

## ZCO Line

### CARBON MONOXIDE NDIR ANALYZER FOR "IN SITU" MEASUREMENTS

- QUICK INSTALLATION
- EASY CALIBRATION
- EXTREMELY LOW MAINTENANCE

The ZCO analyzer uses the well-established Non-Dispersive InfraRed technology recognized and accepted by most of emission control authorities. The sensor, thanks to NDIR technology, measures the average concentration of CO in the entire section of the flue gases duct and assures a long term accurate measurement. The "in situ" installation (directly on the stack) does not require gas sampling and treatment, therefore the equipment costs and maintenance are reduced.



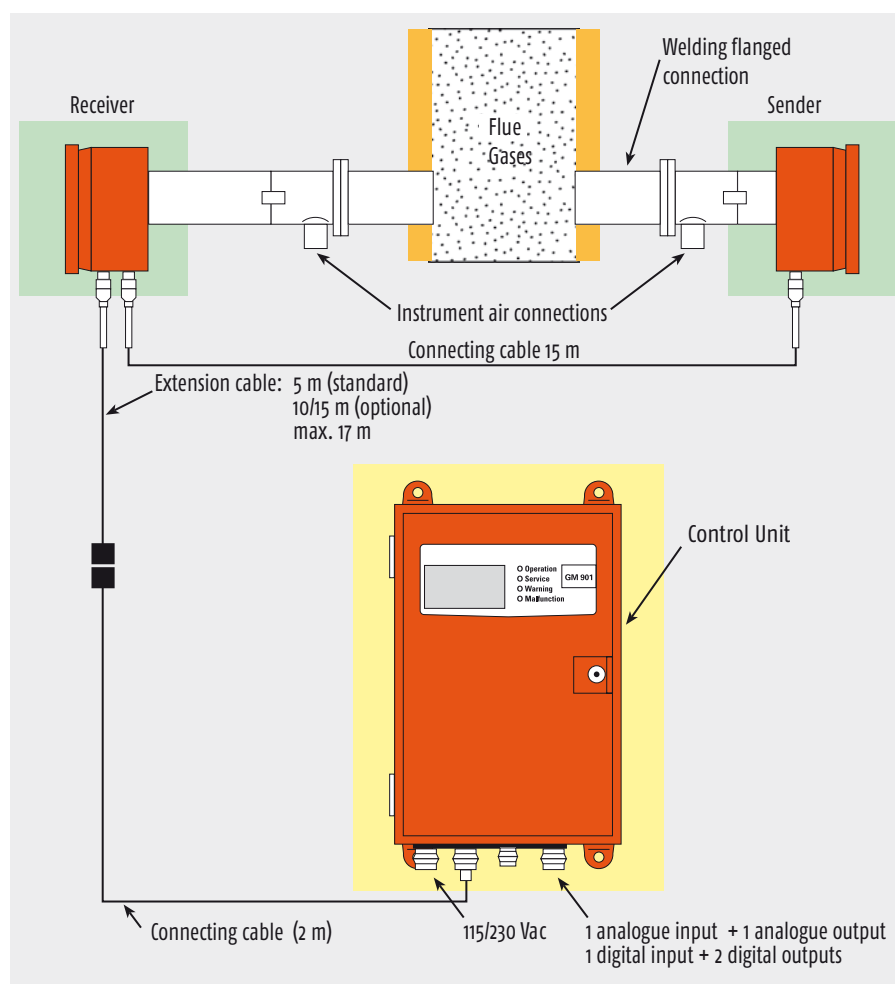
#### FIELD OF APPLICATION

CO MEASUREMENT FOR THE EMISSION MONITORING AND PROCESS CONTROL IN THE FLUE GASES OF INDUSTRIAL BOILERS

- POWER PLANTS
- COAL PROCESSING INDUSTRY
- CEMENT INDUSTRY
- WAST INCINERATION PLANTS
- PAPER AND PHARMACEUTICAL INDUSTRY
- STEEL AND GLASS INDUSTRY
- CHEMICAL AND FOOD INDUSTRY

## DESCRIPTION

The carbon monoxide analyzer, model ZCO-IGM-901, includes sender and receiver units for cross-stack mounting and a control unit to elaborate, display and retransmit the CO value. Thanks to easy installation, start-up is quick and only sender/receiver alignment is necessary. Instrument air is required for cooling and cleaning of the sender/receiver units. Zero calibration is performed every six months without test gas bottles. The control unit includes liquid crystal display; it is possible to make all the operation of parameterization, calibration and visualization. Temperature compensation can be obtained by means of 4...20mA input signal or by setting a fixed value with keyboard. Units of CO measurement can be ppm, mg/m<sup>3</sup> and mg/Nm<sup>3</sup>.



## TERMS OF USE

Flue gas characteristics at the measurement point	Gas flow: homogeneous Gas temperature: $\leq 300^{\circ}\text{C}$ (higher temperatures on request) Dust concentration: $\leq 1\text{g/m}^3 \times \text{m}^3$ .
Type of duct	Flanged connections are suitable for welding on steel ducts (other materials on request or provided by the customer). To avoid loss of alignment, the duct must be able to withstand the sender/receiver units weight, alternatively suitable stands must be provided.
Sender/Receiver location	Location shall allow room for easy mounting/dismounting and accessibility for start-up and maintenance. Ambient temperature shall be within $-20...+55^{\circ}\text{C}$ . Instrument air shall be continuous available for cooling and cleaning.
Control unit location	Unit shall be mounted vertically in an easily accessible and visible location. Standard cables are supplied with a length of 7 meters between receiver and control unit. Extension cables are available for lengths of 12 and 17 meters (other lengths on request). Ambient temperature shall be within $0...55^{\circ}\text{C}$ . For outside mounting a protection is necessary.

## TECHNICAL DATA

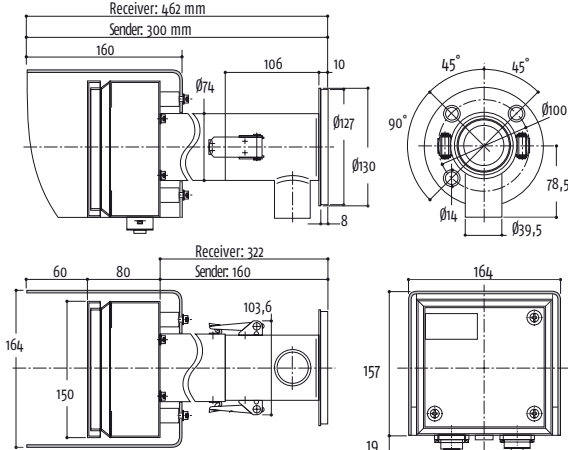
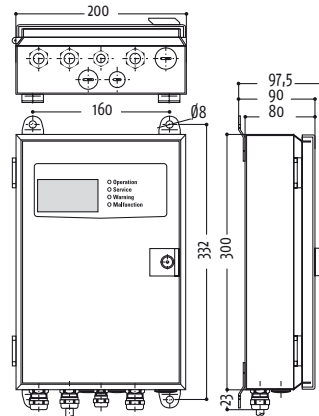
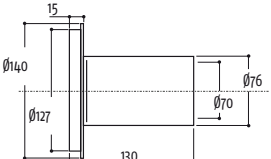
Specification	Value
Sender/receiver distance	Minimum: 500 mm; Maximum: 2.500 mm
Measurement range	Adjustable from 0... 100 ppm to 0... 20000 ppm
Accuracy	5% of the full scale
Response time	5... 360 s
Flue gases temperature	≤300°C (higher temperatures on request)
Sender/Receiver ambient Temperature	-20... +55°C
Control Unit ambient Temperature	0... +55°C
Analogue Input for Flue Gases Temperature	0/4... 20 mA/100 Ω
Isolated Analogue Output for CO retransmission	0/4... 20 mA/500 Ω max.
Status Digital Input for Maintenance	Load max. 5V, 2 mA
2 Alarm Digital Outputs	Fail and threshold
Digital Outputs Rating	Rating 1 A, 125 Vdc, 150 Vac max. (30 VA dc or 60 VA ac)
Power Supply	115/230 Vac 50/60 Hz (jumper selectable)
Current Consumption	75 VA
Protection	IP 65
Sender/receiver Cable length	15 m
Receiver/Control Unit Cable length	2 m + 5 m extension
Instrument air supply	Pressure: +2 mbar more than the stack pressure Consumption: 30 m³/h max.
Options	10/15 m extension cable for Receiver/Control Unit connection (max. distance without repeater 17 m) Optical alignment unit

Conformities/Certifications	Value
Conformities	EMC specifications in accordance with EN 50081 and EN 50082-2
Certifications	VDE Guidelines pursuant to EN 61010 (IEC 1010-1, VDE 0411), protection class 1, protection degree IP65 CE Certification pursuant to EC guideline EMC 89/336 EWG and NSP 72/23/EWG TUV Certification (Report n. 502/074/196-20 081 751)

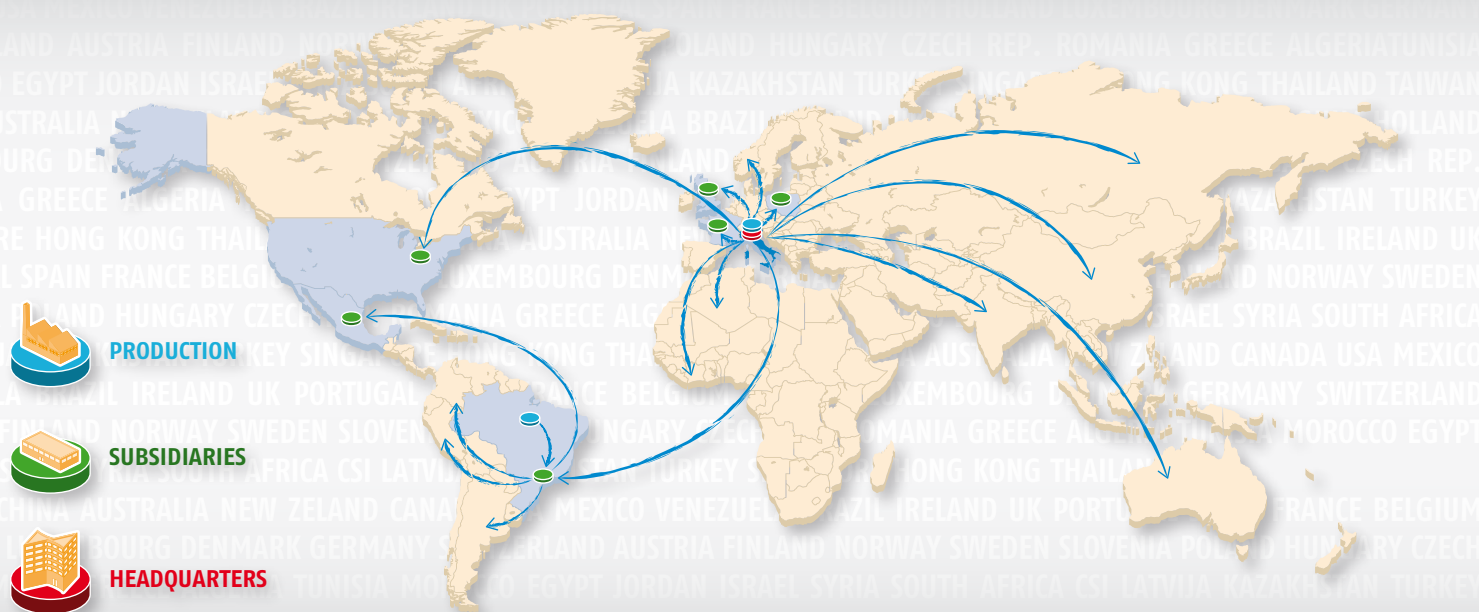
## ORDERING CODE

CO Analysis system composition	Codes
1 Sender	ZCO-IGM-901-00
1 Receiver	
1 Control Unit with 2 m cable	
1 Receiver/Control Unit extension cable: 5 m	
1 Sender/Receiver cable: 15m	
2 mounting flanges with instrument air connection	
2 welding flanged connections	
2 special bolts/nuts/washers kit	
2 flange gasket kits	
1 User Manual	
1 Calibration Certificate	

## DIMENSIONS (in mm)

Sender/Receiver

Control unit

Welding flanged connection


Accessories	Codes
Receiver/control unit extension cable: 10 m	AZCPROLUNGA10M
Receiver/control unit extension cable: 15 m	AZCPROLUNGA15M
Optical alignment unit	AZC2020436
Blower with air filter 0.55 kW - 220... 240 Vac - 50 Hz single phase	AZCSOFFIANTEMGT230
Blower with air filter 0.55 kW - 400 Vac - 50 Hz three phases	AZCSOFFIANTEMGT400



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