



Temperature Monitoring Systems (including data storage) and Alert Systems *Temperature Transmitter - TT*

TT system for early detection of malfunctions in refrigeration and freezing
Preventing damage to merchandise

The TT systems and sensors for Temperature Alert

Measure the air temperature in a cooling facility, does not prevent false temperature alarms due to the opening of the door diffuser defrosting process, inserting of new hot merchandise and so on.

Advantages:

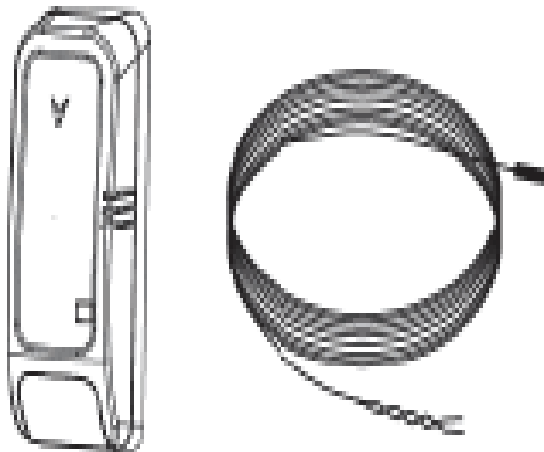
1. Most conventional alarm systems are computer-based, computer failure due to or computer "fall" during a power outage when the UPS stopped working, the temperature alert. The TT system in case of power failure, continue to operate 24 hours and sends power failure alarm, when the power returns system sends notification in accordance with the return.
2. In conventional systems, when the alarm sensor is also the temperature control sensor (operative sensor), in the event of sensor failure or malfunction of the controller, the system operates at extreme temperatures without transmitting an alerting. TT Alert System is an independent alert system that does not depend on the cooling device unit and sends only real alerts.
3. Enabling combining with other alerting sensors - burglary, fire, flood, humidity and so on.
4. The sensors transmitting from any metal sealed cooling rooms and freezers.
5. Proven integrated system



TT – Transmitted Temperature

The Oren & Co. wireless TT sensors is linked through an independent switchboard- Tyco Power Master 10 to Axonize cloud, analyze the temperature data and sends phone messages, MS messages, display graphs, recording data and alarms and more according to customer requirements. The switchboard can handle dozens of sensors in parallel; the TT sensor is positioned without the need for external connections. The useful life of the device battery is seven years. The TT is independent of the power supply or the cooling system controller, does not infringe the front and sealing of the refrigerator or the freezer. The TT designed to monitor and identify faults in the rooms and refrigerators store merchandise in temperature range of

(-) 30°C to (+) 50°C.





Advantages Summary:

1. Integration with other sensors like: TTS (Temperature Transmitter Simulator), cameras, door opening sensors flooding sensors, moisture detectors etc.
2. There is no need for PLC or another controller and programming knowledge.
3. There is no limit to the amount and duration of data logging.
4. Transfer of data to any computer or smart phone.
5. Supply data processing, statistics, graphs, alarms, fault analysis, etc.
6. Integration with GPS for informing sensor position sensor, whether stationary installations and for refrigeration trucks.
7. Fully adapted to customer needs
8. Independent system that is not connected to the control unit of the cooling facility.
9. Saving the accumulation and storing data over the disks and printers.
10. Enabling determination of permissions for data users

Interfaces to TT systems and Temperature monitoring systems

1. Direct interface to security companies.
2. Direct interface to computer, phone and mobile phone.
3. Interface allows application through the cloud for refrigeration trucks, refrigeration facilities, large networks - supermarket chain, refrigeration containers and much more.



Temperature Monitoring Systems (including data storage) and Alert Systems
Temperature Transmitter Simulator - TTS
Preventing False Alarms

- Oren Co. Refrigeration Engineering Ltd. was founded in 1942.
- Advanced refrigeration engineering for industrial, agriculture and military projects
- Advanced manufacturing systems, using components of leading firms only.
- The company operates in accordance with international standards, ISO-9008 and MIL-STD.
- Oren & Co. provides services and solutions for professional and advanced cooling systems in numerous areas including a range of advanced systems for monitoring, data logging, monitoring and alerts on abnormal temperature refrigeration facilities, refrigerated trucks that provide the perfect solution for tracking and protecting the merchandise.

TTS system for early detection of malfunctions in refrigeration and freezing
Preventing damage to merchandise without false alarms

The existing systems and sensors for Temperature Alert

The existing alerting systems measure the air temperature in a cooling facility, the problems with these systems is obtained false alarms because they are affected by changes in temperature due to the opening of the door diffuser defrosting process, inserting of new hot merchandise and so on. In many cases, in order to avoid false alarms, thermostat alarm systems are calibrated to higher temperature, so that malfunction alert is received too late.

The new of temperature alerting sensors – the TTS (Temperature Transmitter Simulator)

The innovation awarded by the TTS system is a sensor system simulates the temperature of the merchandise itself.

The basic principles of the TTS alerts system in cooling and freezing units are temperature monitoring and simulation of thermal capacitance and the latent heat of the products stored compared to today's conventional systems which monitor the air of the cooling and freezing units. The TTS Sensor ignores changes in temperature in the cooling facility caused by opening the door, the diffuser defrosting process, the loading of new hot products goods and human errors. The system and the TTS sensors have high sensitivity and reliability in protecting the temperature of the stored goods. The system gives a alerting of malfunction refrigerating or freezing systems prior to breakdown.



Advantages:

6. Elevating the sensing temperature in ordinary systems to prevent false alarms- there is a possibility that the device will work for extended periods of time at high temperature and without alerting as required – in the TTS system, such a possibility cannot happen.
7. TTS-based alerting system is not affected by the opening of the doors, the inserting of a hot commodity, defrosting process, so only when there is a danger of rising temperature of the stored goods in the cooling facility, the TTS system will send an alert.
8. Most conventional alarm systems are computer-based, computer failure due to or computer "fall" during a power outage when the UPS stopped working, the temperature alert. The TTS system in case of power failure, continue to operate 24 hours and sends power failure alarm, when the power returns system sends notification in accordance with the return.
9. In conventional systems, when the alarm sensor is also the temperature control sensor (operative sensor), in the event of sensor failure or malfunction of the controller, the system operates at extreme temperatures without transmitting an alerting. TTS Alert System is an independent alert system that does not depend on the cooling device unit and sends only real alerts.
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11. The sensors transmitting from any metal sealed cooling rooms and freezers.



TTS – Transmitted Temperature Simulator

The wireless system is linked through an independent switchboard- Tyco Power Master 10 to Axonize cloud, analyze the temperature data and sends phone messages, MS messages, display graphs, recording data and alarms and more according to customer requirements. The switchboard can handle dozens of sensors in parallel; the TTS sensor is positioned without the need for external connections. The useful life of the device battery is seven years. The TTS is independent of the power supply or the cooling system controller, does not infringe the front and sealing of the refrigerator or the freezer. The TTS designed to monitor and identify faults in the rooms and refrigerators store merchandise in temperature range of (-) 30°C to (+) 50°C.





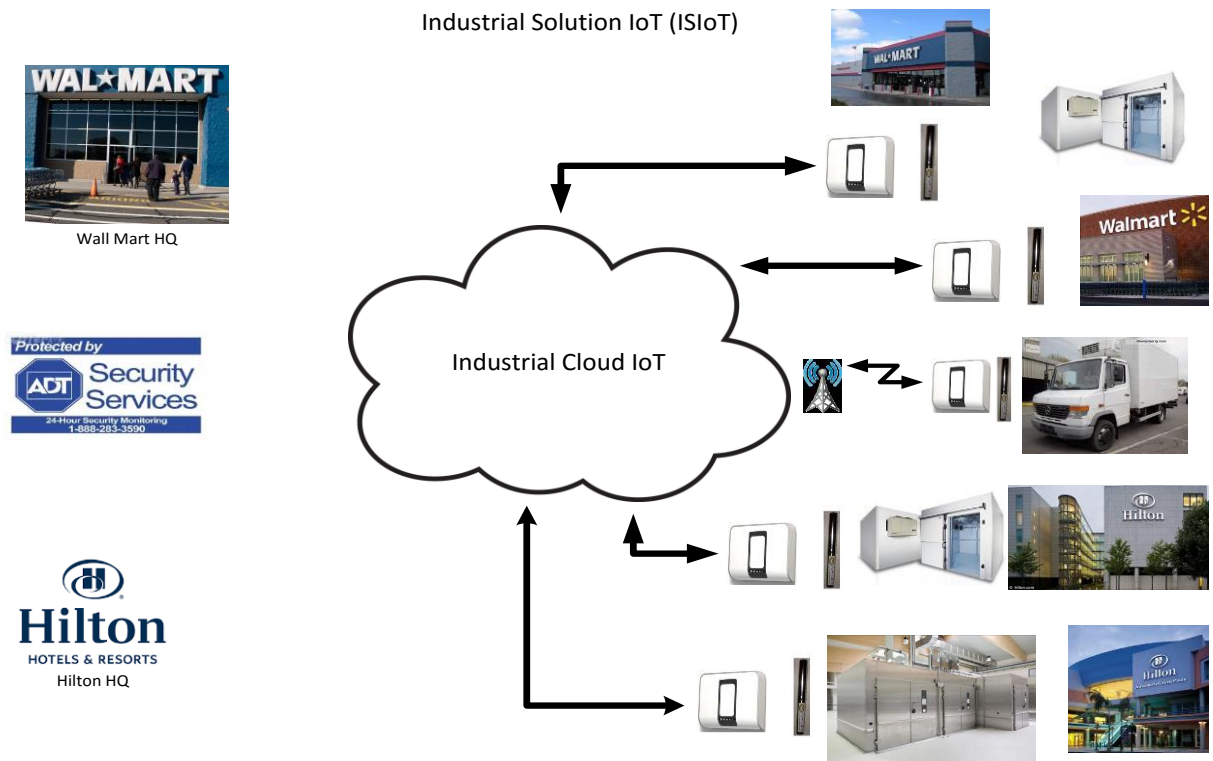
Advantages Summary:

11. The monitoring system allows monitoring by TTS sensors simulation of the goods temperature in the cooling facility.
12. Integration with other sensors like: TT (simple temperature system), cameras, door opening sensors flooding sensors, moisture detectors etc.
13. There is no need for PLC or another controller and programming knowledge.
14. There is no limit to the amount and duration of data logging.
15. Transfer of data to any computer or smart phone.
16. Supply data processing, statistics, graphs, alarms, fault analysis, etc.
17. Integration with GPS for informing sensor position sensor, whether stationary installations and for refrigeration trucks.
18. Fully adapted to customer needs
19. Independent system that is not connected to the control unit of the cooling facility.
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The most advanced system for monitoring temperature in refrigeration units, freezing facilities (supermarkets, food chains, storage houses and refrigeration trucks)

The new era of temperature monitoring, data logging, alerts and statistics, monitoring from anywhere and transfer data anywhere using an advanced system associated with advanced Oren & Co. temperature sensors technology, Axonize cloud technology and Tyco alarming system technology.



Dashboard Summary:

- 55 Devices
- 0 Connected Devices
- 4 Open Alarms
- 80% Critical Battery

Device & Hub Hierarchy:

- McDonald's USA (54)
 - Florida (27)
 - Miami (5)
 - Tyco Gateway 3 (4)
 - Tampa (4)
 - Tyco Gateway 4 (3)
 - St. Petersburg (6)
 - Tyco Gateway 5 (5)

Connected Devices Table:

Connected	Serial #	Name	Battery	Alarm
●	F27	A Modbus Sensor 5	🟢	🔔
●	F1	Fridge 1	🟢	🔔
●	F11	Fridge 1 Magnet	🟢	🔔
●	F10	Fridge 10	🟢	🔔
●	F12	Fridge 12	🟢	🔔
●	F13	Fridge 13	🟢	🔔
●	F14	Fridge 14	🟢	🔔
●	F15	Fridge 15	🟢	🔔
●	F16	Fridge 16	🟢	🔔
●	F17	Fridge 17	🟢	🔔

Alarms & Events Log:

- Event has occurred at 02:35 pm | 26.11.15
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Interfaces to TTS and TT systems and Temperature monitoring systems

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TT and TTS System Typical Applications



For further information, please contact Oren & Co. Ltd. Refrigeration Engineering.

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