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Data Sheet

August 13, 2026

STANFORD RESEARCH SYSTEMS

Stanford Research CIS100 Gas Analyzers

Stanford Research Systems CIS100 Closed Ion Source Quadrupole Gas Analyzer The SRS CIS100 is the 100 amu closed-ion-source quadrupole gas analyzer for direct measurement of trace impurities in process gases at pressures up to 10 mTorr. A high-conductance closed ion source (electron-impact, gold-plated SS304) operates in CIS mode (typically 0.05 mA emission) or open RGA mode (typically 0.5 mA). Faraday cup and electron multiplier detectors are standard on CIS-with-multiplier ordering configurations. Probe mounts on a 2.75 inch CF flange; the electronics control unit separates for bakeout to 300 C. The SRS CIS100 is the 100 amu closed-ion-source quadrupole gas analyzer for direct measurement of trace impurities in process gases at pressures up to 10 mTorr. A high-conductance closed ion source (electron-impact, gold-plated SS304) operates in CIS mode (typically 0.05 mA emission) or open RGA mode (typically 0.5 mA). Faraday cup and electron multiplier detectors are standard on CIS-with-multiplier ordering configurations. Probe mounts on a 2.75 inch CF flange; the electronics control unit separates for bakeout to 300 C. Process-gas impurity monitoring at mTorr pressures; verification of process chambers; RGA-mode UHV residual-gas scans; semiconductor and vacuum-process equipment qualification where 100 amu coverage is sufficient.



MODEL

**Stanford Research
Systems CIS100**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

CIS100

LISTING

<https://aumictechlabs.com/products/cis100-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Stanford Research Systems CIS100 is a Closed Ion Source Gas Analyzer for precise quantitative gas composition measurement in laboratory and industrial environments. It combines a quadrupole mass spectrometer with an integrated CIS ionizer in a compact 2.75" Conflat® flange probe, enabling direct chamber connection for on-line process monitoring, gas purity verification, residual gas analysis, and leak detection without sample preparation or external ionizer modules.

Technical Specifications
Mass Range: 100 amu
Detection Limit: 1 ppm (electron multiplier), 10 ppm (Faraday cup), 1×10^{-12} Torr
Maximum Operating Pressure: 10 mTorr
Resolution: Better than 0.1 amu
Mass Stability: ± 0.1 amu after 30 minutes
Warm-up Time: Peak height $\pm 2\%$ after 3 minutes
Power Requirement: 24 VDC @ 2.5 A (optional AC line module available)
Computer Interface: RS-232C, 28,800 baud
Physical: 6 lbs, compact probe design with integrated control unit

Key Features
Gold-plated stainless steel ionizer reduces outgassing and resists reactive gases
Tungsten filament tolerates corrosive environments including WF_6 and silane exposure
Dual detector configuration: Faraday cup and continuous dynode electron multiplier
Field-replaceable electron multiplier and filament for minimal downtime
Windows-based software supports up to eight ECUs with real-time RGA analysis
Programmable mass scale tuning, sensitivity calibration, and ionizer setup
User-selectable output units: ppm, Torr, mbar, Pa, A
Data export in ASCII format; image export as META files or clipboard
Programmable alarms and electron multiplier gain adjustment

Typical Applications
On-line process gas monitoring and closed-loop control
Process gas purity verification at sub-ppm levels
High-vacuum residual gas analysis
Equipment leak detection and isolation

Compatibility & Integration
Requires connection to a pumping system with minimum 40 L/s effective pumping speed and base pressure below 10^{-9} Torr. Optional O100TDP provides integrated turbo pump and diaphragm roughing pump for direct mounting.

Features & description

From manufacturer datasheet

Features

- Mass range 1 to 100 amu (CIS200 is 200 amu; CIS300 is 300 amu) • CIS and RGA operating modes with programmable electron energy 25 to 105 eV • Better than 0.5 amu resolution at 10 percent peak height (AVS 2.3) • Field-replaceable tungsten or ThO₂/Ir filament with firmware protection • RS-232C 28800 baud and Windows RGA application; multi-head operation • 24 VDC at 2.5 A; optional AC power module; optional O100TDP turbo/diaphragm pump

CIS100 Characteristics / Specifications

PARAMETER	VALUE
Model	CIS100
Manufacturer	Stanford Research Systems
Instrument Type	Closed Ion Source Quadrupole Gas Analyzer
Series	CIS100/CIS200/CIS300
Alias	CIS100; CIS100/1; SRS CIS100
Mass Range	1 to 100 amu
Ion Source Type	high conductance closed ion source
Mass Filter Type	quadrupole, cylindrical rods 0.25 in diameter, 4.5 in length
Detector Type	Faraday cup standard; electron multiplier (CDEM) included on CIS/1 multiplier configurations
Resolution	better than 0.5 amu at 10 percent peak height; adjustable to constant peak width
Maximum Operating Temperature	70 C
Bakeout Temperature	300 C without ECU (manual also lists 350 C FC / 300 C CDEM max bake)
Recommended Bakeout Temperature	200 C
Ionizer Design	closed ion source, cylindrical symmetry, electron impact
Ionizer Material	gold plated SS304
Filament	tungsten or ThO ₂ /Ir with firmware protection, field replaceable
Electron Energy	25 to 105 eV, programmable
Ion Energy	4 or 8 eV, programmable
Focus Voltage	0 to 150 V, programmable
Electron Emission Current	0 to 1 mA, programmable
CIS Mode Emission Typical	0.05 mA
RGA Mode Emission Typical	0.5 mA
CIS Mode Sensitivity	1e-6 A/Torr (N ₂ at 28 amu, Faraday)
RGA Mode Sensitivity	1e-5 A/Torr (N ₂ at 28 amu, Faraday)

PARAMETER	VALUE
CIS Linear Range Upper Limit	2e-3 Torr
RGA Linear Range Upper Limit	1e-4 Torr
CIS MDPP Faraday	1e-8 Torr
RGA MDPP Faraday	1e-9 Torr
CIS MDPP CDEM	1e-10 Torr
RGA MDPP CDEM	1e-11 Torr
Maximum Operating Pressure Faraday	1e-2 Torr to UHV
Maximum Operating Pressure CDEM	2e-3 Torr to UHV
Probe Mounting Flange	2.75 inch CF
ECU Dimensions	4.1 in x 3.1 in x 9.1 in (WHD)
Warm Up Peak Height	+/-2 percent after 3 minutes
Warm Up Mass Stability	+/-0.1 amu after 30 minutes
Computer Interface	RS-232C, 28800 baud with high-level command set
Power Requirement	24 VDC at 2.5 A, male DB9; optional built-in AC module
Weight	6 lbs
Detection Limit Family	1 ppm class / 1e-12 Torr class (CIS series headlines)
Ionizer Conductance Nominal	0.4 L/s
Heater Jacket Option	O100HJC 200 C Notes Specs from SRS CIS catalog, CIS product page, and CIS100/200/300 manual. CIS100 is the 100 amu closed-ion-source analyzer, notaQMS100 atmospheric sampling cart. Confirm filament type, CDEM option, and ECU power module.
Operating temperature	70 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	70 C
Operating Temperature	70 C
Bakeout Temperature	300 C without ECU (manual also lists 350 C FC / 300 C CDEM max bake)
Recommended Bakeout Temperature	200 C
Ionizer Design	closed ion source, cylindrical symmetry, electron impact
Ionizer Material	gold plated SS304
Filament	tungsten or ThO ₂ /Ir with firmware protection, field replaceable
Electron Energy	25 to 105 eV, programmable
Ion Energy	4 or 8 eV, programmable
Focus Voltage	0 to 150 V, programmable
Electron Emission Current	0 to 1 mA, programmable
CIS Mode Emission Typical	0.05 mA
RGA Mode Emission Typical	0.5 mA
CIS Mode Sensitivity	1e-6 A/Torr (N ₂ at 28 amu, Faraday)
RGA Mode Sensitivity	1e-5 A/Torr (N ₂ at 28 amu, Faraday)
CIS Linear Range Upper Limit	2e-3 Torr
RGA Linear Range Upper Limit	1e-4 Torr
CIS MDPP Faraday	1e-8 Torr
RGA MDPP Faraday	1e-9 Torr
CIS MDPP CDEM	1e-10 Torr
RGA MDPP CDEM	1e-11 Torr
Maximum Operating Pressure Faraday	1e-2 Torr to UHV
Maximum Operating Pressure CDEM	2e-3 Torr to UHV
Probe Mounting Flange	2.75 inch CF
ECU Dimensions	4.1 in x 3.1 in x 9.1 in (WHD)

PARAMETER	VALUE
Warm Up Peak Height	+/-2 percent after 3 minutes
Warm Up Mass Stability	+/-0.1 amu after 30 minutes
Computer Interface	RS-232C, 28800 baud with high-level command set
Power Requirement	24 VDC at 2.5 A, male DB9; optional built-in AC module
Weight	6 lbs
Detection Limit Family	1 ppm class / 1e-12 Torr class (CIS series headlines)
Ionizer Conductance Nominal	0.4 L/s
Heater Jacket Option	O100HJC 200 C Notes Specs from SRS CIS catalog, CIS product page, and CIS100/200/300 manual. CIS100 is the 100 amu closed-ion-source analyzer, notaQMS100 atmospheric sampling cart. Confirm filament type, CDEM option, and ECU power module.

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	CIS100
Manufacturer	Stanford Research Systems
Instrument Type	Closed Ion Source Quadrupole Gas Analyzer
Series	CIS100/CIS200/CIS300
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Mass Filter Type	quadrupole, cylindrical rods 0.25 in diameter, 4.5 in length
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Recommended Bakeout Temperature	200 C
Ionizer Design	closed ion source, cylindrical symmetry, electron impact
Ionizer Material	gold plated SS304
Filament	tungsten or ThO2/Ir with firmware protection, field replaceable
Electron Energy	25 to 105 eV, programmable
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Focus Voltage	0 to 150 V, programmable
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CIS Mode Emission Typical	0.05 mA
RGA Mode Emission Typical	0.5 mA
CIS Mode Sensitivity	1e-6 A/Torr (N2 at 28 amu, Faraday)
RGA Mode Sensitivity	1e-5 A/Torr (N2 at 28 amu, Faraday)
CIS Linear Range Upper Limit	2e-3 Torr

PARAMETER	VALUE
RGA Linear Range Upper Limit	1e-4 Torr
CIS MDPP Faraday	1e-8 Torr
RGA MDPP Faraday	1e-9 Torr
CIS MDPP CDEM	1e-10 Torr
RGA MDPP CDEM	1e-11 Torr
Maximum Operating Pressure Faraday	1e-2 Torr to UHV
Maximum Operating Pressure CDEM	2e-3 Torr to UHV
Probe Mounting Flange	2.75 inch CF
ECU Dimensions	4.1 in x 3.1 in x 9.1 in (WHD)
Warm Up Peak Height	+/-2 percent after 3 minutes
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Computer Interface	RS-232C, 28800 baud with high-level command set
Power Requirement	24 VDC at 2.5 A, male DB9; optional built-in AC module
Weight	6 lbs
Detection Limit Family	1 ppm class / 1e-12 Torr class (CIS series headlines)
Ionizer Conductance Nominal	0.4 L/s
Heater Jacket Option	0100HJC 200 C

Notes

Specs from SRS CIS catalog, CIS product page, and CIS100/200/300 manual. CIS100 is the 100 amu closed-ion-source analyzer, notaQMS100 atmospheric sampling cart. Confirm filament type, CDEM option, and ECU power module.

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