
- Logic input for program START actuation
- Programmable readout range -1999 to 3999
- Alarm Inhibit during start up or after setpoint change.
- Auto/Manual control

Application

Applications

- Food Processing and Commercial Ovens
- Sterilizers
- Furnaces
- Autoclaves
- Environmental Chambers
- Goldsmith and Dentistry Ovens



SINGLE CHANNEL

1605

1/16 DIN Ramp/Soak Controller *(cont'd.)*

Specifications

Control Modes	Field Selectable	On/Off, PID SMART (Autotune)
Heat/Cool	Relative Gain	0.20-1, select air, oil or water
Outputs		
Output #1	One (1) Heat or Cool Output	Relay NO. SPDT contact, 3 Amps at 250 Vac (resistive) SSR Drive Transistor output of 24Vdc max at 1mA, 14 Vdc ± 20% at 20mA
Output #2	One Alarm Output, Cool Output	Relay NO. SPST contact, 2 Amps at 250 Vac (resistive)
Output #3	Alarm Output or end of cycle	One (1) SPST relay, 2 Amps at 250 Vac (resistive load)
Alarm Features		
Functions	Field Selectable	Process, Deviation, Band or Heater Breakdown Alarm
Types		Normally Energized/Normally De-energized Inhibit on Power-Up and Setpoint Changes Latching/Non-latching (Manual/Automatic Reset)

Input Specifications

Sensor Type		Range* °F	°C	
Thermocouple	J	0 to +1830	0 to +1000	
			0 to +400.0	
	K	0 to 2190	0 to +1200	
			0 to +400.0	
	L	0-1650	0-900	
			0 to +400.0	
	N	0 to +2550	0 to +1400	
RTD	R	0-3200	0-1760	
	S	0-3200	0-1760	
	T	0 to +750	0 to +400.0	
		-330 to +1470	-200 to +800	
		-199.9 to +400.0	-199.9 to +400.0	
Current		0-20 mA or 4-20 mA dc	} Range and decimal points programmable, -1999 to 4000	
Voltage		0-5, 1-5, 0-10, or 2-10 Vdc,		
		0-60 or 12-60 mVdc		

*Field Programmable for °C or °F

Instrument Power	100-240 Vac, +10%, -15%, 50-60 Hz, 24 Vac or Vdc
Operating Environment	30-120°F (0-50°C) ambient with less than 85% relative humidity

Ordering Information

Complete the Model Number using the Matrix provided.

In Stock:

Model	PCN
1605-11130	307504
1605-61130	307512

Model 1/16 DIN Ramp/Soak Temperature Controller

1605 SMART Self-Tuning, 4 Segment Ramp/Soak, 3 Outputs, Dual 4-Digit Display of Process and Setpoint, Field Selectable Universal Thermocouple, RTD, Voltage or Current Inputs, Auto-Manual Control, Programmable Alarms, 0.1 Degree Display Resolution, IEC 801-4 Noise Immunity, IP65 and NEMA 4X Splashproof Faceplate

Code Output 1 - Heat, Cool

1	Relay, 3 Amps at 240 Vac
6	SSR Drive, 14Vdc at 20mA

Code Output 2 - Alarm or Event

1	Relay, 2 Amps at 240 Vac
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Code Options

1	Output 3 Relay, 2 Amps at 250 Vac
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Code Power Supply

3	100/240 Vac
5	24 Vac/Vdc

Code

0	Add to complete model number
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1605 - 1 1 1 3 0 Typical Model Number