SECTION 22 119 – WATER TEMPERATURE MONITOR - GENERAL

PART 1 - GENERAL

* 1. Related Documents
     1. Drawings and general provisions of the Contract, including General and Supplementary General Conditions and other Division 01 Specification Sections, apply to this Section.
  2. Summary
     1. Provide a complete installation of a water temperature monitoring system to continuously monitor that the water supply remains within operating parameters. A basic system will include a PT100 temperature probe and a central control panel. If the water temperature rises or falls outside of the set parameters, the system shall go into alarm to notify the appropriate individuals. The temperature reading will be done by a PT100 temperature probe that installed into the water pipe wired back into the central control and monitoring panel. The control panel will communicate system status and alarm conditions. There may be remote audible alarm beacons in the system, and BMS connectivity from the control panel.
     2. The system shall include, but not limited to the following:
        1. Future expandability.
        2. Central control and monitoring panel.
        3. Live display of system status and water temperature.
        4. PT100 temperature probe with ½” NPT compression fitting.
        5. Audible and visual alarms.
        6. Re-set and mute functions.
        7. Outputs for remote audible and visual alarms.

PART 2 - PRODUCTS

* 1. Control Panel Type AGS-WTM
     1. Includes a PT100 temperature probe and ½” NPT compression fitting.
     2. The control panel will be 24VAC or 120VAC powered.
     3. Provides system status and indication.
        1. Live temperature reading.
        2. Parameter settings.
        3. Alarm status.
        4. Water status.
        5. Highest temperature measured after alarm.
     4. The control panel will be capable of transmitting signals to the BMS system.
        1. Temperature readout via 0-10V output.
        2. Alarm condition via dry contact relay.
     5. The unit shall provide a 24 VAC or 120 VAC output to control a water solenoid valve.
     6. The control panel will be capable of manually adjusting the minimum and maximum temperature set points.
     7. Local activation of audible and visual alarms, the transmitter shall have an on-board device able to generate an audible output of 60 dBA @ 3.28ft.
     8. The unit shall provide 24V output signals to activate remote audible and alarm beacons model #AGSAAB with in-built adaptable tones and strobes.
     9. Manual reset function to clear any alarm conditions.
  2. Remote audible and visual alarm beacon type AGS-AAB.

PART 3 – EXECUTION

* 1. INSTALLATION
     1. The full installation shall be performed according to the manufacturer’s instructions.
     2. The plumbing contractor shall provide a complete system for installation.
     3. The system will come factory set with a 122F high temperature alarm set point, and a disabled low alarm setpoint.
     4. The controller may be programmed to any other required alarm setpoints after it is provided with 24VAC or 120VAC power.
     5. The provided ½” NPT compression fitting for PT100 probe installation shall be installed into a plumbing tee provided by the div. 22 contractor.
     6. The PT100 temperature probe wiring shall have a max distance of 1500FT.
  2. SEQUENCE OF OPERATION
     1. Normal Operating Conditions
        1. Screen Display
           1. Green LED background.
           2. Water “ON”.
           3. Real time temperature reading.
        2. 0-10V output provides voltage signal based off of a linear scale from 32F to 212F.
        3. Relay output in original state.
     2. Alarm Status
        1. If the water temperature falls outside of the programmed minimum or maximum temperature settings, the unit will enter alarm mode.
        2. Screen Display
           1. Red LED background.
           2. Water “OFF”.
           3. Real time temperature reading.
           4. Flashes highest recorded temperature.
        3. Integral audible alarm will sound.
        4. Relay output switches over.
        5. Alarm Silence: The audible alarm can be silenced by pressing the MUTE button.
        6. The user must manually reset the system at the controller to return to normal operating sequence after the alarm condition has been addressed.
  3. COMMISSIONING
     1. After installation, test equipment to demonstrate operation of functions described above under sequence of operation by manufactures certified service technician.
  4. WARRANTY.
     1. Limited Warranty
        1. American Gas Safety, LLC. warrants to the original purchaser and/or ultimate customer ("Purchaser") of AGS products ("Product") that if any part thereof proves to be defective in material or workmanship within thirty six (36) months, such defective part will be repaired or replaced, free of charge, at AGS' discretion if shipped prepaid to AGS 6304 Benjamin Road, Suite 502, Tampa, FL 33634 in a package equal to or in the original container. The Product will be returned freight prepaid and repaired or replaced if it is determined by AGS that the part failed due to defective materials or workmanship. The repair or replacement of any such defective part shall be AGS' sole and exclusive responsibility and liability under this limited warranty.