

Kurt J. Lesker
Company

GAUGE WITH INTEGRATED CONTROLLER & DISPLAY

DATASHEET

BIOTECHNOLOGY PHARMACEUTICAL DISPLAY TECHNOLOGIES OLED/PLED NANOTECHNOLOGY
MEMS NIGHT VISION AEROSPACE SEMICONDUCTOR SUPERCONDUCTOR OPTICAL & WEB COATING



REFRIGERATION LASER TECHNOLOGY DATA STORAGE MASS SPECTROMETRY THIN FILM PHARMACEUTICAL
AUTOMOTIVE LIGHTING SURFACE ANALYSIS R&D HIGH ENERGY PHYSICS HEAT TREATING DISPLAY

MEASURE YOUR PRESSURE

■ Features

- Wide measuring range lets you monitor your vacuum system from 10^{-4} to 1,000 Torr (10^{-4} to 1,333mbar) with a single gauge
- Includes two set points, user-selectable analog output, and RS-232/485 interfaces
- Analog output is configurable as a non-linear S-curve, log-linear, or user-scalable linear
- Space-saving 1/8 DIN panel mount housing which can also be used as a benchtop unit
- Powered by universal 100-240 VAC or 12-30 VDC



KJLC Integrated Controller and Display

The Convectron® gauge has been in widespread use worldwide, largely unchanged since Granville-Phillips introduced it in 1975. KJLC has completely redesigned its new gauge for significantly lower cost, without sacrificing high quality and performance. The KJLC Integrated Controller and Display provides equivalent or better performance throughout the range of 10^{-4} to 1000 Torr.

KJLC Integrated Controller and Display Modules

The KJLC Integrated Controller and Display module provides the basic signal conditioning required to turn the gauge into a complete measuring instrument. The KJLC Integrated Controller and Display module provides non-linear and linear or log-linear analog outputs, RS232/485 interface, and two set point relays. A built-in display provides a convenient user interface for setup and operation of the vacuum gauge.

Direct drop-in plug-compatible replacement for the GP Mini-Convectron®

The KJLC Integrated Controller and Display module will directly replace most Granville-Phillips Mini-Convectron® modules. Linear and non-linear analog signals, digital interfaces, and set point relays are all included on the standard KJLC module. All are identical to their corresponding Mini-Convectron® functions. Software commands are the same.

GP Mini-Convectron® modules use either a 9-pin D-sub or 15-pin high-density D-sub connector, with 6 different pin out configurations, depending on model and options. If you have more than one vacuum system, you probably have several different Mini-Convectron® models to support. The KJLC Integrated Controller and Display uses both a 9-pin D-sub and a 15-pin high density D-sub connector to bring out all these functions in the same pin out configurations.

One KJLC Integrated Controller and Display module can directly replace dozens of different Mini-Convectron® configurations, reducing the number of spares you need to keep on hand.

Lower cost without sacrificing quality or functionality.

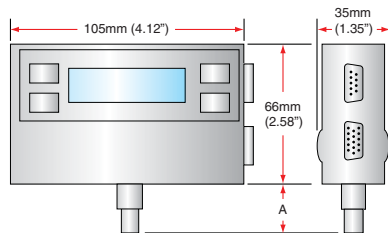
KJLC has made numerous changes to reduce cost and improve performance. Temperature compensation has been moved out of the vacuum environment, significantly reducing costs and improving performance. The gauge is bakeable to 150°C (electronics removed) and shielded against RF interference. A fine mesh screen in the gauge port helps prevent particulate contamination from entering the gauge. The sensor is far more reproducible and easier to make. These, and other, improvements add up to significant cost savings to you.

Similar improvements have been incorporated into the module electronics. The biggest cost savings comes from manufacturing a single model, with all possible options, instead of making dozens of different pc boards and models. And you don't have to give up one feature to get another you want: You can have an analog output with an RS485 interface, or a linear output with set points, or an RS485 interface with a display. The standard KJLC module includes all these features at a cost comparable to the most basic model Mini-Convectron®.

SSURE WITH LESKER

■ Specifications

Measurement Range	1x10 ⁻⁴ to 1000 Torr / 1x10 ⁻⁴ to 1333 mbar / 1x10 ⁻² Pa to 133 kPa
Display	LCD, 4 digits, user-selectable Torr, mbar, or Pa (4 digits from 1100 Torr to 1000 Torr, 3 digits from 999 Torr to 10.0m Torr, 2 digits from 9.9 to 1.0 mTorr.)
Materials Exposed to Gases	Gold-plated tungsten, 304 & 316 stainless steel, glass, nickel, Teflon®
Internal Volume	26 cm ³ (1.589 in ³)
Internal Surface Area	59.7 cm ² (9.25 in ²)
Weight	340 gm (12 oz)
Housing	Aluminum extrusion 105 x 66 x 35mm (4.12 x 2.58 x 1.35 inches)
Fittings/Flanges	0.125" NPT-0.5" tubulation, 4 VCR, 8 VCR, 1.33 Mini-Conflat® (NW16CF), 2.75" Conflat® (NW35CF), KF16, KF25, KF40
Operating Temperature	0 to +40°C
Storage Temperature	40 to +70°C
Bakeout Temperature	150°C (gauge only - electronics removed)
Humidity	0 to 95% RH non-condensing
Mounting Position	Horizontal recommended
Analog Outputs	1) Non-linear S-curve 0.375 to 5.659 Vdc 2a) Linear 0 to 10 Vdc, user scalable (default is 0-10Vdc = 0-1 Torr) 2b) Log-linear 1 to 8 Vdc, 1V/decade
Digital Interface	RS485 / RS232
Input Power	11 to 30 Vdc, protected against power reversal, transients, and over-voltages
Trippoint Relays	Two, single-pole double-throw relays (SPDT)
Contact Rating	1A at 30 Vdc resistive, or ac non-inductive
Connectors	9-pin D male and 15-pin high-density D male
RF/EMI Protection	CE compliant



Dimensions

Fitting	Dimension "A"
0.125" NPT - 0.5" tube	21.8mm (0.86")
NW16KF	29.5mm (1.16")
NW25KF	29.5mm (1.16")
NW40KF	29.5mm (1.16")
1" Mini-Conflat CF16	34.0mm (1.34")
2.75" Conflat CF35	34.0mm (1.34")
0.25" Cajon 4VCR	43.7mm (1.72")
0.5" Cajon 8VCR	40.9mm (1.61")

■ Ordering Information

KJLC Gauge with Integrated Controller	Part No.	Price
0.125" NPT	KJL300800	\$461.00
KF16	KJL300806	\$484.00
KF25	KJL300807	\$495.00
KF40	KJL300808	\$507.00
1.33" CF	KJL300803	\$495.00
2.75" CF	KJL300804	\$507.00
4 VCR Female	KJL300801	\$495.00
8 VCR Female	KJL300863	\$507.00
24 VDC Power Supply (100-240 VAC), US Plug*	KJLPS401A	\$59.00

* Contact us at pressure@lesker.com for other plug options.

GLOBAL VACUUM PRODUCT LINES

VACUUM MART™ DIVISION

Vacuum Valves & Hardware

- Flanges, Components, & Fasteners
- Gate & Angle Valves
- OFHC Copper Gaskets
- Bellows, Tubing, & Seals
- Semiconductor, PV, & FPD Process Valves

Feedthroughs

- Power & High Voltage
- Viewports (Optical Feedthrough)
- Coaxial & Instrumentation
- Thermocouple
- Ferro-Magnetic Fluid Rotary Drives
- USB

Vacuum Pumps & Accessories

- New & Remanufactured
- Rotary Vane & Piston
- Scroll & Diaphragm
- Screw & Roots Blowers
- Turbo & Diffusion
- Cryogenic & Ion
- Traps & Filters
- Complete Offering of Pump Repair Services

Vacuum Fluids

- Full Line of Mechanical Pump Oils
- Fomblin® PFPE - Inert PFPE
- Galden® PFPE - Heat Transfer Fluid
- Vacuum Greases, Sealants, & Solvents
- Pump Oil with R/O Additives
- Silicon Diffusion Pump Oils
- Pump Oil Recycling

Pressure Measurement

- Analog & Digital Active Gauges
- Pressure Indicators & Controllers
- Wide-Range Gauges
- Multi-Gauge Controllers
- Replacement Gauge Tubes
- MKS Baratrons®

Sample Manipulation & Motion

- Rotary & Linear Motion
- Linear Positioners
- Wobble Sticks & Port Aligners
- XYZ Manipulators
- Multi-Axis Manipulators
- Sample Transfer Probes
- Sample Heating & Rotation
- Motion Control
- Sample Distribution Center

Vacuum Services

- Full Line Pump Repair/Rebuild Services
- Pump Oil Recycling
- Technical Information
- Technical Consulting
- Decontamination
- Magnetron Cathode Service
- Contract Manufacturing

PROCESS EQUIPMENT™ DIVISION

Deposition Sources

- Torus® Magnetron Sputtering Sources
- Electron Beam Evaporation
- Organic Material Sources
- Electron Beam Sources
- Ion Sources
- Thermal Evaporation Sources

Process Instrumentation

- Film Thickness
- Mass Flow Controllers
- RF & DC Power Supplies
- Pulsed DC Power Supplies
- Power Supplies for Evaporation

System Components & Custom Engineered Solutions

- Turnkey & Partial Build Solutions
- Comprehensive Engineering Design Support
- Chambers, Frames, & Mounting Structures
- High Temperature & Bakeout Heater Assemblies
- Heater Power Supplies
- Substrate Load Locks & Transfer Vessels

Vacuum Systems

- Thin Film Deposition Systems
- Cluster Tools
- Box Coaters
- General PVD Systems
- Computerized Systems
- Combinatorial Systems
- Organic Material Deposition Systems
- R&D Sputter Tools
- Vacuum Furnaces & Ovens
- Atomic Layer Deposition (ALD)
- Drum Coaters
- In-line & Linear Systems
- R2R Systems

MATERIALS™ DIVISION

Deposition Materials

- Sputtering Targets
- Precious Metals & Reclaim
- Evaporation Pieces
- Thermal Evaporation Sources
- E-Beam Crucible Liners
- Bonding Service
- Backing Plates
- Ceramic Materials Manufacturing (CMM)

MANUFACTURING™ DIVISION

Vacuum Chambers & Components

- Standard SS Cylindrical, D-Shaped, Spherical, & Box Chambers
- Standard Pyrex® Glass Bell Jars & Cylinders
- Standard Building Blocks to Customize Your System
- Custom Chambers
- Array of Finishes & Materials
- Easily Build Your Own Chamber with the Custom Chamber Configurator On-line

Manufacturing & Fabrication

- State-of-the-Art CNC Machining
- Mechanical, Manufacturing, & Industrial Engineering
- Computer Based Scheduling & Routing
- CAD, CAM, & FEA Software
- Coordinate Measuring Machine Inspection (CMM)
- UHV Compatible Cleaning Process

We have a network of representatives around the world ready to service the international vacuum community.

Visit our website to find the representative nearest you, or contact our International Sales Department.

www.lesker.com/locations

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