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01
Overall description
OVERALL DESCRIPTION

Cooler Manager™ is a state of the art IOT device specifically designed for beer or gas volume measurement, REALTIME beer volume tracking on the Point of Sale and data transfer with CLOUD servers via GSM, Bluetooth (Optional) or WIFI.

Cooler Manager™ is connecting to the server on every hour and sends the crucial data to cloud.

Cooler Manager™ controller is built to work in hard and extreme conditions, withstanding heat, moisture, dust and grease build up.

Cooler Manager™ incorporate latest technologies to seamlessly integrate with GSM, Bluetooth (Optional), RFID, NFC and WIFI technologies and protocols.

Bespoke original design with aim to be used in the beer industry. Sensors for monitoring flow, temperature and CO2. Our digital support team continuously works on innovations and required automations. Real-time information using online state of the art reporting tools.

Created to simplify, enhance and provide full insights on the flow of beverages, liquids and gases to industry and consumers.
02
Main functions
K-factor is a parameter, determined by neural network, which measures flow and automatically adjusts measurement to maintain high precision. By considering all parameters, impacting physical characteristics of beer fluid we can measure:

- Beer Volume, total or separated on time scale
- Real Time temperature for each line separately, minimum, maximum temperature, peaks and ice bank (cooler) temperature.
- Type of gas/liquid flowing through lines – Gas, water, beer or cleaning acid
- CO2 pressure, or CO2 leaking anywhere in the system
- BAT - Barrel attached time – very important parameter that tells the beer company how long the barrel is attached to the beer line, i.e. 2 days, 5 days or much more.
- Brands, i.e. Brand 1 Lager, Brand 2, Brand 3 Pilsner etc.
- Number of controller resets and number of on/off switching.
- Total uptime and session uptime
- Number of taps activation per hour (how many times tap is pulled and average beer pouring by each tap pulling)
- Average beer portions per hour
- Speed of Flow turbines, average per hour
- Voltage on power supply, processor and each turbine
- OLED display for real-time volume monitoring
- Power Supply UPS and Battery
- Two Way Communication - You can give orders and commands to the controllers separately from the server (Remotely change brands, factors and variables, set promotions and time for promotions).
- Auto firmware update
- SD card with a complete history and logs
- Separate volume and special reports for Promotions
- Android and iOS Application – set up any parameters and send data easily
03 Deployment
Cooler Manager™ has been deployed in over 9,000 Point of Sale Locations in the South European market. Smart and always connected devices measure, inspect and report on flow, level, quality and safety of any liquid or gas.

Ruggedized IOT device provides real-time data enhancing productivity by using the information to make decisions on everything from delivery, least cost routing optimization and maintenance, reducing cost and allowing increased consumption.

Cooler Manager™ can be:
- Internal – mounted directly inside beer cooler with submerged turbines
- External – mounted anywhere close to beer cooler or on the beer cooler itself with turbines not submerged
04 Communication
Communication

- GSM – Works with any SIM card with data transfer
- WIFI – can be set up to attach on any WIFI network through iOS or Android application, or it can attach on predefined WIFI router by default
- Bluetooth (Optional) – Setting up and sending data to remote server

Always connected via Bluetooth (Optional), 2G/4G and Wi-Fi, our devices are always connected alerting you and with scheduled or real-time frequency.
05
Data storm
The information allows for more precise scheduled or on demand visits, lower maintenance costs and increased sales opportunities, stopping wasted trips and optimizing workflows.

**Cooler Manager™** created an ecosystem of real-time intelligence for business and consumers. Connected intelligent devices providing true IoT insights for any business, simple, easy and smart.

GSM module can be upgraded with an external antenna which comes in the package with **Cooler Manager™** so you do not have to worry about GSM coverage.

If **Cooler Manager™** is in the area without network coverage whatsoever, WiFi module will take care of your data.

Our special access points will provide WiFi connection to **Cooler Manager™** as failover and backup connection protocol.

Always connected via Bluetooth (Optional), 2G/4G and Wi-Fi, our devices are always connected alerting you and the sales representative with scheduled or real-time frequency.

The information allows scheduled visits, lower maintenance costs and increased sales opportunities.

Sales people will have insight into the consumption and sales, whilst management can track the frequency of customer visits increasing sales opportunities.

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**Cooler Manager™ Cloud**

Cloud infrastructure which can be tailored to client requirements.
06
About the app
About the app

Always connected via Bluetooth, 2G/4G and Wi-Fi, our devices are always connected alerting you and the sales representative with scheduled or real-time frequency. The information allows scheduled visits, lower maintenance costs and increased sales opportunities.

Sales people will have insight into the consumption and sales, whilst management can track the frequency of customer visits increasing sales opportunities.
07 Dashboard
With our high line cloud dashboard, management can track every bit of detail about the beer or gas consumption. Management can track data based on time, place or region. Live data feeds give the much-needed support, to company management and how to extract and manage various data.

From Marketing to sales through to maintenance. Detailed live data about the whole region, country or a single beer tap in real-time is a clear advantage of CoolerManager systems.

Graphic views are available for all settings, so that management can visually track every bit of information. With Dashboard, Technical service can track relevant technical data and preempt in time if any issues arise, prior to the venue knowing about it.
Alarms
Alarms

Management can set up custom alarms, about beer flow, gas flow, gas state, or total amount of beer and gas supply / reserve.

Also, management can see when technical service personnel paired with Bluetooth app, time spent on site, and details about controller service.
09
Cooler Manager™
Flow Sensor Turbine
**Cooler Manager™** Flow sensor turbine

**Cooler Manager™** have specially designed flow turbine just for this system. Specially designed turbine with high precision on all flow rates, which integrates temperature sensor and conductivity probe inside the Flow meter body.

**Cooler Manager™** Flow Turbine can be submerged and operate normally in any conditions. Fast-Fit connectors for easy and fast connection to the beer lines.
10 Promotions tracking
Promotions tracking

Cooler Manager™ has the invaluable option for setting up various promotions. Two-way communication with the server enables companies to:

- Set up a Promotion remotely, i.e. track a beer consumption for specific brand in a specific period of time in any Point of Sale
- Increase sale for a period of time
- Track separately that volume
- Monitor volume during the promotion in real time on the controller and with one-hour delay on dashboard
- Cloud Servers send the promotion data to the Cooler Manager controllers to set up promotion.
11 CO2 Measure and Leaking Detection
CO\textsuperscript{2} measure and leaking detection

 Cooler Manager\textsuperscript{TM} has as special add on option that can measure real time consumption of the CO\textsuperscript{2} gas or any other kind of gas.

 Unique system provides great benefits for One Way draft beer systems, and also can detect gas leaking in real time and send an alarm to the cloud server.

 With Cooler Manager\textsuperscript{TM} CO\textsuperscript{2} gas detection and measurement system you can know exact amount of gas spent in any time, so precise that you can measure amount of gas for any poured glass of beer and gas leaking is easily recognizable.
12
SMART-way - gas measuring system for One Way systems
SMART-way – gas measuring system for One Way systems

One Way beer dispensing systems became more popular in recent time because they are more adjusted to weak consuming Points of Sale.

Usually, One Way systems come with separated and unique beer line that can be used only once which makes beer turbine impossible to place. We designed special system for monitoring that kind of systems.

Because that system still needs CO2 gas to operate, we designed highly precise controller that can measure exact amount of CO2 inserted in the barrel and in the glass, so precise that Cooler Manager™ can measure CO2 gas spent in 0.02 liters of beer, which makes sampling resolution about 50 gas samples per liter in time steps of just 100 milliseconds.

With precision this high, it is easy for Cooler Manager™ to recognize any gas leaking anywhere in the system with just a few seconds delay. SMART-Way is extension of Cooler Manager™ system so it supports all the functionalities that Cooler Manager™ already possess.
COOL BEER

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