SENSIC
Clean air sensors

CO/O2 Flue Gas 150^{0}C Sensor

CO detection at viable pricing

Maximized efficiency

Minimized emissions

for domestic bio fuel boilers

INTRODUCTION

The SenSiC CO/02 flue gas sensor detects the relation between the CO (carbon monoxide) and O2 (oxygen) contents in the flue gas and thereby offers better combustion efficiency and emission levels than the lambda sensor. Until now CO sensors have been unaffordable for household heaters/boilers.

The sensor allows you to minimize the airflow (O2) and still avoid excess CO emissions. Thus the heat loss in the outgoing flue gas will be minimized and the CO level kept within the allowed limits.

Less air flow means higher combustion temperature and thus more efficient combustion, less unwanted emissions and less soot generation i.e. less maintenance.
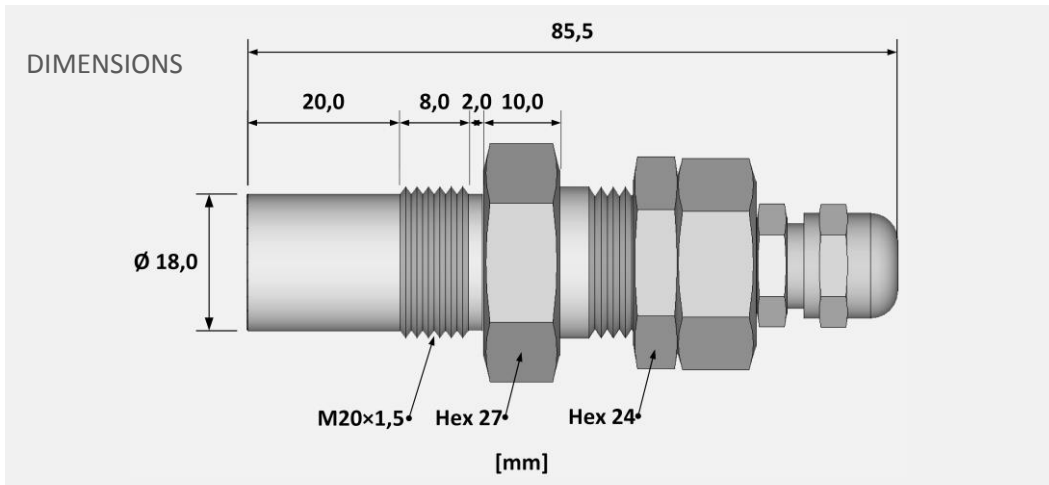
The above advantages are specifically important when using varying fuel quality and moisture contents. The features also allow lower power settings than otherwise.

DELIVERABLES

Description	Name	Article no.	Note
Sensor Unit (+cable)	COO2-T150	101-01	Flue gas 150 ^{0}C
Control Unit	CU-2K	201-01	Evaluation kit
CU appl. note			For integration
CU Software	CU-SW	301-01	Upgradable

For evaluation purposes an evaluation kit is offered (Sensor Unit w. cable/connector + Control Unit). For design-in SenSiC provides documentation for the integration of the necessary part of the CU electronics and software to minimize the production cost for the boiler producer.

COO2-T150_iss2_20140321

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DIMENSIONS

85,5

20,0 8,0 2,0 10,0

Ø 18,0

M20×1,5 Hex 27 Hex 24

[mm]

Sensor Unit	
- Flue gas temperature	150 ^{0}C max
- Rear part temperature	50 ^{0}C max (surrounding air)
CU electronics/features	
- Environment	IP67
- Power supply (integrated)	12V/4Wmax, 5V/1Wmax (from boiler system)
- Data interface (integrated)	I2C / SPI
- CO/O2 detection level	Setting of min. and max. levels
- Approximate tuning levels	CO: 50 – 1000 ppm for O2: 3-9%
- Automatic calibration	Yes. Initiated by boiler system @ no fire ("fresh air")
- Alarm / Status log	Short & long term logs for maintenance

CONTROL UNIT for evaluation

The SenSiC Control Unit is a fully software controlled
Unit with the following IP67 connections:

- Connector to sensor cable
- Connectors + cable to boiler system (open ended)
- Connectors + cable to Power Supply 20-36VDC (open ended)
- USB connector for laptop connection (control/supervision/SW upgrading)