SOLO Basic Temperature Controllers

SLB4848 Series Overview

AutomationDirect's SOLO Basic is a single loop temperature controller that can control heating or cooling processes. Depending upon the particular model of controller, the available outputs include relay, voltage pulse or current. On select models there are two alarm outputs available with nine selectable alarm types. SOLO Basic controllers have a single control output that can be used for control of a heating or cooling application. Models with alarm outputs can also be configured to use one of the alarm outputs as a second control output allowing both heating and cooling control or two stage heating or two stage cooling control. There are three types of control modes: PID, ON/OFF and Manual. SOLO Basic can accept various types of thermocouple and RTDs.

Features

- Auto Tuning (AT) function with PID control
- 1/16 DIN panel size
- 2 line x 4 character 7-segment LCD display for Process Value (PV): Red color, and Set Point (SV): Green color
- Selectable display decimal point XXX.X or XXXX
- Selectable between °C and °F
- UL, CUL and CE agency approvals

Selection Guide

Part Number	Price	Input Voltage	Output #1	Alarm #1* / Output #2**	Alarm #2*
SLB4848-R0	$47.00	100 - 240 VAC	Relay - SPST	–	–
SLB4848-V0	$47.00	100 - 240 VAC	Voltage Pulse	–	–
SLB4848-C0	$47.00	100 - 240 VAC	Current	–	–
SLB4848-R2	$55.00	100 - 240 VAC	Relay - SPST	Relay - SPST	Relay - SPST
SLB4848-V2	$55.00	100 - 240 VAC	Voltage Pulse	Relay - SPST	Relay - SPST
SLB4848-C2	$55.00	100 - 240 VAC	Current	Relay - SPST	Relay - SPST

*Alarm #1 and Alarm #2 have a shared common
** Alarm #1 can be configured to function as Alarm #1 or as Control Output #2
Note: A mounting clip is included. Spare panel clips part number PANEL-16.

User Configurable Output Options

Control Output #1	*Alarm #1 / Output #2
Heating	Alarm #1
Cooling	**Heating
	**Cooling

* Note: Alarm #1 / Output #2 options are only available on models with alarm outputs.
**Heating and cooling options on Alarm #1 are only available in dual output modes. There are six configuration combinations. See manual for details.

SOLO Basic Temperature Controllers

Specifications

Input Power Requirements	100 to 240 VAC 50 / 60 Hz
Operation Voltage Range	85 to 264 VAC
Power Consumption	5 VA Max
Control Mode	PID, ON/OFF or Manual
Input Accuracy	TC temperature indication accuracy: ±(0.3% of span + 1 digit) at 25°C ambient after 20 minutes warm up. Including NIST conformity, cold junction effect, A/D conversion errors and linearization conformity. RTD temperature indication accuracy: ±(0.2% of span +1 digit)
Vibration Resistance	10 to 55 Hz, 10 m/s2 for 10 min, each in X, Y and Z directions
Display	2 line x 4 character, 7-segment LED display PV: 11mm red SV: 9.2 mm green
Shock Resistance	Max. 300 m/s2, 3 times in each 3 axes, 6 directions
Ambient Temperature Range	32°F to 122°F (0°C to 50°C)
Storage Temperature Range	-4°F to 149°F (-20°C to 65°C)
Altitude	2000m or less
Relative Humidity	35% to 80% (non-condensing)
IP Rating	IP66: Complete protection against dust and powerful water jets from all directions. (**inside suitable enclosure)
Agency Approvals	UL, CUL, CE (UL file number E311366)
Pollution Degree	Degree 2 - Normally, only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.
Input Types	
• Thermocouple*	K, J, T, E, N, R, S, B, L, U, TXK (Sampling Rate: 100 ms / per scan)
• Platinum RTD	3-wire Pt100, JPt100 (Sampling Rate: 100 ms / per scan)
• Copper, Nickel RTDs	Cu50, Ni120 (Sampling Rate: 100 ms / per scan)
Control Output Options	
• Relay (R)	SPST max. 5A @ 250 VAC resistive load
• Voltage Pulse (V)	DC 12V±15%, output current 40mA Max
• Current (C)	DC 4-20 mA output (sourcing) (Load resistance: Max 600Ω)
Alarm Output Option	(2) SPST relays with shared common, 3A @ 250VAC resistive load

*Note: Use only ungrounded thermocouples.
** No corrosive gases

Input Types

Thermocouple* Type and Temperature Range

Input Temperature Sensor Type	Temperature Range
Thermocouple TXK type	-238 ~ 1472°F (-150 ~ 800°C)
Thermocouple U type	-328 ~ 932°F (-200 ~ 500°C)
Thermocouple L type	-328 ~ 1562°F (-200 ~ 850°C)
Thermocouple B type	212 ~ 3272°F (100 ~ 1800°C)
Thermocouple S type	32 ~ 3092°F (0 ~ 1700°C)
Thermocouple R type	32 ~ 3092°F (0 ~ 1700°C)
Thermocouple N type	-328 ~ 2372°F (-200 ~ 1300°C)
Thermocouple E type	32 ~ 1112°F (0 ~ 600°C)
Thermocouple T type	-328 ~ 752°F (-200 ~ 400°C)
Thermocouple J type	-148 ~ 2192°F (-100 ~ 1200°C)
Thermocouple K type	-328 ~ 2372°F (-200 ~ 1300°C)

RTD Type and Temperature Range

Input Temperature Sensor Type	Temperature Range
Platinum (Pt100)	-328 ~ 1562°F (-200 ~ 850°C)
Platinum (JPt100)	-148 ~ 752°F (-100 ~ 400°C)
Copper (Cu50)	-58 ~ 302°F (-50 ~ 150°C)
Nickel (Ni120)	-112 ~ 572°F (-80 ~ 300°C)

*Note: Use only ungrounded thermocouples.

Scan or click the above QR code to be taken to the SOLO Basic Quick Start Guide
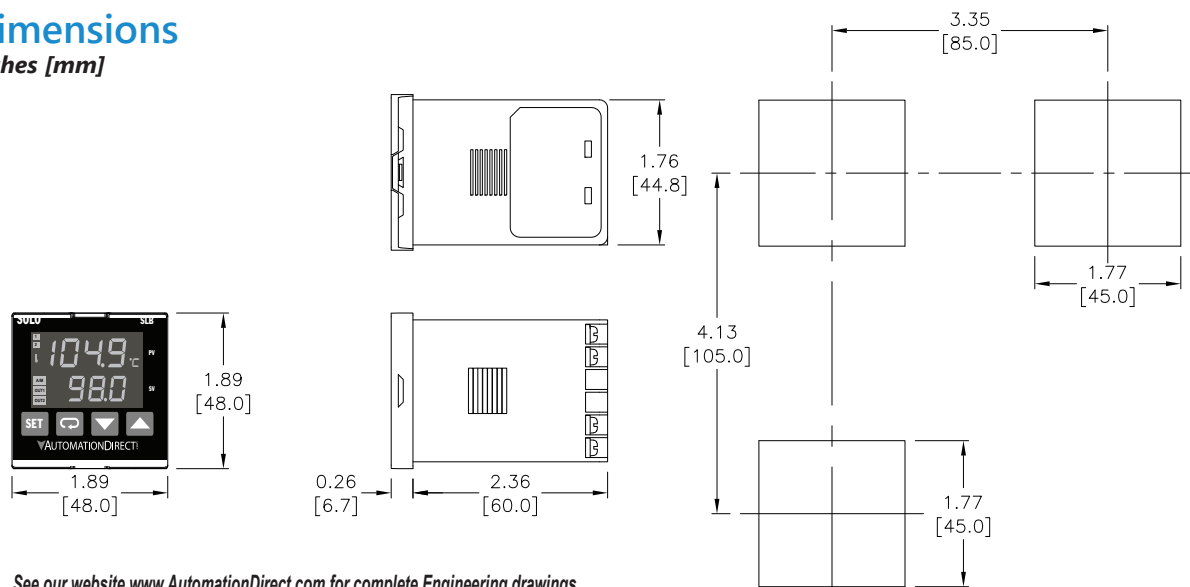
Scan or click the above QR code to be taken to the SOLO Basic Manual

Minimum Cutout and Spacing

Dimensions
inches [mm]

See our website www.AutomationDirect.com for complete Engineering drawings.