

THERMOMETER

AT-803

*One Setpoint



TC Measuring Range

| Sensor | Range | Sensor | Measuring Range | Resolution | Accuracy (23°C ±5°C) |
|--------|-------|--------------|-----------------|------------|----------------------|
| TC | A | K | -50.0 ~ 199.9°C | 0.1°C | ±0.5%FS |
| | | | -58.0 ~ 391.8°F | 0.1°F | ±0.5%FS |
| | B | K | -50 ~ 1200°C | 1°C | ±0.2%FS |
| | | | -58 ~ 2192°F | 1°F | ±0.2%FS |
| | J | J | -50 ~ 1000°C | 1°C | ±0.2%FS |
| | | | -58 ~ 1832°F | 1°F | ±0.2%FS |
| | T | T | -50 ~ 400°C | 1°C | ±0.6%FS |
| | | | -58 ~ 752°F | 1°F | ±0.6%FS |
| R | R | -10 ~ 1700°C | 1°C | ±0.4%FS | |
| | | 14 ~ 3092°F | 1°F | ±0.4%FS | |

(Cold Junction compensator accuracy : ±1°C (10 to 40°C))

RTD Measuring Range

| Code | Range | Sensor | Measuring Range | Resolution | Accuracy (23°C ±5°C) |
|------|-------|--------|------------------|------------|----------------------|
| PT | PA | Pt-100 | -100.0 ~ 199.9°C | 0.1°C | ±0.15%FS |
| | | | -148.0 ~ 391.8°F | 0.1°F | ±0.15%FS |
| | PB | Pt-100 | -100 ~ 600°C | 1°C | ±0.3%FS |
| | | | -148 ~ 1112°F | 1°F | ±0.3%FS |

Specifications

Measuring Section

Input Configuration: Single Ended
 Operation Method: Dual Slope A/D Conversion
 Conversion Rate: 0.625/sec (TC), 1.25/sec (RTD)
 Normal Mode Rejection: More than NMR 40dB (Typ)
 Display: 7 Segment LED 14.2mm 3 1/2digit (Red)
 Polarity: A"_" is displayed automatically
 Zero Display: Leading Zero Suppression
 Overage Indication: When input exceed the maximum display, flash "0.FL" or "-0.FL"
 Sensor Compensate: ±99 digit

TC Measurement Section

Input Sensor: K,J,T,R
 Temperature Display: °C or ° F selection on tact switch
 Sensor Lead Resistance: Less than 50 Ω
 Linearizing Method: Digital Linearizing
 Burn-out Alarm : "... " flash
 Temp. Coefficient : ±200ppm/°C at fullscale (0~50°C)
 Excessive input : DC ± 5V

RTD Measurement Section

Input Sensor: PT100 Ω
 Current for Resistance: 1mA (Typ.)
 Temperature Display : °C or ° F selection on tact switch
 External Lead Resistance : Less than 10 Ω for one lead wire
 Linearizing Method: Digital Linearizing
 Burn-out Alarm : When A or B connection burn-out, "oFL" flash
 When C connection burn-out, "... " flash
 Temp. Coefficient : ±200ppm/°C at fullscale (0~50°C)

Comparator Section

control Method: Microcomputer system
 Setting Range : -1999~0~+9999(one setpoint)
 Comparative Operation: By conversion rate
 Comparative Condition: Indication > Setpoint → ALM Lit (A type)
 Indication < Setpoint → ALM Lit (B type)
 Comparison Relay Output: Contact capacity of each relay
 250VAC 0.2A Resistive Load
 120VAC 0.5A Resistive Load

Feature

- Sensor types K,J,T,R,Pt-100 Ω
- Selectable Sensor (Only for TC type)
- Selectable °C, °F Display
- Available Relay Output
- Provided Sensor Compensate Function
- BCD Output (Option) TTL, Open collector
- Analog Output (Option) 4-20mA, 0-10V
- DIN Size 96mm (W) ×48mm (H)×95mm (D)

Common Section

Memory Back up : EEPROM (More than 100,000 time rewrite) about 10 years
 Operating Temperature : 0~50°C 35~85% RH (no condensation)
 Storage Temperature: -10~70°C Less than 60%RH
 Power Supply: 90 to 132VAC, 180 to 264VAC
 Selectable internal switch
 Power Consumption : Approx. 2VA
 Dimensions : 48(H) x 96(W)x 95(D)mm DIN Size
 Weight : Approx. 300g
 Dielectric Strength: Between; input and 0V terminal 500VDC
 Between; input and common, relay output terminal 500VDC
 Between power supply and common, case, relay output terminal 1500VAC/min.
 Insulation Resistance : 500VDC 100MΩ at above terminal
 Dielectric Noise: Power supply connector normal / common mode±1500V noise width 500nS
 Accessories : Instruction Manual, Unit Label, Cover for connector

Output

●BCD Data Output (Isolated from input(LO))
 ●At Open Collector
 Measured data: Negative logic transistor "ON" at logic "1"
 Polarity signal : Transistor "ON" at minus input
 "OVER" signal: Transistor "ON" at overflow input
 Printing command signal: Transistor "ON" during a period of approx 20ms at every measurement completion
 Transistor output capacity: Applied voltage, 30V max. current, 10mA max Saturated output voltage less than 1.2V at 10mA
 ●At TTL
 Measured data: Tri-state parallel BCD positive logic with latch output
 Polarity signal: Level"1" at minus display
 "OVER" signal: Level"1" at overflow input
 Printing command signal: Positive pulse approx 20ms at every measurement completion
 TTL level, funout 2
 ●Analog output (Isolated from input)
 Output : 4~20mA, 0~10V
 Accuracy: Less than 0.5%FS (23°C±5°C)
 Load Resistance: Less than 550Ω(4~20mA)
 More than 10kΩ(0~10V)

Sales, Service, Technical support

Topac Inc.

101 Derby St., Hingham MA 02043 USA

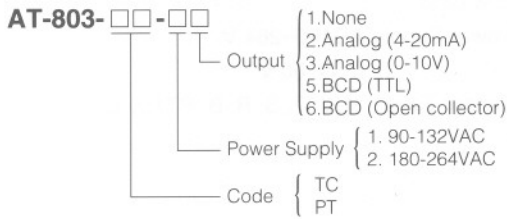
www.topac.com, sales@topac.com

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Ordering Code

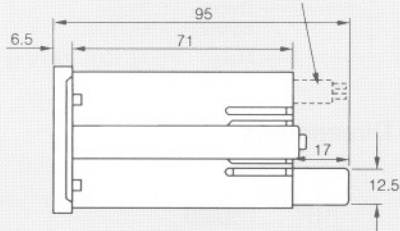


Dimensions

Front

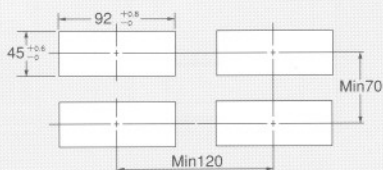


BCD, ANALOG Output



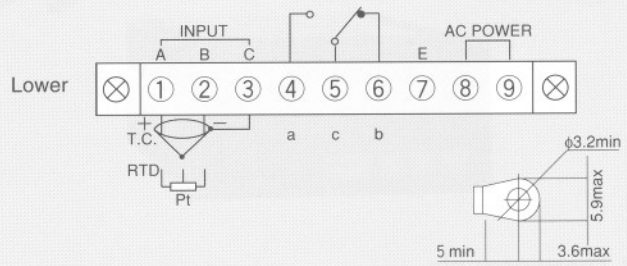
Side

Panel Cutout

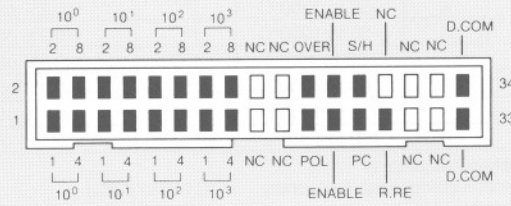


Panel thickness: 0.8 to 5.0mm

Connection Diagram



BCD Output (MIL Connector)



Analog Output



Thermometer

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