

TMV Water Temperature Monitoring System



PRODUCT DESCRIPTION

The MAG TMV Water Temperature Monitoring System monitors a building's water temperature from the outlet of a TMV.

It delivers a risk management tool by monitoring and recording temperatures across multiple points to identify whether there are faults in need of maintenance.

Engineered to meet the special performance, compliance and reporting needs of each building, our customised solution includes all wiring and electrical components in the TMV Boxes, programming and is fully commissioned ready to use.

APPLICATIONS

Health and aged care facilities; commercial buildings; airports; hotels; educational facilities including schools and gymnasiums; sports facilities; correctional and prison buildings.

BENEFITS

- Real time monitoring of water temperature
- Multi monitoring of temperature from all TMVs
- Real time reporting, including logging of all temperatures – allows ability to respond promptly to any problems
- Building Management Integration - can be connected to, and integrates with, existing BACnet® Building Automation Systems
- Live updating on display screens
- Reduced maintenance costs, procedures and less downtime
- Efficient facility management (streamlined monitoring and identification of problems, effective reporting)
- Out of temperature range alarming 24/7
- Flexible and secure access to different groups of users
- No mixing chamber required – ideal with FM Mattsson TMVs
- Easy to install and use
- 12-month warranty

PRODUCT CODE: MAG TMV Water Temperature Monitoring System.

HOW IT WORKS

The TMV Water Temperature Monitoring System constantly monitors the valves outlet temperature electronically, through a calibrated sensor probe installed into the outlet pipework of the TMV.

This provides real time monitoring of water temperature, performance status of all TMVs throughout the facility, live updating on display screens and provides a warning via an alarm if an out-of-temperature event is detected.

TEMPERATURE MONITORING

The sensor probes are installed on the outlet pipework of the TMVs for continuous monitoring. The water outlet setpoint of the TMV is generally **43.5°C**.



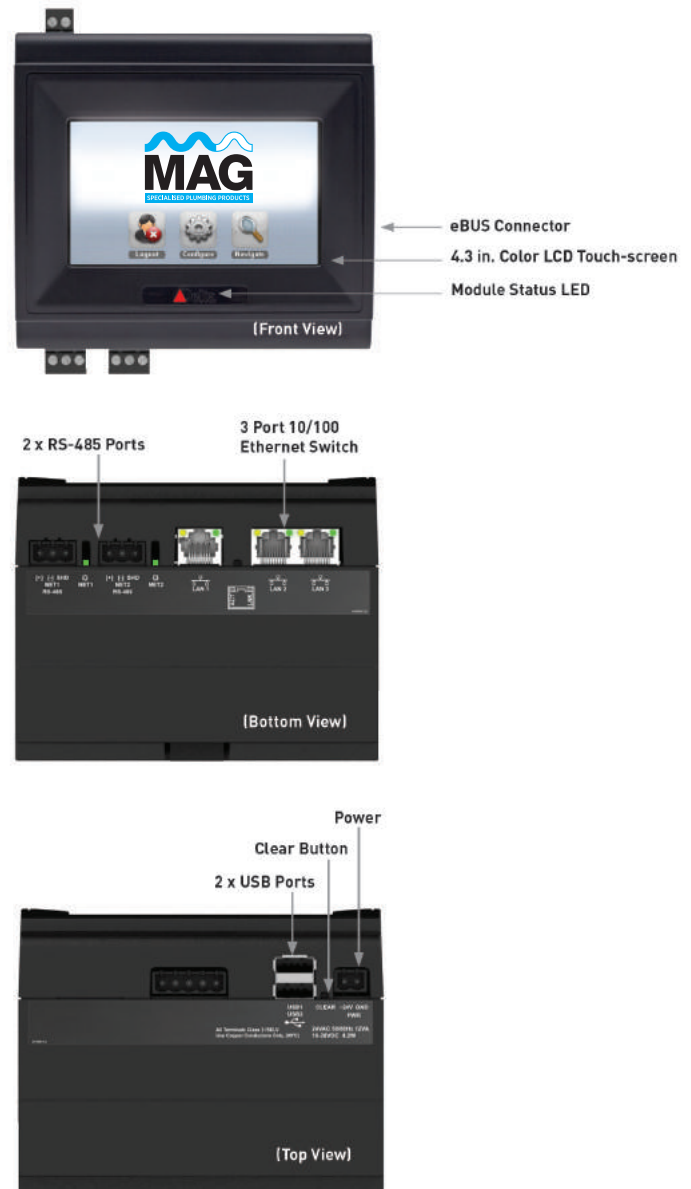
Sensor Probe installed on the outlet pipework of the TMV

BACnet® System – Business Intelligence, Flexibility and Control

The monitoring sensors are connected to enteliBUS Manager (eBMGR), a fully programmable native BACnet® Building Controller. enteliBUS Manager supports multiple communications methods including, as standard, BACnet/IP, BACnet over Ethernet, BACnet MS/TP (Master Slave/Token Passing), and Delta LINKnet.

The Manager is the automation engine of the enteliBUS Control System. It contains the primary CPU, memory storage and external communication ports.

- Fully programmable, the Manager also provides the control logic for enteliBUS I/O expansion backplanes.
- User experience can be tailored to meet specific needs.
- For control at a finger's touch and communication with remote networks.
- Standard high-resolution color display and customizable screens provide an easy-to-use graphical interface tailored to your needs.
- Advanced fault detection and diagnostics.
- LED status indications of power, CPU Scan and Ethernet ports.
- Small footprint.
- Modular design for flexibility, ease of service and reduced cost for future expansion.



TEMPERATURE LOGGING AND REPORTING

Real time temperature readings of the TMVs are logged once per minute (adjustable) within the system server which resides locally on site for full control and real-time access.

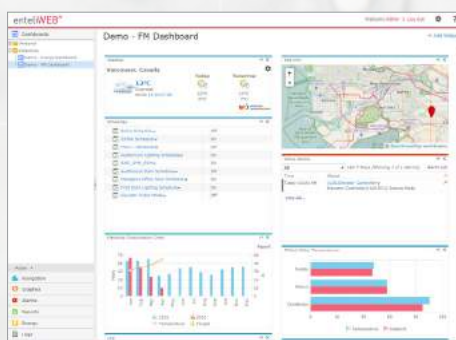
Professional, built in reports can be generated for all TMV'S monitored from a report wizard or saved in a library. The reporting system is flexible and delivers custom reports which can be emailed automatically to a schedule (e.g., daily, weekly, etc). Output options include PDF, CSV and web.

Data can be presented in enterprise, personal or system dashboards to meet your exact needs. Dashboards and object pages can also be optimized for viewing on your smartphone or tablet.

TEMPERATURE ALARM

Each TMV is monitored for three separate alarm conditions:

- **High Temperature Alarm** - will activate when the temperature rises above the high temperature set point of 48°C (adjustable). The alarm condition will return to normal upon the temperature falling below the high temperature setpoint.
- **Low Temperature Alarm** - will activate when the temperature falls below the low temperature set point of 38°C (adjustable) for over 24 Hours (adjustable). The alarm condition will return to normal upon the temperature rising above the low temperature set point.
- **Sensor Fault Alarm** - will activate upon the system monitoring a pre-set high and low limit of each temperature probe. Any TMV outside of these parameters will generate a sensor faulty condition alarm. The alarm condition will return to normal upon the probe reading within the pre-set parameters.



GENERAL INFORMATION

- Stable industrial RS485 Standard Communications
- IP65 rated at sensor and buffer end
- Intervals from 10 seconds to 1 day
- Readings in degrees C or F
- Save files to your directory/Back up HDD
- Unique ID number per point
- Provides both audible and visual alarms (i.e., sensor 'fail' status and 'out of range' status)
- Can also email critical alarms if required

Frequently Asked Questions

1. Does the system work with all TMV brands? Technically, yes. However, as the system is designed to monitor and record 'out of temperature' events, if generic TMVs are used, there may be more out of temperature alarm activation.

This means the temperature monitoring system is working - yet it can also highlight less than ideal TMV performance.

2. How many TMVs do we need to have to make it a viable investment? We would recommend a minimum number of 50 TMVs would be required.

3. How does connectivity work? The monitoring sensors are connected to enteliBUS Manager (eBMGR), a fully programmable native BACnet® Building Controller. enteliBUS Manager supports multiple communications methods including, as standard, BACnet/IP, BACnet over Ethernet, BACnet MS/TP (Master Slave/Token Passing), and Delta LINKnet.

BACnet is a data communication protocol for building automation and control networks. It is an ANSI and ISO standard and has been recognised by international standard. BACnet is the predominant standard specified for BMS installations.

The monitoring system can be accessed via the head end computer from any standard web browser accessing the Delta Web based supervisory controller and interface (relevant security access is required).

- A.** The system collects raw data (temperatures) from the calibrated sensor probe installed into the outlet pipework of the TMV.
- B.** Provides tools to analyse, compare and aggregate the data.
- C.** Logs data, alarms and events. Old data can be automatically archived and retrieved. Periodical backups ensure data is never lost.
- D.** Displays data and reports in real time - produces high quality reports, presents reports to outputs required.

4. How often are the temperatures logged? The temperatures are logged 365 days per year, 24/7. Real time temperature readings of the TMVs are logged once per minute (this is adjustable) - to intervals from 10 seconds to 1 day.

5. How is the data shown? The data can be shown in many ways. Multiple temperatures can be viewed on a single chart or graph. These charts/graphs can be emailed or printed directly from the system to provide automated reports.

6. Where does historical data sit? Historical data resides in a MySQL database within the server or saved over the cloud.

7. How does the alarm work? The system provides both audible and visual alarms (i.e., sensor 'fail' status and 'out of range' status). Further, it can also email critical alarms if required.

8. Are the sensor probes reliable and are they provided as part of the system? The sensor probes are provided with the system and are supplied recalibrated. The sensors have excellent long-term stability and working life. We have a 12-month warranty on the sensor life.

9. Is the technology supported throughout Australia? Yes, the technology is supported throughout Australia through a large network of service agents in every State.

10. What types of building is the system suited to?

Health and aged care facilities; commercial buildings; airports; hotels; educational facilities including schools and gymnasiums; sports facilities; correctional and prison buildings.

11. Who would use this system?

- Facility/Building managers and maintenance staff - to monitor performance, meet compliance reporting needs, identify erroneous operation.
- Building owners - to improve ROI of building, add attractiveness to tenants, water usage.
- Finance managers - to monitor performance against budgets, ROI of improvements & upgrades.