

HOT FILAMENT ION GAUGES

KJLC 351 Series Hot Cathode Mini-Ion Vacuum Gauge



Kurt J. Lesker
Company

VACUUM MART
DIVISION

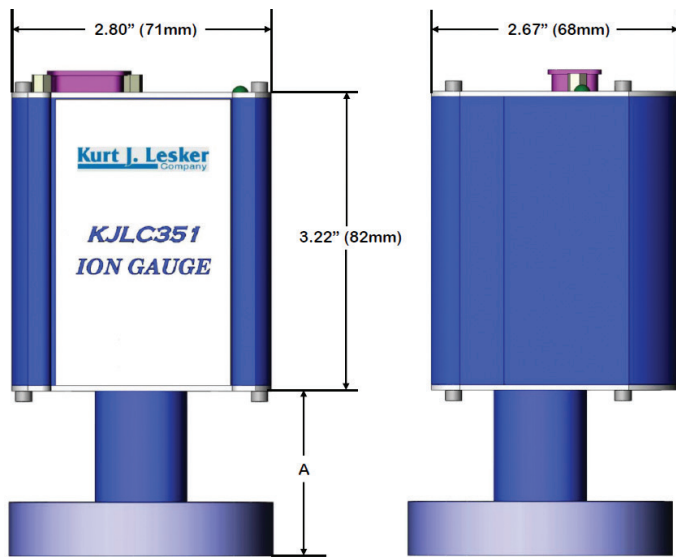
Features

- Wide measurement range:
1.0 x 10⁻⁹ to 5 x 10⁻² Torr
1.3 x 10⁻⁹ to 6.7 x 10⁻² mbar
1.3 x 10⁻⁷ to 6.7 Pa
- Ionization gauge designed specifically for use with KJLC's multigauging controllers
- Significant cost savings compared to other vacuum gauge measurement systems
- Full range measurement from 1 x 10⁻⁹ Torr to atmosphere when used with the KJLC Multi-gauge Controller Series (MGC) and a convection gauge
- Dual hot filament design, rugged and compact metal construction
- Built-in electrometer results in significant controller and cabling cost reduction

Benefits

- The KJLC351 ionization vacuum gauge module provides the basic signal conditioning required to turn the gauge into a complete measuring instrument.
- The electrometer circuit auto zeroes to ensure that the readings are not subject to temperature drift, eliminating the need for unnecessary and expensive circuitry which further reduces the cost.
- The KJLC351 is functional only when used with the MGC vacuum gauge controller series. This allows the user to remotely operate the KJLC351 from the MGC.
- All operations including filament on/off, degas, and change of emission current is controlled from the MGC.
- The emission current can be set to automatically switch between 4 mA and 100 μ A. This results in optimal and stable pressure readings over the entire measurement range from low to high vacuum.
- The KJLC351 gauge tube assembly is constructed of a compact all metal design with dual yttria coated Iridium or optional dual tungsten filaments.
- For general vacuum applications, dual yttria coated filaments are offered for use with air and inert gases such as N₂, argon, etc. Dual tungsten filaments are available for use with gases that may not be compatible with yttria coated filaments. Please contact customer service for options.
- The gauge sensor assembly can be easily replaced in the field.

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Fitting	Dimension A
NW16KF	1.45 in. (37mm)
NW25KF	1.45 in. (37mm)
NW40KF	1.45 in. (37mm)
1 1/3 in. Mini-CF	1.85 in. (47 mm)
2 3/4 in. Conflat®	1.70 in. (43 mm)

Specifications

Measurement Range	1.0 x 10 ⁻⁹ to 5 x 10 ⁻² Torr / 1.3 x 10 ⁻⁹ to 6.7 x 10 ⁻² mbar / 1.3 x 10 ⁻⁷ to 6.7 Pa
Accuracy - N ₂ (Typical)	1.0 x 10 ⁻⁸ to 5 x 10 ⁻² Torr; ± 15% of reading
Repeatability - (Typical)	± 5% of reading
Materials Exposed To Gases	Dual Filaments: yttria coated iridium or optional tungsten Ion collector: tungsten Grid: tantalum Others: 316/304 SS, glass, nickel
Sensitivity	Factory pre-set. Also user adjustable from 2 to 99 (set by the MGC)
X-Ray Limit	< 5 x 10 ⁻¹⁰ Torr, < 6.7 x 10 ⁻¹⁰ mbar, < 6.7 x 10 ⁻⁸ Pa
Emission Current	100 µA, 4 mA, or automatic switching between 100 µA and 4 mA
Degas	3 W, electron bombardment
Overpressure Protection	Gauge is auto turned off at factory default setting of 5 X 10 ⁻² Torr MGC can also be set up to auto filament turn on/off using a convection gauge
Filament Status	Filament on/off status is determined by LED on the KJLC351 and also display messages and available user interface options on the MGC
Internal Gauge Volume	1.0 in ³ (16.4 cm ³)
Temperature	Operating; 0 to + 40°C Storage; -40 to + 70°C
Bakeout Temperature	200°C (sensor only - electronics removed)
Humidity	0 to 95% relative humidity, non-condensing
Weight	0.6 lb. (0.27 kg) with NW25 KF flange
Housing (Electronics)	Aluminum extrusion
Mounting Orientation	Any
Setpoint Relay	Relays available from the MGC
Input Signal	All KJLC351 operations controlled from the MGC
Filament Selection	User selectable between filament 1 and 2 - command signal sent from the MGC
Input Power	Powered by the MGC
Connector/Cabling	KJLC cable/connector assembly for connection to the MGC
CE Compliance	EMC Directive 2014/30/EU, EN55011, EN61000-6-2, EN61000-6-4, EN61326-1, EN61010-1
Environmental	RoHS compliant

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