

GM910 CO Concentration Monitor

**Keeping the Environment Clean
and Plant Operation Safe**



Optimizing emission monitoring

Certainty in the monitoring of CO concentrations in industry continually increases in importance. With the GM910 monitor this is determined opto-electronically. The GM910 helps to optimize the fuel-to-air ratio, effectively reducing both, pollutant production and fuel consumption. The monitor is mainly of use where emission monitoring is necessary and/or is required by law.

Measurement Principle

The measurement principle of the GM910 is based on non-dispersive IR-gas filter correlation. A light source in the sender unit emits light through the gas laden measurement path to the receiver. There the incoming light is directed through a special infrared filter to a highly sensitive sensor. The GM910 measures the wavelength specific absorption of CO molecules and compares this with the radiated light energy. From this the CO concentration in mg/m^3 or ppm is calculated.

Key Features

- Non-contact CO concentration measurement directly in the exhaust flue
- Automatic self-test
- Low maintenance expenditure
- High reliability
- Water- and dustproof construction
- Remote diagnostics/ Modem compatibility

Field of application

- Power generation plants
- Cement industry
- Roastery processes

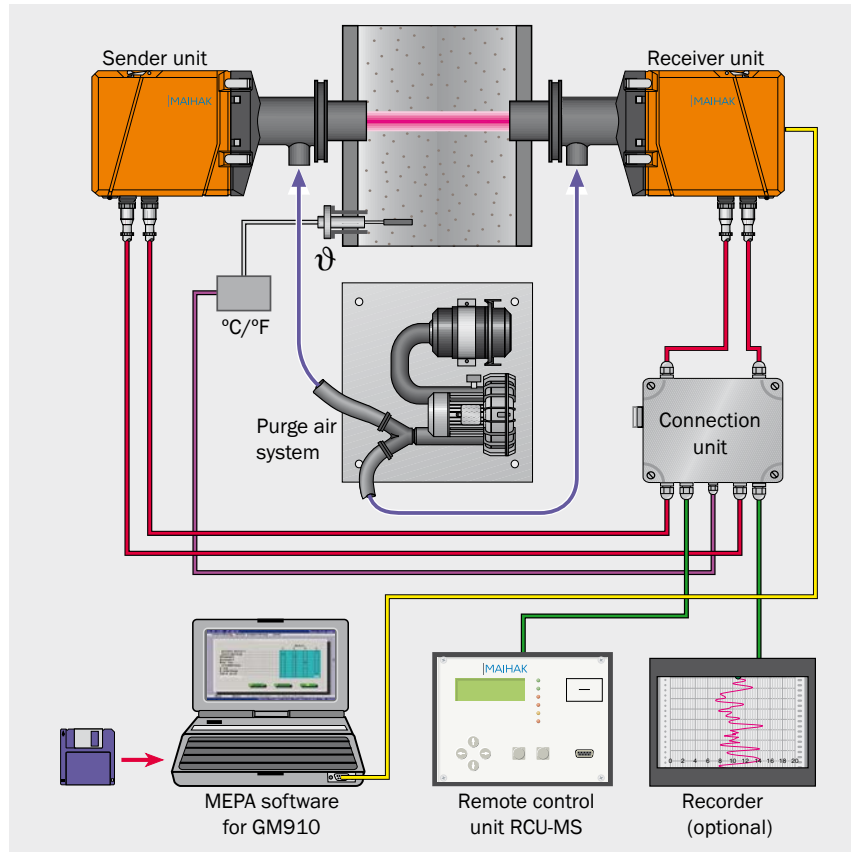


System Components

The in-situ measurement device GM910 consists of:

- Sender unit
- Receiver unit
- Connection unit
- Purge air unit

The sender and receiver units are mounted facing each other on special flanges in the exhaust duct. The sender unit contains an IR source which generates the measurement light. The highly sensitive IR detector is housed in the receiver unit. As well as connecting the sender and receiver, the connection box provides an analog output (0 to 20 mA), status output and an external maintenance switch. An purge air unit serves to protect the optical surfaces of the sender and receiver units from dust and dirt.



Technical data GM910	
Measuring data	
Measurement principle	IR-gas filter correlation
Measurement range	
• Smallest meas. range	0 ... 300 mg/m ³ or ppm
• Largest meas. range	0 ... 20,000 mg/m ³ or ppm
Measurement path	0.5 ... 8 m (1.64 ... 26.24 ft)
Measurement accuracy	±2% f.s.d.
Repetition accuracy	±2% f.s.d.
Response time	1 ... 1,800 s, adjustable
Plant data	
Gas temperature	Up to 250 °C (482 °F) for emission monitoring, up to 370 °C (698 °F) for combustion regulation
Ambient temperature	-20 ... +55 °C (-4 °F ... +131 °F)
Device data	
System features	System/self test, watchdog function, zero- and reference point check
Supply voltage	115/230 V AC; 48 to 62 Hz
Dimensions L x W x H	
• Sender/receiver	552 mm x 223 mm x 347 mm (21.73" x 8.78" x 13.66") , incl. purge air unit
Weight	
• Sender/receiver	25 kg (55lb), incl. purge air unit
Protection class	IP 65
Interfaces and Signals	
• Input signals	Analog input 0, 2, 4 to 20 mA selectable (temperature), 1 binary input (maintenance/test)
• Output signals	Analog output 0, 2, 4 to 20 mA selectable (load max. 750 Ω) 3 relay outputs AC 48 V, AC 0.5 A DC (potent. free)