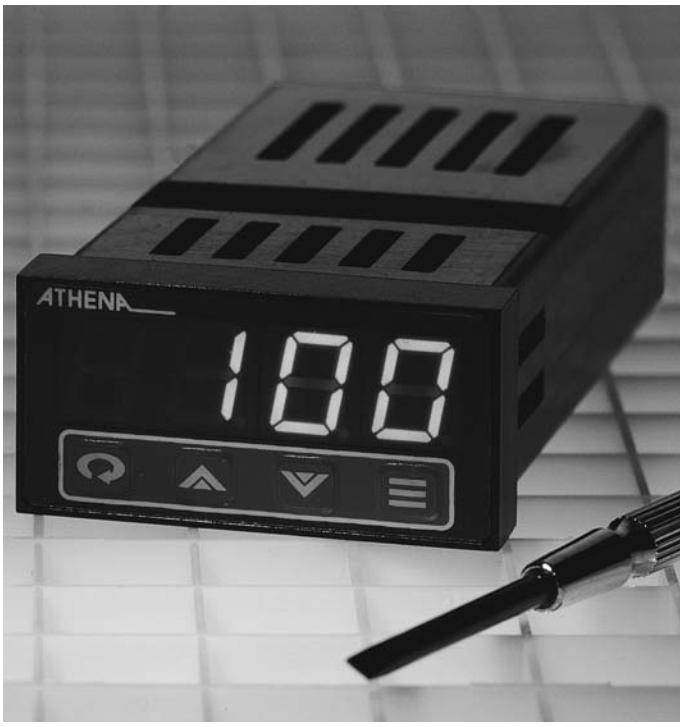
C-Series 32C Universal Temperature/Process Controller



The Athena 32C is a 1/32 DIN panel mounted, auto-tuning controller that can be used for precise control of a single loop with two independent outputs field-configurable as direct acting, reverse acting or alarm. An LED display provides visual indication of various controller functions.

- Field-Configurable Universal Inputs
- Bumpless Auto/Manual Transfer
- NEMA 4X (IP65) Dust and Splash-Proof Front Panel
- Decimal Display in 0.1° for Measured Temperatures Under 1000°F or °C
- On/Off through Full PID Operation (P, PI, PD, PID)
- Adjustable Hysteresis and Deadband
- Outputs Configurable as Alarms
- Field-Configurable Process and Deviation Alarms (Latching or Non-Latching)
- Dual Output/Dual Alarm Capabilities
- UL, cUL and CE Approvals
- Special and Custom Options Available

Range Information

Input	Range	Input	Range
"J"	-148°F to 1400°F (-100°C to 760°C)	100 ohm RTD	-328°F to 1562°F (-200°C to 850°C)
"K"	-220°F to 2462°F (-140°C to 1350°C)	100 ohm RTD (Decimal)	-199°F to 392°F (-128°C to 200°C)
"T"	-202°F to 752°F (-130°C to 400°C)		
Millivolt Linear (Scaleable)	0 to 50mV/10 to 50mV	Current Linear (Scaleable)	4 to 20mA, 0 to 20mA

Ordering Information

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Input Calibration
Code
T = Thermocouple
R = RTD
M = Millivolt Linear
C = Current Linear

Output 1 (Heating/Cooling)
(See Note)
Code
0 = None
B = Relay, N.O.
S = Pulsed 20Vdc or 17mA
T = Solid-State Relay

Output 2 (Heating/Cooling)
(See Note)
Code
0 = None
S = Pulsed 20Vdc or 17mA
T = Solid-State Relay

Special Options
00 = None
Consult Factory

Note: Both Outputs MUST be Field Configured to be either Direct Acting or Reverse Acting

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Technical Specifications

Operating Limits

Ambient Temperature	32°F to 140°F (0°C to 60°C)
Relative Humidity Tolerance	90% R.H. maximum, non-condensing
Line Voltage Power	85 to 265 Vac, 50/60 Hz 120 to 375 Vdc, (auto polarity)
Power Consumption	Less than 6 VA (instrument)

Performance

Accuracy	± 0.2% of full scale, ±1 digit
Setpoint Resolution	1.0 count/0.1 count
Repeatability	±1.0 count
Temperature Stability	5 µV/°C (maximum)
TC Cold-End Tracking	0.05°C/°C ambient
Noise Rejection	100 dB common mode 70 dB series mode
Process Sampling	3.5 Hz (270 ms)

Control Characteristics

Setpoint Limits	Span of sensor
Alarms	Adjustable for high/low; selectable process or deviation
Proportional Band	1 to span of sensor
Integral	0 to 9600 sec
Derivative	0 to 2400 sec
Cycle Time	0.3 to 120 sec
Control Hysteresis	1 to span of sensor
Deadband	Range of sensor
Manual Control	Operator initiated
Auto-Tune	Operator initiated

Inputs

Thermocouple	J, K, T Maximum lead resistance, 100 ohms for rated accuracy
RTD	Platinum 2-wire, 100 ohms at 0°C, DIN curve standard (0.00385)
Linear	0-50mV/10-50mV 4-20mA/0 to 20mA
Decimal Position	Selectable: none, 1/10, 1/100

Outputs

B	5 A/3 A (120/240Vac) normally open
S	20Vdc pulsed or 17mA
T	1 A , Solid-state relay

Mechanical Characteristics

Display	4-digit 0.39˝(10 mm) LED display
Front Panel Rating	NEMA 4X (IP65)
Connections	Screw Terminals
Numeric Range	-1999 to 9999
Front Panel Cutout	0.874˝x 1.771˝(22.19 mm x 45 mm)

Specifications subject to change without notice.