

HOT FILAMENT (ION) GAUGES

KJLC 354 Series Controller



Kurt J. Lesker
Company

VACUUM MART
DIVISION

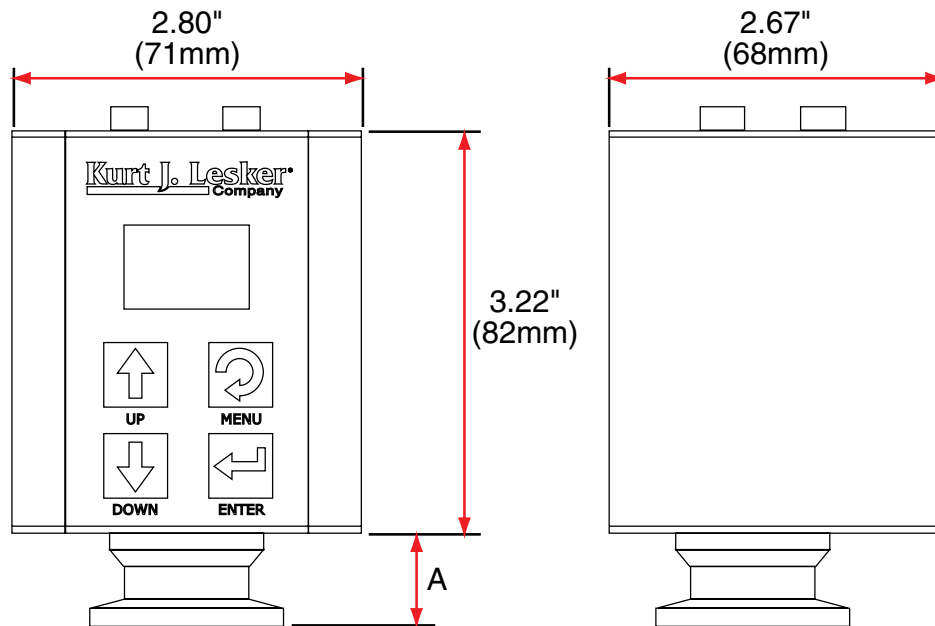
Features

- Dual hot filament Ionization vacuum Gauge module with on-board controller
- Wide measurement range from 1×10^{-9} Torr to 5×10^{-2} Torr
- Includes extremely bright, crisp OLED digital display, set-point relay, analog output, and RS485 interface
- Service and research display screens provide valuable data and ease of use
- Low cost, plug-compatible direct drop-in replacement for the Granville-Phillips[®] Micro-Ion[®]

Benefits

- The electrometer auto zeroes to ensure that the readings are not subject to temperature drift. This eliminates the need for unnecessary and expensive circuitry which further reduces the cost
- Service screens can monitor filament operation. Error messages will be displayed for all fault conditions
- Filament current, emission current, and ion current can be monitored in real time on the research screen. Sensitivity and degas time can be user adjusted
- Setpoint relay can be manually toggled to test for correct wiring
- The display enables the user to select from 16 common gases without having to apply manual correction factors
- The gauge sensor assembly can be easily replaced in the field by simply removing four socket head cap screws
- Dual yttria coated filaments are offered for use with inert gases such as air, N₂, argon, etc. Optional dual tungsten filaments are available for use with gases not compatible with yttria filaments such as those that contain chlorine, fluorine, etc.

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| Fitting | Dimension A |
|--------------|---------------|
| NW16KF | 1.45" (37mm) |
| NW25KF | 1.45" (37mm) |
| NW40KF | 1.45" (37mm) |
| 1½" Mini CF | 1.85" (47 mm) |
| 2¾" Conflat® | 1.70" (43 mm) |

Dimensions Approximate

Specifications

| | |
|----------------------------|--|
| Measurement Range (Signal) | 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 |
| Display | OLED Graphical Display, 3 Digits Plus 2 Digits Exponent, Bright Yellow |
| Materials Exposed To Gases | Dual Filaments: Ytria Coated Iridium Or Optional Tungsten Ion Collector: Tungsten Grid: Tantalum Others: 316/304 SS, Glass, Nickel |
| Sensitivity | Factory Pre-Set. Also User Adjustable Between 2 To 99 Using The Display |
| X-Ray Limit | < 5 X 10 ⁻¹⁰ |
| Emission Current | 100 uA, 4 mA, Or Automatic Switching Between 100 uA And 4 mA |
| Degas | 3 Watts E-Beam |
| Overpressure Protection | Gauge Turns Off At Factory Default Setting Of 5 X 10 ⁻² Torr |
| Internal Gauge Volume | 1.0 in ³ (16.4 cm ³) |
| Operating Temperature | 0 To + 40° C |
| Bakeout Temperature | 200° C (Sensor Only - Electronics Removed) |
| Humidity | 0 To 95% Relative Humidity, Non-Condensing |
| Weight | 0.6 Lbs (0.27 Kg) With NW25 KF Flange |
| Mounting Orientation | Any |
| Serial Communications | RS485 - ASCII Protocol |
| Analog Output | Log-Linear 0 To 9 Vdc, 1V/Decade |
| Setpoint Relay | One Single-Pole, Double-Throw (SPDT), 1A At 30 Vdc Resistive, Or Ac Non-Inductive |
| Status Outputs | Degas & Filament On/Off Status Are Determined By Display Messages, Via Open Collector Transistor Or RS485 Communication |
| Input Signal | Degas And Filament On/Off & Emission Current Are Set By Continuity To Ground Using Digital Inputs, RS485 Or Manually Using Front Panel Push Button |
| Filament Selection | Filament 1 Or 2 Selectable Via Front Panel Push Buttons Or RS485 Commands |
| Input Power | 20 to 28 Vdc, 30 W protected against power reversal and transient over-voltages |
| Connectors | 9-Pin D-Sub Male For Analog And 9-Pin D-Sub Female For RS485 |
| RF/EMI Protection | CE Compliant |
| Environmental | RoHS compliant |

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