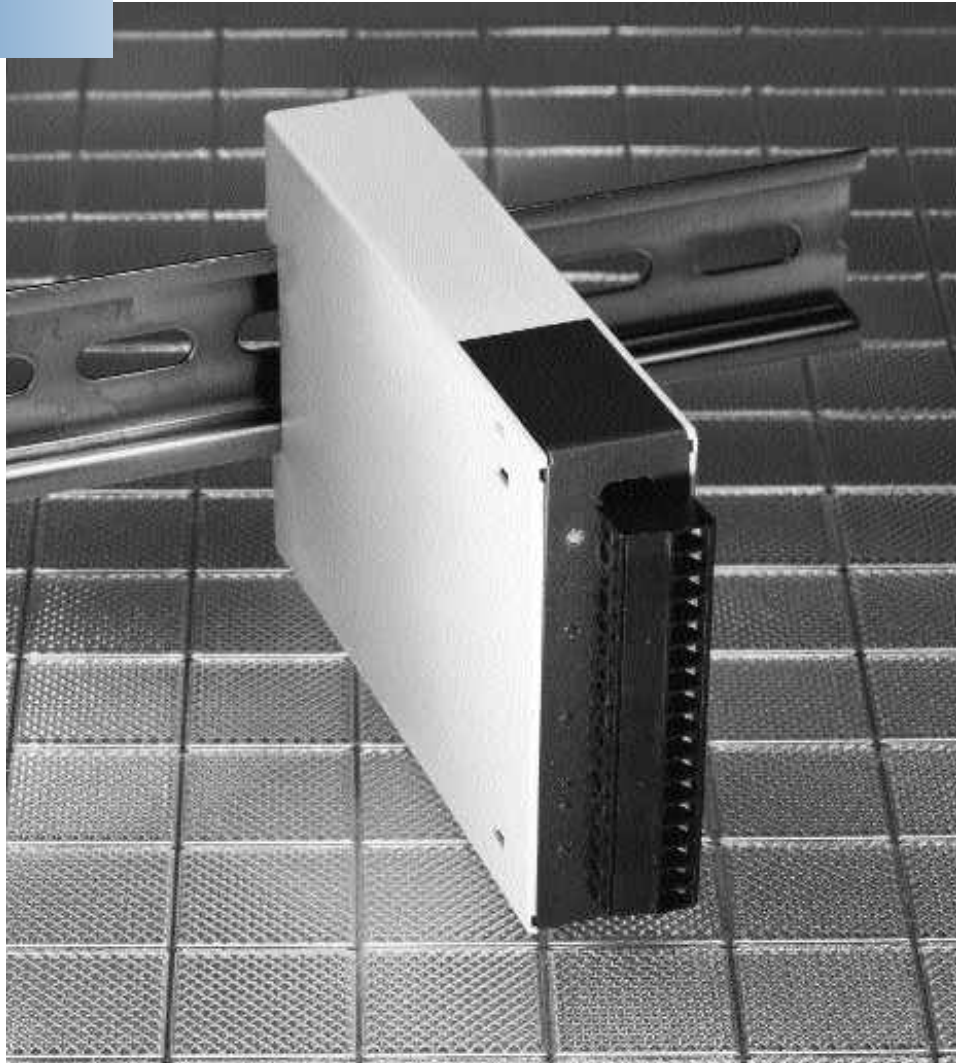


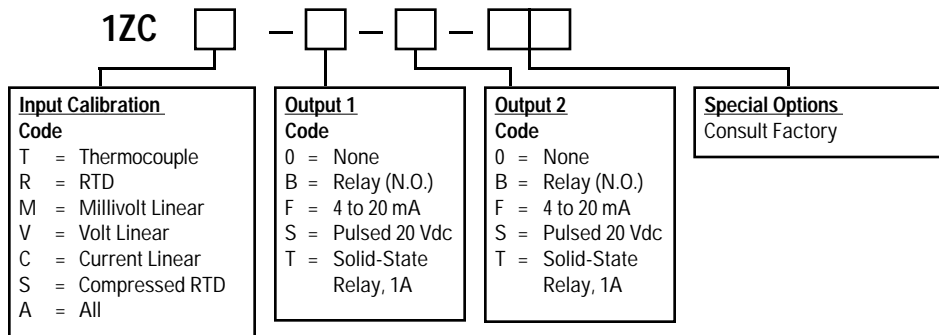
# SERIES 1ZC

## DIN Rail Type Temperature/Process Controller

- Miniature DIN Rail Mountable Enclosure Stackable to Required Number of Zones
- Each Zone Independently Powered 100-250 V 50/60 Hz (24 Vac/dc available)
- RS-485 Serial Communications Using Athena + Protocol
- Easy Communications Bus Wiring
- Auto Tune
- Each Output Universally Configurable as Heat/Cool or Alarm
- Accepts RTD (2 and 3 Wire), Thermocouple, and Linear Inputs
- Loop Break Alarm
- Pluggable Terminal Block for Easy Wiring and Controller Replacement
- Optically Isolated Inputs and Outputs



## 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)		



## SPECIFICATIONS

### OPERATING LIMITS

Ambient Temperature	32° F to 131° F (0° C to 55° C)
Relative Humidity Tolerance	90%, non-condensing
Power	100-250 V 50/60 Hz (single-phase) 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

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
Manual Control	Operator initiated

### 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

Specifications subject to change without notice.

### OUTPUTS

B	5A/3A (120/240 Vac) relay, normally open
F	4-20 mA, full output to load with 500 ohm impedance, max.
S	20 Vdc pulsed output
T	Solid-state relay, 1 A

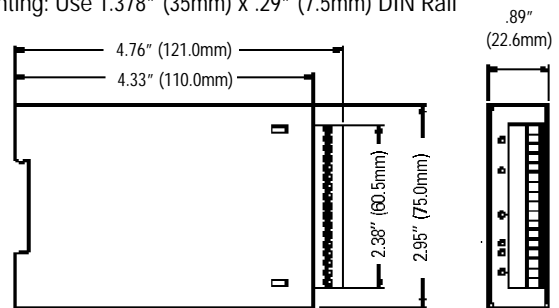
### COMMUNICATIONS TYPE

RS-485 Standard

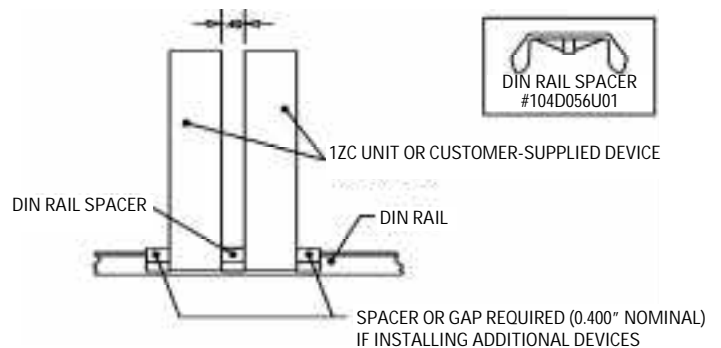
### MECHANICAL CHARACTERISTICS

Display	LED displays for Sensor Error, RXD, TXD, Output 1, Output 2, Power/Run
Connections	Screw terminals

Mounting: Use 1.378" (35mm) x .29" (7.5mm) DIN Rail



### MOUNTING CLEARANCE REQUIREMENTS



### 1ZC CONTACT IDENTIFICATION

#### Contact #/Description

1	Sensor (-) T/C, RTD, or Process
2	Sensor (+) T/C, RTD, or Process
3	Sensor Bias for RTD
4	Comms RS485 + ("A") I/O line bidirectional
5	Comms RS485 - ("B") I/O line bidirectional
6	Output 1 Relay, N.O., SS relay: Load; Process (+)
7	Output 1 Relay, common, SS relay: Load; Process: (-)
8	Output 2 Relay, N.O., SS relay: Load; Process (+)
9	Output 2 Relay, common, SS relay: Load; Process: (-)
10	Power Input, L2 (reference only, no polarity required)
11	Power Input, L1 (reference only, no polarity required)