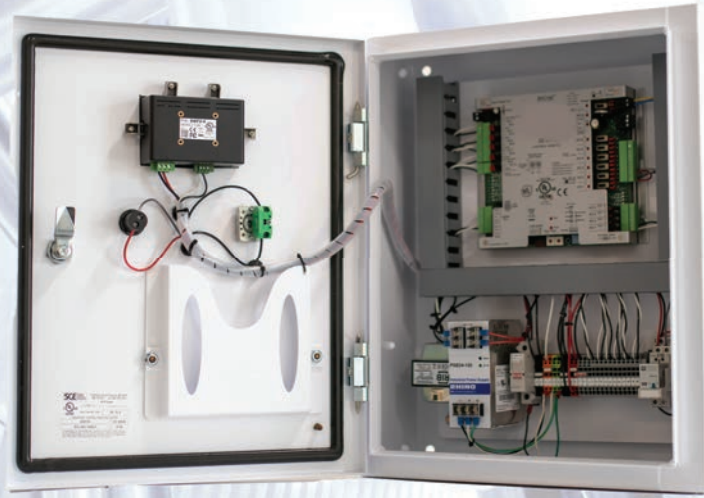




# EC1000 SERIES TOUCHSCREEN CONTROL PANEL



## DESCRIPTION

The Thermaflo EC1000 Electronic Controller combines full PID BacNet based control of temperature pressure level or flow and a combination one simple dynamic panel. Over 40 years of field experience has been designed into the EC1000. Standard application for the EC1000 are as follows:

Temperature control of Heat Exchangers, Process Vessels, Hot Water Hydronic Heating Systems, as well as Domestic Water Systems

Pressure Control of Steam Pressure Reducing Stations, VFD drive pump controls, Boiler and Deaerator systems, and Clean Steam Generators

Level control of Feed Water and Deaerator Tanks, Process Tanks and Vats, Clean Steam Generators and Boiler Systems

Flow control of heating logics, steam flow into processors, and buildings with BTU /Steam Flow/or Water Flow Measurements

- Simple standard functions, all EC1000 controllers are designed to operate with Thermaflo water heating clean steam and feedwater systems. Standard features include high temperature alarms, value shutdowns, slow ramp startup, remote BacNet or 4-20 Ma control, remote on-off and real time trending of set points versus actual with 24 hour 10 year backup for BAC systems

Single point wiring: These controllers only require one 120VAC connection for operation and internal system wiring required on packages with built in surge protection 5 AMP service required

The EC1000 features a NEMA standard enhanced white panel completely programmed, wired, and tested ready for operation



# FEATURES

**Touchscreen Control:** The standard 7" touchscreen keeps the user informed of set point versus actual, alarms, go off operating of control valve while allowing simple adjustments to be made available in 10" optional sizes.

**Alarm Function:** Closes control valves and safety shutdown valve in the event of high temperature or pressures, plus has a latching or non-latching feature. These alarm points are fully programmable.

The EC1000 when fitted with a P51 transmitter will control both pressure and temperature at the same time to a TH Series type heat exchanger using one JVV steam control valve eliminating the need for expensive and high maintenance PRV stations.

**Ramp Control System:** This feature slowly starts a system by incrementally opening at a programmed rate a steam or hotwater control valve thus eliminating thermal shock, water hammer or system overload. Startup is made simple and controlled and can be automatically, or remotely activated

**Contacts for BMS (Building Management Systems):** Building management systems are fully informed 24/7 with BacNet, Dry Contact or 4-20 MA of alarms, set points, Control valve positions, and control. Remote control of set points and On-Off are standard.

**Single Point UL Wiring:** Each EC1000 has single point 120 vac power connection and is UL Certified

**Custom Setup and Programming:** Thermaflo application Technicians can setup program, and test the EC1000 for your specific needs in our live system and hydronic testing at facility.

# SPECIFICATIONS

<b>Supply Voltage</b>	120 Volts AC @ 5AMPS
<b>Power Consumption</b>	24 Volts DC 60 Watts
<b>Power Supply Output</b>	24V DC 60 Watt
<b>Inputs</b>	Volt, RTD, 1000 OHM Thermister
<b>Up to</b>	
<b>BacNet Remote</b>	Dry Contacts or EMS Signal
<b>Outputs</b>	0-20 MA, 4-20
<b>PDI and BacNet</b>	Ma 0-10 Volts, Dry Contact Relay BacNet MSTP
<b>Control Actions</b>	Direct or Reverse on all outputs heating, cooling or level
<b>Display Standards</b>	Touchscreen 7" LLC ( 10" Optional)
<b>Real Time Clock</b>	10,000 Hours continuous
<b>Internal Power Supply</b>	24 VDC 60 Watts for control valve actuator power
<b>Ambient Temperature</b>	-4° to 140° F Never Subject to any Temp above 140F
<b>Accuracy Enclosure Approval</b>	UL Listed
<b>Weight</b>	22 lbs
<b>Overall Dimensions</b>	16" width x 20" height x 8" depth

## Model Number Code EC1000-01-04.5-1-120V

Programmed PID Loops \_\_\_\_\_  
 01 Standard  
 02 2 Loops  
 03 3 Loops  
 04 4 Loops

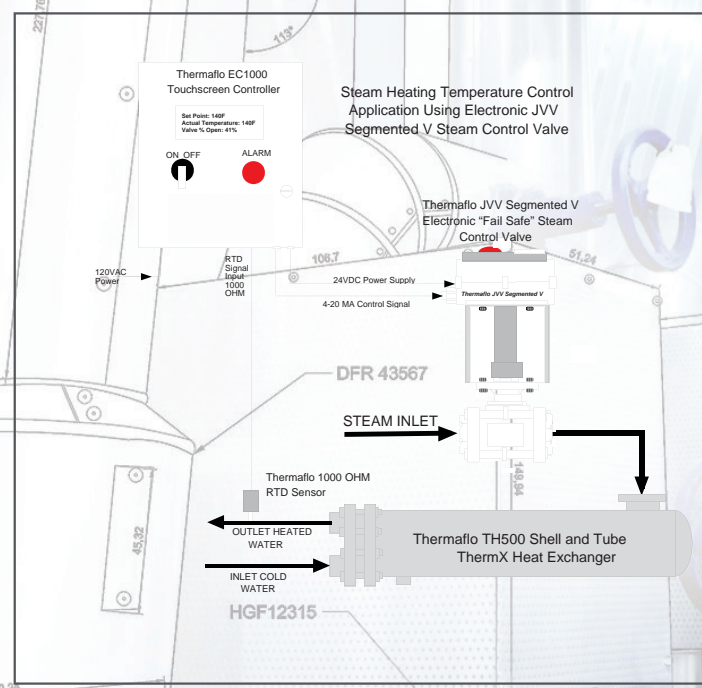
Touchscreen Size \_\_\_\_\_  
 04.5 4.5" Optional  
 07 7" Standard  
 010 10" Optional  
 Note: 10" Option increases panel size to 20"x 24" x 6"

Panel Rating \_\_\_\_\_  
 1 NEMA 1 Not Splash Proof  
 4 NEMA 4 OPTIONAL  
 Standard Panel for Indoor Protected Use.

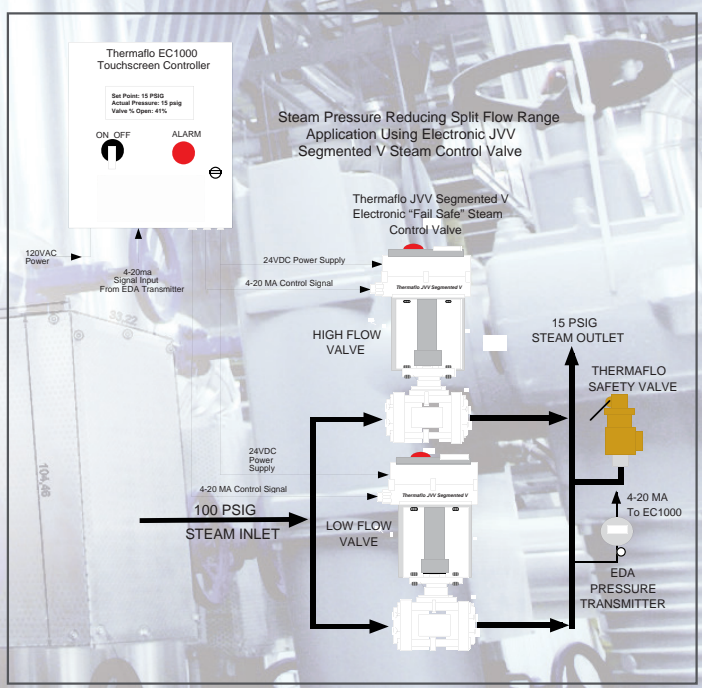
120V Power 60Hz Standard  
 50 Hz Available

**When ordering specify control mode of each loop for example:**  
**01- Temperature**  
**02- Pressures**  
**03- (2) Temperatures**  
**(1) Pressure**

**Thermaflo EC1000 JVV Single Valve Hookup**



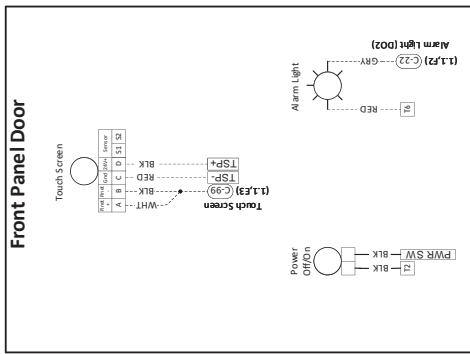
**Thermaflo EC1000 JVV Dual PRV Valve Hookup**



Split Range Valve Controls Requires Special Programming

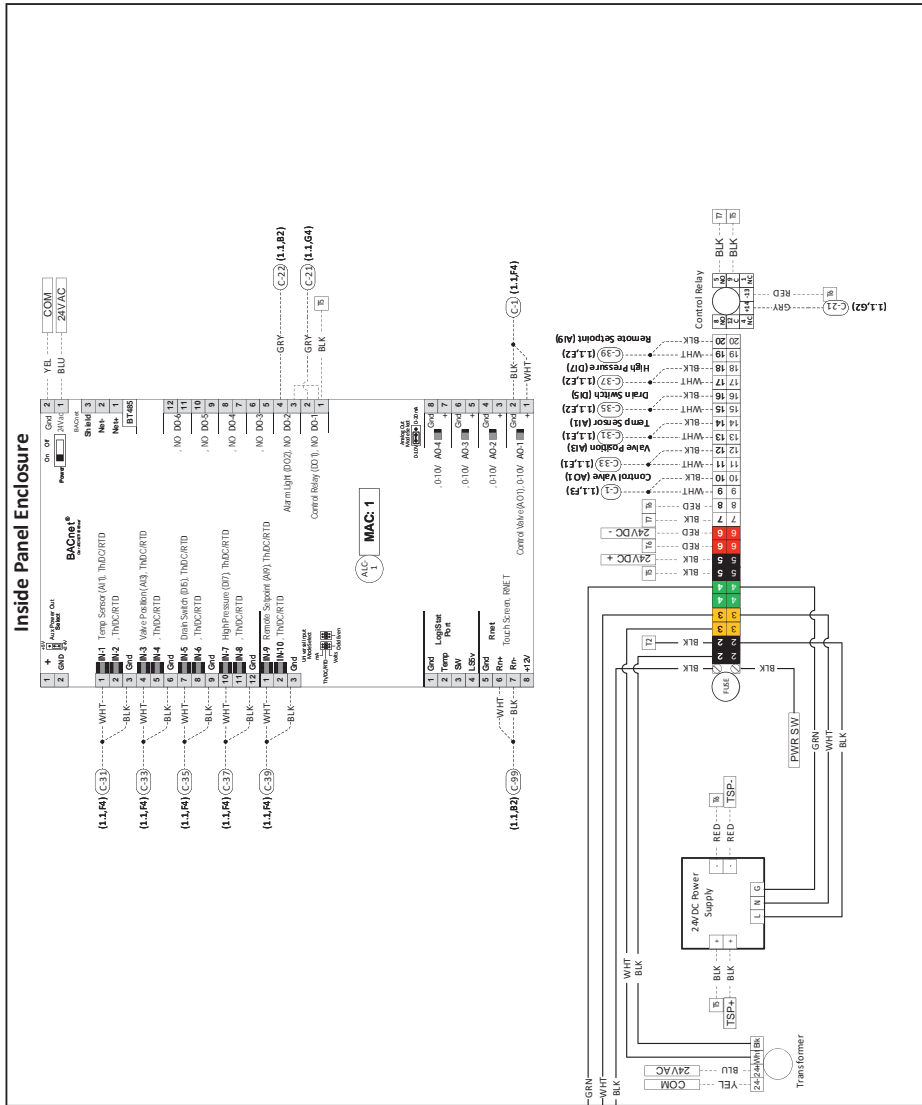
# Thermaflo Engineering EC1000 Touchscreen Bacnet Panel

Panel Size: 16" Wide x 20" OAH, 4.5" Deep  
White Gloss Color



Standard Touchscreen 7" Size

- Standard Inputs:
  - 1000 Ohm RTD Temperature Control
  - Control Valve Position Feedback % Open
  - Pressure Transmitter 4-20ma
  - Remote Bacnet Temperature Setpoint
  - Remote On Off
- Standard Outputs and Display:
  - Outlet Water or Fluid Temperature 0-10 or 4-20
  - Control Valve % Open
  - High Temperature Alarm
  - High Pressure Alarm Latching
- Options:
  - Flow Meter GPM Inputs (2)
  - Temperature Input (1)
  - Level Control PID
  - Pressure Control PID (2) Valves
- Standard 24VDC Transformer to operate the Thermaflo JVV Segmented V Control Valve



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