

# Legacy Series 18 and 19 Universal Temperature/Process Controller

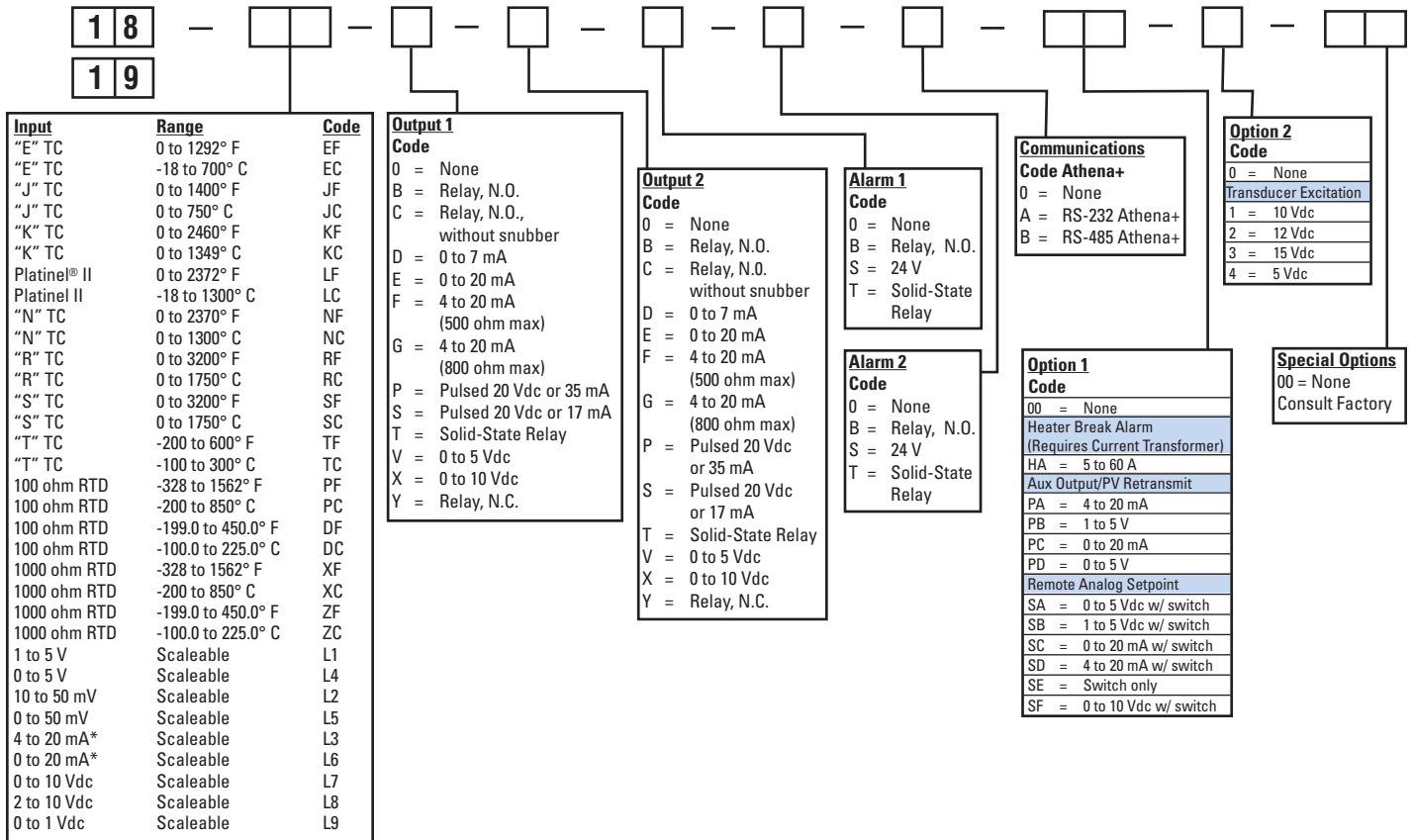


- ▲ Switch-Selectable Inputs
- ▲ User-Selectable Ramp to Setpoint
- ▲ Auto-Tuning, Heat or Cool
- ▲ Dual Output/Dual Alarm Capabilities
- ▲ On/Off Through Full PID Operation (P,PI,PD,PID)
- ▲ NEMA 4X (IP65) Dust and Splash-Proof Front Panel
- ▲ Bumpless Auto/Manual Transfer
- ▲ Adjustable Hysteresis & Heat/Cool Spread
- ▲ Field-Configurable Process, Deviation, or Latching Alarms
- ▲ Optional Process Variable Retransmission
- ▲ Remote Setpoint Select, Non-Linear Inputs, or Other Special Options
- ▲ cUL and CE Approvals

The Athena Legacy 18 and 19 Controllers are available as 1/8 DIN (18) vertical or 1/8 DIN (19) horizontal models. Both panel mounted, auto-tuning controllers can be used for precise control of a single loop with two independent outputs. The controllers accept thermocouple, RTD, voltage, or current input. RS-232 or RS-485 communications are available, and two digital LED displays provide visual indication of various controller functions.



## Ordering Information



# Legacy Series 18 and 19 Universal Temperature/Process Controller

## Technical Specifications

### Operating Limits

Ambient Temperature	32°F to 131°F (0°C to 55°C)
Relative Humidity Tolerance	90% non-condensing
Line Voltage	100 to 250 Vac 125 to 300 Vdc 24 Vac/dc optional
Power Consumption	Less than 6 VA (instrument)

### Performance

Accuracy	±0.20 % of full scale, (± 0.10% typical), ± 1 digit
Setpoint Resolution	1 count/0.1 count
Repeatability Temperature	±1.0 count
Stability	5 mV/°C (maximum)
TC Cold	
End Tracking	0.05°C/°C ambient
Noise Rejection	100 dB common mode 70 dB series mode
Process Sampling	10 Hz (100 ms)
Digital Filtering	Adjustable 0.1 to 10

### Control Characteristics

Setpoint Limits	Span of Sensor
Alarms	Adjustable for high/low, selectable process or deviation
Rate	0 to 900 sec
Reset	0 to 2400 sec
Cycle Time	0 = 200 ms; 1 to 120 sec
Gain	0 to 400
Gain Ratio	0 to 2.0 (in 0.1 increments)
Control Hysteresis	1 to 100 (on/off configuration)
Spread (Output 2)	0 to 100 (above setpoint)
Ramp to Setpoint	1 to 100 min
Auto-Tune	Operator initiated from front panel
Manual Control	Operator initiated from front panel

### Inputs

Thermocouple	B, C, E, J, K, N, NNM, R, S, T, Platinel II Maximum lead resistance, 100 ohms for rated accuracy
RTD	Platinum 2- and 3-wire, 100 ohms at 0°C, (DIN curve standard 0.00385)
Linear	0-50 mV/10-50 mV, 0-20 mA/4-20 mA, 0-10 mV/0-50 mV, 0-100 mV, 0-1 V/0-5 V, 0-10 V, 1-5 V

### Outputs

Output #1 Reverse Acting (heating)	
Output #2 Direct Acting (cooling)	
B	5 A /3 A (120/240 Vac), normally open
E	0 - 20 mA
F	4-20 mA, full output to load 500 ohm impedance max.
G	4-20 mA, full output to load 800 ohm impedance max.

### Outputs

P	20 Vdc or 35 mA
S	20 Vdc or 17 mA
T	1 A , Solid-state relay
V	0 to 5 Vdc
X	0 to 10 Vdc
Y	1 A , normally closed relay

### Alarm Outputs

B	5 A /3 A (120/240 Vac), mechanical relay
S	24 V, 20 mA
T	SSR, NC, 24-240 Vac

### Mechanical Characteristics

Display	Dual, 4-digit 0.36" (9.2 mm) LED Display Process Value: Orange Setpoint Value: Green
Numeric Range	-1999 to 9999
Front Panel Rating	NEMA 4X, (IP65)
Front Panel Cutout	3.622" x 1.771" (92 mm x 45 mm)
Connections	Screw Terminals

Specifications subject to change without notice.

