

iGRAIN SILO FIRE DETECTION

FAST RESPONSE FIRE DETECTION

General description

The iGRAIN FIRE DETECTOR is a versatile unit with a very fast detection of CO₂ inside the silo. The unit comes with a complete roof-mounting-kit and can be retrofitted on top of any storage bin. It provides an ALARM RELAY OUTPUT and a data bus output.

Operating principle

If the CO₂ is generated by a fire or an emerging fire, the CO₂ increase will be exponential (unlike CO₂ generated by biologic infestation in the bin). It is therefore easy for the system to detect an emerging combustion.

Monitoring

The iGRAIN FIRE DETECTOR is monitoring the bins at all times. The sensor status is constantly monitored from the host PC. System Alarms are reported immediately. If monitoring of the ambient CO₂ level of 400 ppm fails, then the system alarm is activated.

Redundancy

The fire detectors are designed for redundant loop line routing of the supply voltage, the analogue alarm and the RS485, which guarantees highest availability and optimal fail-safety. Detectors are powered by separate, redundant and oversized Power Supplies. The RS485 line is redundant and connects to the iGrain System with the iGrain Fire Alarm software installed and it is connected to one or more iGrain Relay Output Unit(s) for visualization of the position of a possible Alarm, that the power is on at all sensor and that all sensor are measuring.

ADVANTAGES

- **Fast response**
- **Long term stability**
- **Computer monitored**

Technical Specifications

The iGRAIN FIRE DETECTOR system communicates via RS-485, Modbus with the iGRAIN MANAGER SOFTWARE.

CO2 sensor	Dual wavelength principle with temperature compensation. Measure range: 0 – 20.000 ppm, (0 - 2%), response time less than 5 sec. Measures constantly the ambient 400 ppm. This confirms active monitoring
In/Outputs	System status, relay and data-output (to PLC). Analogue dual loop line In and Out. RS-485 dual Loop Line In and Out (to PC/PLC). Self Monitoring Alarm Output with visual alarm indicator
Supply Voltage:	5VDC

