



Air Gauge Interface Module (AGM)



AGM-A

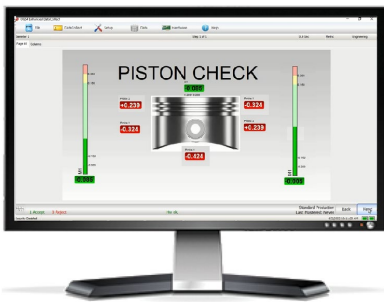


AGM-B

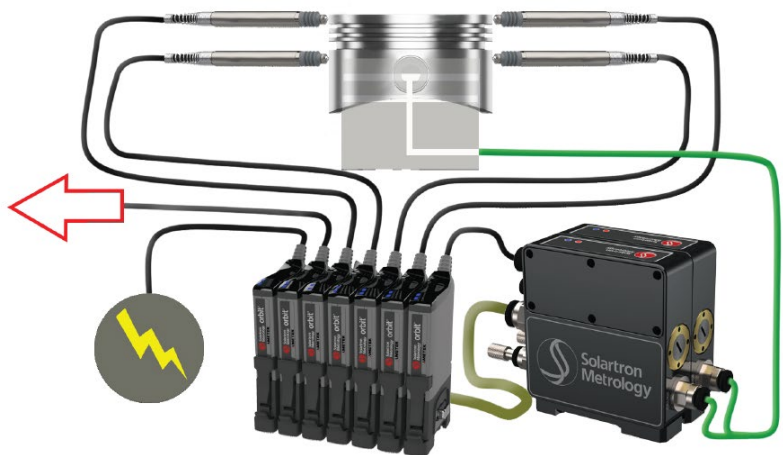
- Easy Setup and **Mastering** using PC software or onboard display
- Very high stability
- Resolution < 0.1 μm
- Pressure range 0 to 30 psi
- Choice of AGM Module with Setup screen (AGM-A) or without screen (AGM-B)

Air Gauging and Orbit® - Full Connectivity

Solartron Metrology's Orbit® Air Gauge Interface Module (AGM) makes connecting air gauge measurement probes to the Orbit® Digital Measurement Network simple, allowing the user to mix air gauges with contact and non contact sensors. With Orbit®, the user can easily output data to PC Software or PLCs.



Orbit Gauge Software 4.0



Measurement of Piston with Air Gauging checking ID, and connected to Orbit with the Air Gauge Module. OD Checked with Digital Probes.



Technical Specifications



Products Specifications	AGM - A	AGM - B
AGM Pressure Measurement Performance		
Recommended Input Pressure (Note 1)	30 Psi, 2.06 bar, 206 kPa	
Recommended Working Pressure (Note 2)	1 to 29 PSI, 0.07 bar to 1.99 bar, 6.8kPa to 199 kPa	
Pressure Linearity	0.03% FSO over range 1 PSI to 28 PSI	
AGM Typical Measurement Performance with Gauge Head (Note 3)		
Measuring Range	Typical 100 µm	
Resolution (µm)	<0.1 µm	
Repeatability (Note 1)	Typical < 1 um	
Features		
Mastering	Min Max	
Integrated colour display	Used for set up and display of measurement	N/A
Units	mm , inches or mil	
Interfaces		
Orbit3 Electronics	Fully compatible with ALL Solartron Orbit Controllers and Measurement Modes	
No of AGM powered by USBIM Controller (Note 4)	3	4
No of AGM powered by 1 PSIM (Note 4)	25	25
No of AGM-B that can be Connected to 1 AGM-B Interface Module	N/A	20
Air Gauge Interface	Single Channel	
Air Input Connection	Push Fit 8 mm diameter pipe	
Gauge Head Air Connection (Option 1)	Push Fit 6 mm diameter pipe	
Gauge Head Air Connection (Option 2)	MBP6400-4-4-O-RR (G1/4-19)	
Environmental		
Sealing	IP65 (excludes air connections)	
Operating and Storage Temperature °C	0 to 60	
EMC Emissions	EN61000-6-3	
EMC Susceptibility	EN61000-6-2	
Mechanical		
Mounting	Din Mount	
Materials	Aluminium / Steel / ABS	

Note 1 : The AGM will operate with an input air pressure between 10 to 30 PSI, 0.7 to 2 bar.

Note 2 : The AGM should be set so that the min master pressure is withing the specified working range.

Note 3 : Actual performance depends on Air Gauge Head fitted values are typical

Note 4 : Solartron advise checking power requirements for any Orbit Configuration issuing the power calculator supplied with the Orbit Suite.

To achieve full performance a precision regulator and filter is highly recommended

Do not exceed 30 PSI into AGM





Easy Mastering

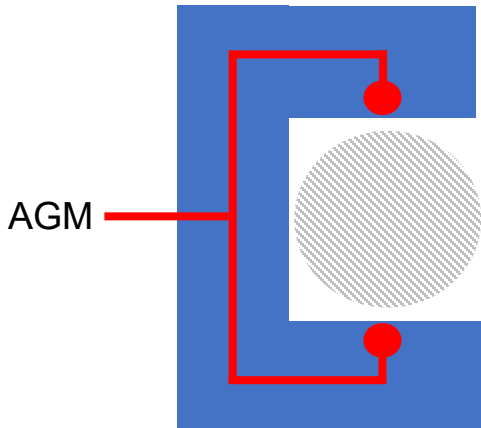
Orbit® Software Drivers include an AGM Mastering Software for easy set-up. For AGM-A, mastering can also be performed on module.

The screenshot shows the 'Air Gauge Utility' software interface. On the left, there's a list of 'Air Gauge Modules' with '365YM17504' selected. The main area displays configuration details for this module, including 'Module ID: 365YM17504', 'Orbit Reading: 0.0454 mm', 'Mastered Reading: 63.5354 mm', 'Status Desc: Over Range', 'Offset: -0.0100 mm', 'Stroke: 0.0450 mm', 'UOM: mm', 'Master Min: 63.5000 mm', 'Master Max: 63.5254 mm', 'Mastered Status: Mastered', 'Pressure: 0.00 psi', 'Limit High: 0.0000', and 'Limit Low: 0.0000'. A 'Mastering Step 1 of 5' dialog box is overlaid, showing 'Master Minimum Reading' set to 35.000 mm and 'Master Maximum Reading' set to 35.050 mm. Below this, a 'Mastering Step 2 of 5' dialog box shows a downward arrow pointing to a hatched rectangular block, with the instruction 'Place Probe Into Minimum Master' and 'Next >>' button highlighted.

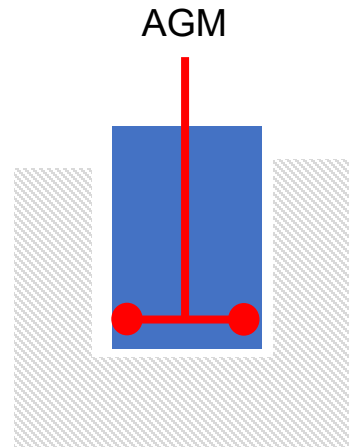




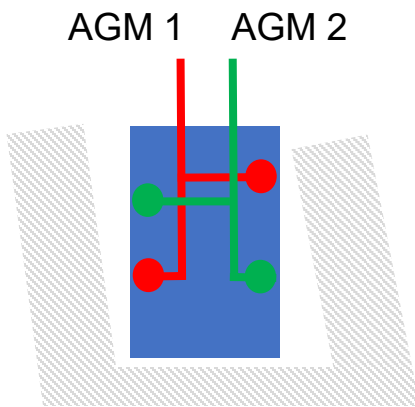
Applications



OD Check

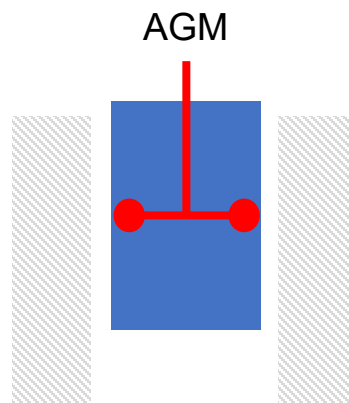


ID Check
(Blind Hole)

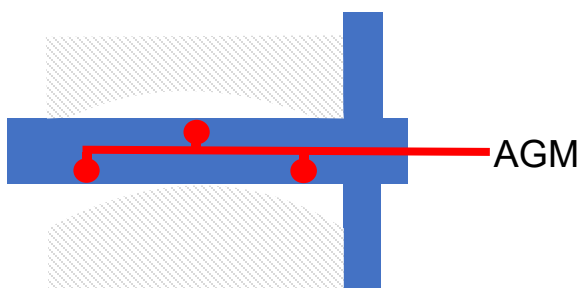


Parallel or Square
Check

(2 Air Circuits connected to 2 AGM
Parallelism = AGM 1 - AGM 2)



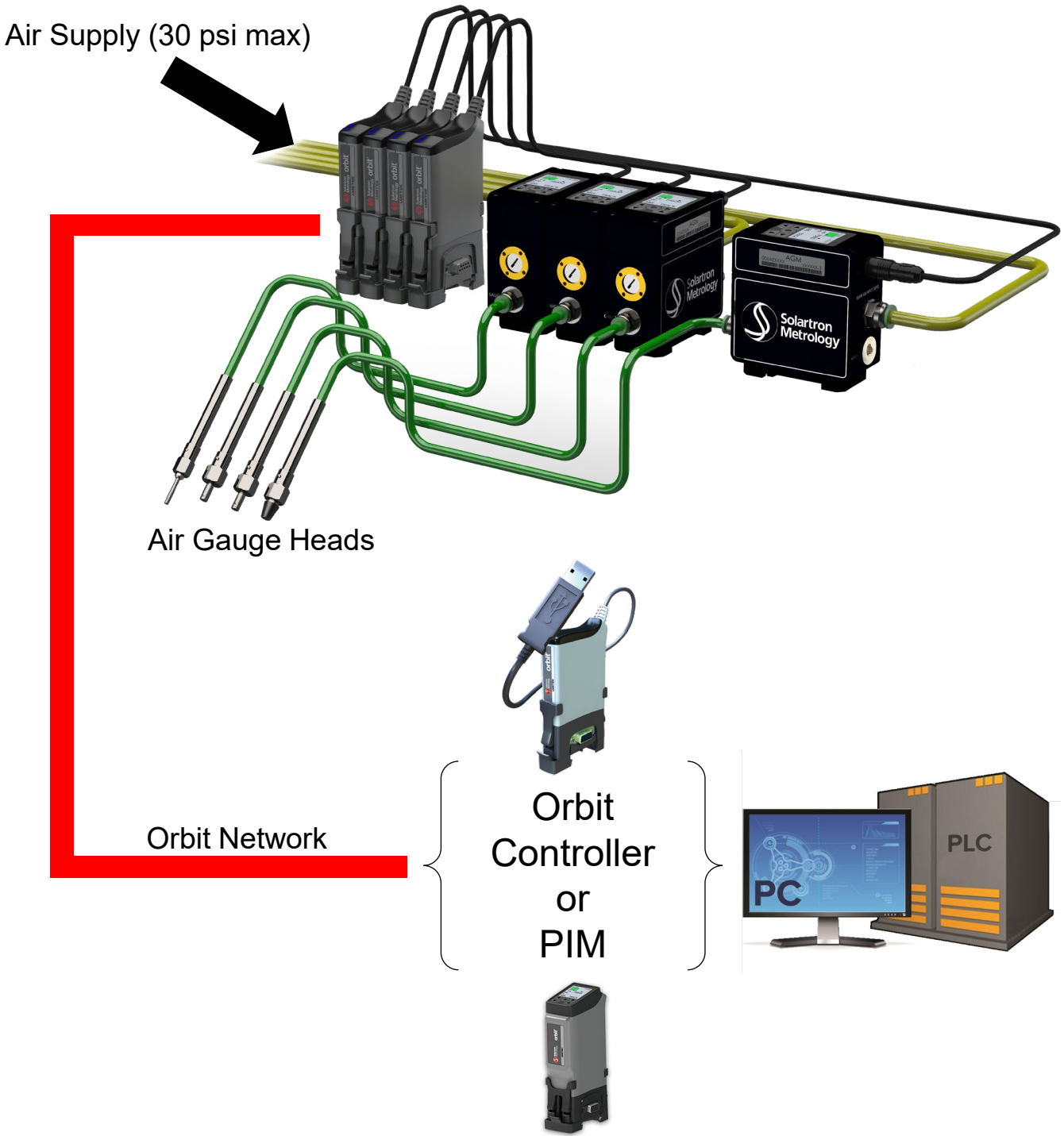
ID Check
(Open Hole)



Straightness or Bow



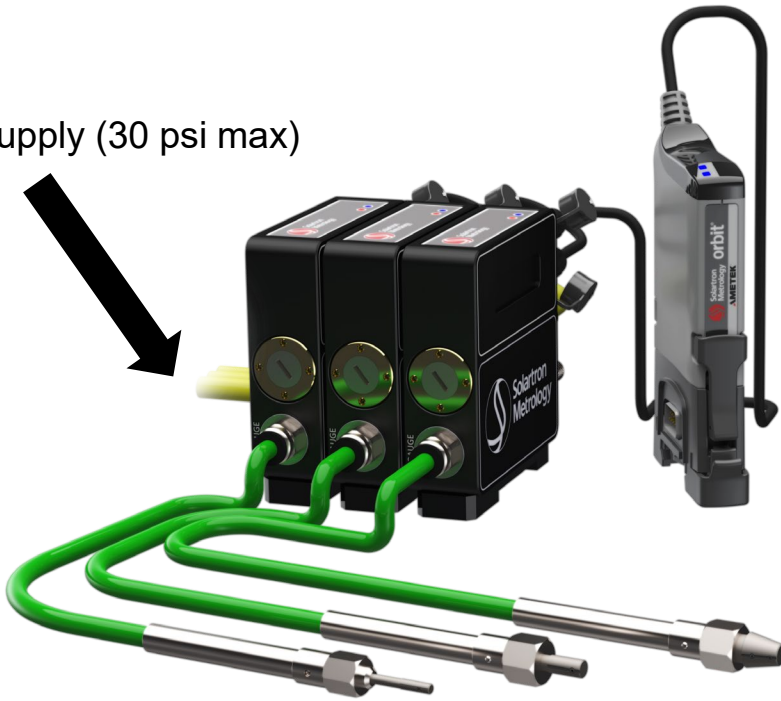
Connectivity for Type A Module





Connectivity for Type B Module

Air Supply (30 psi max)



Air Gauge Heads



Orbit Controller
or
PIM

Orbit Network





Safety

The AGM and associated Air Gauging heads use compressed air and are for industrial use only by competent personnel. The air supply must be dry and filtered to prevent ingress of contamination into the AGM. Ensure that you comply with the relevant regulations for use of compressed air for the location where the AGM is installed.

Use and Mastering

The AGM can be configured and Min Max Mastered in 2 ways:

- Locally, using On Screen Display (AGM-A only)
- Via the Air Gauge Mastering Utility (which is installed as part of the Orbit suite of programs).

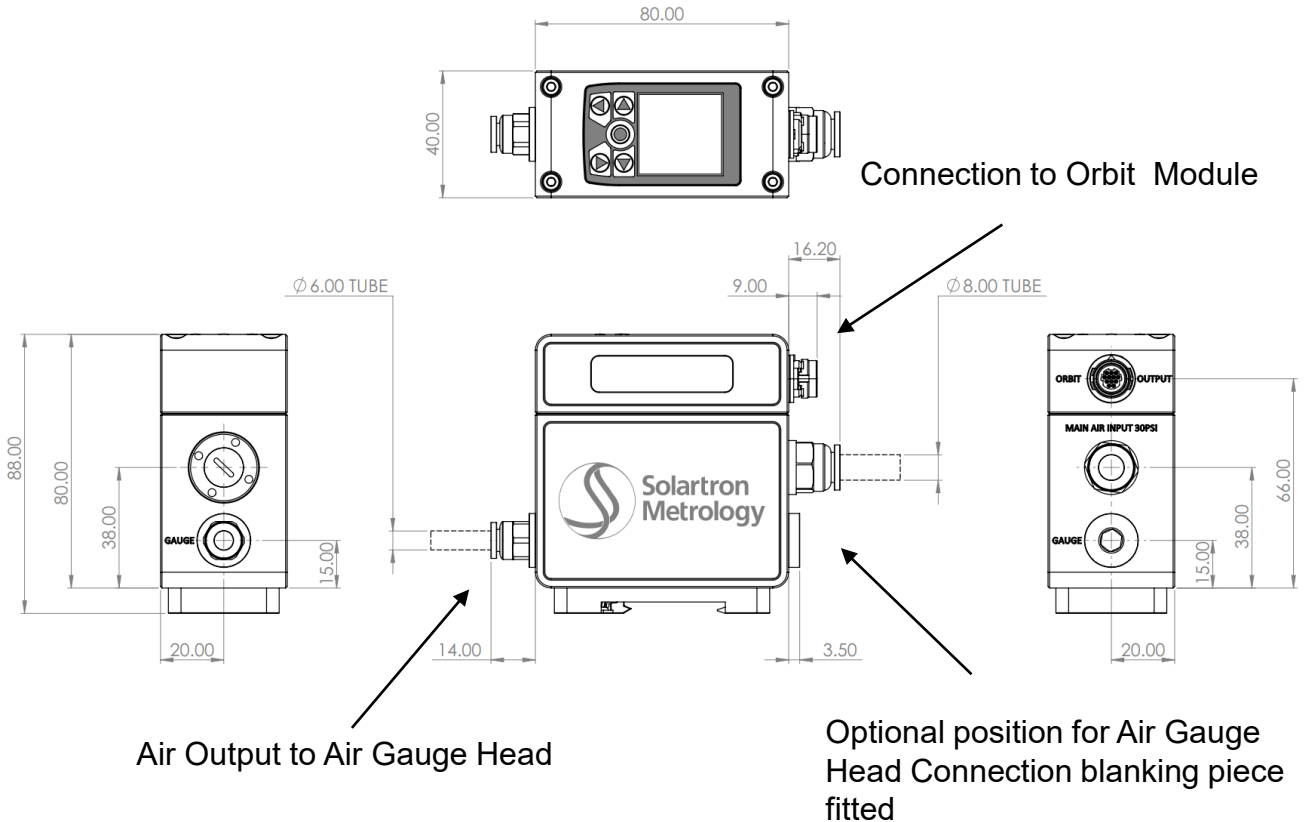
On Screen Display

The AGM-A has its own on-screen colour display, complete with keypad and five control buttons. This enables readings, and a simple menu to be displayed. High and Low limits can also be set.



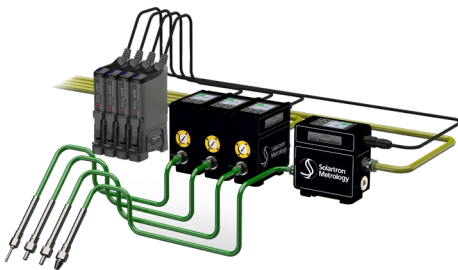
See Orbit3 Module Manual 502914 for more details

Dimensions – Type A



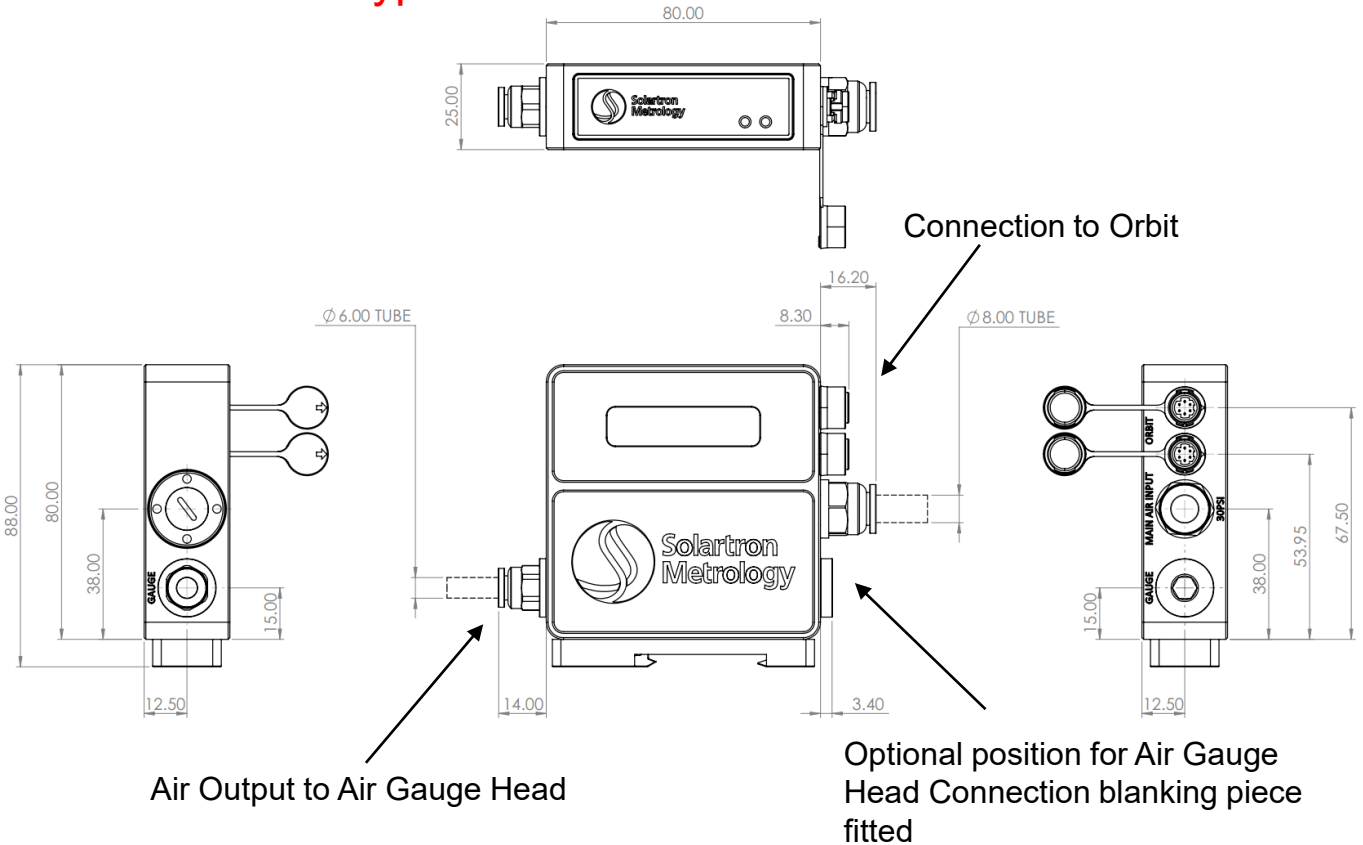
The AGM-A is normally supplied with push fit pipe connectors 8 mm diameter for pressure in and 6 mm for air gauge heads (2x). The threads on the AGM are ¼ inch BSPP, if these need to be replaced for a different fitting.

Connecting – Type A



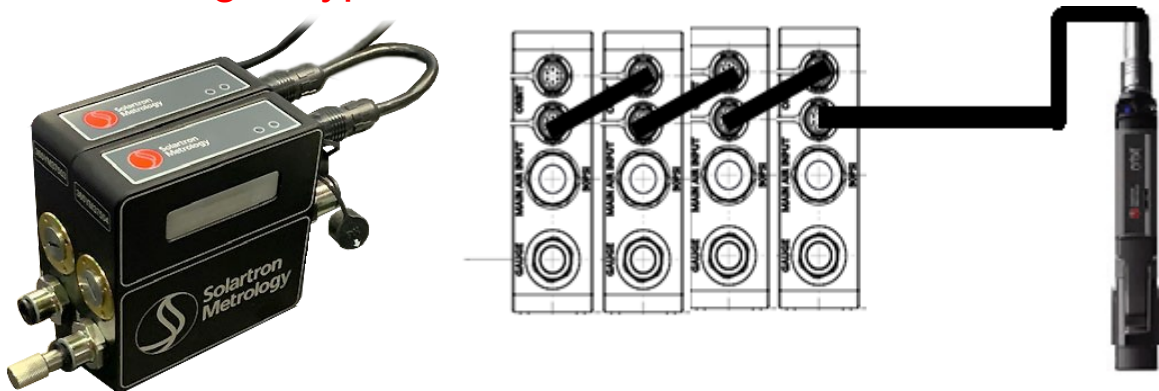
The AGM – A is supplied connected to a PIE Module (as shown) for easy integration to the Solartron Orbit Digital Measurement Network. For dimensions of the PIE Module see Orbit catalogue.

Dimensions – Type B



The AGM-B is normally supplied with push fit pipe connectors 8 mm diameter for pressure in and 6 mm for air gauge heads (2x). The threads on the AGM are ¼ inch BSPP, if these need to be replaced for a different fitting

Connecting – Type B



The Type B can be connected to each other to form an Orbit network using the supplied link cable, the final connection to the Orbit network is made using a PIE Module.



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