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Data Sheet
July 30, 2026

WATLOW

Watlow Series 981c-10cc-AARG Temperature Controller

The Watlow Series 981c-10cc-AARG is a microprocessor-based PID temperature controller featuring auto-tuning capability and programmable multi-step profiles for precise thermal management in industrial processes. This 1/8 DIN form factor unit delivers flexible I/O configurations, non-volatile memory, and burst-fire control in a compact 4-inch deep enclosure rated NEMA 4X for harsh environments. Typical Applications Process heating, thermal profiling, gas valve modulation, and multi-stage cure cycles requiring precise setpoint management and event-driven logic. Compatibility & Integration Direct integration with solid-state relays, electromagnetic relays, and analog control instrumentation. Supports thermistors and slidewire feedback systems for OEM integration. Aumictech offers NIST-traceable calibration and repair for the Watlow 981c-10cc-AARG. Calibration covers I/O channel accuracy

MODEL	CALIBRATION
Watlow 981c-10cc-AARG	Available on request
CONDITION	**STATUS**
Used	In stock
RFQ / SKU	**LISTING**
981c-10cc-AARG	https://aumictechlabs.com/products/981c-10cc-aarg-2/

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Watlow Series 981c-10cc-AARG is a microprocessor-based PID temperature controller featuring auto-tuning capability and programmable multi-step profiles for precise thermal management in industrial processes. This 1/8 DIN form factor unit delivers flexible I/O

configurations, non-volatile memory, and burst-fire control in a compact 4-inch deep enclosure rated NEMA 4X for harsh environments. Technical Specifications Control Architecture Auto-tuning PID with burst-fire control capability Four independent program files, each containing six steps (24 steps total) Files linkable into single 24-step sequences with guaranteed soak deviation Ramp-rate or time-based profile execution Program looping and remote start/hold capability Wait-for-event programming option Program status retention through power-loss events Sampling & Response Control outputs and single input: 10 Hz Dual input configuration: 5 Hz Display refresh: 2 Hz Retransmit, remote setpoint, and alarm outputs: 1 Hz Electrical Input: 24 to 28 V AC/DC (±10%, -15%) Frequency: 50/60 Hz (±5%) Maximum power consumption: 16 VA Factory-replaceable Slo-Blo® fuses: 2 A at 250 V (high voltage) or 5 A at 250 V (low voltage) Non-volatile memory preserves configuration after power failure Key Features Accepts 11 thermocouple types (J, K, T, R, S, B, E, N), RTD, and scalable process inputs Secondary input factory-configured for slidewire feedback (gas valve applications) Up to two discrete event inputs SSR and relay control outputs with optional analog retransmit (0–10 V or 4–20 mA) Dual auxiliary outputs for time-based events or alarms Hardware and software parameter lockout for operator security Touch-safe terminals with #6 compression universal screws (28–14 gauge wire) Environmental Operating: 0 to 55°C, 0 to 90% RH non-condensing Storage: −40 to 85°C Typical Applications Process heating, thermal profiling, gas valve modulation, and multi-stage cure cycles requiring precise setpoint management and event-driven logic. Compatibility & Integration Direct integration with solid-state relays, electromagnetic relays, and analog control instrumentation. Supports thermistors and slidewire feedback systems for OEM integration.

981C10CCAARG Specifications

PARAMETER	VALUE
Constants For This	1/8 DIN Ramping
Controller	The Watlow SERIES 982 vertical
Features and Benefits	Four files / 24 steps
Ordering Information	To order, complete the code number with the information below:
Single chanel	1
horizontal mounting	2 = 100 to 240Vı(ac/dc) nominal,
vertical mounting	3 = 24 to 28Vı(ac/dc) nominal,
Software	C = Standard (4-file, 6 step per file,
program capability)	Input 1
Input 2	0 = None
standard on all units)	Output 1
RC suppression	F = Universal process, 0-5VÎ(dc), 1-5VÎ(dc),
fast cycle times or extended service life.	2
Agency Approvals	• CE: 89/336/EEC Electromagnetic Compatibility Directive.
Operator Interface	• Dual, four digit LED displays. Upper: 0.4 in. (10 mm).
Available with basic or universal signal conditioner	Type C
Type D	2
Pt 2	2
Available with universal signal conditioner	Type B870to1816°C(1598 to 3300°F)
RTD Resolution (DIN or JIS)	1° (DIN) -200to800°C(-328 to 1472°F)
Process	-999 to 9999 units for all: 0-5VÎ(dc); 1-5VÎ(dc); 0-10VÎ(dc);
Input 2 slidewire feedback	100 to 1200Ω.
Line Voltage/Power	• 100-240Vı(ac/dc) +10 percent, -15 percent; 50/60Hz, ±5 percent.
Operating Environment	• 0 to 55°C (32 to 130°F), 0 to 90 percent RH, non-condensing.

PARAMETER	VALUE
Storage Temperature	• -40 to 85°C (-40 to 185°F).
Terminals	• #6 compression universal head screws, accepts 28-14 gauge wire.
Shipping Weight	• .35 kg lbs (3.01 lbs).
Sample/Update Rates	• 1 input, PID and control outputs: 10Hz.
Your Authorized Watlow Distributor is	WIN-981-0903

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	• -40 to 85°C (-40 to 185°F). Terminals • #6 compression universal head screws, accepts 28-14 gauge wire.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet (https://www.instrumart.com/assets/981_982.pdf). Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

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Specifications C) C) C)
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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