

spirax/sarco®

EL3300 Multi Loop Temperature Controller

DESCRIPTION

The EL3300 controller is a 1/4 DIN panel mounted multi-loop controller suitable for constant set point applications and for use with the Spirax Sarco range of pneumatic and electric series actuators, valves and sensors.

Standard Model Number: 330E-K0-2D0-21-00B000-00-0

TECHNICAL DATA

Mounting Arrangement	Panel mounted 1/4 DIN
Power Supply	90 to 264 VAC, 50/60 Hz, 24 VAC/DC optional
Power Consumption	6 VA
Front Protection	IP65/NEMA 3 hose down rating
Accuracy	0.20% of span typical (1 digit for display)
Inputs	1 standard universal/analog inputs plus one optional isolated universal input, or two optional high level analog inputs. Thermocouples (Type B, E, J, K, N, R, NiMoly, S,T,W5W26); 100 ohm Platinum RTD; Voltages or Current (0-10mV, 10-50mA, 1-5V, 0-10V, 4-20mA)
Communications	422/485-ASCII, Modbus RTU (configurable) or DMCS
Input sampling rate	6 times per second
Alarms	Up to two 5 - amp SPDT relays
Output	4 - 20 mA current output
Control Algorithms	Configurable for PID-A, PID-B, PID with manual reset or On-Off control
Heat/Cool Capability	Provides split range control with independent PID tuning constants for heating and cooling.
Two Loops of Control	Two independent loops or internally cascaded loops in one device

FEATURES

Easy to Configure - A bright dedicated configuration display provides straightforward multilanguage prompts that allow easy set-up with minimum time and effort.

Autotune - This standard feature provides plug and play tuning algorithm, which will, at the touch of a button or through digital input, accurately identify and tune any process including those with deadtime and integration processes.

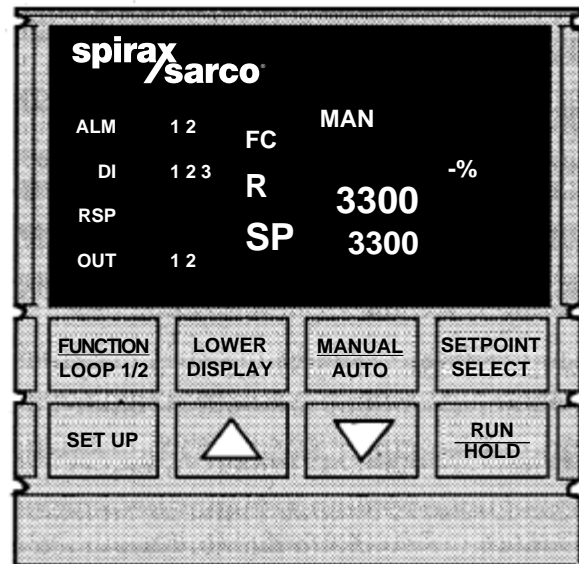
Fuzzy Logic - This feature uses fuzzy logic to suppress process variable overshoot which can result from setpoint changes or externally induced process disturbance. It operates independently from Autotune. It can be enabled or disabled.

Universal Inputs - Accepts RTD's, mA, mV or voltage input through simple configurations (other inputs also available).

Setpoint Ramp - A configurable ramp rate or a single programmable setpoint ramp up to 4-1/4 hours adds to start-up flexibility.

Heat/Cool Capability - Provides split-range control with independent PID tuning constants for heating and cooling, plus mixed output forms.

Manual/Automatic Modes - Bumpless, balanceless transfer between control modes.



Thermocouple Failsafe - Configurable for upscale or downscale burnout or failsafe output level.

Dual Setpoints - Simple push-button selection allows quick switchover from primary to alternate setpoint.

INSTALLATION AND COMMISSIONING

Installation and commissioning should be carried out in accordance with the instructions supplied with each controller.

MOUNTING ARRANGEMENTS

Controllers are panel mounted as standard using the brackets provided with the units.

Consult factory for other options.

EL3300 Multi Loop Controller

Upper Display - six characters

- Normal operation - four digits dedicated to display the process variable

- Configuration mode- displays parameter value or selection

Lower Display - eight characters

- Normal operation - displays operating parameters and values

- Configuration mode- displays function groups parameters

F - ° Fahrenheit being used
C - ° Centigrade being used

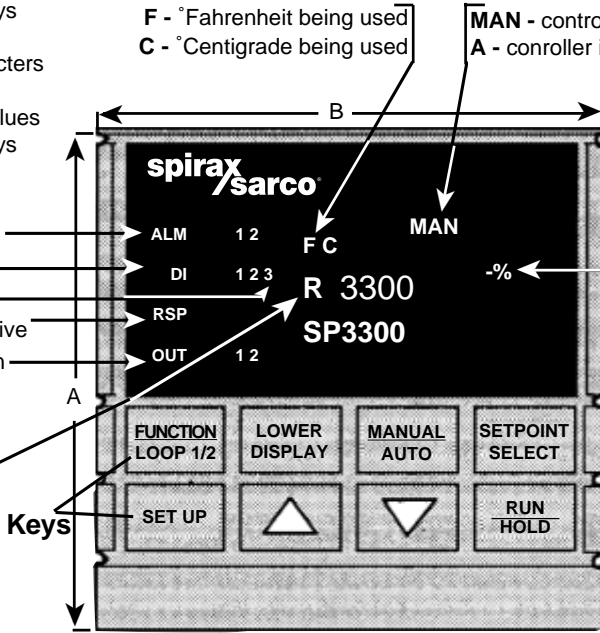
MAN - controller in manual mode

A - controller in automatic mode

MAN and A - off — communications option active

ALM - Alarm conditions exist
DI - Digital Input active
3 - LSP 3 active
RSP - Remote SP or SP2 active
OUT - Control Relay 1 or 2 on

T - Accutone in progress
t - PV tune in progress
L" - Loop 2 display
I - Cascade control
C - Computer setpoint active
O - Output override active
R - Run SP ramp/program
H - Hold SP reamp/program

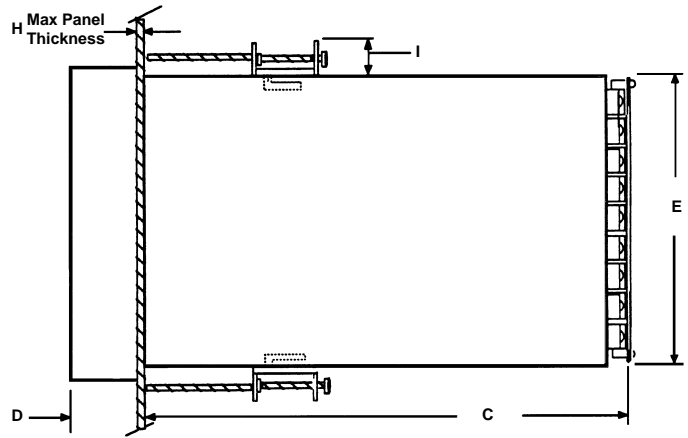


Deviation Bargraph -

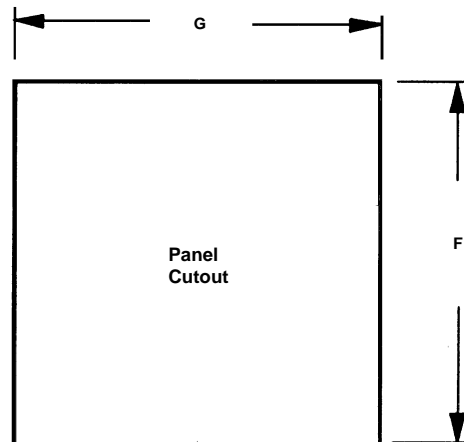
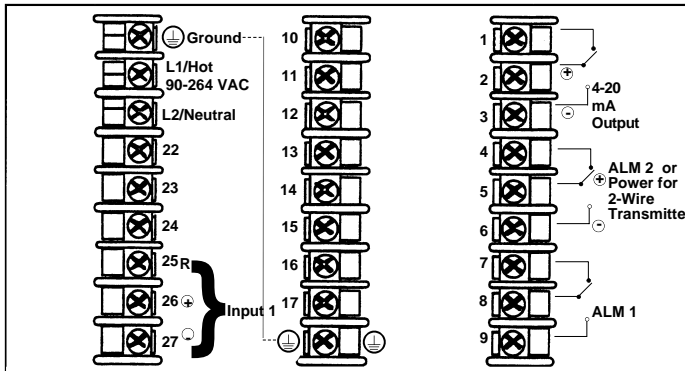
- Center bar indicated PV is within $\pm 1\%$ of setpoint.
- Next bar will light if PV is between $\pm 2\%$ but less than $\pm 10\%$ deviation.
- If PV is equal to or greater than $\pm 10\%$ deviation, the center bar plus all ten deviation bars will light.

DIMENSIONS (NOMINAL) IN INCHES AND MILLIMETERS

Controller				
A	B	C	D	E
3.78"	3.78"	5.82"	0.85"	3.57"
96	96	147.3	21.6	90.7
Panel Mounting Cut Out				
F	G	H	I	
3.62"	3.62"	.945"	.394"	
92	92	24	10	



EL3000 WIRING DIAGRAM



TIS 1.615 US 08.99