



SINGLE STAGE Positive Displacement



High Voltage

Ensure package is securely isolated from the power supply before starting work VSD/VFD: Wait 10mins after isolating power before gaining access to electrical enclosure

🔼 High Pressure

Ensure package is securely isolated from the compressed air system before starting work Ensure any internal compressed air is fully vented before starting work

<u>ss</u> **High Temperature**

Allow internal parts and pipework to cool before starting work



Observe all regional, site and equipment safety regulations, warnings and instructions



Important information



Notes and recommendations

Scope of this document

This document focuses on the installation of the UniTAG in an AirMatics installation.

In such installation there are always other components installed (AirTAGs and/or Metacentre).

The installation of these components is not part of this document.

All sensors require a proper way of installation. Be sure these are installed according to the requirements. This is obviously not part of this document.

Depending on the installation, some sensors are connected to the Metacentre, These connections are not part of this document.

AirMatics installations require system configuration. This is not part of this document.

Version	Date	Description	Author(s)	
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Installation Type

A UniTAG is always installed with other devices (AirTAG(s) and / or Metacentre) and (most often¹) a number of Sensors.

Before starting the installation, be sure which type of installation is required, be sure which sensors are applicable.

Main Types:

• AirTAG Asset Group

No Metacentre is used, only AirTAGs

Sensors:

- ➔ System Pressure (P1 mandatory) connected to UniTAG
- → Generation Pressure (P2 option) connected to UniTAG
- → Air Flow (F1 option) connected to UniTAG
- ➔ Dewpoint (D1 option) connected to UniTAG
- ➔ Temperature (T1 option) connected to UniTAG



Metacentre Management System Integration

No AirTAGs are used, Metacentre is not used

Sensors:

- → System Pressure (P1 mandatory) connected to Metacentre
- → Generation Pressure (P2 option) connected to Metacentre



• Metacentre / AirTAG Asset Group Integration Both AirTAGs and Metacentre are used

¹ With a "Metacentre Management System Integration" it is possible all sensors are already available on the Metacentre.





Sensors:

- → System Pressure (P1 mandatory) connected to Metacentre
- → Generation Pressure (P2 option) connected to Metacentre
- ➔ Air Flow (F1 option) connected to UniTAG
- → Dewpoint (D1 option) connected to UniTAG
- ➔ Temperature (T1 option) connected to UniTAG



Overview of connectivity to UniTAG





Installation Steps

This sheet provides an overview of the steps to be taken to install a UniTAG.

Follow the steps according to the installation.

UniTAG installation				
	Туре			
		Metacentre Management System	Metacentre / AirTAG Asset Group	Step
	AirTAG Asset Group	Integration	Integration	Reference
Installation Steps				
Physical installation	Yes	Yes	Yes	1
Installation Gateway	Yes	Yes	Yes	2
Antenna	Yes	Yes	Yes	3
Power	Yes	Yes	Yes	4
Comms to AirTAGs	Yes	No	Yes	5
Comms to Metacentre	No	Yes	Yes	6
		Connected to Metacentre (not	Connected to Metacentre (not	
System Pressure	Yes	part of this document)	part of this document)	7
		Optionally connected to		
		Metacentre (not part of this		
Generation Pressure	Option	document)	Option	8
Air Flow	Option	Not relevant	Option	9
Dewpoint	Option	Not relevant	Option	10
Temperature	Option	Not relevant	Option	11
Alarms	Option	Not relevant	Option	12



Connections on the UniTAG. Greyed out connections are not in use (though the connectors might be present).



Overview of connections from the perspective of the UniTAG



Step Reference 1; Physical installation

By default, UniTAG is delivered in a metal housing (referred to as the "UniTAG housing").





This box is to be installed against a wall.

In case the UniTAG is not yet installed in the metal housing, install UniTAG in metal housing on the indicated location.





Step Reference 2; Installation of Gateway

See also next step (Antenna)

In case the location on the Antenna requires the Gateway to be installed out of the UniTAG housing, only guidelines can be provided as this is highly dependent on the installation.

The Gateway package consists of:



2.a) Gateway installation on UniTAG housing

• Install the DIN Rail mount brackets on the Gateway





• Physically mount the Gateway at the right side of the UniTAG



• Install the power cable for the Gateway

Power cable article number: Y19TICS05 (if not yet delivered with the UniTAG).



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Connect power cable from UniTAG X06 to power input of Gateway



• Connect the Ethernet between UniTAG and Gateway



2.b) Gateway installation out of UniTAG housing

If the Gateway cannot be installed in the UniTAG housing, this is due to the requirement for the Antenna location.

In that case it is recommended to use a second "UniTAG housing" in which only the Gateway is installed. Powering the Gateway can be done directly from the power supply provided in the housing.





A Network cable has to be installed between the UniTAG and the Gateway:





Step Reference 3; Antenna

The standard delivered antenna has a cable length of 3m.

The antenna can either be installed on the UniTAG housing ...





... or on another nearby location (which depends on the installation).

The cables of the antenna are labeled with "LTE" and "GNSS"







In case anther antenna is required, please follow the instructions provided with the antenna.



Step Reference 4; Power

Ensure the enclosure and UniTAG are securely earthed to the asset main earth point.

The AirTAG X09 Earth terminal must always be securely connected to the assets main earth point using a 2.5mm2 CSA (14AWG) earth cable.

• Internal power for the UniTAG

In case the UniTAG is already having a power cable connection (on X09), you can skip this step.

Power connection of the UniTAG is done as such (connector is supplied):



• Powering the UniTAG housing

A mains connection is provided on these points:





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Step Reference 5; Communications to AirTAGs

The UniTAG communicates with one or more AirTAGs via Ethernet.

It is suppose all AirTAGs are properly installed (or will be in a later phase). This installation is not part of this document.

The "last" AirTAG in the chain of AirTAGs needs a Ethernet connection to the UniTAG.



A CAT5 (/5E/6) Ethernet connection coming from the "last AirTAG" is connected to X19 on the UniTAG.



Step Reference 6; Communications to Metacentre

Communications to Metacentre equipment is done via AirBUS485 communication.

Connection is done via X18.



The RS485 data communications cable can be supplied with an RJ11 plug pre-fitted. If necessary remove (cut) the RJ11 plug from the cable and reconnect the L1 (A+) and L2 (B-) wires to a plug type that matches the asset controller socket.

Step Reference 7 and 8; System Pressure and Generation Pressure

Dedicated pressure sensor(s) are supposed to be installed properly, the UniTAG is able to power and monitor the signal from dedicated pressure sensor(s).

The UniTAG is able to monitor the signal from a 4-20mA or 0-10V, 0-5V, 1-5V, 0.5-4.5V type pressure sensors². Other sensors are not supported.

System Pressure is connected to X11 Generation Pressure is connected to X12



X11 / X12 - X11: System Pressure - X12: Generation Pressure

² The UniTAG must be configured according to the type of sensor in use. This configuration is not part of this document.



Step Reference 9 and 10; Airflow and Dewpoint

These optional sensors are connected to X13:



Both sensors need to be 4..20mA and are supposed to be properly installed.

The sensors are either loop powered or self powered. Connectivity is as such:





4-20mA Loop Powered (Passive)

4-20mA Self Powered (Active)



Step Reference 11; Temperature

The Temperature sensor (only PT1000 type supported) is supposed to be properly installed.

Connection is done to X16 – connections T1+ and T1-.





Step Reference 12; Alarms

Up to 4 Alarm signals³ can be connected to the UniTAG





The ALARM status monitoring inputs are voltage detecting. If 24-240Vac/dc is detected across the two input terminal pins the input is active (ON). When no voltage is detected the input is deactivated (OFF).

Do not connect the UnitTAG Alarm monitoring terminals to a voltage greater than 240V.

³ The UniTAG must be configured according to the Alarms in use. This configuration is not part of this document.



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