FLAIR
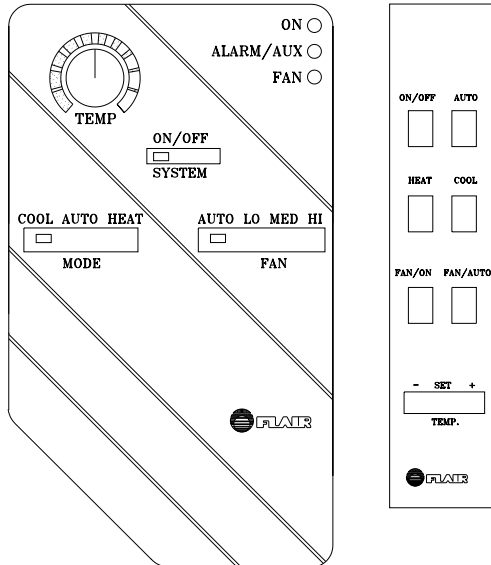
THERMOSTAT *series TF93*

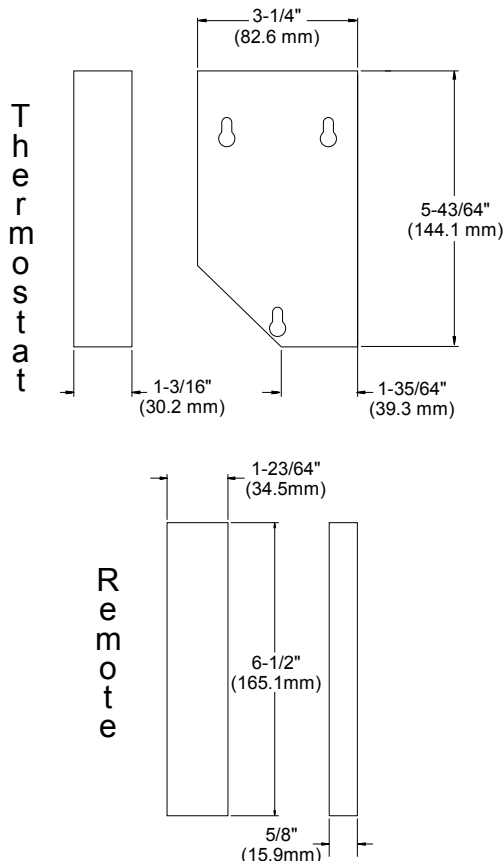For proportional valve control of heating and cooling fan coil systems.

BENEFITS & SPECIAL FEATURES

Same benefits as the TE93 with the addition of remote control:

- Proportional output provides fast and accurate positioning for zone actuators and valves.
- Proportional integral control eliminates overshoot and droop.
- Adjustable dead band prevents overlapping between heating and cooling modes.
- Manual on/off override.
- Electronic temperature limiting and locking.
- Low and high limit temperature alarms can activate a dry contact to switch an external control.
- Automatic heating/cooling changeover.
- Three speed automatic fan control with manual override.
- Direct or reverse acting outputs.
- System status indicators.
- Adjustable differential band.
- Infra-red remote control internal receiver (standard).
- Infra-red remote control transmitter (optional).
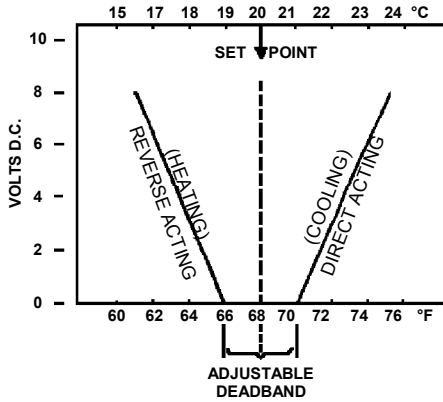- Infra-red remote control external receiver (optional).
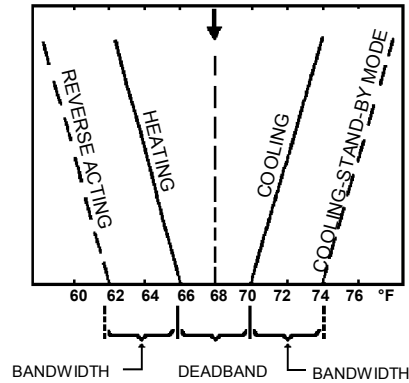
DIMENSIONS

SPECIFICATIONS

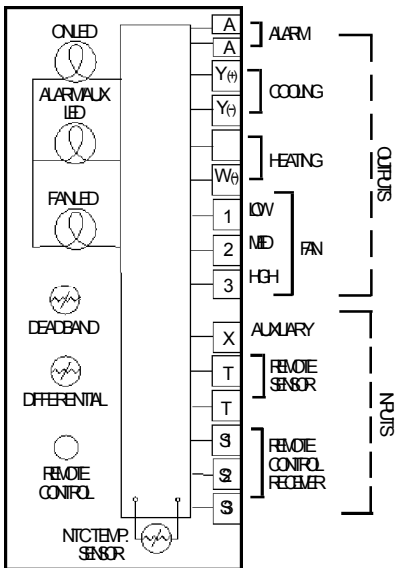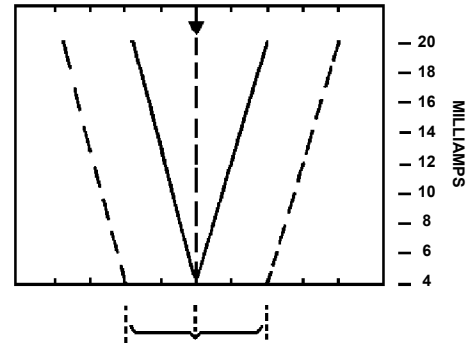|	
Operating Voltage:	24 vac (-15%, +10%, 50-60 Hz)
Output:	0-10 VDC or 4-20mA
Temperature Range:	50° F - 90° F (10° C - 32° C)
Temperature Differential:	
Heating:	0-2° C approximately ±0.8° F (.4° C)
Cooling:	0-2° C approximately ±0.8° F (.4° C)
Fan (in auto mode):	
Low:	< 2° F (1.1° C)
Med:	2 - 4° F (1.1°-2.2° C)
High:	> 4° F (2.2° C)
Bandwidth:	0-10° C 0-2° F (0-1.1° C)
Dead Band:	Adjustable 0 - 4° F (2.2° C) to set point
Sensor System:	Negative Temperature Coefficient (NTC)
Standard:	internal
Optional:	remote temperature
Optional:	return air temperature
Switches (Optional):	
Slide:	SYSTEM: ON/OFF
Slide:	MODE: COOL/AUTO/HEAT
Slide:	FAN: AUTO/LOW/MED/HIGH
Rotating:	set TEMPerature
Indicator LED's:	ON (Steady Green)
	ALARM (Flashing Red) / AUX (Steady Red)
FAN: Low	(Slow Flashing Yellow)
Med	(Flashing Yellow)
High	(Fast Flashing Yellow)
Security:	Electronic temperature limiting and locking
Dimensions: Thermostat:	$5^{43}/_{64}$ x $3^1/_4$ x $1^3/_{16}$ Inches (144.1 x 82.6 x 30.2 mm)
Remote:	$6^1/_2$ x $1^{23}/_{64}$ x $^5/_8$ Inches (165.1 x 34.5 x 15.9 mm)
Remote Control Transmitter (optional):	7-button infra-red
Battery:	(2) AAA
Range:	36' (10 meters)
Remote Control Receiver (optional):	infra-red
Range:	36' (10 meters)

**Zero Bandwidth
Positive Deadband**

**Positive Bandwidth
and Deadband**

**Positive Bandwidth
Zero Deadband**

Model Number: TF931120
Description: 1 stage heat, 1 stage cool

Switching Current at 24 VAC:
   Cooling: 1 Amp
   Heating: 1 Amp
   Fan: 1 Amp
Weight: .4 lbs. (880 g)

ACCESSORIES

Remote Temperature Sensor	TX101001
Return Air Temperature Sensor	TX101011
Remote Control Transmitter	TX502001

   (Compatible with internal and external remote control receivers.)

Remote Control Receiver (external)	TX503001

   (Up to 5 receivers may be daisy chained to thermostat and placed at remote locations—relays signal from remote control transmitter to thermostat.)

Backplates may be used to cover large holes in walls or mount to utility boxes:

horizontal	TX201001
vertical	TX202001
square	TX203001

Transformers:

40 VA	TR140100
20 VA	TR120100

Relay Transformers:

20 VA (2) SPST 120 VAC relay	TR440200
20 VA (1) SPST 120 VAC relay	TR440300

APPLICATIONS

- Central (main) heating or cooling.
- Zone heating or cooling.
- Residential. (Single or multi-family, Apartments, Co-ops, Condominiums)
- Commercial. (Stores, Restaurants, Offices)
- Industrial
- Institutional. (Hospitals, Hotels, Motels)

REFERENCES

For More Information On:	See:
Non-Remote version	TE93 data sheet
Wiring, jumper, potentiometer settings and applications	Instruction sheet
Other thermostats	This section
Zone Actuators	Star Actuator section
Zone Valves	Star Valve section
Wiring Panels	Control Panels section
Warranty & Pricing	Pricing & Terms section