JCA-CO

Carbon Monoxide (CO) Transmitter and Controller

Introduction

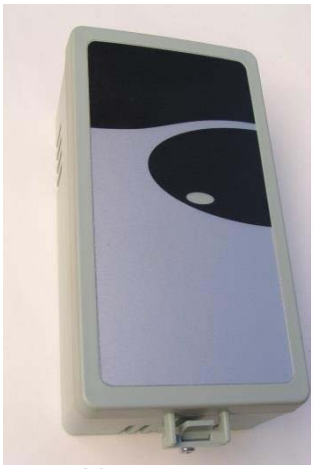
The JCA-CO uses electrochemical cell to sense CO gas concentration. It measures CO level and controls supply and exhaust fans to maintain acceptable indoor air quality.

The transmitter/controller is typically used for:

- enclosed or semi-enclosed car parks;
- residential and commercial CO detectors;
- kitchen, restaurants, freezing machine rooms.

The advantages of the electrochemical cell used in JCA-CO-65 are low temperature and humidity dependency, a linear output with CO concentration, no zero shaft and long life. These characteristics make field calibration simple and easy.

Since the active filter is accumulating volatile organic compounds (VCO), the reading will be higher when the sensor is initially powered. This "back -fill" effect which results in "higher CO" reading will last for a few hours before returns to normal. It is recommended to power the sensor once installed or wait for 12 hours before starts to control the ventilation fans.



CO Transmitter

CO Controller

CAUTION
Health Hazard.

- Improper use may create dangerous situations.
- Use in application for sensing CO only.
- For life-safety applications, this device can function only as a secondary or lesser device.

Features and Benefits	
➢ **Electrochemical Cell**	Long sensor life 5 years Stable and no Zero shaft for easy calibration Linear output
➢ **Easy to calibrate in the field**	Span adjustment trim pot for easy calibration
➢ **Easy to change sensor cell**	Just like change A4 battery
➢ **Easy to wire**	2 wires, loop powered, no voltage drop for long distance
➢ **Standard alone controller**	In-build display, Analogue out put, 2 relay outputs

Ordering code

Code	Description
JCA-CO-D	CO controller, Display, wall mount, 0-100ppm, 2Anlogue outputs, 2Relays, 24vAC
JCA-CO-65-6525	CO transmitter, wall mount, 0-100ppm/4-20mA, 2 wires loop powered, 24vDC
JCA-CO-65-6528	CO transmitter, Display, wall mount, 0-100ppm/4-20mA, 2 wires loop powered, 24vDC
JCA-CO-65-6531	CO transmitter, duct mount, 0-100ppm/4-20mA, 2 wires loop powered, 24vDC
JCA-CO-Adaptor	CO sensing element calibration adaptor
JCA-CO-Cell	Field replaceable electrochemical cell

Technical Specification

CO Measurement

Sensing element	Electrochemical
Gas sample mode	Diffusion
Sensor Rated Life	5 years
Response time (l/e)	T90 =< 1 minute
Warmup	Less 2 minutes diffusion time
Measurement range	0- 100ppm
Extended measurement range	101-255 ppm, or 0-200ppm, 0-500ppm
Accuracy	Better than ±5%
Annual zero drift	Smaller than ±5% measurement range
Digital resolution	1 ppm
Stability	±5% (over 900 days)

General Performance

Compliance with	EMC Directive 89/336/EEC (CE Mark Pending)
Operating temperature range	0 to 50 ^{o}C
Operating humidity range	0 to 100% RH (non-condensing)
Maintenance interval	Yearly calibration recommended

Electrical

Power input	22-29 vAC (controller), or 24 vDC ±10% (transmitter)
Power consumption	< 1.5 W average (controller), or 20mA (transmitter)
Wiring connections	Terminal block 2 mm^2 maximum

Outputs

Controller	2 x AO (0-10vDC AN1& 2); 2 x DO (Relay 1 &2) 4 digit LCD display with CO/ppm, temperature/^{o}C indicator Push buttons for on-board zero calibration
Transmitter	4-20 mA loop powered, 24 vDC Span Adjustment for calibration

Installation: Wiring diagram and Calibration steps