

Terroir Expression Manager by **Rovanco**[®]

ISO 9001:2015
CERTIFIED COMPANY

 **PRI Registrar**
PERFORMANCE REVIEW INSTITUTE



Measure & Monitor...

- Ambient Temperature
- Cellar Humidity
- Mold Detection
- Soil Temperature
- Soil Humidity
- Water Ingress

Rovanco's

Terroir Expression Manager

Measures & Monitors

- *Ambient Temperature*
- *Cellar Humidity*
- *Mold Detection*
- *Soil Temperature*
- *Soil Humidity*
- *Water Ingress*

Fluctuations in temperature and moisture levels jeopardizes efforts which can result in inferior results or even cause the destruction of crops. A stable environment is the greatest assurance vineyards and orchards will experience the optimal harvest.

SAM units are engineered to measure and monitor temperature, humidity and moisture levels, allowing the user to take action when the current environment is not conducive to the optimum crop yields.

Data continuously collected by SAM units is communicated at set intervals to a central system via IoT technology. If any parameter exceeds the set alarm thresholds, immediate alarm notification will be sent via e-mail or SMS to the person managing the system.

With SAM units strategically positioned throughout a vineyard, orchard or in cellars, the user can get a detailed, real-time overview of the conditions crops and products in a given region are experiencing.



Lithium ion battery powered SAM units provide critical information about a crop area and precisely defines the current conditions there.





Ambient Temperature – Utilizing a monitoring probe, the SAM units measure ambient outside temperature & humidity.

Significant temperature drop data received at the central monitoring system, allows action to be taken in some cases.

For example, some fruit producers combat a late Spring frost by misting vines or trees with water, preserving the delicate buds and preventing crop damage. Knowing in advance this temperature drop is imminent is crucial.

In contrast, data sent indicating dramatically rising temperatures, can provide advanced notice that an adjusted irrigation cycle is required.

Soil Temperature & Moisture Levels – is also monitored. In the event the SAM unit indicates soil moisture is below acceptable levels, the user knows the area is in need of irrigation.

Data is also collected for moisture level by the SAM's sensors. For example, excessive water in a vineyard valley could indicate a break in the irrigation system. This can now be identified and repaired before damage to the crops can occur.

Where water comes to rest and soil content varies from region to region even of the same property. So the importance of strategically locating SAM units in various areas at differing elevations, will allow the user to know what conditions exist in each area of the whole property.

SAM units provide you with the information you need to be accurately proactive.

Temperature Monitoring During Storage & Aging

A critical time in the journey from vine to wine or aging alcohol to whiskey.



- A stable temperature & humidity range is crucial during the aging and storing process. Strategically locating SAM units with sensor probes throughout storage cellars assures every barrel stays within the desired temperature range and keeps the vintage consistent.
- Leaks, flooding or mold growth can ruin a cellar and all the product contained within it. Simply hanging a SAM unit equipped with probes on an interior wall can sense water ingress levels or detect unwanted elements such as mold and communicate this information to the central monitoring station. This allows actions to be taken before severe destruction can occur.



SAM Unit shown installed in optional Stainless steel mounting cabinet

SAM-1 Technical Specifications

Unit

- Up to 5 independent inputs/sensors.
- Housing is IP 67 rated.
- Waterproof so engineered for outdoor use.

Communication

Collected data sent via IoT cellular technology or through LAN network. MQTT protocol data can also be sent directly to an external system.

Power Supply

Lithium Battery lasts approximately 2-3 years when sending data 4 times per day.

Measurement

Temperature: -55C to 135C

Humidity: 0-100% RH

Rovanco Piping Systems, Inc.

20535 S.E. Frontage Road

Joliet, IL 60431

(815) 741-6700

Fax (815) 741-4229

www.rovanco.com

marketing@rovanco.com

**ISO 9001:2015
CERTIFIED COMPANY**

 **PRI Registrar**
PERFORMANCE REVIEW INSTITUTE

© 2023 Rovanco Piping Systems, Inc.
cc #05242023