MRU INSTRUMENTS

OMS *420* EX

O2 & COe in-situ monitoring system for use in hazardous area zone 2

The OMS 420 Ex - probe is used for continuous measurement of oxygen and combustible gas concentrations in flue gases up to 1,000 °C of various industrial furnaces/ovens/boilers, with hazard of explosive atmosphere at petroleum refineries, petrochemical plants and natural gas plants.

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 II 3G Ex pz II T3 Gc
- Unique hot solid electrolyte sensor for combustible COe -measurement without 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 back lit 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 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 Vortex cooler for high ambient temperatures.

OMS *420* EX

TECHNICAL SPECIFICATIONS

Measurement component		Measuring range	Resolution	Accuracy
O_2	**Oxygen**	0 … 25 Vol. % absolute	0.01 %	**± 0.2** % or ± 5 % of reading*
CO_e	**Combustibles**	0 … 1,000 ppm	1 ppm	**± 50 ppm or ± 10** % of reading*

General technical data	
Warm-up time	min. 30 min.
Response time/T90	< 10 sec.
Process conditions	
Temperature	up to 1,832 °F
Pressure	361 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	12" up to 78" (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, back lit 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	II 3G Ex pz II T3 Gc
Cabinet	Fiber glass reinforced PE with gray, conductive painting
Dimensions	26" x 20" x 14" (650 x 500 x 350 mm) (H x W x D)
Weight / Protection	55 lbs. (25 kg) / IP 65
Operating temperature	41°F ... 113 °F (+5 °C ... +45 °C) (or 149°F (+65 °C) with ATEX Vortex cooler) -49**°F ... 113 °F** (-45 °C ...+45 °C) with cabinet heater
Storage temperature	-4°F ... 131 °F (-20 °C ... +55 °C)
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 -20°C or less)

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