

Infrared Digital LEL/Toxic Gas Transmitter

LEL/Toxic Gas Transmitters for the detection of ____ (Specify Gas) _____ 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 explosion-proof infrared sensor. Gas transmitters shall be ATI Series D12EX-IR , 2-wire type with integral LCD display or 3-wire type with integral LCD display with back light feature.

Gas transmitters shall measure gas concentrations in the installation area using an NDIR (non-dispersive infrared) Sensor. The sensor shall consist of an explosion-proof, stainless steel housing, an infrared light source, a detector, and a thermistor. The light source is a thin wall tungsten filament lamp, with an MTBF of more than 5 years, and is pulsed at 2Hz. The detector is a dual pyroelectric element design, with each element covered by an optical filter that will pass only a specific band of infrared radiation. The heat generated by the lamp shall assist in keeping moisture from condensing in the sensor body, and on the detector.

Gas transmitters shall measure gas concentrations in the installation area using smart infrared gas diffusion sensors. Sensor gas type, range and calibration data shall stored in the sensors' memory and be automatically read into the transmitter. Sensors shall be capable of remote calibration using a bench transmitter at a convenient location with the new calibration data stored in the sensor module memory.

The Gas Transmitter shall be housed in an explosion proof enclosure with window and consist of an electronic board stack with LCD graphic display with magnetic function switches for non-intrusive access to all transmitter programming and display functions. The electronic board stack shall be designed to plug into a power supply board at the base of the transmitter enclosure and 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 loads up to 675 ohms with a standard 24 VDC supply. Transmitter shall be rated explosion-proof for Class 1, Div 1, Groups B, C, & D. Transmitter shall be certified explosion-proof to ATEX CE 0539 II 2 G Ex db IIC T6 Gb and IEC Ex Ex db IIC T6 Gb.

OPTIONAL:

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 Hartä communication output supporting both 4-20 mA and constant current mode of operation.

Each gas transmitter shall be provided with Modbusä protocol and software selectable on either RS485 or RS232.
