

Application Description

An Automation Direct TC33 Temperature controller is to be used as a temperature control for GS2 drive running a blower for a single zone furnace.

Specifications

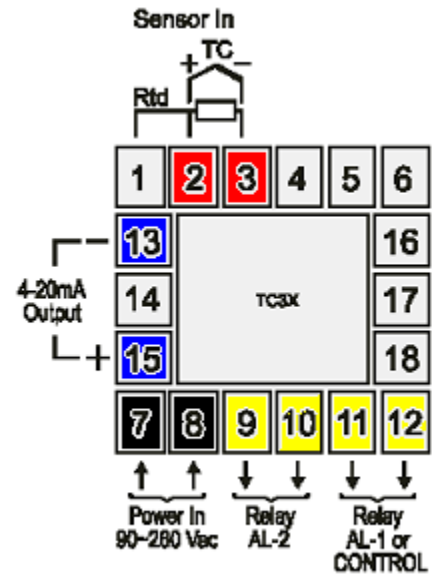
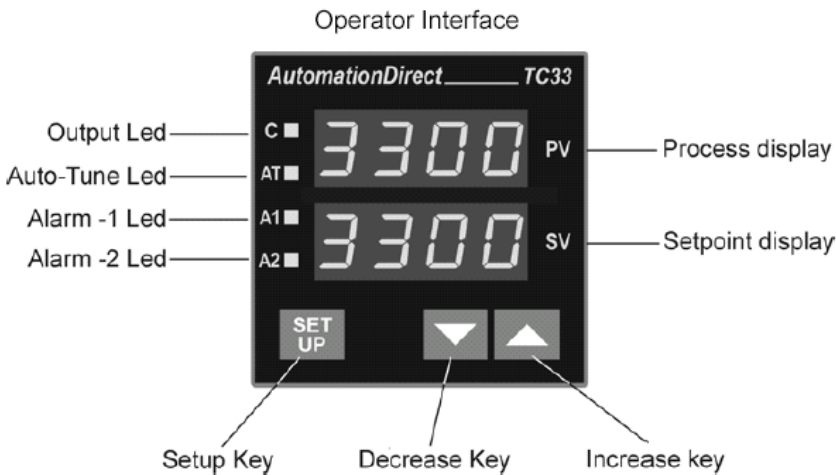
Master Control: 1 x TC33-2010-AC
 1 x GS2-23P0
 User supplied HW: 1 x J type T/C



Process: User needs to control a specific temperature within the furnace.

Display: PV (process variable) –58 to 1400*F and SV (set point variable) –58 to 1400*F

Alarms: High temperature is 1000*F
 Sensor Error



Example TC33 program:

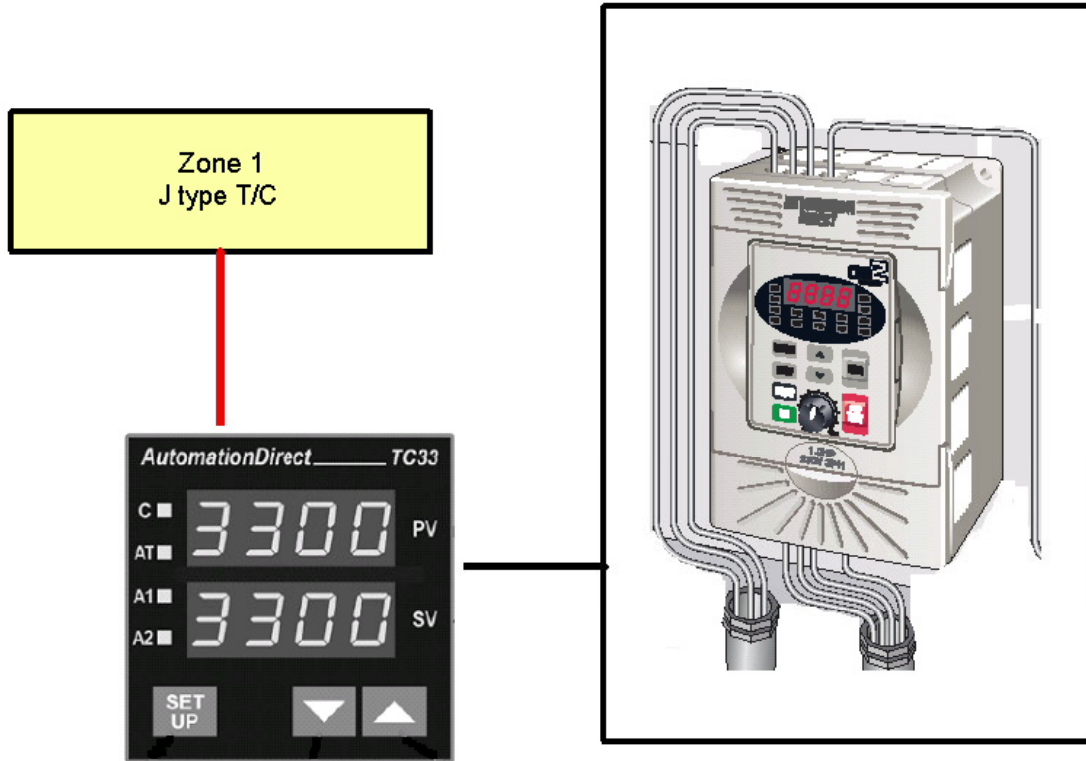
Cycle 3 CONFIGURATION	DEFAULT	NEW	COMMENTS
Type	1	0	J type T/C (-58 to 1400°F)
Unit	0	1	degrees Fahrenheit
Act	0	0	reverse acting
Cntr	2	2	4-20 ma control output
Sphl	1370	1400	Upper range for SV and PV
A1fu	0	1	High alarm function for alarm relay 1
A2fu	0	5	Sensor error alarm function alarm relay 2
Cycle 2 ALARMS	DEFAULT		
Atun	0	NO	only active during tuning procedure
Pb	10	x.x	P set during auto tune
lr	0	x.x	I set during auto tune
Dt	0	x.x	D set during auto tune
Ct	0.5	0.5	default
Hyst	0	0	not using Hysterisis control (ON/OFF)
A1sp	610	1000	High temp alarm
A2sp	610	n/a	Sensor error alarm
Cycle 1 OPERATION	DEFAULT		
RATE	0	0	rate of rise disabled
T SP	0	0	time for soak disabled
RUN	1	1	enable run mode

Example GS2 set-up:

INVERTER GRADE MOTOR							
HP	3	Volts	208	PHASE	3	TYPE	P
RPM	3525	AMPS	9.2	HZ	60	SF	1.15
DESIGN	B	AMB	40°C	INSUL CLASS	F		
DUTY	CONT	ENCL	TEFC	CODE	K		

GS2-23P0 setup	DEFAULT	NEW	COMMENTS
P 0.00	240	208	Motor Nameplate Voltage Setting
P 0.01	10	9.2	Motor Nameplate Amps Setting
P0.02	60	60	Motor Base frequency
P0.03	1750	3525	Motor base RPM
P0.04	1750	3600	Motor Maximum RPM
P1.00	0	1	Coast to stop
P1.01	10	20	Acceleration time
P2.00	0	2	Volts/Hertz set to fans and pumps
P3.00	0	1	External operation keypad stop enabled
P4.00	0	3	4-20 ma control enabled (switch must be changed to ACI)
P8.00	0	3	RPM display

Basic Diagram:



4-20 ma analog signal to GS2 drive controlling cooling blower to single zone furnace.

