

THERMOLINE

TEMPERATURE CONTROLLERS

TC410 Temperature Controller



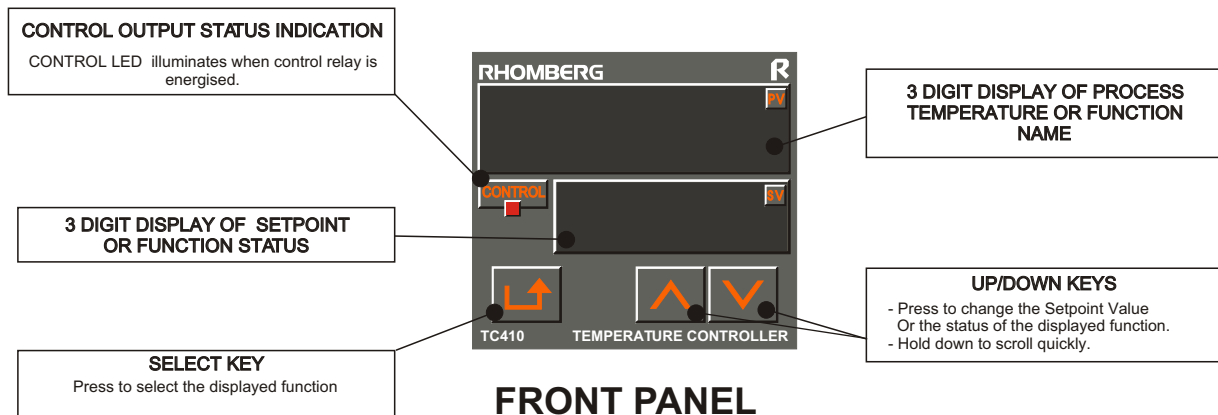
FEATURES and BENEFITS

- User friendly installation and operation.
- Easily configuration via a simple text based function menu.
- Dual Display for simultaneous indication of both process temperature and setpoint.
- Selectable PID or ON/OFF control.
- PID algorithm control with Autotune function to ensures precision control.
- Full Autotune for PID control, calculating P, I, D, and Anti-reset wind-up terms.
- Adjustable PID relay cycle time for precision control of fast or slow processes.
- Adjustable ON/OFF control hysteresis, allowing greater flexibility when controlling non-critical processes.
- Keypad lock to ensure that operational modes and settings are secured once the controller is installed.
- An 8 Amp relay output or SSR (Solid State Relay) drive output.
- Analogue and digital input filtering.
- A plug connector system that allows quick and easy connections.
- Multi-voltage (21 - 53V AC/DC, 85 - 265V AC/DC).
- Digitally calibrated.
- CE mark.



TC410

Temperature Controller



TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATIONS	
Operating Temperature	0 - 50°C
Humidity	5 - 85% non-condensing
Storage Temperature	-20°C to 70°C
Protection Class (Front Panel)	IP54
Protection Class (Rear Panel)	IP30
Connection	Plug-connector
Weight	250g
Standards	CE mark
Creepage Distance	VDE 0110 (Group C 250V) IEC 664/664A VDE 0435
Power Supply	21 - 53V AC/DC 85 - 265V AC/DC
Power Consumption	Less than 3VA

OPERATING TEMPERATURE	INPUT SPECIFICATIONS								
	SENSOR TYPE								
	PT100	E	J	K	R	S	T	B	N
UPPER LIMIT	800	950	750	999	999	999	380	999	999
LOWER LIMIT	-99	-99	-99	-99	-40	-40	-99	50	-99

CONTROLLER SPECIFICATIONS	
Setting Accuracy	1%
Linearisation Accuracy	±0.3%
Cold Junction Tracking	0.05°C per °C
Sampling Period	70ms
Control Method	PID or On/Off
PID Control Relay Cycle Period	1 to 240 seconds
ON/OFF Control Hysteresis	0 to 99,9°C

EMC PROTECTION RATING	
Radiated Susceptibility	IEC 801-3, Class 3
Radiated Emission	CISPR11, Class B
Conducted Susceptibility	IEC 255-22-1, Class II
Conducted Emission	CISPR11, Class B

DISPLAY SPECIFICATIONS	
PV Display Type	3 x 10mm, Red
SV Display Type	3 x 7mm, Green
Resolution (PV, SV)	1°C
Temperature Display Range	-99 to 999°C

OUTPUT SPECIFICATIONS	
Control Output (Relay)	250V AC, 8A, SPDT/ SPST(N.O.)
Control Output (SSR Drive)	8-28V at 10mA

FUNCTION HIGHLIGHTS

CONTROL MODE

Selectable control mode ON/OFF or PID

PID RELAY CYCLE TIME

Adjustable PID Relay Cycle Time for precision control of fast or slow processes

ON/OFF CONTROL HYSTERESIS

Adjustable ON/OFF Control Hysteresis to select the recovery point for non-critical processes

PID AUTOTUNE

Full Autotune function which calculates P,I,D and Anti-reset wind-up terms.

KEYPAD LOCK

Keypad Lock to prevent unauthorised adjustments of controller settings.

