**Specification for: Stand-Alone CO/NO2 Gas Detection Control System**

1. **Overview and Scope**The Ventilation Control Panel shall be a wall mounted stand-alone ventilation controller with two onboard SC2 series gas sensor modules.

Recognizing that this is a life safety application, the system shall be third-party certified to EN 50545-1 or an equivalent performance standard, must be certified to UL safety standard 61010-1 / CSA22.2, and the manufacturer must be certified to the ISO-9001 quality standard.

1. **Gas Sensors**
	1. CO / NO2 sensors shall be placed throughout the garage with radius of coverage of 50 feet per unit as required for compliance with local codes.
	2. To facilitate lifecycle maintenance, all sensor elements must be integrated into smart sensor modules. The sensor modules must be field replaceable without special tools. Each sensor module must store its calibration history and next service due date.
	3. Gas sensors shall meet all performance specifications including accuracy and repeatability in environments between -4 and 149 degrees Fahrenheit with relative humidity between 15 and 90% (non-condensing).
	4. CO and NO2 sensors must be electrochemical type.
2. **Gas Controller**
	1. The gas controller must be intended specifically for parking garage ventilation control applications. All parameters including sequence of operation must be entered using embedded menus.
	2. The controller must be Listed to UL 2075 to conform with IMC 2018 and later requirements. Non UL Listed products will not be approved.
	3. The controller shall provide a continuous, scrolling display of all gas values with a visual indication of values that are in alarm.
	4. The controller shall have two (2) SPDT Alarm Relays and One (1) 4-20mA Analog Output.
	5. The controller shall have three (3) status LEDS to indicate Alarm, Fault and Power.
	6. A password shall be required to change all system parameters.
	7. The controller must be rated NEMA 4X.
	8. The controller must include an audible horn (minimum 85 dB) to annunciate alarms and system faults.
3. **Installation and Commissioning**
	1. The system shall be installed and commissioned according to the manufacturer’s recommendations.
	2. The commissioning contractor shall provide a written report certifying that all devices are operational, and the design sequence of operation is fully functional.
4. **Approved Manufacturer**
	1. The parking garage ventilation and control system shall be the PolyGard 2 Series SGC6 by INTEC Controls (12700 Stowe Drive, Poway, CA, 92064, 858-578-7887), www.inteccontrols.com.