

ACTIVE INVERTED MAGNETRON (AIM) GAUGE

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Edwards Active Inverted Magnetron (AIM) Gauges

Gauges provide accurate measurement over the vacuum range of 1×10^{-2} to 1×10^{-9} mbar. These gauges have proved to be rugged and reliable in a wide range of applications, ranging from scientific instruments to industrial processes.

The AIM-X Gauge is an inverted magnetron gauge head and gauge controller combined into a single compact unit, and features a linear output for easy integration with a computer or PLC.

The XL variants have a very low external magnetic field, these are ideally suitable for use with sensitive analytical instruments or in applications where the gauge needs to be mounted in close proximity to a turbomolecular pump.



Features and benefits

- Drive electronics combined in the gauge head
 - Reduce the system cost
 - Save valuable rack space
- Wide-range, regulated, internal power supply
 - Runs from standard d.c. power supplies +13.5 to +36 V
 - Tolerant to voltage fluctuations
- Standard analog output 0 to +10 V d.c. and gauge identifier
 - Easy to interface with a computer or PLC
 - Fault output indication
- Low output impedance and integral Faraday shield
 - Provide high level of noise immunity
 - Permit long cable runs (up to 100 m)
- Interchangeable body tube
 - Rapid tube replacement without pre-calibration
 - Electrode service kit allows user cleaning and maintenance
- Bakeable Tube
 - The DN40CF tube is bakeable to 300 °C (with the electronics removed)
- Unique striker design
 - Ensures rapid striking even at high vacuum or in contaminating conditions
- CSA, C/US Approved
 - Meets safety requirements for electrical equipment for measurement

Technical data

Pressure range	
AIM-X / AIM-XL	10 ⁻² to 10 ⁻⁹ mbar
Maximum overpressure	10 bar absolute (145 psi)
Power supply	+13.5 to +36 V d.c. (max 1 V ripple)
Power consumption	2 W maximum
Output signal	2 to 10 V d.c.
Set-point output external load rating	40 V d.c., 100 mA max
Temperature range	
Operating	5 to 60 °C
Storage	0 to 70 °C
Baking (DN40CF version only)	300 °C with electronics removed DN40CF only

Materials exposed to vacuum	
NW25	Stainless steel (AISI 304 and 306), fluoroelastomer and soda lime glass
DN40CF	Stainless steel (AISI 304 and 306), copper, ceramic, very small amount of copper braze
Internal volume	26 cm ³
Weight	
AIM-X NW25	810 g
AIM-XL NW25	860 g
AIM-X DN40CF	1090 g
AIM-XL DN40CF	1140 g
External interface connector	8-way FCC68/RJ45 socket
Flange size	NW25 or DN40CF
Standards	
Electromagnetic compatibility	EN 61326 (Class B Emissions)
Enclosure rating	IP40

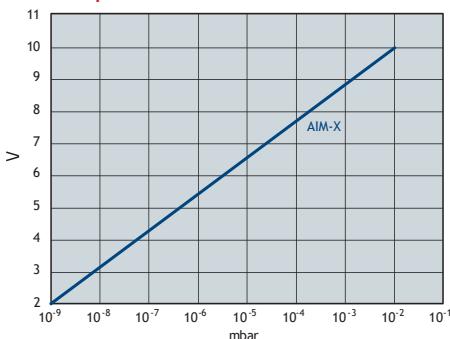
Ordering information

Product	Order number	Order number
AIM-X-NW25	D14642000	*D1464200C
AIM-XL-NW25	D14645000	*D1464500C
AIM-X-DN40CF	D14662000	*D1466200C
AIM-XL-DN40CF	D14665000	*D1466500C

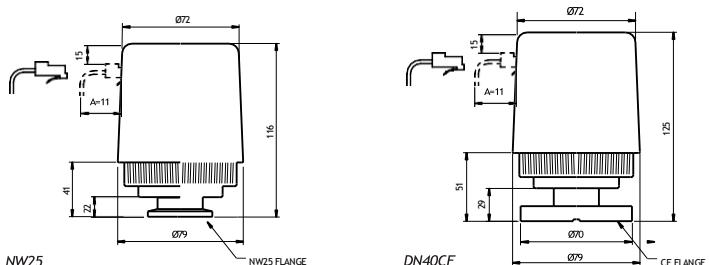
* Supplied with a certificate of calibration traceable to national standards

Product	Order number
Replacement body tube assembly	
NW25	D14545801
DN40CF	D14661801
Body tube service kit	
NW25	D14545802
DN40CF	D14661802
Other accessories and supporting products	
NW25 centring 3D baffle Viton	D02110000
0.5M Active Gauge Cable	D40001005
1M Active Gauge Cable	D40001010
3M Active Gauge Cable	D40001030
5M Active Gauge Cable	D40001050

Output characteristics



Dimensions mm (inch)





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