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Data Sheet

August 13, 2026

LAKE SHORE

Lake Shore DRC-93C

Instrument Type: Cryogenic Temperature Controller Alias: DRC-93C; DRC93C; Lake Shore DRC-93C Control Type: three-term PID real-time analog control PID Range: GAIN, RESET, and RATE each 0.1 to 99 (990 to 1 range) Alias: DRC-93C; DRC93C; Lake Shore DRC-93C Control Type: three-term PID real-time analog control PID Range: GAIN, RESET, and RATE each 0.1 to 99 (990 to 1 range) Heater Output: up to 50 W (1 A, 50 V) standard



MODEL

Lake Shore DRC-93C

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

DRC-93C

LISTING

<https://aumictechlabs.com/products/drc-93c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Lake Shore DRC-93C is a microprocessor-based temperature controller delivering three-term analog PID control for cryogenic research and industrial temperature regulation. It accommodates one or two interchangeable sensor input cards and provides dual five-digit displays with direct temperature readout in Kelvin, Celsius, or Fahrenheit when paired with compatible sensors like the DT-470 Series. Technical Specifications Control Architecture Three-term PID control with proportional (GAIN), integral (RESET), and derivative (RATE) parameters, each adjustable from 0.1 to 99 16-bit analog-to-digital converter with 100 microvolt resolution Sensor Inputs & Display Accepts one or two input cards; cards may differ in type for multimodal sensing Compatible with silicon sensors (9210-3, 9220-3) or proprietary Gallium-Aluminum-Arsenide sensors Optional 8229 Scanner Card extends capacity to 6 sensors Dual five-digit displays; 0.01 K resolution above

100 K, 0.001 K below 100 K Optional High Resolution Setpoint mode: 0.01 K above 40 K, 0.001 K below 28 K (DT-470 series) Direct sensor voltage display to 100 microvolt resolution; ohms and nanofarads also supported Setpoint Control Standard setpoint settability: 0.1 degrees Optional High Resolution Setpoint: 0.01 degrees above 100 K, 0.001 degrees below 100 K Five-digit setpoint entry in temperature units; range determined by input card Heater Output Maximum output: 50 watts into 50 ohm load Digital bar graph displays power as percentage of selected range Rear-panel rheostat enables maximum power limiting Optional W60 output stage: 60 watts into 25 ohm load Programming & Control Internal program memory: up to 99 steps Math functions integrated IEEE-488 interface standard for remote control of all front-panel functions and dual-input data access Key Features Flexible sensor input architecture with mixed card types Dual independent sensor displays with selectable units High-resolution temperature setting and monitoring for low-temperature applications Field-adjustable heater power limiting Typical Applications Cryogenic material characterization, helium liquefier operation, dilution refrigerator control, materials science research, industrial temperature management in low-temperature environments. Compatibility & Integration Standard IEEE-488 GPIB interface enables networked instrument control and automated data logging. Compatible sensor ecosystems include DT-470 diode sensors and silicon resistance thermometers.

Features & description

From manufacturer datasheet

Features

- Analog PID; GAIN/RESET/RATE 0.1 to 99

DRC93C Characteristics / Specifications

PARAMETER	VALUE
Model	DRC-93C
Manufacturer	Lake Shore Cryotronics
Instrument Type	Cryogenic Temperature Controller
Series	DRC-93C
Alias	DRC-93C; DRC93C; Lake Shore DRC-93C
Control Type	three-term PID real-time analog control
PID Range	GAIN, RESET, and RATE each 0.1 to 99 (990 to 1 range)
Heater Output	up to 50 W (1 A, 50 V) standard
Heater Load Switch	rear slide 10-25, 25-35, or 35-50 ohm (power off to change)
Heater Ranges	five output ranges, approximate decade step reductions
Heater Monitor	bar display of current or power as percent of range, 1% resolution
Sensor Slots	2 input card slots (A and B)
Scanner Option	8229 adds four additional channels; dwell 0 (skip) to 99 s
Display	5-digit LED in K, C, F, or sensor units (V, ohm, nF)
Display Resolution	0.001 K below 100 K; 0.01 K above 100 K (0.0001 K below 10 K with 9317C)
Setpoint Resolution Temperature	0.1 in corresponding units (high-resolution option 0.01 above 100 K, 0.001 below 100 K)
Typical Controllability	better than 1 mK below 30 K and 5 mK above 30 K in properly designed system
IEEE488 Interface	standard; remote setpoint, gain, rate, reset, units, heater, curves, ramps
RS232 Option	8223
Analog Output Option	8225, 10 mV/K in temperature units (sensor-unit scalings per card)
Line Power	90-110, 105-125, or 210-250 Vac selected rear panel, 50 or 60 Hz, 75 W
Dimensions	432 mmW x 102 mmH x 330 mm D (17 × 4 × 13 in), Style L full rack
Net Weight	8 kg (17 lb)

PARAMETER	VALUE
Example Input Cards	9210 diode; 9220; 9215 capacitance; 9305 thermocouple; 9317C Ge; 9318C Ge/CGR
Response Time Electronics	less than 1 s to rated accuracy for non-Lagrangian calculations
Factory IEEE Address	12 class (confirm rear address switch)
Successor	Lake Shore 340 / 336 / 350 class controllers Notes Specs from Lake Shore DRC-93C instruction manual Table 1.1 and heater paragraphs (50 W / 1 A / 50 V, PID 0.1-99, 75 W line, 17×4×13 in). Sensor accuracy follows the installed input cards. Confirm line voltage wheel, heater resistance switch, and option cards. DRC-93CA is the related analog-control family variant.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	DRC-93C
Manufacturer	Lake Shore Cryotronics
Instrument Type	Cryogenic Temperature Controller
Specifications	
PARAMETER	VALUE
Series	DRC-93C
Alias	DRC-93C; DRC93C; Lake Shore DRC-93C
Control Type	three-term PID real-time analog control
Specifications	
PARAMETER	VALUE
PID Range	GAIN, RESET, and RATE each 0.1 to 99 (990 to 1 range)
Heater Output	up to 50 W (1 A, 50 V) standard
Heater Load Switch	rear slide 10-25, 25-35, or 35-50 ohm (power off to change)
Heater Ranges: five output ranges, approximate decade step reductions	
Heater Monitor: bar display of current or power as percent of range, 1% resolution	
Optional Heater: W60 60 W, 1.5 A at about 43 V into 25 ohm	
Specifications	
PARAMETER	VALUE
Sensor Slots	2 input card slots (A and B)
Scanner Option	8229 adds four additionalAchannels; dwell 0 (skip) to 99 s
Display	5-digit LED in K, C, F, or sensor units (V, ohm, nF)
Specifications	

PARAMETER	VALUE
Display Resolution	0.001 K below 100 K; 0.01 K above 100 K (0.0001 K below 10 K with 9317C)
Setpoint Resolution Temperature	0.1 in corresponding units (high-resolution option 0.01 above 100 K, 0.001 below 100 K)
Typical Controllability	better than 1 mK below 30 K and 5 mK above 30 K inappropriately designed system

Specifications

PARAMETER	VALUE
IEEE488 Interface	standard; remote setpoint, gain, rate, reset, units, heater, curves, ramps
RS232 Option	8223
Analog Output Option	8225, 10 mV/K in temperature units (sensor-unit scalings per card)

Specifications

PARAMETER	VALUE
Line Power	90-110, 105-125, or 210-250 Vac selected rear panel, 50 or 60 Hz, 75 W
Dimensions	432 mmWx 102 mmHx 330 mm D (17 x 4 x 13 in), StyleIfull rack
Net Weight	8 kg (17 lb)

Specifications

PARAMETER	VALUE
Example Input Cards	9210 diode; 9220; 9215 capacitance; 9305 thermocouple; 9317C Ge; 9318C Ge/CGR
Response Time Electronics	less than 1 s to rated accuracy for non-Lagrangian calculations
Factory IEEE Address	12 class (confirm rear address switch)

Successor: Lake Shore 340 / 336 / 350 class controllers

Notes

Specs from Lake Shore DRC-93C instruction manual Table 1.1 and heater paragraphs (50 W / 1 A / 50 V, PID 0.1-99, 75 W line, 17x4x13 in). Sensor accuracy follows the installed input cards. Confirm line voltage wheel, heater resistance switch, and option cards. DRC-93CA is the related analog-control family variant.

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

Aumictech

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30-day returns
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Generated August 13, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.