

Titan Calibrated Omni-Sensor

The Titan Omni-Sensor is an aspirated module for in-zone climate monitoring. It combines temperature, humidity, PAR light, and optional CO₂ monitoring (when using SEN-OSM/CO₂) in a compact unit that can be suspended anywhere within a monitored or controlled zone.



Applications



The advanced electronics and instrumentation on board the Omni-Sensor make it suitable for a wide range of applications, including greenhouses, growth chambers, produce coolers, high humidity propagation houses and other clean ambient air sampling environments.

Use wherever combined temperature and humidity measurements are required. The integrated light sensor is suitable for confirmation of lighting and shade system operations as well as quantitative light measurement.

Aspirated sensors are not suitable for environments containing a lot of fog or very fine mist. Fans and other electronic parts will be damaged from prolonged exposure to free water. In addition, moisture will accumulate in the air path affecting both humidity and temperature readings through local evaporation and evaporative cooling until the unit is completely dry again. Use non-aspirated versions of this sensor or other sensors for these special applications. For all other applications, aspiration improves response.

Alternatives

Argus provides a wide selection of application-specific sensors and sensor enclosures for use with the Titan system. Other models of the Omni-Sensor include one for CO₂ monitoring (SEN-OSM/C&CO₂), temperature-only monitoring (SEN-OSM/T) and one for temperature and humidity monitoring (SEN-OSM/RHT). They are supplied with and without digital displays. Individual sensor options are also available for CO₂, PAR light measurement, and many other environmental parameters. For special applications, customer specified sensors can also be connected. Please contact Argus for additional details.

For any high humidity applications, it is recommended to use the SEN-RHT sensor instead of the OMNI.

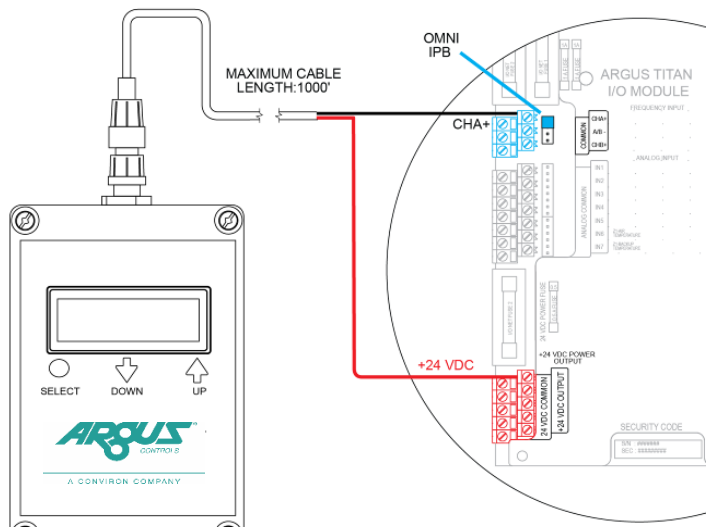
Features

- **Calibrated** – The Omni sensor can be manually calibrated using the Omni sensor display.
- A convenient on-board display shows the current values for all readings and accepts operator entered field calibration adjustments.
- Connects to a Titan I/O Module using **simple, two-conductor shielded or unshielded cable**. This also provides an easy means of suspension for the sensor. Digital communications enable **long wiring runs up to 4000 feet**. Custom cable lengths can be specified.
- Requires only a single digital input on the I/O Module leaving all analog inputs free for other uses. Up to two Omni-Sensors can be connected to one I/O Module.
- High accuracy temperature and humidity measurements.
- A high-resolution integrated light sensor is included for measurement of the local light conditions at the sensor location. This is useful for confirming the operation of shade and blackout curtains as well as supplemental lighting equipment.
- **Compact, versatile construction.** The box cover can be rotated 180 degrees, so that the cable enters via the bottom of the unit. This accommodates wall or post mounting and eliminates any shading effect from the cable on the light sensor. A bracket for wall or post mounting is included.

Specifications

Dimensions	4.9" x 3.3" x 2.1" (H x W x D)
Power Requirements	Power is provided by the connected I/O Module via the 2-wire connection.
Cabling	Factory cable is provided separately. Standard lengths are 15', 30', and 60'. Custom lengths are also available. Cables can also be extended using 2-conductor non-shielded 18-24 AWG UV-resistant cable. A blue Omni-Sensor Input Protection Board is provided with each sensor and must be installed on the I/O Module input as shown. Wiring details are provided with each unit.
Display	2-line, 16 characters reflective. 0 – 50 °C operating range
Temperature Sensors	Typical Accuracy: +/-0.1°C at 20°C.
Humidity Sensor	Range: 10 -100% non-condensing Typical Accuracy: 0 - 80%RH: +/- 2%RH; 80 - 100%RH: +/-3%RH It is not recommended to exceed 80% RH and to use the SEN-RHT sensor for >80%
Light Sensor	Lux (illumination) with conversions to generate PAR (Photosynthetically Active Radiation). Readings are in μmols and light Energy in W/m ² . This sensor is intended for general use only. There is a 10 second delay once you change the PAR multiplier in order to keep the value before it is powered off.
Max Operating Range	0 °C to +50 °C Note: Aspiration Fan turns off below -10°C or >98%RH.

Wiring Details



Typical wiring example. For installation, refer to the supplied wiring diagrams and instructions.

The supplied Input Protection Board (Omni IPB) provides power for the Omni-Sensor and protection for the I/O Module.

Additional Information

For more information, please refer to the Omni-Sensor Operator Manual or contact Argus.

