

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

InstruTech®

Series 211 Stinger™ Convection Vacuum Gauge Measurement Unit & Display - Torr/mTorr

- **Wide measurement range**
  1 x 10^{-4} to 1,000 Torr
  1.3 x 10^{-4} to 1,333 mbar
  Monitor your vacuum system from atmosphere to 1 x 10^{-4} Torr with a single gauge
- **Built-in digital display with analog output and setpoint relay**
  Easy setup and operation
- **Wider measuring range and better accuracy than TC gauges**
  Upgrade your vacuum system and process performance
- **Also a lower cost, plug-compatible direct drop-in replacement for the most basic Granville-Phillips® Mini-Convectron® models**
  Significant savings for you
  No changes to your process
  Use your existing hardware, cables, and software



CVM211 Sensor

The sensor inside the CVM211 *Stinger™* module incorporates numerous design enhancements compared to other traditional convection vacuum gauges.

Temperature compensation has been moved out of the vacuum environment and placed around the outside of the vacuum gauge tube. This has eliminated a dozen or so unnecessary parts and welds, significantly increasing the reliability, providing optimal vacuum measurement while reducing cost. The improved mechanical strength results in a highly robust vacuum gauge less susceptible to mechanical shock and vibration.

Other design features include reduced internal volume and significant reduction of internal surface area resulting in faster pump-down and less outgassing. A fine mesh screen in the gauge inlet port helps prevent particulate contamination from entering the gauge. The gauge is shielded against RF interference.

These, and other, design features add up to a highly reliable vacuum gauge with significant cost savings that are passed on to the user.

CVM211 Built-in Controller & Display

InstruTech's CVM211 *Stinger* module provides the necessary signal conditioning to turn the convection gauge into a complete vacuum measuring instrument.

The CVM211 *Stinger* module provides one log-linear or non-linear analog output and one setpoint relay. In addition, a built-in display provides the measured pressure values and provides a convenient user interface for setup and operation of the vacuum gauge.

Low-cost upgrade for thermocouple TC vacuum gauges

The CVM211 *Stinger* provides a wider measuring range than traditional thermocouple vacuum gauges - from 1 x 10^{-4} Torr to above atmosphere - so you can monitor your entire pump-down and vent cycle.

The CVM211 *Stinger* convection enhanced Pirani gauge is more accurate than a thermocouple gauge, especially at lower pressures. And depending on your gauge/readout configuration, the cost of a *Stinger* is about the same cost of a TC gauge system.

Also a direct drop-in replacement for Mini-Convectron®

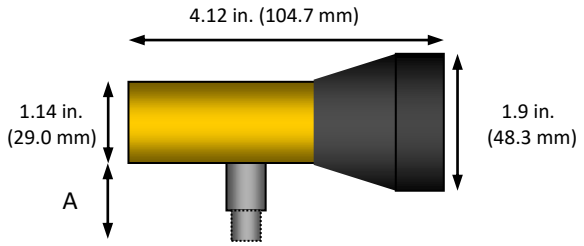
The *CVM211 Stinger* can also directly replace the most basic Granville-Phillips® Mini-Convectron® modules, at significantly lower cost. The InstruTech *Stinger* provides equivalent or better performance throughout the range of 1 x 10^{-4} to 1,000 Torr.

The 9-pin D-sub connector has the same pinouts and signals as the corresponding Mini-Convectrons®. The non-linear analog signal and setpoint relay are identical to their corresponding Mini-Convectron® functions. With *Stinger*'s performance, more robust design, longevity, smaller size, and lower cost, your process will only improve.

Guided by our vast experience and vacuum measurement know how, InstruTech sensors are specifically designed for optimum reliability and performance. Whether you're looking to reduce costs or improve your process, the CVM211 Stinger offers a cost-effective solution for your vacuum gauging needs.

Specifications

measurement range	1×10^{-4} to 1,000 Torr / 1.3×10^{-4} to 1,333 mbar / 1.3×10^{-2} Pa to 133 kPa
accuracy - N_2 (typical)	1×10^{-4} to 1×10^{-3} Torr; 0.1 mTorr resolution 1×10^{-3} to 400 Torr; ± 10% of reading 400 to 1,000 Torr; ±2.5% of reading
repeatability - (typical)	± 2% of reading
display	3 digit LED (3 digits from 999 Torr to 10.0 mTorr), (2 digit LED from 9.9 mTorr to 1.0 mTorr), (1 digit LED from 0.9 mTorr to 0.1 mTorr)
materials exposed to gases	gold-plated tungsten, 304 & 316 stainless steel, glass, nickel, Teflon®
internal volume	1.589 in^3 (26 cm^3)
internal surface area	9.25 in^2 (59.7 cm^2)
weight	4.8 oz. (136 g)
housing (electronics)	molded plastic
operating temperature	0 to +40 °C
storage temperature	-40 to +70 °C
bakeout temperature	+70 °C max
humidity	0 to 95% relative humidity, non-condensing
mounting orientation	horizontal recommended (orientation has no effect on measurements below 1 Torr)
analog output	log-linear 1 to 8 Vdc , 1 V/decade, or non-linear analog S-curve 0.375 to 5.659 Vdc
input power	12 to 28 Vdc, 2 W protected against power reversal and transient over-voltages
setpoint relay	one, single-pole double-throw relay (SPDT), 1 A at 30 Vdc resistive, or ac non-inductive
connector	9-pin D-sub male
CE compliance	EMC Directive 2014/30/EU, EN55011, EN61000-6-2, EN61000-6-4, EN61326-1, EN61010-1
environmental	RoHS compliant



fitting	dimension **A**
1/8 in. NPT male - 1/2 in. tube	1.00 in. (25.4 mm)
NW16KF	1.30 in. (33.0 mm)
NW25KF	1.30 in. (33.0 mm)
NW40KF	1.30 in. (33.0 mm)
1 1/3 in. Mini-Conflat®	1.08 in. (27.4 mm)
2 3/4 in. Conflat®	1.47 in. (37.3 mm)
1/4 in. Cajon® 4VCR®	1.86 in. (47.2 mm)
1/2 in. Cajon® 8VCR®	1.75 in. (44.5 mm)

Ordering Information	***Part Number***	***Part Number***
	With Log-Linear	**With Non-Linear**
CVM211 Fittings / Flanges	**analog output**	**analog output**
Combination 1/8 in. NPT male - 1/2 in. tube (use 1/8 in. NPT male or 1/2 in. O.D. O-ring compression)	CVM211GAL	CVM211GAA
NW16KF	CVM211GBL	CVM211GBA
NW25KF	CVM211GCL	CVM211GCA
NW40KF	CVM211GDL	CVM211GDA
1 1/3 in. Mini-CF / NW16CF Mini-Conflat®	CVM211GEL	CVM211GEA
2 3/4 in. CF / NW35CF Conflat®	CVM211GFL	CVM211GFA
1/4 in. Cajon® 4VCR® female	CVM211GGL	CVM211GGA
1/2 in. Cajon® 8VCR® female	CVM211GHL	CVM211GHA

Granville-Phillips® and Mini-Convectron® are registered trademarks of MKS Instruments, Andover, MA.
Swagelok®, Cajon®, VCR® are registered trademarks of the Swagelok Company, Solon, OH.
Conflat® is a registered trademark of Varian, Inc. / Agilent Technologies, Lexington, MA.
Teflon® is a registered trademark of E. I. du Pont de Nemours and Company, Wilmington, DE.

InstruTech®
1475 S. Fordham St.
Longmont, CO 80503
USA

Phone +1-303-651-0551
Fax +1-303-678-1754
E-mail info@instrutechinc.com
Web www.instrutechinc.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP