

DETCON FP SERIES CATALYTIC BEAD COMBUSTIBLE GAS SENSORS

Detcon catalytic bead gas sensor assemblies are designed to monitor ambient air for concentrations of combustible gas in the range of 0-100% of the lower explosive limit (LEL). The sensor technology is of the catalytic pelistor type and consists of matched pair catalytic bead detectors located in a plug-in-field-replaceable sensor package. Catalytic bead sensor show an excellent response to a long list of combustible gases. This technique is non-selective and may be used for the detection and monitoring of several target combustible gases. The Detcon sensor is specifically designed to be poison resistant and is capable of providing reliable performance for periods of 5-10 years in most industrial environments. The technology is offered in three explosion-proof instrument packages with varying features as described in this brochure.

Sensor Highlights

- Very rugged with strong resistance to damage from climate extremes and catalyst poisons
- Long service life
- Capable of measuring all hydrocarbon and non-hydrocarbon combustible gases
- Inexpensive to replace and maintain
- Minimal effects from temperature, wind, dust and humidity

Areas of Sensor Benefits

- Rainy and high humidity environments
- Dirty and dusty operating areas
- Areas where several different combustible gases may be present
- Areas where non-hydrocarbon combustible gases must be detected



Model FP-424C



Model FP-524C



Model FP-624C

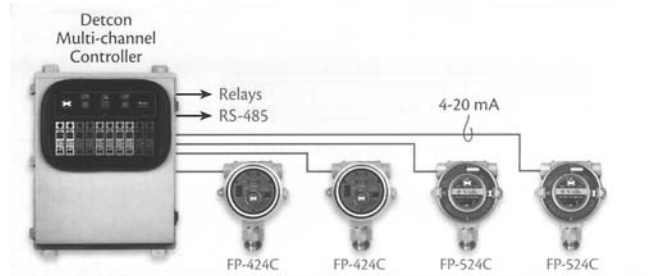
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The **FP Series** of combustible gas detectors provide the end-user with a wide variety of output options. When combined with Detcon's extensive line of multi-channel, microprocessor-based, PLC-based, and PC-based controllers, the result is a complete solution to any system design and networking application. Shown below are a series of typical system integration approaches.

4-20mA

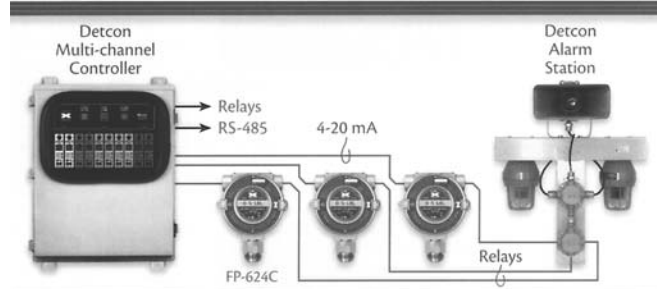
Direct feed of individual sensor

4-20 mA outputs to dedicated Detcon multi-channel controller. The controller repeats outputs, and provides relay and RS-485 output options.



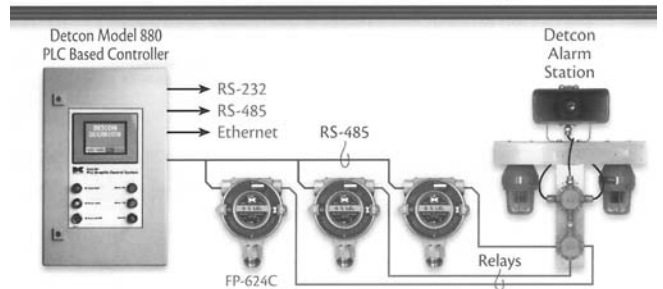
4-20mA & Local Relays

Direct feed of 4-20 mA outputs to dedicated Detcon multi-channel controller is combined with direct wiring of built-in relay outputs (from Model FT-624C) to activate field-mounted alarm stations or other response. Controller provides additional relay and RS-485 output options.



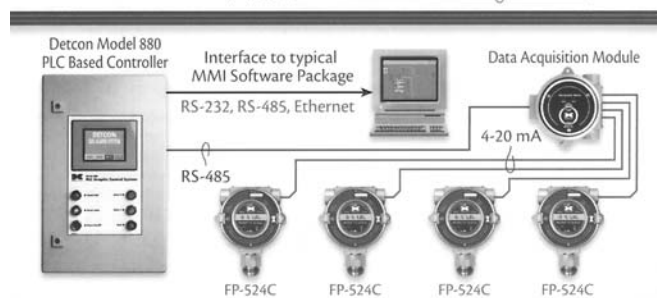
RS-485 & Local Relays

Individual sensors (Model FT-624C) are connected via RS-485 serial communications loop combined with direct wiring of built-in relay outputs to activate field-mounted alarm stations or other response. Detcon Model 880 PLC graphic controller provided all data handling, display and historical logging.



4-20mA & RS-485 Combination

Individual sensor 4-20mA outputs are routed to Detcon DA-1 Data Acquisition Modules for conversion to RS-485. DA-1S are looped and fed to Model 880 PLC providing all data handling, display, and historical logging. The Model 880 can be interfaced to a PC-based MMI using Ctect, Wonderware or other software package.



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Detcon solid state H2S gas sensor assemblies are designed to monitor ambient air for gas concentrations of hydrogen sulfide in a wide variety of ranges; from the standard field adjustable models with 0-20/50/100 ppm selectivity, to high-range models up to 1,000 ppm. The sensor technology is a proprietary solid state metal oxide semiconductor. The sensor consists of two thin films: a temperature sensitive heater film, and a hydrogen sulfide sensitive sensor film. Both films are deposited on a silicon microchip by vacuum deposition. The heater film elevates the operating temperature of the sensor film to a level where an optimized sensitivity and response to hydrogen sulfide is achieved. The sensor film consists of a proprietary metal oxide that shows a dynamic signal change to hydrogen sulfide gas. Range of sensitivity is from part per billion to % by volume. This rugged sensor is capable of maintaining its operating characteristics for periods of up to 10 years in most industrial environments. The technology is offered in three explosion-proof instrument packages with varying features as described in this brochure.

Sensor Highlights

- Extremely rugged/most resistant to damage from climatic extremes
- Very long service life
- Longest warranty of any H2S gas detection sensor in the world
- Inexpensive to replace and maintain
- Not affected by prolonged or high level exposure to H2S

Areas of Sensor Benefits

Extreme Climate Conditions

- Open desert and other high temperature areas
- Sub-zero temperature areas
- Tropical and sub-tropical humidity

Harsh Environments

- Offshore Operations
- Oil & gas drilling operations
- Areas with a constant presence of H2S



Model TP-424C



Model TP-524C



Model TP-624C

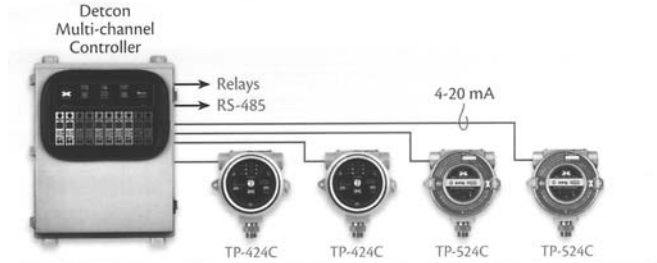
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4-20mA

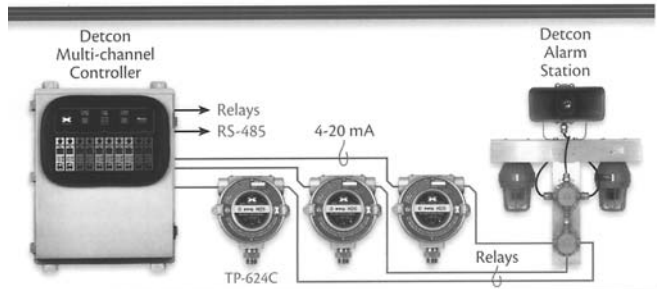
Direct feed of individual sensor

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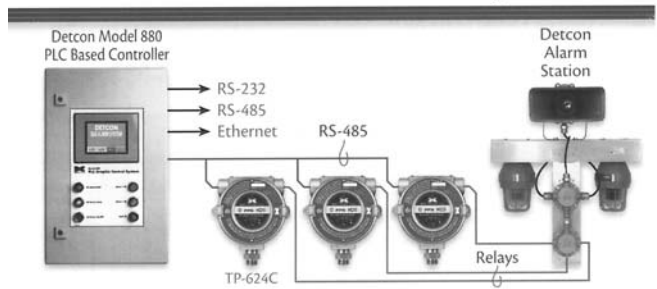
4-20mA & Local Relays

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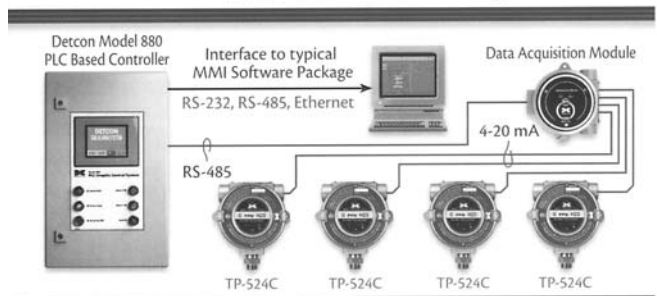
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