ARUN MICROELECTRONICS LTD

NGC2D Ion Gauge Controller

UHV Dual Bayard-Alpert Ion Gauge Controller

The NGC2D is a high-accuracy Ion Gauge controller that offers integrated pressure measurement and process control; with a large, clear display, an intuitive user interface and serial communications.

FEATURES

- Continuous measurement range: 1000 mBar to 3 x 10^{-11} mbar.
- Controls 2 Ion gauges (sequentially), 2 AML Pirani gauges and 1 Capacitance Manometer.
- Bright green LED display shows bar-graph or numeric pressure, trend, diagnostics, etc..
- Display in mBar, Torr or Pascal. Permanent bar-graph of Pirani pressures.
- Customizable gauge labels.
- Simple, guided setup is re-entrant and can be password protected
- Automatic or manual emission current setting.
- Ion gauge sensitivity adjustable 1$mbar^{-1}$ to 140$mbar^{-1}$.
- Automatic start of Ion gauge in pump-down and can be interlocked by Pirani or external signal.
- Manual and automatic electron-bombardment degas programs.
- 4 power relays for process control (5A, 240V) flexibly assignable to gauges with programable hysterisis.
- System bakeout program with control of temperature, time & over-pressure limit. Integral K-thermocouple amplifier.
- Automatic control of titanium sublimation pump controller with optional countdown / cancellation of imminent firing.
- RS-232C interface for data-logging and control
- Recorder output 1.0 volt/decade.
- 1U high full-width, steel cased instrument for easy rack-mounting.
- Operates from 100V to 240V, 50/60Hz supply.

SPECIFICATIONS

Ionization Gauge				
Gauge type	AML AIG1xG are recommended. Bayard-Alpert gauges from many other manufacturers are suitable without adjustment other than sensitivity.			
Range	From 1 x 10^{-3} to below 3 x 10^{-11} mbar with a UHV gaugehead with tungsten filaments. The low limit is dependent on gaugehead, cable construction and length and conditions of use. The upper limit is determined by the acceptable life of the filament and my be extended by the use of thoria or yttria-coated iridium filaments.			
Accuracy and repeatability	Determined principally by the gaugehead: controller errors are much smaller. Emission at 0.5mA is recommended.	Electrometer Logarithmic Conformance		
		Range	21°C	5°C to 35°C
		1mA to 350pA	<1%	<1%
		<350pA to 10pA	<1%	<4%
		<10pA to 2pA	<10%	<20%
Gauge supplies	Grid: +200 volts in emission, +500 volts at ≤60 mA in degas. Filament: +50 volt bias, ≤12 volts at ≤4.2 A (Tungsten) ≤2.6 A (Iridium) with filament power limited at > 30 watts.			
Pirani Gauge				
Gauge type	AML types PVU and PVB. A constant-voltage bridge circuit reduces contamination at high pressures. AML Pirani gaugeheads may be exchanged or extension leads may be connected without adjustments being necessary.			
Capacitance Manometer				
Gauge type	Gauges of any manufacture having a +10 volt full-scale output at 1, 10, 100 or 1000 mbar or Torr and which are self-powered are suitable. Pressure indication can be in units different to the full-scale units defined for the Gauge.			
General Specifications				
Pressure display	Scientific notation (1 or 2 decimal place resolution) or bar-graph displays in mbar, Torr or Pascal.			
Operating temperature	5° to 35° Celsius for specified performance. Incoming air temperature is measured and displayed and operation is inhibited at >40°C.			
Supply voltage	100 V to 240 V nominal at 48 to 65 Hz, without adjustment.			
Power consumption	<20 watts idling, <75watts in emission.			
Dimensions	1U high, full width x 270mm Deep			

ORDERING INFORMATION

Order Code	
NGC2D	Ion Gauge Controller
AIG17G	UHV BA Ion Gauge. 2 x Tungsten filaments
AIG18G	UHV BA Ion Gauge. 2 x Thoria coated Iridium filaments
AIG19G	UHV BA Ion Gauge. 2 x Yttria coated Iridium filaments
AIGL3 6 or 9	3, 6 or 9 metre bakeable ion gauge cable
PVU3	Pirani gauge. Non-bakeable with 3m cable
PVB3	Pirani gauge. Bakeable with 3m cable
PVX10	Pirani 10 metre extension cable, non-bakeable

Arun Microelectronics Ltd
Unit 2, Bury Mill Farm
Bury Gate
PULBOROUGH
RH20 1NN
United Kingdom

Tel: +44 (0)1903 884141
email: sales@arunmicro.com