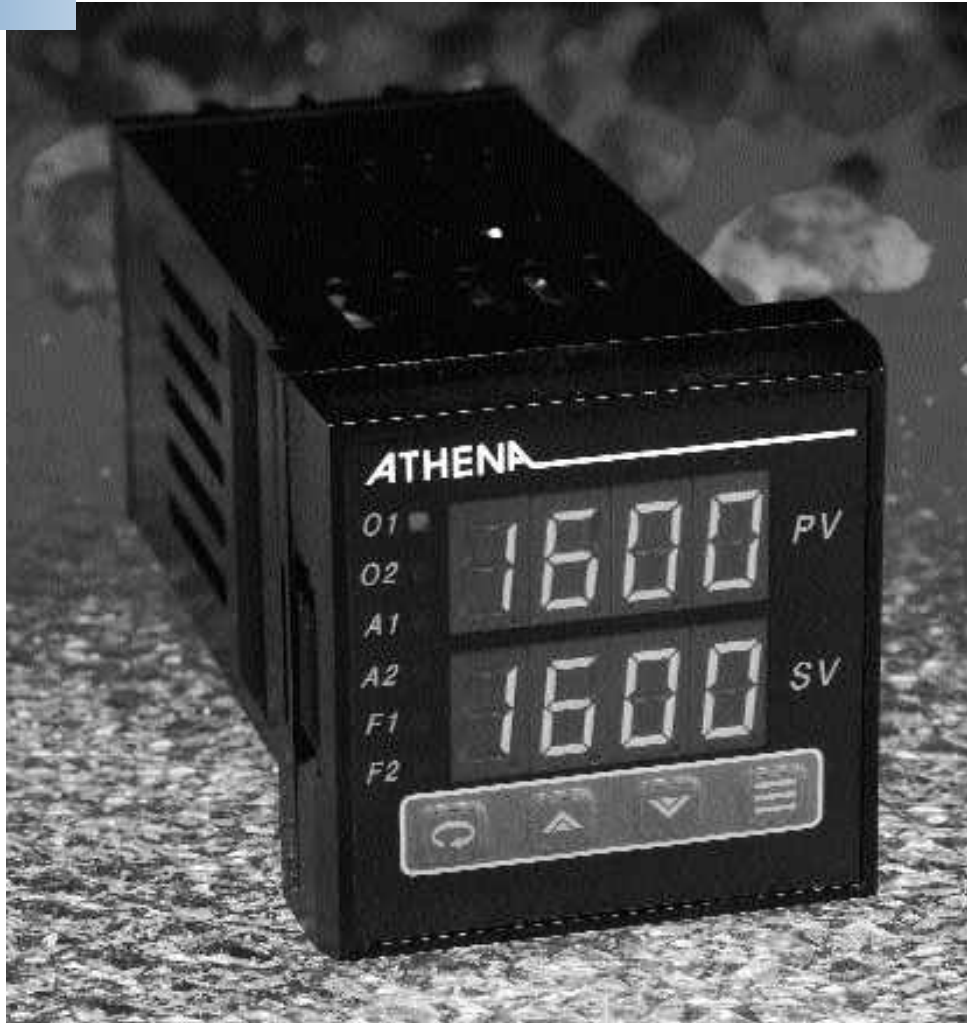


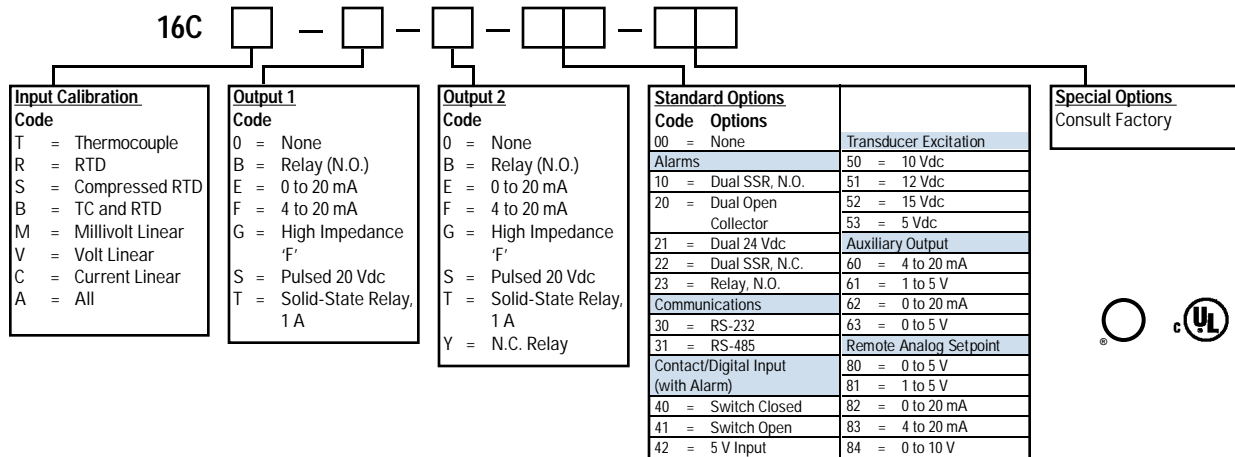
# SERIES 16C

## 1/16 DIN Temperature/ Process Controller

- Field-Configurable Universal Inputs
- User-Selectable Ramp to Setpoint
- 8-Level Ramp/Soak Control
- 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)
- Auto-Tuning, Direct or Reverse Acting (Field-Configurable)
- Adjustable Hysteresis and Deadband
- Outputs Configurable as Alarms
- Field-Configurable Process or Deviation Alarms; Latching or Non-Latching; Band and Inverse Band
- Dual Output/Dual Alarm Capabilities
- UL, cUL, and CE Approvals
- Options Include Serial Communications (RS-232, RS-485), Remote Analog Setpoint, Multi-Function Contact/Digital Input, Transducer Excitation, and Auxiliary Output.
- Special and Custom Options Available



## Ordering Information



### Range Information

Input	Range	Input	Range
"B"	32 to 3308°F (0 to 1820°C)	"R"	-58 to 3214°F (-50 to 1768°C)
"C"	32 to 4199°F (0 to 2315°C)	"S"	-58 to 3214°F (-50 to 1768°C)
"E"	-238 to 1832°F (-150 to 1000°C)	"T"	-454 to 752°F (-270 to 400°C)
"J"	-328 to 1400°F (-200 to 760°C)	Platinel® II	-148 to 2250°F (-100 to 1232°C)
"K"	-454 to 2462°F (-270 to 1354°C)	100 ohm RTD	-328 to 1562°F (-200 to 850°C)
"N"	-450 to 2372°F (-268 to 1300°C)	100 ohm RTD (Decimal)	-328.0 to 707.0°F (-200.0 to 375.0°C)
"NNM"	32 to 2570°F (0 to 1410°C)		

## LIMITS

## SPECIFICATIONS

Ambient Temperature	32° F to 131° F (0° C to 55° C)
Relative Humidity Tolerance	90%, non-condensing
Power	100-250 V 125 to 300 Vdc 24 Vac/Vdc optional

Power Consumption	Less than 6 VA
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## PERFORMANCE

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

## CONTROL CHARACTERISTICS

Alarms	Adjustable for high/low; selectable process, or deviation
Proportional Band	2 to span of sensor
Integral	0 to 9600 seconds
Derivative	0 to 2400 seconds
Cycle Time	0 = 200 ms; 1 to 120 seconds
Control Hysteresis	1 to span of sensor
Autotune	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

B	5A/3A (120/240 Vac) relay, normally open
E	0-20 mA
F	4-20 mA, full output to load with 500 ohm impedance, max.

G	High impedance 'F'
S	20 Vdc pulsed output
T	Solid-state relay, 1A
Y	5A/3A (120/240 Vac) relay, but normally closed (output 2 only).

## ALARM TYPE

With dual alarm option: See ordering code.

## 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 Cutout	1.771" x 1.771" (45 mm x 45 mm)
Depth Behind Panel	3.937" (100 mm)
Front-Panel Rating	NEMA 4X (IP65)
Connections	Screw terminals

Specifications subject to change without notice.

