



Measurement & Analytics | Measurement made easy

Endura combustion gas analyzers  
More stability. Less worry.  
Tough made easy

# For the toughest process applications we've made the choice very easy

Harsh environments demand rugged and robust combustion gas analyzers – effective and efficient solutions, even for the toughest processes.

Introducing the Endura Series from ABB – the world leader in oxygen measurement.

In diverse sectors, from hydrocarbon processing and power generation to process industries, the Endura range of instruments deliver enhanced business and operational benefits from the most stable and reliable technical platform.



#### A history of innovation

Re-engineered and taken back to technical fundamentals, the Endura AZ Range saves you time, money and disruption. From rugged enclosure design, self-diagnostic electronics and auto calibration, to common component advantages combined with proven, innovatively applied technologies, the result delivers solutions that are easy to specify, install, configure, maintain and use.

#### Flexibility – our most rigid benchmark

An Endura AZ combustion gas analyser will provide a solution to just about every combustion gas oxygen analysis problem. Flexibility is in their DNA – with options including long life probes up to 4m in length with integral or remote electronics. These deliver stability and accuracy in hot, dusty, humid, corrosive and hazardous area applications, and then you can choose from industry standard flange configurations and extensive installation options.

#### The key benefits at a glance

Proven to be robust right across the range: due to advanced design, precision manufacturing, long life serviceable probes and rugged enclosures.

Ease of use: with self-calibration and diagnostics, simple operation via user-friendly interfaces and fast, easy access components for complete site serviceability.

High return on investment and low cost of ownership: thanks to common longer-lasting components, reduced footprint and lower installation, maintenance and purchasing costs.

#### Choose from the Endura AZ Series – and relax

The Endura AZ Series delivers superior operational efficiency with total customer confidence. ABB's global reputation as a leading and innovative technology supplier is further heightened by the quality, consistent accuracy, long term reliability and safety found in each of these products.

#### Technical features include:

- Advanced design and precision manufacturing
  - robust, long-life probe
  - proven cell design from over 50 years experience
  - fast response to process variations
  - stable and accurate Oxygen measurement

- Unique integrated auto-calibration system
  - easy compliance for emission monitoring regulation
  - reduced installation costs – eliminates requirement for expensive external calibration panel
  - reduced maintenance costs
- Probe lengths up to 4 m (13 ft) and industry-standard flange configurations
  - suitable for a wide range of applications
  - extensive installation options
- Innovative corroded fixings release
  - fully site-serviceable probe
  - ease of access to internal components
- Advanced transmitters
  - easy configuration, monitoring and diagnostics
  - HART communications
  - cell performance logging and diagnostics



# Endura AZ20

## Delivering enhanced business and operational benefits



The sensor, based on a zirconium oxide cell, is mounted at the tip of the probe that is inserted in the flue duct. The resulting direct, in situ measurement provides accurate and rapid oxygen reading for combustion control optimization and emissions monitoring.

### Technical features include:

- Advanced design and precision manufacturing
  - robust, long-life probe for process temperatures up to 800 °C (1472 °F)
  - proven cell design from over 50 years experience
  - fast response to process variations
  - stable and accurate oxygen measurement
- Unique integrated auto-calibration system
  - easy compliance for emission monitoring regulation
  - reduced installation costs – eliminates requirement for expensive external calibration panel
  - reduced maintenance costs
- Probe lengths up to 4.0 m (13.1 ft) and industry-standard flange configurations
  - suitable for a wide range of applications
  - extensive installation options
- Easy cell release
  - fully site-serviceable probe
  - easy access to internal components
- Advanced transmitters
  - easy configuration, monitoring and intuitive HMI
  - HART communications
  - cell performance logging and diagnostics

# Endura AZ25

## High temperature combustion gas oxygen analyzer



The Endura AZ25 is an in situ combustion gas oxygen analyzer system designed for use in high temperature applications > 600 degrees C.

The Endura Combustion Gas Oxygen Analyzer AZ20 is the latest in a long line of high-quality, combustion gas analyzers from ABB. The sensor, based on a zirconium oxide cell, is mounted at the tip of the probe that is inserted into the furnace or flue duct. The resulting direct, in situ measurement provides accurate and rapid oxygen reading for combustion optimization, process control and furnace atmosphere monitoring.

### Technical features include:

- Proven design and precision manufacturing
  - Robust, long-life probe for process temperatures up to 1400 °C (1292 °F)
  - Stable and accurate oxygen measurement
- Automatic calibration system
  - Controls test gas sequence, flow rate and test gas detection
- Probe lengths up to 1250 mm (49 inches) and choice of protective sheath materials
  - Configurable to suit application conditions
- Industry-standard flanges
  - Simplifies installation
- Advanced transmitters
  - Easy configuration, monitoring and intuitive HMI
  - HART communications
  - Cell performance logging and diagnostics

# Endura AZ30

## Combustion gas oxygen analyzer for hazardous area monitoring



The Endura AZ30 is an explosion-proof/flameproof combustion gas analyzer system designed for use in Hazardous Areas.

The sensor, based on a zirconium oxide cell, is mounted at the tip of the probe that is inserted in the flue duct. The resulting direct, in situ measurement provides accurate and rapid oxygen reading for combustion control optimization and emissions monitoring.

### Technical features include:

- System Certification – ATEX / IECEx
  - Certified for use in Zones 1, 2, 21, 22 and Gas Groups IIA, IIB + H2 and Dust IIIC
- System Certification – FM USA and Canada
  - Certified for use in Class I Division 1 gas groups BCD, Class II Division 1 dust groups EFG
- Advanced design and precision manufacturing
  - Robust, long-life probe for process temperatures up to 700 °C (1292 °F)
  - Stable and accurate oxygen measurement
- Unique integrated auto-calibration system
  - Easy compliance for emission monitoring regulation
- Probe lengths up to 2.0 m (6.6 ft.) and industry-standard flange configurations
  - Extensive installation options
  - Fully site-serviceable probe
- Advanced transmitters
  - Easy configuration, monitoring and intuitive HMI
  - HART communications
  - Cell performance logging and diagnostics

# Endura AZ40

## Added simplicity and best in class accuracy for combustion optimization



ABB's latest analyzer for measuring oxygen and combustibles in combustion applications is a worthy replacement for the proven SMA90 system. Incorporating new electronics and ABB's common HMI, the AZ40 brings new levels of efficiency and simplicity to help operators fine-tune their combustion processes, lower fuel costs and reduce production of nitrogen oxides.

### Increased functionality through simplified design

- Reduced maintenance and extended uninterrupted operation through the incorporation of advanced blowback functionality.
- Redesigned product focused on ease of operation and no longer requires 'expert' operation or installation to gain the full potential of the device.
- Complete backwards compatibility with field upgradeability for the existing installed base of SMA analyzers.

### Enhanced performance enables tighter process control

- Best in class resolution allows visibility of previously inaccessible COe data for tighter control and more efficient combustion processes.
- COe and O2 measurement in a single device

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