

# BlueEye™ Ex-D

Gas quality analyzer  
 Reliable, no moving parts  
 Fast response time  
 Low CAPEX, no OPEX

## BROCHURE

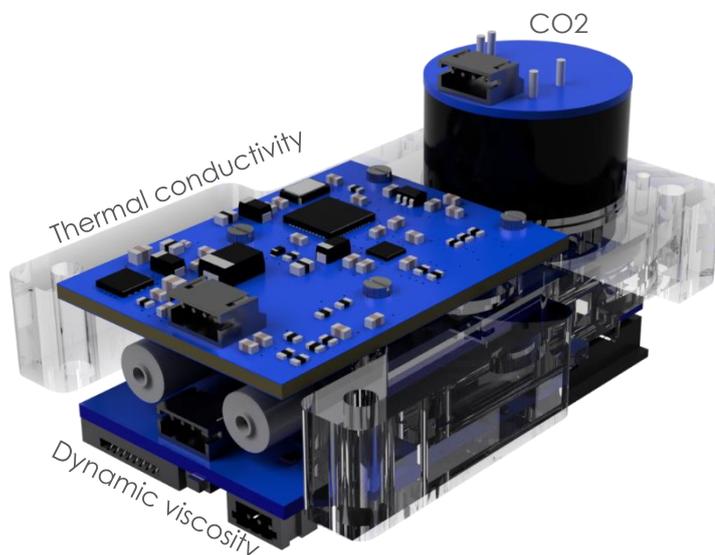


### About the BlueEye™ Ex-D

The BlueEye™ Ex-D is a low CAPEX gas analyzer, designed for the continuous measurement of combustible gases. Every second the device accurately measures the combustion properties and calorific content of gas compositions, including gases with high CO<sub>2</sub> and H<sub>2</sub> content.

Gas is flowing at low flow rate (~50 ml/min) in and out of the BlueEye™ Ex-D through Swagelok connectors. Measurement output is interfaced through 4-20 mA current loop and Modbus RTU.

The BlueEye™ Ex-D uses Bright Sensors' patented MEMS gas viscometer technology combined with other MEMS sensors. The analyzer is specifically developed for biomethane injection, hydrogen blending, combustion control, gas grid monitoring and other stationary applications.



### Main Features

Measurement output:

- Wobbe Index
- Calorific content (HHV & LHV)
- CO<sub>2</sub> concentration
- Density
- Air Fuel Ratio
- Methane Number

Accuracy:

- Pipeline gas typically <1%
- Other gas compositions on request

Maintenance free & reliable

- No moving parts
- No chemical reactions

Fast & continuous measurement

- 7 second Viscosity
- 1 second Thermal Conductivity and CO<sub>2</sub>

Other features:

- Explosion proof certified enclosure
- Built-in flow reducer
- Interface: 4-20mA, Modbus RTU
- Input Power: 12-24VDC
- Plug-and-play installation
- Easy replacement of sensor unit
- CE, UKCA, IECEx in progress
- OILM R140 Class B in progress

## BlueEye™ Ex-D Specifications

Measurement	Units	Reference conditions	Calculation method
Wobbe Index (WI)	MJ/m <sup>3</sup> , kWh/m <sup>3</sup> BTU/scf	0/0°C, 15/15°C, 15/15°C, 20/20°C, 25/20°C at 101325 Pa and 60°F at 14.696 psi	ISO 6976:1995 GPA 2172:2009
Higher Heating Value (HHV)			
Lower Heating Value (LHV)			
Density ρ	kg/m <sup>3</sup> , lbm/scf		
Air Fuel Ratio λ	-	-	Simplified method
Methane Number	-	-	ISO23306 PKI Methane Number
CO2 concentration*	mol%	-	-

<b>Accuracy</b>	≤ 1% of reading
<b>Repeatability</b>	≤ 0.2% of reading**
<b>Dynamics</b>	One measurement every 1s, reaction time T90 < 60s

Gas Composition Range					
Methane	70-100mol%	Higher Alcanes	0-1 mol%	Hydrogen	≤ 20 mol%
Ethane	0-20 mol%	Nitrogen	0-20 mol%	Water (Gaseous)	≤ 0.1 mol%
Propane	0-5 mol%	Carbon Dioxide	0-9 mol% (50 mol%)*	Dust, Liquids	Without
Butane	0-3 mol%	Oxygen	≤ 3 mol%	H2S	≤ 0.01 mol%
<b>Addressable range for HHV</b>	8.38 to 12.875 kWh/m <sup>3</sup> (15°C/15°C), 810 to 1245 BTU/scf (60°F/14.696 psi)				
<b>Operating gas temperatures</b>	0 to 50°C, 32 to 122°F				
<b>Operating gas pressures</b>	960 to 1100 mbar, 13.9 to 16 psia				
<b>Flow rate</b>	50 ml/min (+/- 10%), 0.00177 scf/min (+/- 10%)*				

\* in combination with CO2 sensor, \*\* on an unfiltered 1 second cycle measurement, \*\*\* flow rate range customizable on request

## Electrical and Mechanical Specifications

<b>Interfaces</b>	Modbus RTU (RS485), analog output (4-20mA current loop)
<b>Supply Voltage</b>	12 to 24V, < 2W
<b>Dimensions and Weight</b>	140mm x 135mm x 125mm and 2.6kg, 5.51in x 5.32in x 4.92in and 5.7 lbs
<b>Gas Connections</b>	2 Swagelok 1/4" (Female)
<b>Certifications</b>	IP66, CE, IECEx, ATEX, UL & OIML R140 Class B in progress

## Environment Conditions

<b>Operating Temperature</b>	-20°C to 70°C, -4°F to 158°F
<b>Storage Temperature</b>	-40°C to 70°C, -40°F to 158°F
<b>Environment Humidity</b>	0-95 % Relative Humidity, non-condensing
<b>Burst Pressure</b>	< 250 mbar, < 3.6 psig

# DASTEC S.R.L.

**Representantes / Distribuidores Exclusivos**

 **Argentina**

Tel: (+54 11) 5352 2500

Email: [info@dastecsrl.com.ar](mailto:info@dastecsrl.com.ar)

Web: [www.dastecsrl.com.ar](http://www.dastecsrl.com.ar)

 **Uruguay** [www.dastecsrl.com.uy](http://www.dastecsrl.com.uy)

 **Paraguay** [www.dastecsrl.com.py](http://www.dastecsrl.com.py)

