



InstruTech®

Series 600 Cold Cathode Inverted Magnetron Ionization Vacuum Gauge

Wide measurement range

Model CC605

1.5 x 10⁻⁹ to 3.75 x 10⁻³ Torr
 2 x 10⁻⁹ to 5 x 10⁻³ mbar
 2 x 10⁻⁷ to 5 x 10⁻¹ Pa

Model CC606 - UHV range

7.5 x 10⁻¹¹ to 3.75 x 10⁻³ Torr
 1 x 10⁻¹⁰ to 5 x 10⁻³ mbar
 1 x 10⁻⁸ to 5 x 10⁻¹ Pa

*Inverted Magnetron Cold Cathode sensor,
 rugged and compact metal construction*

Corrosion resistant ceramic feed through

Prolonged lifetime in harsh environments

Compact small footprint

Cleanable sensor



CC600 Cold Cathode

The series 600 Cold Cathode ionization gauge sensor assembly is constructed of a compact metal design resulting in a simple yet rugged sensor suitable for numerous industrial applications. Two different gauge configurations are available. Model CC605 utilizes an elastomer internal seal while the CC606 uses a metal seal allowing pressure measurements in the UHV range.

The sensor assembly can be easily disassembled and cleaned allowing long term use with minimal down time. A sensor activation aid mounted on the anode improves the

time it takes to activate the cold cathode sensor.

The series 600 Cold Cathode require the InstruTech B-RAX 3500 Controller to operate. The Controller displays the pressure and provides numerous outputs including analog output, digital I/O and serial communications.

When used with the B-RAX 3500 Controller, the combination of superior sensor design and enhanced signal processing provides optimal and stable pressure readings over the entire measurement range from low to high vacuum.

Specifications

measurement range

CC605	1.5 x 10 ⁻⁹ to 3.75 x 10 ⁻³ Torr / 2 x 10 ⁻⁹ to 5 x 10 ⁻³ mbar / 2 x 10 ⁻⁷ to 5 x 10 ⁻¹ Pa
CC606	7.5 x 10 ⁻¹¹ to 3.75 x 10 ⁻³ Torr / 1 x 10 ⁻¹⁰ to 5 x 10 ⁻³ mbar / 1 x 10 ⁻⁸ to 5 x 10 ⁻¹ Pa

accuracy - N₂ (typical)

CC605	1.5 x 10 ⁻⁸ to 3.75 x 10 ⁻³ Torr: ± 30% of reading when used with B-RAX 3500 Controller
CC606	7.5 x 10 ⁻¹⁰ to 3.75 x 10 ⁻³ Torr: ± 30% of reading when used with B-RAX 3500 Controller

repeatability - (typical)

CC605	1.5 x 10 ⁻⁸ to 3.75 x 10 ⁻³ Torr: ± 30% of reading when used with B-RAX 3500 Controller
CC606	7.5 x 10 ⁻¹⁰ to 3.75 x 10 ⁻³ Torr: ± 30% of reading when used with B-RAX 3500 Controller

materials exposed to gases

CC605	anode: molybdenum	internal seal: FPM	others: Al ₂ O ₃ , stainless steel
CC606	anode: molybdenum	internal seal: Ag	others: Al ₂ O ₃ , stainless steel

internal gauge volume

1.22 in³ (20 cm³)

admissible pressure

130 psi, 9 bar absolute (limited to inert gases < 55 °C)

operating temperature

CC605	CC606	
with standard cable	+ 5 to + 80 °C	+ 5 to + 80 °C
with high temperature cable	+ 5 to + 150 °C	+ 5 to + 250 °C

bakeout temperature

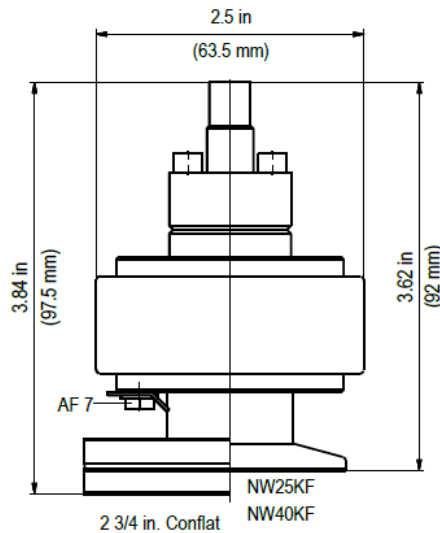
+ 150 °C + 250 °C

storage temperature

- 40 to + 80 °C - 40 to + 80 °C

humidity	max. 80% at temperatures up to +31 °C, decreasing to 50% at +40 °C
weight	1.32 lb. (600 g) with NW25KF and NW40KF flange 1.87 lb. (850 g) with 2.75 in. Conflat flange
mounting orientation	any
high voltage in measuring chamber	<3.3 KV
current in measuring chamber	≤ 700 μA
connector	SHV (coaxial cable)
input power	provided from B-RAX 3500 Controller
output signal	provided from B-RAX 3500 Controller
CE compliance	when used with B-RAX 3500 Controller: EMC Directive 2014/30/EU, EN55011, EN61000-6-2, EN61000-6-4, EN61326-1, EN61010-1
environmental	RoHS compliant

dimension



Ordering Information

Part Numbers

CC605 Cold Cathode Sensor

NW25KF	CC605SC
NW40KF	CC605SD
2 3/4 in. CF / NW40CF Conflat®	CC605SF
Maintenance kit (FPM O-ring, inner ring, ignition aid)	IL002943
Repair kit (anode assembly, FPM O-ring, inner ring, ignition aid)	IL002944
Tool set for removing / installing sensor ignition aid	IL002586

CC606 Cold Cathode Sensor - UHV

NW40KF	CC606SD
2 3/4 in. CF / NW40CF Conflat®	CC606SF
Maintenance kit (metal seal, centering ring, ignition aid, washer)	IL002945
Repair kit (Anode assembly, metal seal, centering ring, ignition aid, washer)	IL002946
Tool set for removing / installing sensor ignition aid	IL002586

Cables: For connection to the B-RAX 3500 Controller please see cables listed in the B-RAX Controller data sheet.



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