

# FD-410 EX FOG DETECTOR



The FD-410A fog detector is a microprocessor device designed to automatically detect and execute the control functions for a fog signal, traffic signage or other devices, when visibility has decreased below a preprogrammed level.

The fog detector is of the pulsed infrared, backscatter, single-station type. Typically programmed to transmit a beam of modulated infrared light every 2 minutes, it measures the amount of light reflected by the atmosphere to the receiver in the instrument. Two consecutive, affirmative samples, for example, will instantly actuate a relay if fog density exceeds a preset value. This value is programmed correspond to a meteorological visibility between 0.5 and 2 nautical miles.

The area sampled is in the form of a narrow sector 2 to 12 meters in front of the instrument.

## FEATURES

- Microprocessor-based design ensures maximum reliability and minimum maintenance. **Light emitting diode (LED)** light source provides extremely long service life.
- Automatic self-checking. Electronic pilot light system automatically compensates for fouling/fogging of the lens.
- Remote on/off control terminals.
- Requires no warm-up period. **Heaters for windowpanes are not required.**

- Extremely **low power consumption**. Ideal for solar power applications.
- Ships, cars or other passing objects will not affect operation.
- Remote monitoring of fault and visibility levels.

## SPECIFICATIONS

- **Light Source:** Light Emitting Diode (LED).
- **Light Wavelength:** 0.94  $\mu\text{m}$ .
- **Pulse Frequency:** 14.4 kHz.
- **Pulse Energy:** Main Light Transmitter--50 mW. Pilot Light Transmitter--1.8 mW.
- **Light Emitting/Receiving Angle:** Transmitter--0.6 degrees. Receiver--6 degrees.
- **Sampling Zone:** Between 2 and 12 meters.
- **Sampling Time:** 15 seconds every 2 minutes. (standard). Programmable options.
- **Supply Voltage:** 12 to 30 V DC. AC optional.
- **Power Consumption:** 2.4 watts average.
- **Current Drain:** Average 200mA, 12 volts DC.
- **Remote Alarm Output:** RS-232 or contact closure. RS-485 optional.
- **Visibility Data Transmission:** RS-232 via Radio Modem or RS-485 over a maximum of 2000 m of wire.
- **External Device Control Threshold:** Three thresholds programmable between 0.5 and 2 nautical miles visibility.
- **Operating Temperature:** -40°C to +53°C.
- **Ingress Protection Rating:** IP66
- **Materials:** Stainless Steel.
- **Dimensions:** 390mm x 540mm x 596mm.
- **Net Weight:** 65 kg, 145 lbs.
- **Mounting:** Top/bottom plate mounting

## **EC-TYPE EXAMINATION CERTIFICATE:**

**Certificate No.:** Intertek ITS09ATEX16407X  
**Coding:** II 2 G Ex d IIB T6 TA -40°C to +53°C Gb

**Certificate No.:** IECEx ITS 10.0038X  
**Coding:** Ex d IIB T6 Ta -40°C to +53°C Gb

## **ELECTROMAGNETIC COMPATIBILITY (EMC) DIRECTIVE CERTIFICATE NUMBER:**

Epsilon 04TEST1297

*Specifications subject to change without notice*

Form No.:041411C

