

# OMS 420 Ex

# IN-SITU COMBUSTION OPTIMIZATION MONITOR

## FOR HAZARDOUS AREA ZONE 2

4-20mA

RS 485

MODBUS



O<sub>2</sub>

CO<sub>e</sub>

Until now, in-situ measurements, used to tune boilers, were limited to O<sub>2</sub> only. The introduction of combustible CO<sub>e</sub>-measurements however, to be used simultaneously with O<sub>2</sub>-measurements, provides engineers an improved tool to lower excess air to previously unachieved levels. Lowering excess air means lowering fuel consumption, greater cost savings and reduced NO<sub>x</sub> emissions.



since 1984 ®

AIR fair

EMISSION MONITORING SYSTEMS

Over 30 years of innovative gas analysis!

- Suitable for temperatures up to 1,800 °F
- O<sub>2</sub> and CO<sub>e</sub> measurement is possible
- Extremely service friendly
- Very competitively priced
- Low cost of ownership

## MAIN FEATURES

- >> hazardous area designation of use: Zone 2 equivalent to Class 1, Div 2, Gr C/D
- >> special IP65 pressurized cabinet and z-purge controller, complying to EX II 3G Ex pz II T3 Gc
- >> unique hot solid electrolyte sensor for combustible CO -measurement without the need for sample dilution with air as required for catalytic bead sensors (Pellistors)
- >> easy and fast, on site replaceable detector head with sensors (O2 & COe )
- >> unique blow-back system for dusty flue gases
- >> integrated auto-calibration for accurate measurements
- >> integrated control unit with backlit display, operating key pad, dual galvanic isolated 4...20 mA output and digital output RS 485 (Modbus RTU)
- >> stainless steel SS316Ti flange 4" ANSI-150 lbs with flow guidance probe tubes, from 11.81" to 78.81" (300 mm up to 2 m) length
- >> low energy consumption, no poisoning effects on sensors, stable in hot, wet and water saturated flue gases, dust tight and water proof enclosure, with optional ATEX heater for very low ambient air temperatures or ATEX Vortec cooler for high ambient temperatures

## TECHNICAL SPECIFICATIONS

Measured component	Gas	Range	Accuracy	Method
	O2	0 ... 25%	0.2% abs.	zirconium dioxide
	COe	0 ... 1,000ppm	+/- 5% full scale	hot solid electrolyte
Zero drift	< 0,2 % of range per month, negligible with auto-zero			
Span drift	< 0,2 % of range per month, negligible with auto-zero			
Linearity	< 1 % FS			
Warm up time	Minimum 30 minutes			
Response time	< 10 seconds			
<b>Process conditions</b>				
Temperature	up to 1,832°F (1,000 ° C)			
Pressure	361 inH2O to 441 inH2O (900 to 1.100 mbar)			
Flow velocity	min. 1 m/sec to max. 30 m/sec			
Probe connection	flange 4" ANSI-150 lbs., stainless steel 1.316Ti			
Probe tube length	11.81" to 78.81" (300 mm to 2,000 mm), Inconel steel			
Calibration	Manual or automatic (user free settable) 1 point (offset) or 2 points (offset and span)			
HMI Human Machine Interface	Graphical, backlit display Keyboard and password protected operation Dual, analog output 4...20 mA, isolated, max. load 500R RS 485 digital interface (Modbus RTU) DIN-rail RS 485/Profibus converter			
Ex classification	Ex II 3G Ex pz II T3 Gc			
Cabinet	Glass fiber reinforced PE with grey, conductive painting			
Dimensions	25.58" x 19.68" x 13.77" (650 x 500 x 350 mm) (H x W x D)			
Weight / Protection	55lbs. (25 kg) / IP 65			
Ambient temperature	41°F ... 113°F (+5 °C ... +45 °C) (149°F (+65 °C) with ATEX Vortec cooler) -49°F ... 113°F (-45°C ... +45 °C) with cabinet heater			
Operating requirements				
Electric power supply	100...240 Vac / 47...63 Hz / 100 W or 300 W with cabinet heater			
Compressed air	87 ... 116 psi (6...8 bar), free of dust, oil and water (DP -4°F (-20°C) or less)			

Data subject to change without notice