

# Endura AZ10

## Key specifications at a glance

Main features	
Design	<ul style="list-style-type: none"> <li>Close-coupled sensor and remote mounted transmitter</li> <li>Optional auto-cal system with or without restrictors</li> <li>Flanged, threaded or plate-mounted process fittings and sample-intake tubes</li> </ul>
Intake tube lengths	200, 350, 500, 650 mm (7.9, 13.8, 19.7, 25.6 in)
Reference air supply	By diffusion, pumped supply not required
Probe flanges and mounting	ABB flange, DN65 and DN80, ANSI 2½ and 3 in
System accuracy	<1 % of reading or ±0.05 % O <sub>2</sub> (whichever is the greater)
Response time	Test gas T <sup>90</sup> <15 seconds
Process gas temperature	-20 to 600 °C (-4 to 1112 °F)
Power supply	100 to 240 V AC ±10 %
Max duct temperature	400 °C (752 °F)
Ambient temperature range	-20 to 55 °C (-4 to 131 °F)
Communication	<ul style="list-style-type: none"> <li>1 current output</li> <li>2 digital input/outputs</li> <li>User-configurable</li> <li>HART* communication v5.7</li> </ul>

\*HART is a registered trademark of the FieldComm Group

## Contact

### ABB Limited

#### Measurement & Analytics

Oldends Lane  
Stonehouse  
Gloucestershire  
GL10 3TA, UK  
Tel: +44 1453 826 661  
Fax: +44 1453 829 671  
Email: instrumentation@gb.abb.com

### ABB Inc.

#### Measurement & Analytics

125 E. County Line Road  
Warminster  
PA 18974, USA  
Tel: +1 215 674 6000  
Fax: +1 215 674 7183

### ABB Engineering (Shanghai) Ltd.

#### Measurement & Analytics

No. 4528, Kangxin Highway  
Pudong New District  
Shanghai, 201319, P.R. China  
Tel: +86(0) 21 61056666  
Fax: +86(0) 21 61056677  
Email: china.instrumentation@cn.abb.com

[abb.com/measurement](http://abb.com/measurement)

Sales



Service



Software



© ABB 2019  
Specifications subject to change without notice.



ABB MEASUREMENT & ANALYTICS

## Endura AZ10

Robust and cost-effective oxygen measurement for small package boilers and marine EGR



LFT/ENDURA/AZ10-EN Rev. A 03.2019

## Endura AZ10

### Maximum versatility

- Proven robust design and performance**
  - Multi-layer electrode prolongs cell life even in SO<sub>x</sub> emissions environment
  - Accuracy better than 1 % of reading or ±0.05 % O<sub>2</sub>
- Advanced warning of sensor status**
  - On-board sensor lifetime indicator
- Remote or automatic calibration**
  - Automatically on time schedule
  - Manually at instrument, by HART command or remote digital signal
- Rapid commissioning and start-up**
  - Easy set-up in less than 10 minutes
  - Supplied ready to operate using factory calibrated data
- Simple installation and operation**
  - Close-coupled sensor and standard intake tubes
  - No need for pumped or compressed reference air
- Minimal maintenance even in hostile environment**
  - Can be performed in situ with basic tools
  - Extremely low drift ABB zirconia technology <±0.2 % typical O<sub>2</sub> range value per month
  - Generally only needs periodic 1-point calibration with air
- Marine certification**
  - IACS E10 Rev. 5.0 2006 test specification for type approval
  - ABS certificate 15-LD1262098- PDA

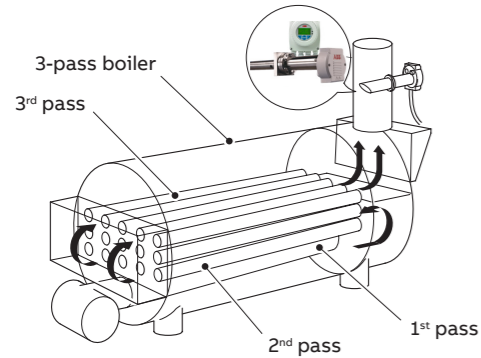


## Endura AZ10

### Ideal for small package boilers

Versatile system aids increased boiler efficiency through leaner operation and reduced emissions

Cost-effective solution for precise monitoring of small boilers in hospitals and academia; and manufacturing industries such as fertilizer production, paper manufacturing, food and beverage production, and the chemical and pharmaceutical industries.



#### Designed for small, oil or gas-fired, industrial boilers

- From approx. 2.7 t/h up to 27 t/h of steam capacity
- High pressure steam boiler 6 to 25 bar (87 to 362 psi); typically  $\leq 10$  MW
- Often 1 to 3 O<sub>2</sub> systems per boiler
- Measurement point: Boiler furnace or economizer outlets
- Typical process: 150 to 300 °C (302 to 572 °F),  $\pm 0.5$  kPa, dust  $\leq 1$  g/Nm<sup>3</sup>
- Fuel: Biomass, fuel oil, kerosene or gas



## Endura AZ10

### Efficient auto-calibration system with restrictors

Fully automatic system provides complete confidence by controlling the gas sequence and eliminates incorrect calibrations

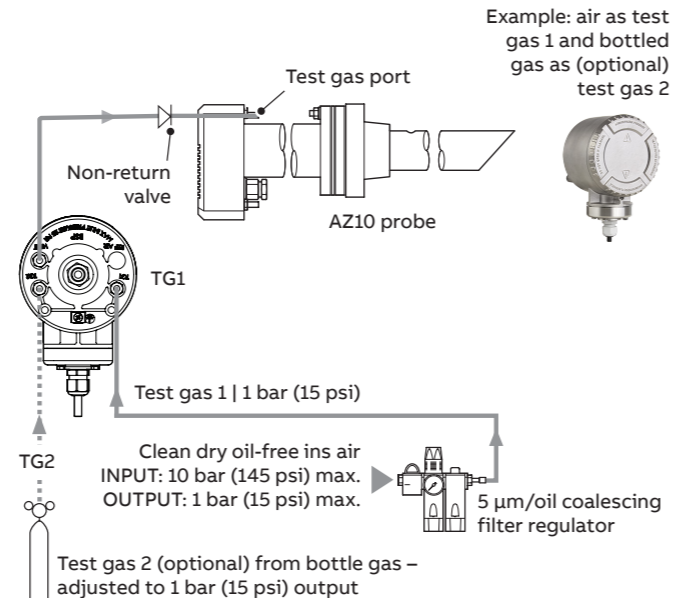
Cost-effective solution for precise monitoring of small boilers in hospitals and academia; and manufacturing industries such as fertilizer production, paper manufacturing, food and beverage production, and the chemical and pharmaceutical industries.

#### AZ10 integrated restrictors simplifies installation

- No need for external on/off valves for gases
- No need for needle valves to set the flow rate
- No need for flowmeters

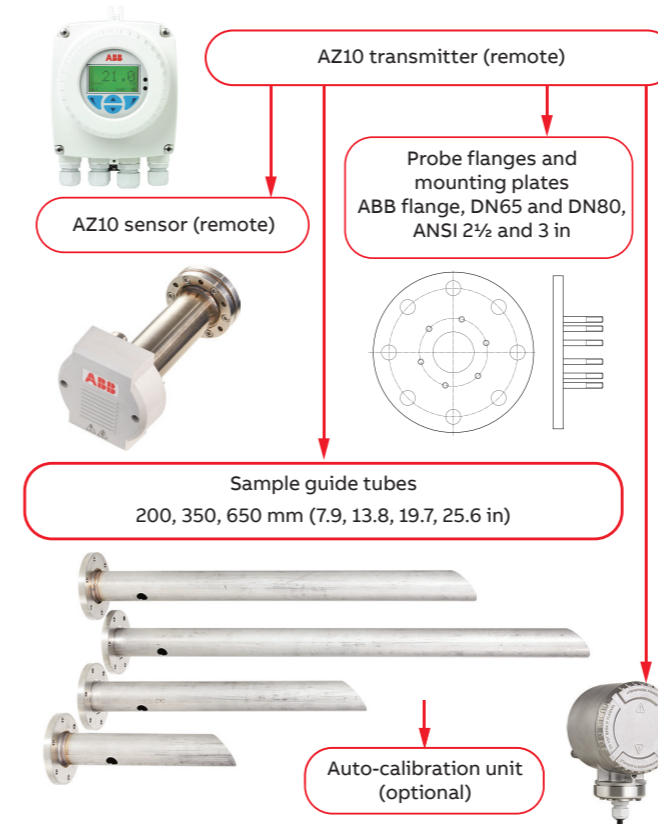
#### AZ10 autocal unit

- Test gas supply: restrictor in autocal unit limits flow to 2.2 l/min (4.662 scfh) at 1 bar (15 psi)



## Endura AZ10

### The whole measuring system at a glance



## Endura AZ10

### Ensuring compliance with IMO regulations

Performs a critical role allowing EGR optimization in marine diesel engines to ensure regulatory compliance and engine performance optimization

Marine industry benefits of ABB Endura AZ10 O<sub>2</sub> technology:

- Marine certification
  - IACS E10 Rev. 5.0 2006 test specification for type approval
  - ABS certificate 15-LD1262098-PDA
- Minimal maintenance even in hostile environments
  - can be performed in situ with basic tools
- Compliance with IMO and CEMS
  - Remote or automatic calibration
  - Assured system performance accuracy
- Assured performance
  - Accuracy better than 1 % of reading or  $\pm 0.05$  % O<sub>2</sub>
- Proven robust design and performance
  - Validated in 'normal and extreme' performance tests

