



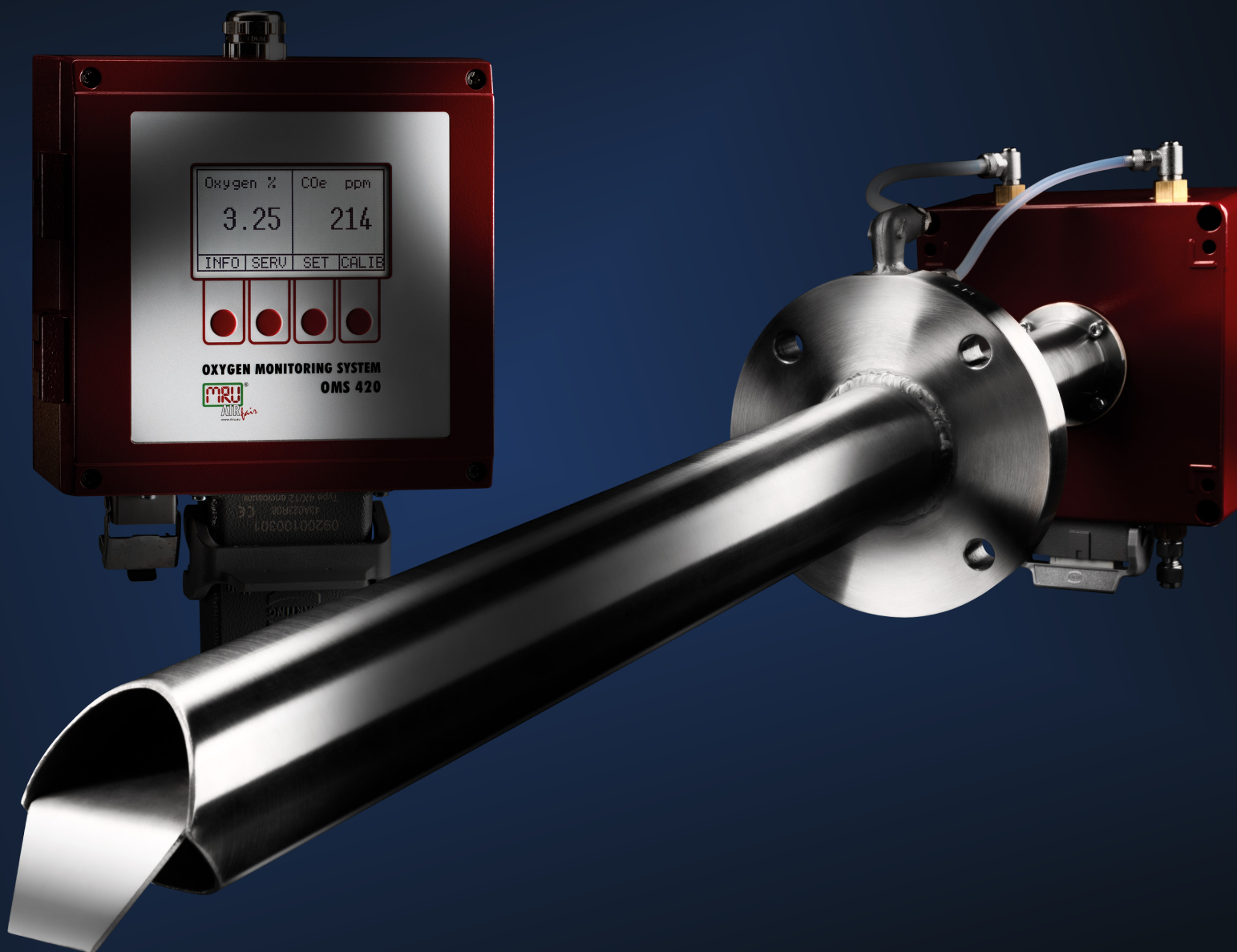
OMS 420

In-situ real-time analysis of
Oxygen and COe.

O₂ | COe Combustion optimization



**Reduce costs through
combustion optimization**



OMS 420

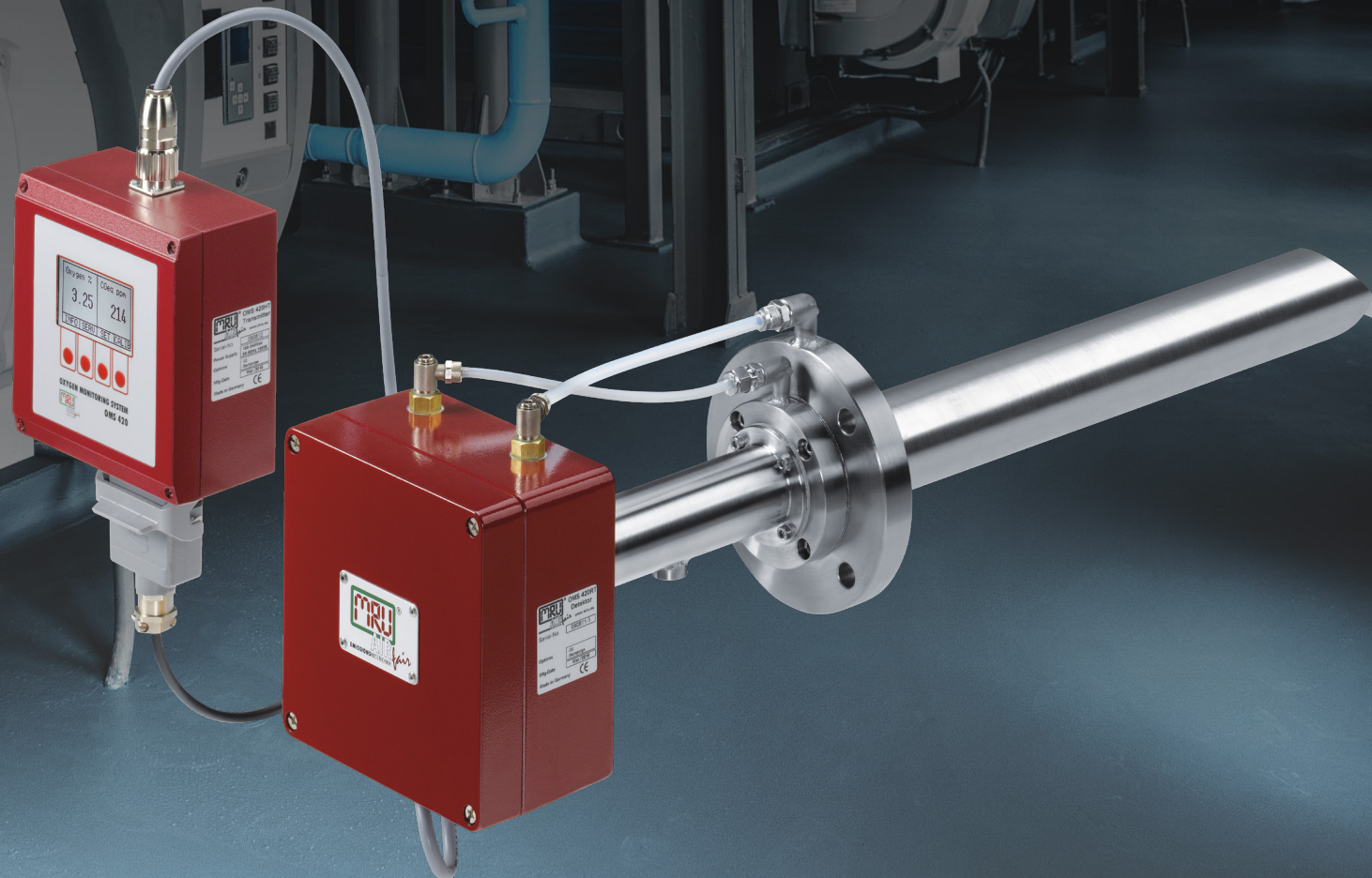
On site - real-time oxygen and CO_e analysis

OMS 420 provides continuous combustion optimisation at industrial boilers

- All combustions with combustion temperatures up to max. 3,092 °F (1,700 °C) (see different models)
- Die casting aluminum enclosure with electronics, keyboard, up-front display of O₂ and CO_e*
- Standard DN65 flange with variable probe tube lengths Ø 2.36" (60 mm) and with back-purge-/compressed air connector
- Connecting tube with reference air inlet and small flange, Ø 3.94" (100 mm)
- Rugged industrial plug for power supply and data transfer (analog 4 ... 20 mA, digital RS 485)

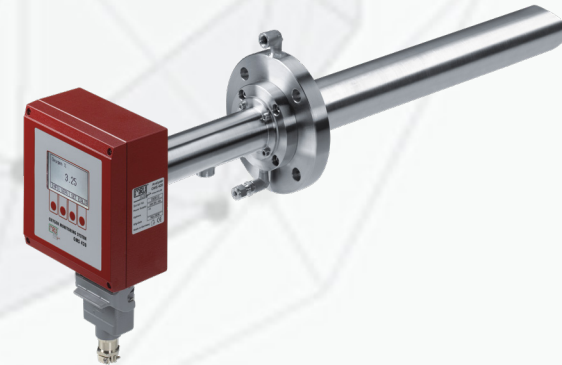
Options:

- CO_e measurement
- Compressed air back-purge with control valve complete with electronics, incl. adjustable intervals – recommended for high dust sites
- Automatic calibration for span and offset, using pneumatic unit PU 420
- Application with high temperatures up to approx. 3,092 °F (1,700 °C) with ceramic tube and ejector (model HT)
- Remote control- and display unit max. 32 foot (10 m) (model RT) for applications with high ambient-/radiation temperature > 122 °F (50 °C)



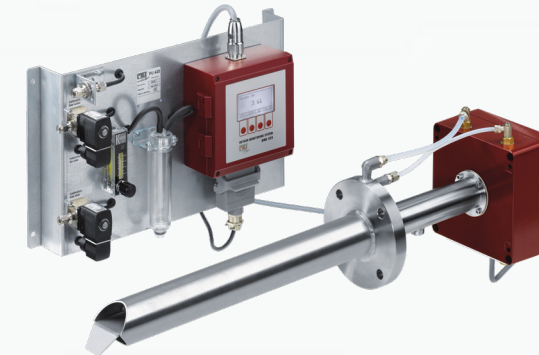
The devices in detail

An overview of different models



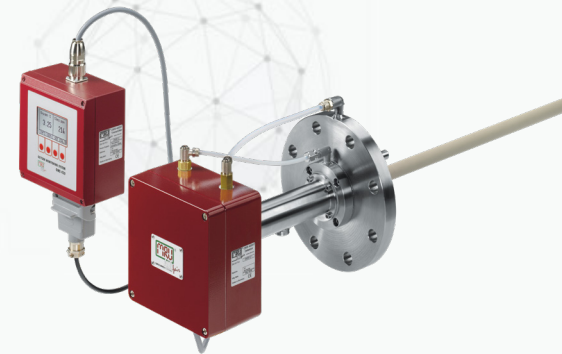
OMS 420 compact model

- For use only at clean combustions, ambient to probe head temperature not higher than 140°F (+60 °C)
- Temperature regulated ZrO₂ sensor, transmitter mounted on probe head
- Dual galvanic isolated 4 ... 20 mA analog output and digital output RS 485 (Modbus RTU)
- Power supply: 24 Vdc, 100 W



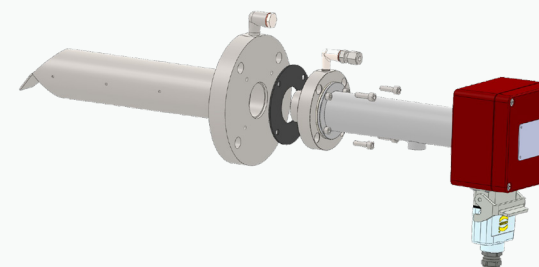
OMS 420 RT remote transmitter with pneumatic unit PU420 for automatic calibration

- Aluminum housing with corrosion-resistant, red powder coating
- Separate electronics with LCD display and operating keys
- RS 485 interface with Modbus RTU protocol for digital data transfer
- 4 ... 20 mA analog output, RS 485 (Modbus RTU)
- Power supply: 100 ... 240 V, 100 W



OMS 420 HT - high temperature with ceramic probe and ejector

- For use only at all clean and dusty/dirty combustions and 4" ANSI-150 lbs flange
- Probe design with ejector (sample aspiration via air-jet pump)
- Including automatic back-purge with clean and dry compressed air 87 ... 145 psi (6 ... 10 bar)
- Power supply: 100 ... 240 V, 100 W



Service-friendly handling

The OMS 420 transmitter with electronics, display and operating keys as well as the connection tube and the small sensor flange form one unit and are fixed to the probe flange with 4 screws. For service, inspection and repair work simply loosen these 4 screws and replace the complete transmitter within minutes.

OMS 420

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. |
| Flange | DN65 PN6 flange, Ø 6.3" (160 mm) |
| Probe tube | 12" ... 6.5-foot (300 ... 2,000 mm) Ø 2.36" (60 mm) |
| Flange temperature | min. 158 ° F ... max. 302 ° F (+70 ... max. +150 °C) (condensation moisture must be avoided) |
| Response time/T90 | < 10 sec. |
| Analog output | 2x current loop 4 ... 20 mA, with galvanic isolation linearized for both 0 ... 25.00 % O ₂ and 0 ... 1,000 ppm CO _e (user definable settings in 0.5 % steps are possible) |
| Digital output | RS 485 (with Modbus protocol, without galvanic isolation) |
| Power supply | 18 ... 24 Vdc (for model OMS 420 compact), 90 ... 100 W 100 ... 240 Vac (for model OMS 420 RT and HT), max. 100 W |
| Electronics of the transmitter | with local microprocessor, display and 4 push-buttons |
| Calibration inlet | with test gas fitting for 6/4 mm tube calibration gas supplied manually or automatically via. pneumatic unit PU 420 |
| Back-purge inlet | min. 6 ... 8 bar compressed air with quick connector for 8 mm tube |
| Ambient temperature of electronics | -4 ... 140 ° F (-20 ... +60 °C) |
| Enclosure Transmitter | die cast aluminum, 6.3" x 6.3" x 2.36" (160 x 160 x 60 mm) and 7.87" (200 mm) probe tube, Ø 1.97" (50 mm) |
| Protection class | IP65 |
| Weight | approx. 7.7 lbs. (3.5 kg) (without probe and flange) |

Data subject to change without notice. | * which ever is larger | N-59814EN-K0-QM-1220



MRU Instruments, Inc.

Humble, TEXAS 77396 USA
Tel.: +1 (832) 230-0155
Info@mru-instruments.com
www.mru-instruments.com

MRU Representative: