nAIM ACTIVE INVERTED MAGNETRON

Edwards nAIM series, active Inverted Magnetron vacuum gauges combine the gaugehead and controller in one compact active unit. These are new digital versions of gauges that have proved to be rugged and reliable in a wide range of applications ranging from scientific instruments to industrial processes.

The nAIM gauges feature compact size for easy installation, a serial output and a replaceable sensor tube. It is anticipated that the digital gauges will be compatible with the next generation of Edwards instrument and active gauge controllers and displays. They are also CSA and C/US approved as well as fully RoHS compliant due to their lead-free construction.

Features and Benefits

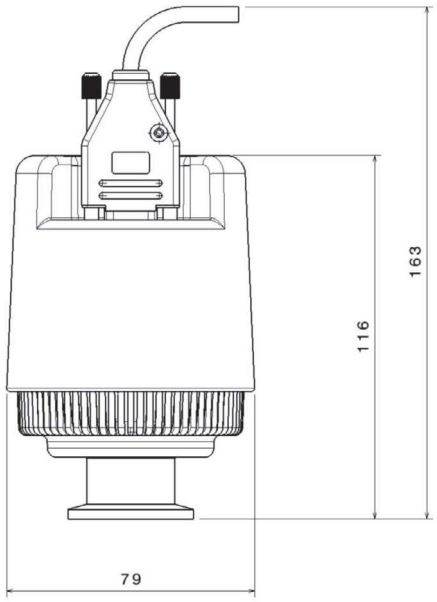
- Wide-range supply voltage allows operation from 15 to 48V d.c.
- Gauge naming allows user to store gauge identification data.
- Rapid tube replacement without pre-calibration
- Unique striker design ensures rapid striking even at high vacuum or in contaminating conditions
- Low external magnetic field version (L) for sensitive analytical instruments (patented)
- Serial communications based on a simple ASCII, low latency, query and command protocol that can operated in a point to point or multidrop system with minimum overhead
- Adjustable open collector set-point output for straightforward process control and interlocking
- RS485, 9600baud, 8bits, 1 start bit, 1 stop bit M

For information on Digital Gauge DX protocol please contact Edwards.

Example Serial Commands

Read gauge Identity:	
Send:	?S751<cr>
Reply:	=S751 nAIM_ RS485;D02610600A;nnnn<cr>
Hardware version; software version; gauge name	
Set pressure units:	
Send:	!S755 n<cr>
Reply:	*S755 0<cr>
Units: 1 = mbar, 2 = Pa, 3 = Torr	
Turn gauge On and Off:	
Send:	!C752 n<cr>
Reply:	*C752 0<cr>
State:	0 = Off, 1 = On
Read gauge pressure and status bits:	
Send:	?V752<cr>
Reply =	V752 n.nnE±nn;nnnn<cr>
Status bit masks:	
Gauge on:	0x0002
Set-point:	0x0004
Units:	0x0030 Any

nAIM Active Inverted Magnetron Dimension



Technical Data

Part Number

nAIM Range D1469xxx0

					Magnet	Comms	Tube & Flange	
D	1	4	6	9	0 - Standard 1 - Low Field	0 - RS485 5 - RS232	1 - Non-Industrial NW25 2 - Non-Industrial CF 3 - Industrial NW25 4 - Industrial CF	0

Mechanical	
Mass	0.81kg – 1.11kg
Internal volume	26 cm^3
Enclosure rating	IP42 Vertical as shown
	IP40 Other orientations
Performance	
Measurement range	
nAIM	10^{-2} to 10^{-9} mbar
Accuracy typically	±30%
Maximum over-pressure	10 bar absolute
Operating and Storage Conditions	
Temperature range	
Operating	5° to 60° C
Storage	0° to 70° C
Humidity	
	80% RH up to 31° C decreasing linearly to 50% RH at 40° C and above
Maximum altitude	3000 m
Electrical Data	
Electrical supply voltage	15 to 48 V DC nominal
Power consumption	2 W
Identification Resistor	10KΩ ±2%
Set-point – open collector transistor	
Rating	48 V DC 100 mA

All serial gauges are identified by a 10KΩ resistor as full gauge identification is carried out over serial communications.