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D14671880
Issue F

Instruction Manual

Industrial Active Inverted Magnetron Gauge



Description	Item Number
AIM-SI1-NW25	D14671000
AIM-XI1-NW25	D14672000
AIM-SLI1-NW25	D14674000
AIM-XLI1-NW25	D14675000

Original Instructions

EDWARDS

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1 Introduction

1.1 Scope and definitions

This manual provides installation, operation, maintenance and storage instructions for the Edwards Industrial Active Inverted Magnetron Gauge. You must use the gauge as specified in this manual.

Read this manual before you install and operate the gauge. Important safety information is highlighted as WARNING and CAUTION instructions; you must obey these instructions. The use of WARNINGS and CAUTIONS is defined below.

WARNING



Warnings are given where failure to observe the instruction could result in injury or death to people.

CAUTION

Cautions are given where failure to observe the instruction could result in damage to the equipment, associated equipment and process.

Throughout this manual, page, figure and table numbers are sequential.

The units used throughout this manual conform to the SI international system of units of measurement.

The following symbol appears on the AIM Gauge:



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1.2 General description

The AIM Gauge, shown in Figure 1, is an inverted magnetron gauge head and gauge controller in a single compact unit. The gauge operates as a cold cathode ionisation gauge, in which the pressure is measured indirectly as function of the current which flows in a Townsend discharge maintained in the body tube.

The measurement range of the gauge is 1 x 10^{-8} to 1 x 10^{-2} mbar (AIM-SI1/AIM-SLI1) and 1 x 10^{-9} to 1 x 10^{-2} mbar (AIM-XI1 /AIM-XLI1). The AIM Gauge vacuum connection is a NW25 flange.

The AIM Gauge requires a 13.5 to 36 V d.c. power supply; it has a 2 to 10 V d.c. analogue output which is related to pressure. The AIM Gauge is compatible with all of the Edwards TIC (Turbo Instrument Controller), ADD (Active Digital Display) and with the appropriate versions of the Edwards AGD's (Active Gauge Displays). Alternatively, you can read the AIM Gauge output signal with a voltmeter or analogue-to-digital converter.

We recommend that you do not operate the AIM Gauge unless the pressure in the vacuum system is 1 x 10^{-2} mbar or lower. A gauge enable signal is used to control the operation of the AIM Gauge; refer to Section 4.2 for more information.

An 8-way electrical connector socket on the AIM Gauge (Figure 1, item 7) is used to connect the AIM Gauge to your TIC, ADD, AGD or electrical supply and voltmeter. Electrical cables fitted with suitable connector plugs are available as accessories.

A gauge identification signal is available on the electrical connector; this signal is used by Edwards Controllers to identify which type of Active Gauge is connected.

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The AIM Gauge has a set-point facility; the set-point signal is an open drain transistor (FET) output, which is on when the pressure measured by the Gauge is below a pre-set pressure. You can adjust the pressure at which the set-point output goes on; refer to Section 4.4.

Note: *If you use an Edwards TIC Controller, ADD Controller or AGD Display, the AIM Gauge set-point output signal is not used.*

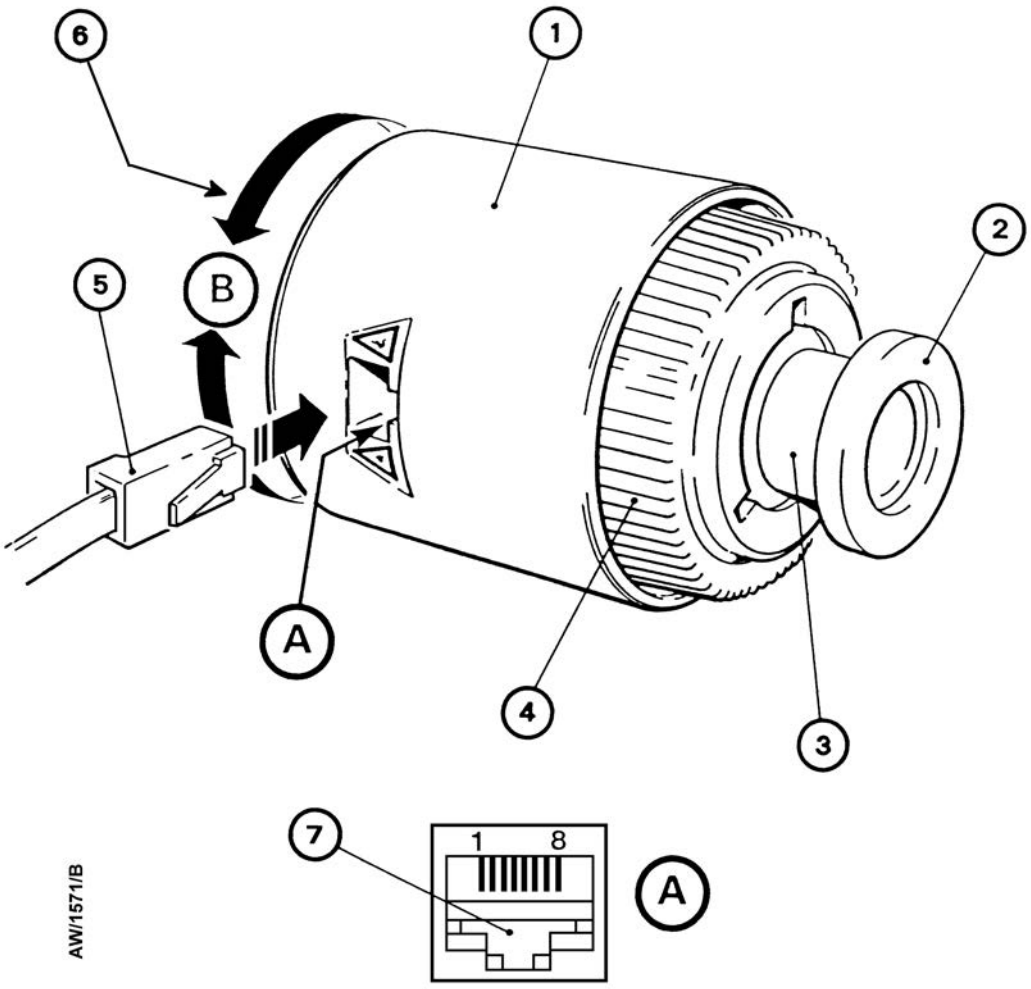
1.3 Gas dependency

The ionisation of the gas in the vacuum system is dependent on both the pressure and the physical properties of the gas. Therefore, the output signal of the AIM Gauge is gas dependent.

The output signal voltage to pressure conversions in Section 4.3 apply for nitrogen and dry air.

Calibration graphs for use with argon, neon, krypton, helium and carbon dioxide are available on request; contact your supplier or Edwards.

Figure 1 - General view of the AIM gauge (showing the NW25 flange)



1. End-cap
2. Vacuum flange
3. Body tube
4. Magnet housing
5. Cable connector plug
6. Set-point potentiometer (on end of item 1)
7. AIM Gauge connector socket

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2 Technical data

2.1 Mechanical data

Dimensions	See Figure 2
Mass	840 g
Volume of gauge tube	26 cm^2
Enclosure rating	IP40

2.2 Performance, operating and storage conditions

Ambient temperature	
Operation	5 to 60°C
Storage	0 to 70°C
Ambient humidity (operation)	10 to 90% (non condensing)
Maximum operating altitude	2000 m
Maximum internal pressure	10 bar absolute (9 bar gauge)
Pressure measurement range	1 x 10^{-8} to 1 x 10^{-2} mbar (AIM-SI1/AIM-SLI1) 1 x 10^{-9} to 1 x 10^{-2} mbar (AIM-XI1/AIM-XLI1)
Pollution category	EN61010 Category 2

2.3 Electrical data

Voltage	+13.5 to +36 V d.c.
Max voltage ripple	1 V peak to peak
Max source resistance	50 Ω
Max power consumption	2 W
Electrical connector	FCC68/RJ45 type, 8-way
Pressure output signal	
Range	2 ≤ output ≤ 10 V d.c.
Error range	output < 2 V d.c. or output > 10 V d.c.
Impedance	0.1 Ω
Min load impedance	10 kΩ
Max current source	1 mA
Gauge enable	
Control sense	Active low
Active level	< 1.3 V
Control impedance	12 kΩ pull up to positive supply
Set-point output external load rating	40 V d.c., 100 mA max
Set-point trip level	
Range	1.8 to 10.0 V
Minimum load impedance	200 kΩ
Hysteresis	500 mV

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Back EMF suppression diode*	
Min. surge rating	1 A
Min. reverse voltage rating	100 V
Gauge identification resistance	100 kΩ ± 2% AIM-SI1/AIM-SLI1 110 kΩ ± 2% AIM-XI1/AIM-XLI1

* *Required when you use an external d.c. relay connected to the set-point output.*

2.4 Error monitoring

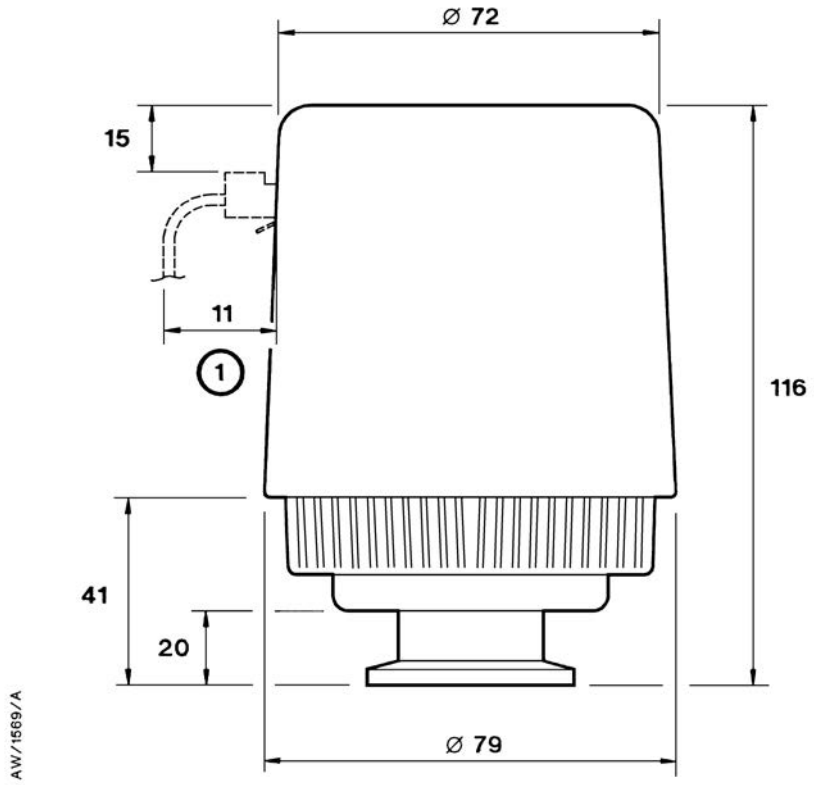
The set-point output is switched off:

- for 0.5 seconds during gauge switch on
- when pressure output signal voltage < 1.8 V

2.5 Materials exposed to vacuum

- Stainless steel (AISI 304, 416 and 347)
- Fluoroelastomer
- Soda lime glass

Figure 2 - Dimensions (mm)



1. Clearance required for electrical cable

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3 Installation

3.1 Unpack and inspect



WARNING

The AIM gauge incorporates magnets. Keep away from heart pacemakers, computers, credit cards and any other magnetically sensitive devices.



WARNING

Magnetic Field may interfere with pacemakers. Maintain a distance of minimum 10 cm between the magnet and the heart pacemaker. You can also use anti-magnetic shield to prevent the influence of strong magnetic field.

Remove all packing materials and protective covers and check the AIM Gauge. If the AIM Gauge is damaged, notify your supplier and the carrier in writing within three days; state the Item Number of the AIM Gauge together with your order number and your supplier's invoice number. Retain all packing materials for inspection. Do not use the AIM Gauge if it is damaged.

If the AIM Gauge is not to be used immediately, replace the protective covers.

Store the AIM Gauge in suitable conditions as described in Section 6.

Note: *Please consult your supplier in case of any difficulty.*

3.2 Fit the AIM gauge to the vacuum system

The AIM Gauge can be mounted in any orientation. To avoid the build up of debris or condensable material in the body tube of the AIM Gauge (which will probably cause pressure measurement errors), we recommend that you install the AIM Gauge vertically as shown in Figure 2.

Use an O-ring/centring ring or co-seal and clamp to connect the NW25 flange of the AIM Gauge to a similar flange on your vacuum system.

If required, you can turn the end cap (relative to the magnet housing) so that the electrical connection socket is in a convenient position on your system; refer to Figure 1 and use the following procedure: hold the magnet housing (4) and turn the end cap (1) in a clockwise or anti-clockwise direction (arrow B) until the electrical connection socket (7) is in the required position.

3.3 Electrical connection



WARNING

If the AIM Gauge malfunctions, the AIM Gauge pressure output may be incorrect. If such a failure could cause injury to people or damage equipment, you must install a suitable control system to indicate the failure and, if necessary, to close down your process system.

When using a cable longer than 30 m, full compliance with European Standards requires an in-line surge suppressor (please refer to Section 7.3).

Note: *Ensure the cable is installed in such a way as to not cause a trip hazard.*

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3.3.1 Connect to Edwards controllers or AGD display

Connect the AIM Gauge to the controller or display with a cable which is terminated in suitable connectors. Suitable cables are available from Edwards (refer to Section 7).

3.3.2 Connect to your own supply and control equipment

Note: *Do not connect the electrical supply common (pin 2) to the signal common (pin 5). If you do, the AIM Gauge pressure output signal will be inaccurate.*

A schematic diagram of the recommended electrical connections to the AIM Gauge is shown in Figure 3.

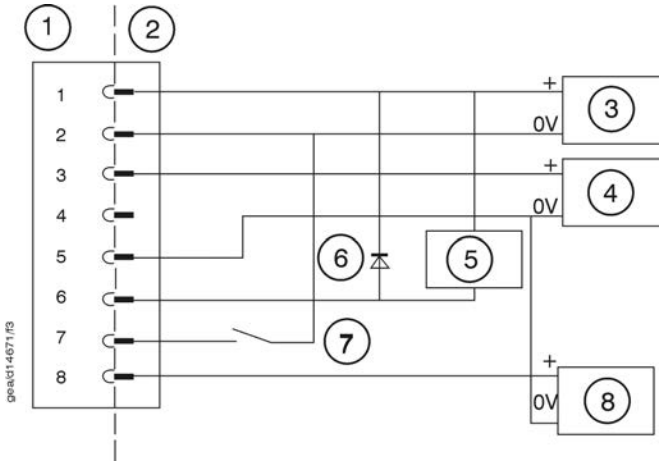
The pins on the AIM Gauge electrical connection socket are used as shown in Table 1. The specification of the electrical supply, d.c. relay and back EMF suppression diode are given in Section 2.

The connection to pin 6 is optional. Make the connection to pin 6 if you want to connect the set-point output signal to a d.c. relay; you must connect a suppression diode between pins 1 and 6 to protect the AIM Gauge from transient voltages generated when the d.c. relay is switched off.

You can connect a voltmeter between pins 5 and 8 to measure the set-point trip level (that is, the voltage at which the set-point output will go on); see Figure 3.

Connect a switch between pins 2 and 7 to enable and disable the gauge (refer to Section 4.2). If you want to measure the gauge identification signal (which identifies the AIM Gauge), measure the resistance between pins 4 and 5.

Figure 3 - Schematic diagram of typical electrical connections



1. AIM gauge electrical connector socket
2. Cable electrical connector plug
3. Electrical supply
4. Voltmeter (pressure signal)
5. D.C. relay (optional)
6. Back EMF suppression diode (optional)
7. Gauge enable switch
8. Voltmeter (set-point trip level)

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Table 1 - Pins on the AIM gauge electrical connector socket

Pin Number	Use
1	Electrical supply positive voltage
2	Electrical supply common
3	Pressure measurement output signal
4	Gauge identification signal
5	Signal common
6	Set-point output signal
7	Gauge enable
8	Set-point trip level

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4 Operation

4.1 Safety

WARNING



Do not use the AIM Gauge to measure the pressure of explosive or flammable gases or mixtures.

WARNING



Never operate the AIM Gauge when it is disconnected from the vacuum system or when there are explosive or flammable gases in the surrounding atmosphere of the vacuum system. High voltages (up to 3 kV) are generated inside the body tube of the AIM Gauge; these could cause injury to people or could be a source of ignition.

WARNING



The AIM Gauge incorporates magnets. Keep away from heart pacemakers, computers, credit cards and any other magnetically sensitive devices.

4.2 Enable and disable the AIM gauge

CAUTION

Do not operate the AIM Gauge for long periods when the system pressure is above 1 x 10^{-2} mbar. If you do the anode pin can be damaged and the AIM Gauge can be severely contaminated.

We recommend that you only enable the AIM Gauge when the system pressure is lower than 1 x 10^{-2} mbar and that you disable the gauge when the system pressure is 1 x 10^{-2} mbar or higher.

If you have connected the AIM Gauge to an Edwards Controller, refer to the corresponding instruction manual for details of how to enable (switch on) and disable (switch off) the AIM Gauge.

Otherwise, to enable (switch on) the AIM Gauge, connect pin 7 to pin 2 (or to ground). To disable (switch off) the AIM Gauge, disconnect pin 7 from pin 2 (or from ground).

4.3 Pressure measurement

If you connected the AIM Gauge to an Edwards Controller, the pressure measured by the AIM Gauge is shown on the display.

If you connected the signal output of the AIM Gauge to a voltmeter, convert the measured voltage to the corresponding pressure value: for AIM-SI1 and AIM-SL1, refer to Table 2; for AIM-XI1 and AIM-XLI1 gauges, use the equation $P=10^{(7/8\ V\ -\ 10.75)}$ where P is the pressure in mbar, and V is the measured voltage.

If necessary, adjust the pressure reading to compensate for the type of residual gas in your vacuum system (refer to Section 1.3).

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4.4 Set-point

Note: *The set-point is not used if you connect the AIM Gauge to an Edwards Controller.*

To adjust the voltage at which the set-point output signal goes on, turn the set-point potentiometer, which is accessible through an access hole in the end cap of the gauge: see Figure 1. Turn the potentiometer clockwise to increase the voltage and turn it anticlockwise to decrease the voltage. Refer to Section 4.3 to determine the operating voltage which corresponds to a given pressure.

The AIM Gauge has an error monitoring facility, which ensures that the set-point output signal is off:

- When the gauge is switched off (that is, not enabled)
- For 0.5 seconds immediately after the AIM Gauge is switched on
- When the pressure output signal is out of range, perhaps because the gauge has failed to strike (ignite)

If required you can adjust the potentiometer so that the set-point operating voltage is < 1.8 V (that is, turn the potentiometer fully anticlockwise). This ensures that the set-point output signal is permanently off.

If required, you can use the set-point output signal to indicate when the Gauge is operating correctly; adjust the potentiometer so that the set-point operating voltage is ≥ 10 V (that is, turn the potentiometer fully clockwise). If the gauge is operating normally, the set-point output signal will then be switched on.

Note: *If you adjust the set-point operating voltage to > 9.5 V the hysteresis voltage will be > 10 V and the set-point output signal may not switch off when the pressure rises; if so, the set-point output signal will only go off when the gauge is switched off (that is, disabled).*

Table 2 - Pressure and voltage characteristics for nitrogen and dry air

Pressure (mbar)	Output voltage	Pressure (torr)
1.0×10^{-8}	2.00	7.5×10^{-9}
2.4×10^{-8}	2.50	1.8×10^{-8}
5.8×10^{-8}	3.00	4.4×10^{-8}
8.1×10^{-8}	3.20	6.1×10^{-8}
1.1×10^{-7}	3.40	8.3×10^{-8}
1.5×10^{-7}	3.60	1.1×10^{-7}
2.1×10^{-7}	3.80	1.6×10^{-7}
2.9×10^{-7}	4.00	2.2×10^{-7}
4.0×10^{-7}	4.20	3.0×10^{-7}
5.4×10^{-7}	4.40	4.1×10^{-7}
7.3×10^{-7}	4.60	5.5×10^{-7}
9.8×10^{-7}	4.80	7.4×10^{-7}
1.3×10^{-6}	5.00	9.8×10^{-7}
1.7×10^{-6}	5.20	1.3×10^{-6}
2.2×10^{-6}	5.40	1.7×10^{-6}
2.8×10^{-6}	5.60	2.1×10^{-6}
3.6×10^{-6}	5.80	2.7×10^{-6}
4.5×10^{-6}	6.00	3.4×10^{-6}
5.6×10^{-6}	6.20	4.2×10^{-6}
6.9×10^{-6}	6.40	5.2×10^{-6}
8.4×10^{-6}	6.60	6.3×10^{-6}

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Table 2 - Pressure and voltage characteristics for nitrogen and dry air (continued)

Pressure (mbar)	Output voltage	Pressure (torr)
1.0×10^{-5}	6.80	7.5×10^{-6}
1.2×10^{-5}	7.00	9.0×10^{-6}
1.4×10^{-5}	7.20	1.1×10^{-5}
1.7×10^{-5}	7.40	1.3×10^{-5}
2.0×10^{-5}	7.60	1.5×10^{-5}
2.4×10^{-5}	7.80	1.8×10^{-5}
2.9×10^{-5}	8.00	2.2×10^{-5}
3.5×10^{-5}	8.20	2.6×10^{-5}
4.3×10^{-5}	8.40	3.2×10^{-5}
5.7×10^{-5}	8.60	4.3×10^{-5}
7.9×10^{-5}	8.80	5.9×10^{-5}
1.2×10^{-4}	9.00	9.0×10^{-5}
1.9×10^{-4}	9.20	1.4×10^{-4}
3.3×10^{-4}	9.40	2.5×10^{-4}
6.7×10^{-4}	9.60	5.0×10^{-4}
1.7×10^{-3}	9.80	1.3×10^{-3}
3.6×10^{-3}	9.90	2.7×10^{-3}
1.0×10^{-2}	10.00	7.5×10^{-3}

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5 Maintenance

5.1 Introduction

WARNING



Do not disconnect the electronics and magnet housing from the body tube when the body tube is connected to the vacuum system. If there is a plasma discharge in the vacuum system near the body tube, the body tube can become electrically charged.

WARNING



Disconnect the AIM Gauge before you remove the AIM Gauge from the vacuum system. High voltages are generated inside the AIM Gauge.

The internal components of the AIM Gauge are shown in Figure 4. The AIM Gauge is designed so that you can clean these components, or use the spares listed in Section 7 to replace these components. Refer to the following sections for details of the maintenance procedures which you should do when necessary.

5.2 Replace the body tube

Refer to Figure 1 and use the following procedures to replace the body tube.

5.2.1 Remove the AIM gauge from the vacuum system

1. Switch off the AIM Gauge electrical supply and ensure that the vacuum system is at atmospheric pressure.
2. Disconnect the cable connector plug (5) from the AIM Gauge and remove the AIM Gauge from the vacuum system.

5.2.2 Fit the new body tube

1. Hold the magnet housing (4) and turn the body tube (3) anticlockwise (when viewed from the vacuum flange) to unlock the bayonet fitting. Remove the body tube from the magnet housing.
2. Slide the new body tube into the magnet housing (4).
3. Hold the magnet housing (4) and turn the body tube (3) clockwise (when viewed from the vacuum flange) to lock the bayonet fitting.

5.2.3 Refit the AIM gauge to the vacuum system

Refit the AIM Gauge to the vacuum system as described in Section 3.2 and refit the cable connector plug to the socket on the AIM Gauge (7).

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5.3 Replace the electrode assembly

CAUTION

Internal anode assembly includes a sharp-edged component. Care should be taken when handling this item.

Refer to Figure 4 in the following procedure.

1. Remove the AIM Gauge from the vacuum system as described in Section 5.2.1.
2. Remove the body tube from the AIM Gauge as described in Step 1 of Section 5.2.2.
3. Fit the flat spanner supplied in the electrode assembly kit (refer to Section 7) to the two lugs in the end of the collar (1), then turn the collar anticlockwise to unscrew the collar from the body tube (4) and remove the anode assembly (2) and the O-ring (3).
4. Use circlip pliers to remove the circlip (8) from the vacuum flange end of the body tube, then remove the outer cathode plate (7), cathode tube (6) and the inner cathode plate (5).
5. Fit the new inner cathode plate (5) into the body tube (4) ensuring the end with reduced diameter is furthest from the vacuum flange. Then fit both new cathode tubes (6). If this has been done correctly the second cathode tube will now be protruding about 2 mm beyond the end of the vacuum flange. Hold the outer tube so that the inner cathode plate is held in place, invert the assembly, and rest the outer cathode tube on the bench.
6. Fit the new O-ring (3) and anode assembly (2) into the body tube.
7. Refit the collar (1) to the body tube. Locate the flat spanner on the two lugs on the collar and turn the collar clockwise until it is fully secured in the body tube.
8. Hold the outer tube so that the inner cathode plate is held in place, and re-invert the assembly so that the 14-point striker on the anode can be seen. Remove and discard the outer cathode tube.
9. Now use the 0.5 mm diameter wire supplied to check that the minimum gap between the striker and the inner cathode plate is at least 0.5 mm. This means ensuring the wire is able to pass between the striker and cathode plate all the way round. If not, use a single (gloved) finger on the top of the anode to gently bend it in the appropriate direction. Repeat the test and gentle bending if necessary until the striker-cathode plate gap is 0.5 mm.
10. Fit the new outer cathode plate (7) and secure with the circlip (8). Ensure both the circlip centre and ends are pushed tight towards the inner cathode plate.
11. Refit the tube assembly to the magnet housing as described in Step 2 and 3 of Section 5.2.2. Refit the vacuum gauge to the vacuum system as described in Section 5.2.3.

5.4 Replace the electronics and magnet housing

The magnet housing and end-cap contain the AIM Gauge control electronics. Replace the complete unit as described below.

1. Remove the AIM Gauge from the vacuum system.
2. Remove the body tube from the AIM Gauge.
3. Dispose of the old magnet housing and end cap (refer to Section 6).
4. Fit the body tube to the new magnet housing and end-cap. Refit the AIM Gauge to the vacuum system.

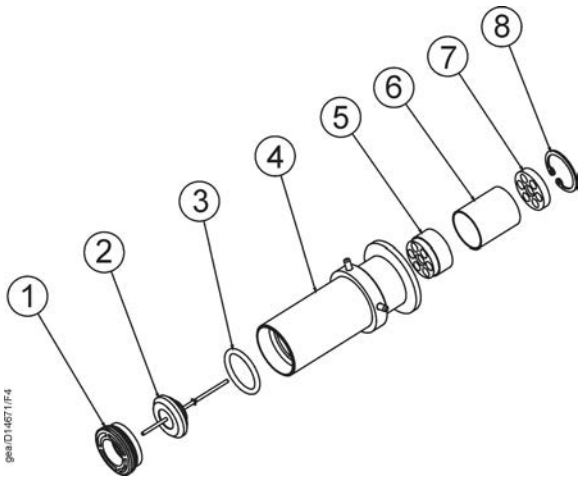
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5.5 Clean the internal components

Refer to Figure 4 in the following procedure.

1. Remove the internal components from the magnet housing.
2. Degrease the cathode plate (5), cathode tube (6), body tube (4) and anode assembly (2) in a suitable degreasing agent.
3. Thoroughly soak the components in a suitable laboratory detergent.
4. Rinse the components in clean water to remove the detergent.
5. Rinse the components in alcohol to remove all of the water, then thoroughly dry the components.
6. Inspect the anode assembly and cathode plates to ensure they have no tiny hairs attached.
7. Refit the components in the magnet housing.

Figure 4 - Exploded view of the AIM gauge tube assembly



1. Collar
2. Anode assembly
3. O-ring
4. Body tube
5. Inner cathode plate
6. Cathode tube
7. Outer cathode plate
8. Circlip

5.6 Fault finding

If the AIM Gauge does not operate correctly, ensure that the electrical connections are correct (refer to Section 3) and ensure that your electrical supply is suitable for the AIM Gauge (refer to Section 2).

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6 Storage and disposal

6.1 Storage

Return the AIM Gauge to its protective packaging and store the AIM Gauge in clean dry conditions until required for use. Do not exceed the storage temperature conditions specified in Section 2.

When required for use, prepare and install the AIM Gauge as described in Section 3.

6.2 Disposal

Dispose of the AIM Gauge and any components safely in accordance with all local and national safety and environmental requirements.

Alternatively, you may be able to recycle the AIM Gauge and/or cables; Contact Edwards or your supplier for advice (also see below).

The AIM Gauge and associated cables are within the scope of the European Directive on Waste Electrical and Electronic Equipment. Edwards offers European customers a recycling service for the AIM Gauge/cables at the end of the product's life. Contact Edwards for advice on how to return the AIM Gauge/cables for recycling.

Particular care must be taken if the AIM Gauge has been contaminated with dangerous process substances or if the AIM Gauge has been overheated or has been in a fire.

6.3 Return the equipment or components for service

Before you send your equipment to us for service or for any other reason, you must send us a completed Declaration of Contamination of Vacuum Equipment and Components – Form HS2. The HS2 form tells us if any substances found in the equipment are hazardous, which is important for the safety of our employees and all other people involved in the service of your equipment. The hazard information also lets us select the correct procedures to service your equipment.

We provide instructions for completing the form in the Declaration of Contamination of Vacuum equipment and Components – Procedure HS1.

Download the latest documents from www.edwardsvacuum.com/HSForms/, follow the procedure in HS1, fill in the electronic HS2 form, print it, sign it, and return the signed copy to us.

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7 Spares and accessories

7.1 Introduction

Edwards products, spares and accessories are available from Edwards companies in Belgium, Brazil, Canada, France, Germany, Hong Kong, Italy, Japan, Korea, Switzerland, United Kingdom, U.S.A. and a worldwide network of distributors. The majority of these centres employ Service Engineers who have undergone comprehensive training courses.

When you maintain this Edwards product, we recommend you use only Edwards maintenance and service kits.

Order spare parts and accessories from your nearest Edwards company or distributor. When you order, please state for each part required:

- Model and Item Number of your equipment.
- Serial Number (if any).
- Item Number and description of the part.

7.2 Spares

Spare	Item Number
Electronics and magnet housing:	
AIM-SI1	D14641800
AIM-XI1	D14642800
AIM-SLI1	D14644800
AIM-XLI1	D14645800
Body tube assembly	D14671801
Electrode assembly kit	D14671802
Anode assembly kit (10 anodes)	D14671810

7.3 Accessories

The cables suitable for use with the AIM Gauge are as follows. These cables are supplied with 8-way male electrical connectors on both ends.

Cable length		Item Number
0.5 m	18 inches	D40001005
1.0 m	3 feet	D40001010
3.0 m	10 feet	D40001030
5.0 m	15 feet	D40001050
10 m	30 feet	D40001100
15 m	50 feet	D40001150
25 m	80 feet	D40001250
50 m	150 feet	D40001500
100 m	325 feet	D40001999
Surge suppressor		D40006000

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P20002040H

EU Declaration of Conformity

This declaration of conformity is issued under the sole responsibility of the manufacturer:

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RH15 9TW
UK

Documentation Officer
Jana Sigmunda 300
Lutín , 78349
Czech Republic
T: +42(0) 580 582 728
documentation@edwardsvacuum.com

The product specified and listed below

Product Description: Industrial Active Inverted Magnetron Gauge

AIM-SI1-NW25	D14671000
AIM-XI1-NW25	D14672000
AIM-SLI1-NW25	D14674000
AIM-XLI1-NW25	D14675000

Is in conformity with the relevant Union harmonisation legislation:

2014/30/EU	Electromagnetic compatibility (EMC) directive Class B Emissions, Industrial Immunity
2011/65/EU	Restriction of certain hazardous substances (RoHS) directive as amended by Delegated Directive (EU) 2015/863

Based on the relevant requirements of harmonised standards and technical documentation:

EN 61010-1:2010+A1:2019	Safety requirements for electrical equipment for measurement, control and laboratory use. General requirements
EN IEC 61326-2-3:2021	Electrical equipment for measurement, control and laboratory use. EMC requirements. Particular requirements. Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning

This declaration, based on the requirements of the listed Directives and EN ISO/IEC 17050-1, covers all product serial numbers from this date on: *2024-11-22*

You must retain the signed legal declaration for future reference
This declaration becomes invalid if modifications are made to the product without prior agreement.

Nick Barratt - Engineering Manager, Eastbourne

Ed Neuss – General Manager, Eastbourne

P20002040H

Declaration of Conformity

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Edwards Ltd
Innovation Drive
Burgess Hill
West Sussex
RH15 9TW
UK

Documentation Officer
documentation@edwardsvacuum.com

The product specified and listed below

Product Description: Industrial Active Inverted Magnetron Gauge

AIM-SI1-NW25	D14671000
AIM-XI1-NW25	D14672000
AIM-SLI1-NW25	D14674000
AIM-XLI1-NW25	D14675000

The object of the declaration described above is in conformity with relevant statutory requirements:

Electromagnetic Compatibility Regulations 2016
Class B Emissions, Industrial Immunity

Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Relevant designated standards or technical specifications are as follows:

EN 61010-1:2010+A1:2019	Safety requirements for electrical equipment for measurement, control and laboratory use. General requirements
EN IEC 61326-2-3:2021	Electrical equipment for measurement, control and laboratory use. EMC requirements. Particular requirements. Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning

This declaration, based on the requirements of the listed Statutory Instruments and EN ISO/IEC 17050-1, covers all product serial numbers from this date on: *2024-11-22*

You must retain the signed legal declaration for future reference
This declaration becomes invalid if modifications are made to the product without prior agreement.

Signed for and on behalf of Edwards Ltd



Nick Barratt - Engineering Manager, Eastbourne



Ed Neuss – General Manager, Eastbourne

ADDITIONAL LEGISLATION AND COMPLIANCE INFORMATION

EMC (EU, UK): Class B Industrial equipment

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

RoHS (EU, UK): Material Exemption Information

This product is compliant with the following Exemptions
Annex III:

- 6(c) Copper alloy containing up to 4% **lead** by weight
- 7(a) **Lead** in in high melting temperature type solder (i.e. lead based alloys containing 85% by weight or more lead)
- 7(c) I Electrical and electronic components containing **lead** in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

REACH (EU, UK)

This product is a complex article which is not designed for intentional substance release. To the best of our knowledge the materials used comply with the requirements of REACH. The product manual provides information and instruction to ensure the safe storage, use, maintenance and disposal of the product including any substance based requirements.

Article 33.1 Declaration (EU, UK)

This product contains Candidate List Substances of Very High Concern above 0.1%ww by article as clarified under the 2015 European Court of Justice ruling in case C-106/14.

- Lead (Pb)
  This substance is present in certain brass / electrical or electronic components.
- Lead Oxide / Lead monoxide / Lead (II) oxide
  This substance is present in certain electrical or electronic components.

Additional Applicable Requirements

The product is in scope for and complies with the requirements of the following:

2012/19/EU	Directive on waste electrical and electronic equipment (WEEE)

材料成分声明
China Material Content Declaration

	有害物质 Hazardous Substances					
部件名称 Part name 	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr VI)	多溴联苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
铜接头 Brass connectors	X	O	O	O	O	O
电缆/电线/连接器 Cable/wire/connector	X	O	O	O	O	O
印刷电路组件 (PCA) Printed Circuit Assembly (PCA)	X	O	O	O	O	O
电子元件和控件 Electronics and Controls	X	O	O	O	O	O

O: 表示该有害物质在该部件的所有均质材料中的含量低于 GB/T 26572 标准规定的限量要求。
O: Indicates that the hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.

X: 表示该有害物质在该部件的至少一种均质材料中的含量超出 GB/T26572 标准规定的限量要求。
X: Indicates that the hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T26572.

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