

# WIDE-RANGE GAUGES

## KJLC Multi-Gauge Controller – MGC4000



**Kurt J. Lesker**  
Company

**VACUUM MART**  
DIVISION

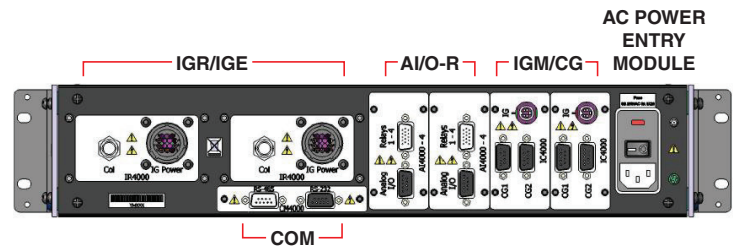
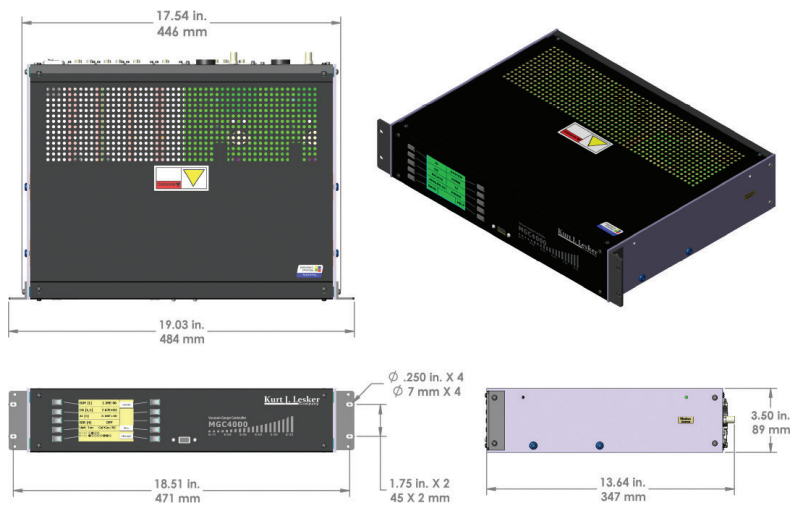
### Features

- Windows® Embedded Compact operating system provides reliable and stable instrument operation
- Capable of operating up to 4 ionization and 4 convection gauges simultaneously as well as display pressures from up to 2 CDG devices
- Easy to read LCD with backlighting provides sharp contrast with wide viewing angle
- Capable of providing up to 8 analog outputs, 16 setpoint relays and RS485 / RS232 interface

### Benefits

- Configure the MGC4000 to your exact specifications for low cost of ownership and unparalleled ease of use
- Full chamber control from atmosphere to 2.00E-11 Torr on one controller allowing the user to conserve valuable lab space
- The MGC4000 can be personalized by assigning specific names to individual gauges or use the factory default gauge symbols
- High efficiency power supply design and effective thermal management techniques enable operation of the MGC4000 without the need for air movement devices such as troublesome fans
- Filament operation including filament current, emission current and ion current can be monitored in real time on research screens

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TYPICAL MGC4000 MULTI-GAUGE CONTROLLER - BACK PANEL

## Specifications

<b>Measurement Range: (Vacuum Gauge Dependent)</b>	EB degas B-A UHV nude ionization gauge: $2.0 \times 10^{-11}$ to $1 \times 10^{-3}$ Torr I <sup>2</sup> R degas B-A glass or nude ionization gauge: $4.0 \times 10^{-10}$ to $1 \times 10^{-3}$ Torr KJL 351 miniature ionization gauge: $1.0 \times 10^{-9}$ to $5 \times 10^{-2}$ Torr Convection gauges: $1.0 \times 10^{-4}$ to 1000 Torr
<b>Units Of Measure</b>	Torr, mbar, Pa - user selectable
<b>Function:</b> Ionization Gauge (4 Max) Convection Gauge (4 Max) Capacitance Diaphragm Gauge (2 Max)	Powers and operates up to two glass-enclosed or nude B-A ion gauges and up to two KJLC 351 miniature ion gauge modules Powers and operates up to four 275 convection or Granville-Phillips® Convector® convection gauge transducers Accepts analog input signals from CDGs or other KJLC vacuum gauge modules (external power source for these type auxiliary devices will be required)
<b>IG Filament/Sensor Control - On /Off</b>	Front panel push buttons, using convection gauges, digital input or serial communications
<b>IG Filament Switching</b>	Filament 1 or 2 selection using front panel push buttons
<b>IG Emission Current</b>	100 $\mu$ A, 4 mA, 10 mA or automatic switching between 100 $\mu$ A and 4 mA
<b>Degas</b>	Nominal 40 W resistive (I <sup>2</sup> R), 40 W electron bombardment (EB)
<b>Overpressure Protection</b>	Turns ion gauge off at factory default or user programmed settings
<b>Temperature</b>	Operating; 0 to + 40°C storage; -40 to + 70°C
<b>Humidity</b>	0 to 95% relative humidity, non-condensing
<b>Weight</b>	12 lb. (5.5 kg)
<b>Analog Input (Or Use, Alternatively, For Remote Ig Filament/Sensor Turn On)</b>	Accepts up to two analog inputs from 100 mTorr, 1, 10, 100, 1000 Torr F.S. capacitance diaphragm gauges (0-10 Vdc) or analog inputs from other Lesker vacuum gauge modules series 275i, 300 and 354. Alternatively, analog input can be used as digital input for remote IG sensor turn on by applying a continuous ground or remove ground for remote IG sensor turn off.
<b>Analog Output</b>	Up to 8 analog outputs can be assigned to any of the gauges. IG: Log linear 0 to 10 Vdc, 1 V/decade, various scaling selections also provides analog output compatibility with Granville-Phillips® (GP) controller models 307, 350, and 358 IG: Log Linear 1.7 V to 9.3 Vdc (nominal 1.8 to 8.7 Vdc) 0.8 V/decade IG: Linear 0 to 10 Vdc (useable over 3 decades, compatible with GP 307, 350 & 358) Combination IG + CG: Log linear 0.5 to 7 Vdc, 0.5 V/decade CG: Log linear 0 to 7 Vdc or 1 to 8 Vdc, 1 V/decade, or Linear 0 to 10 Vdc, or Non-Linear
<b>Setpoint Relays</b>	Up to 16 user programmable single-pole, double-throw (SPDT), 2A at 30 Vdc, 2A at 250 Vac, resistive load, assignable to any of the gauges. (Note- Contact rating applies to units shipped after Feb 28, 2017. See User Manual for older units specs)
<b>Serial Communications</b>	RS485 / RS232 - ASCII protocol (RS232 protocol compatible with GP 307 controller)
<b>Source Power</b>	100-240 Vac, 50/60Hz, nominal, universal input power - 600 VA operating
<b>CE Compliance</b>	EMC Directive 2004/108/EC, EN61326-1, EN55011, Low Voltage Directive 2006/95/EC, EN61010-1
<b>Environmental</b>	RoHS compliant

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