

ELECTRONIC HEAT PUMP

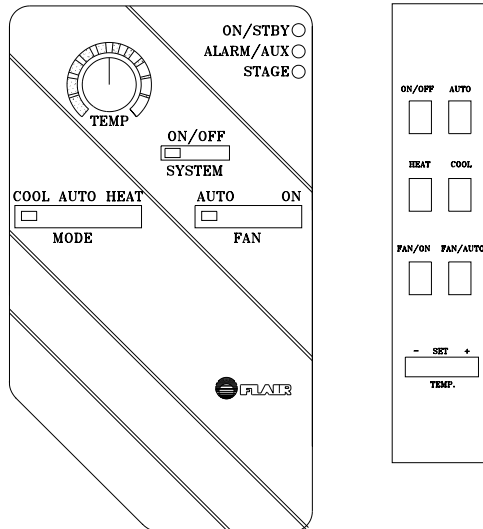
THERMOSTAT *series TF31*

For central (main) or zoned control of heating and cooling heat pump systems.

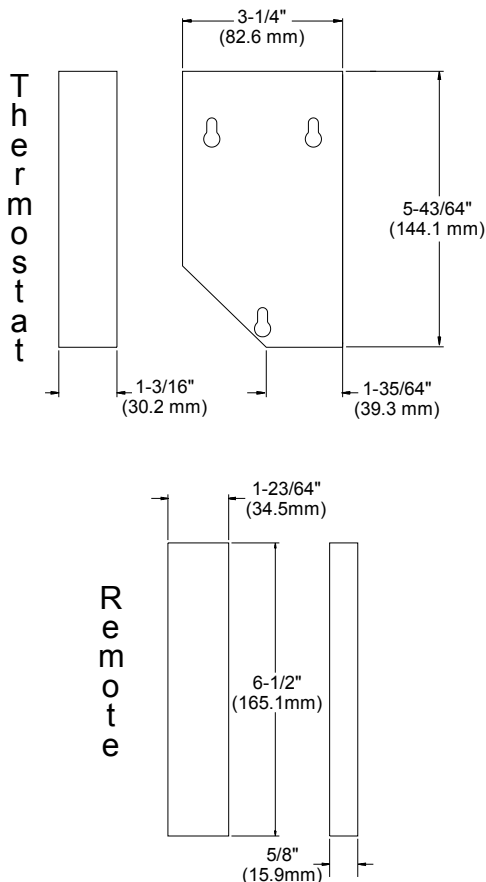
BENEFITS & SPECIAL FEATURES

Same benefits as the TE31 with the addition of remote control:

- 4 minute time delay for compressor protection (may be bypassed).
- No batteries required.
- Remote temperature sensor (optional).
- Return air temperature sensor (optional).
- Automatic heating/cooling changeover.
- 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.
- Continuous (on) or intermittent (auto) fan control.
- System status indicators.
- Available in up to 3 stages of heating, 2 stages of cooling heat pump control.
- Warmer/cooler scale standard.
- Fahrenheit and Celsius scales included.
- No sub-base required.
- Infra-red remote control internal receiver (standard).
- Infra-red remote control transmitter (optional).
- Infra-red remote control external receiver (optional).



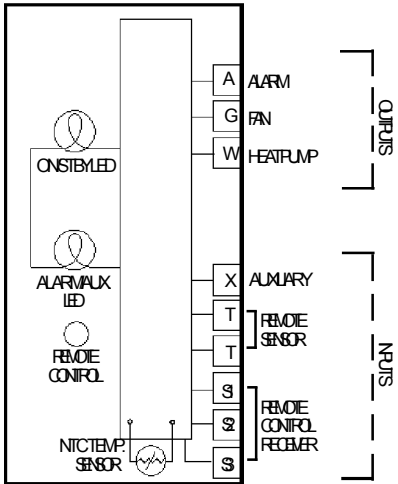
DIMENSIONS



SPECIFICATIONS

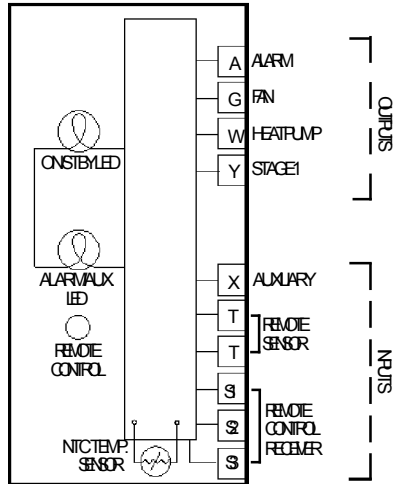
Operating Voltage:	24 vac (-15%, +10%, 50-60 Hz)
Temperature Range:	50°F - 90°F (10°C - 32°C)
Temperature Differential:	
Heating:	approximately ±0.8°F (.4°C)
Cooling:	approximately ±0.8°F (.4°C)
Between stages:	2° F (1.1° C)
Dead Band:	4°F (2.2° C)
Sensor System:	Negative Temperature Coefficient (NTC)
Standard:	internal
Optional:	remote temperature
Optional:	return air temperature
Compressor Protection:	4 minute time delay
Switches:	
Slide:	SYSTEM: ON/OFF
Slide:	MODE: COOL/AUTO/HEAT
Slide:	FAN: AUTO/ON
Rotating:	set TEMPERATURE
Indicator LED's:	ON (Steady Green) / STBY (Flashing Green) ALARM (Flashing Red) / AUX (Steady Red)
Staging (orange):	Stage One (Off); Stage Two (On); Stage Three (Flashing)
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 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)

MODEL NUMBERS AND DESCRIPTIONS FOR VARIOUS APPLICATIONS



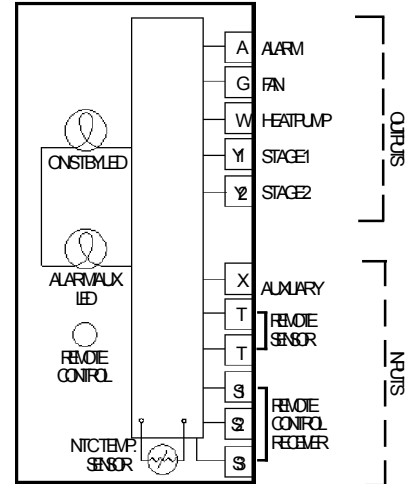
Model Number: TF311120
Description: 1 stage heat, 1 stage cool

Switching Current at 24 VAC:
Heat Pump: 1 Amp
Stage 1: 1 Amp
Fan: 1 Amp
Alarm: 1 Amp
Auxiliary: 1 Amp
Weight: .4 lbs. (880 g)



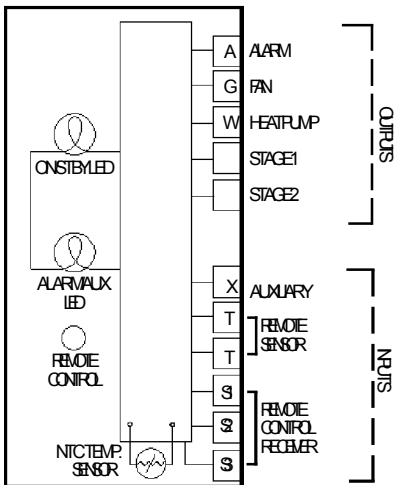
Model Number: TF312120
Description: 2 stage heat, 1 stage cool

Switching Current at 24 VAC:
Heat Pump: 1 Amp
Stage 1: 1 Amp
Stage 2: 1 Amp
Fan: 1 Amp
Alarm: 1 Amp
Auxiliary: 1 Amp
Weight: .4 lbs. (880 g)



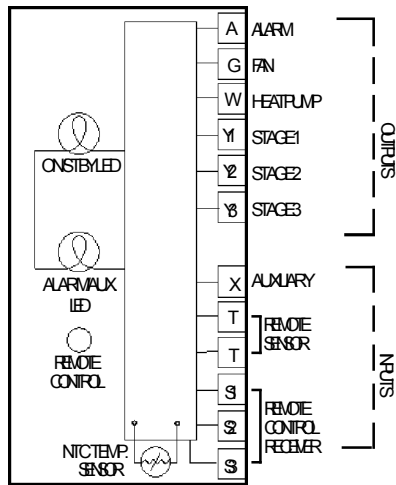
Model Number: TF312220
Description: 2 stage heat, 2 stage cool

Switching Current at 24 VAC:
Stage 1: 1 Amp
Stage 2: 1 Amp
Heat Pump: 1 Amp
Fan: 1 Amp
Alarm: 1 Amp
Auxiliary: 1 Amp
Weight: .4 lbs. (880 g)



Model Number: TF313120
Description: 3 stage heat, 1 stage cool

Switching Current at 24 VAC:
Heat Pump: 1 Amp
Stage 1: 1 Amp
Stage 2: 1 Amp
Stage 3: 1 Amp
Alarm: 1 Amp
Auxiliary: 1 Amp
Weight: .4 lbs. (880 g)



Model Number: TF313220
Description: 3 stage heat, 2 stage cool

Switching Current at 24 VAC:
Heat Pump: 1 Amp
Stage 1: 1 Amp
Stage 2: 1 Amp
Stage 3: 1 Amp
Fan: 1 Amp
Alarm: 1 Amp
Auxiliary: 1 Amp
Weight: .4 lbs. (880 g)

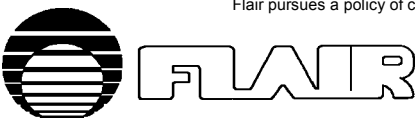
ACCESSORIES

Remote Temperature Sensor	TX101001
Return Air Temperature Sensor	TX101011
Remote Control Transmitter (Compatible with internal and external remote control receivers.)	TX502001
Remote Control Receiver (external) (Up to 5 receivers may be daisy chained to thermostat and placed at remote locations—relays signal from remote control transmitter to thermostat.)	TX503001

REFERENCES

For More Information On:	See:
Non-Remote version	TE31 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

Flair pursues a policy of constant improvement. For this reason, all specifications are subject to change without notice.



FLAIR INTERNATIONAL CORPORATION

600 Old Willets Path • Hauppauge, New York 11788 • Tel: (516) 234-3600 • Fax: (516) 234-3610