

## Digital Combustible Gas Transmitter

Combustible Gas Transmitters and shall be provided to monitor and display ambient gas concentration in \_\_\_\_ (Specify location) \_\_\_\_\_. Each gas transmitter shall consist of an explosion-proof electronic transmitter and close coupled catalytic bead sensor. An optional gas generator for the purpose of sensor and system response verification shall be available. Gas transmitters shall be ATI Series D12-17, 3 or 4 wire type with integral LCD display and back light feature.

Gas transmitters shall measure combustible gas concentrations in the installation area using a catalytic bead based sensor, close coupled to the transmitter enclosure. Sensor range and calibration data shall stored in memory in the transmitter.

The Gas Transmitter shall be housed in an explosion proof enclosure with viewing window and consist of an electronic board stack with LCD graphic display. Magnetic function switches shall be located below the LCD display and be accessible through the window for non-intrusive calibration, programming and display functions via a magnetic tool. The electronic board stack shall be designed to plug into a power supply board at the base of the transmitter enclosure and be to be easily removable for service or field wiring. The transmitter shall display gas concentrations on an LCD graphics display along with alarm indication and menus for setup and operating parameters.

Gas transmitters shall operate from power supplies of 12-30 VDC, and shall be capable of driving external 4 – 20 mA signal loads up to 675 ohms with a standard 24 VDC supply. Transmitter enclosure shall be rated explosion-proof for Class 1, Group B, C, & D.

### OPTIONAL:

- Each gas transmitter shall be supplied with an Auto-Test feature consisting of an electrochemical gas generator integral to the sensor and automatically generate a small concentration of Hydrogen every 24 hours to verify sensor operation. During the verification test, the analog and optional digital output from the transmitter shall be held and optional relay alarms shall be inhibited to avoid activation of alarms.
  - Each gas transmitter shall be provided with three SPDT 5-Amp alarm relays that are assignable to any alarm setpoint or fault condition and fully programmable for setpoint, hysteresis and time delay.
  - Each gas transmitter shall be provided with Hart™ communication output supporting both 4-20 mA and constant current mode of operation.
  - Each gas transmitter shall be provided with Modbus™ protocol and software selectable on either RS485 or RS232.
- 
-