IR22 F Transmitter

Optional local alarms for each transmitter location

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CO_2 detection for cold storage

Carbon dioxide leaks in cold storage rooms can quickly become dangerous because CO_2 refrigeration systems operate at high pressures. In the case of subcritical and transcritical systems, these are often above 100 bar.

The IR22 F transmitter reliably monitors the CO_2 concentration under the toughest of conditions. while providing additional safety functions.

Robust and durable

The rugged IP65 IR22 F transmitter measures carbon dioxide (CO_2) from -40 °F to +140 °F.

Two switching outputs enable connectivity to additional safety devices, such as audible and visual alarms or self-contained alarm push buttons for each detection point. Tri-Color LED status (green, yellow and red) provides instant operating status of the transmitter.

Digital, analog or ACDC

The IR22 F is available with digital RS-485 interface and Modbus protocol or as analog 4-20 mA. It is also ACDC-capable (Analog Carrier for Digital Communication) which allows additional data to be transmitted digitally over the 4-20 mA cabling.

Dependant on transmitter quantity and the connected alarm devices, bus cable lengths of up to 3/4 of a mile are possible.
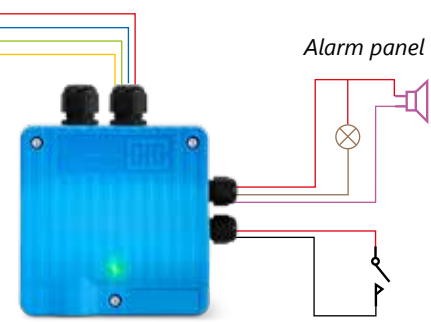

Alarm panel

Push button manual alarm

Manual alarm and acknowledgement

The digital input can be used to connect a manual push button for instant alarm activation / alarm acknowledgement.

Switching outputs

Connection and configuration example

Alarm panel

e.g. manual alarm button or acknowledgement of the horn

Technical Data: IR22 F

Gas: Carbon dioxide (CO_2)
Measuring principle: Infrared (IR)
Detection range:
  Range: 0 to 5% volume
  Resolution: 0.01% volume
Gas supply: Diffusion or gassing per calibration adapter
Expected sensor life: Greater than 5 years
Response time: t_{90} < 50 s
Temperature: -40 to +140 °F / -40 to +60 °C

Humidity: 0 to 95% r. h. non-condensing
Pressure: 70 to 130 kPa
Output signal:
  Analog: 4-20 mA with ACDC
  Digital: RS-485 Modbus
Switching outputs: 2x Open collectors
Digital input:
  Binary input, optionally quiescent or operating current, for manual alarms

Power supply: 12 to 30 V DC
Housing: Plastic
Protection class: IP65
Dimensions: 3.8 x 4.75 x 2 in /
  96 x 123 x 49 mm
  (W x H x D)
Weight: 4.4 to 5.3 oz / 125 to 150 g