SECTION 23 09 13 – WATER LEAK DETECTION - 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 leak detection system for continuous monitoring. A basic system will include a controller with a water leak sensing attachment. The sensing attachments may be pucks or ropes. When the chosen sensing attachment detects the presence of water, it will signal the controller to enter alarm condition. The controller then shall have in built in audible alarm along with connection capabilities to signal BMS systems, remote audible alarm strobes, electronic solenoid and ball valves, and other electronic actuated devices as required.
		2. The system shall include, but not limited to the following:
			1. Future expandability.
			2. Central control and monitoring panel.
			3. LED system status indicator.
			4. BMS/BAS relay.
			5. In-built audible and visual alarms.
			6. Output for remote audible & visual alarm strobes.
			7. Normally closed or normally open water solenoid valve.
			8. Manual re-set after alarm condition.
			9. Mute functions.

PART 2 – PRODUCTS

* 1. Basis of Design, AGS Type AGS-WLM
		1. 24V or 110VAC Powered.
		2. LED Indication of Status.
			1. Alarm status.
			2. Water On status.
		3. Outputs Must Meet or Exceed Specs as Listed Below
			1. Water Valve Output
				+ NC/COM/NO, max 3A @ 110V
			2. BMS Relay Output
				+ NC/COM/NO, max 3A @ 110V
			3. Strobe Relay Output
				+ NC/COM/NO, max 3A @ 110V
		4. The unit shall be compatible with both 24V and 110V valves.
		5. Local activation of audible and visual alarms of 60 dBA @ 3.28ft.
		6. 24V or 110V output signals to activate remote audible and alarm beacons model #AGSAAB with in-built adaptable tones and strobes.
		7. Manual reset function to clear any alarm conditions.
		8. Sensitivity adjustment of sensing attachments.
		9. Mute function to clear audible alarms.

Delete as required.

* 1. Sensing Cable Type AGSRP Series (2-Core)
		1. Pre-defined lengths as stated by the manufacturer.
		2. Cable must be a quick drying type for re-use after water leak detection.
		3. Must include a 5ft lead cable as a minimum.
		4. Manufacturer must have the option to include 4 core cable for fault detection, indicating faulty cables or incorrect wiring.
	2. Sensing Cable Type AGSPLRP Series (4-Core)
		1. Pluggable ropes with male and female plug ends for expandability and adaptability.
		2. Tee attachments for multiple branches from one controller.
		3. Cable must be a quick drying type for re-use after water leak detection.
		4. Must include a 5ft lead cable as a minimum.
		5. Up to 500FT of connected pluggable rope. d
	3. Water Leak Puck Type AGSP Series
		1. Must be able to connect upto 8 pucks to the main water leak detection controller.
		2. Lead wire may be extended up to 100FT.
		3. Must not alarm due to condensation or humidity.
	4. Solenoid Valve Type AGS-SOLVLV Series
		1. NSF certified brass lead free (unless stated otherwise in the plans).
		2. 120VAC or 24VAC powered.
		3. Normally Closed or Normally Open (refer to plans).
	5. 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.
	2. SEQUENCE OF OPERATION
1. Normal Operation
	* + 1. LED Display:
2. Green LED Illuminated
3. Water “ON”.
	* + 1. The water valve outputs remain in a state to keep solenoid valve open.
				1. Energizing Normally Closed Valve.
				2. De-Energized Normally Open Valve.
			2. Audible alarm beacon off.
			3. BMS signaling non-alarm condition.
4. Alarm Condition
	* + 1. LED Display:
5. Red LED Illuminated
6. Water “OFF”.
	* + 1. The water valve outputs remain in a state to keep solenoid valve closed.
				1. De-Energize Normally Closed Valve.
				2. Energized Normally Open Valve.
			2. Audible alarm beacon on.
				1. May be muted via “mute” button.
			3. BMS signaling alarm condition.
			4. Local internal alarm on.
				1. May be muted via “mute” button.
			5. System must be manually reset to return to normal state.
				1. Auto reset may be turned on via settings.
		1. Fault Status
			1. If damaged cables or incorrect wiring is detected, the controller will enter alarm mode. (Only applicable with the use of 4 core sensing cables with fault detection).
			2. LED Display:
7. Amber LED Illuminated
8. FAULT
	* + 1. Integral audible alarm will sound.
			2. BMS relay output switches over.
	1. COMMISSIONING
		1. After installation, test equipment to demonstrate operation of functions described above under sequence of operation by manufactures certified service technician.
	2. 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.