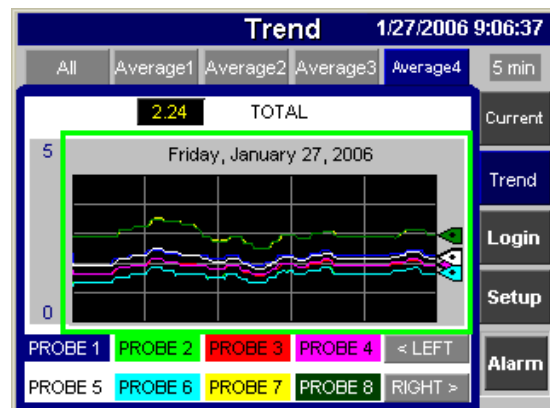
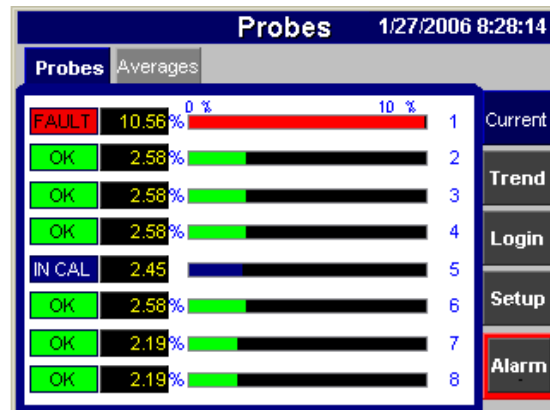
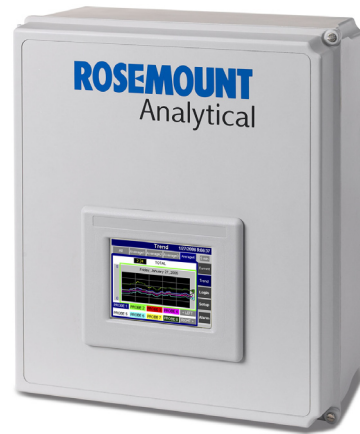


# OxyBalance Oxygen Display and Averaging System

Large combustion processes continually require improved gas analysis in order to maintain the best heat rate performance. The OxyBalance system is a display and averaging system that assists plant operations in setting overall fuel/air ratios as well as providing a tool for balancing individual burners or sets of burners.

## Features

- Graphically displays and trends from 1-8 oxygen measurements
- Probe inputs may be from Rosemount Analytical, Westinghouse or any competitive oxygen probe with a 4-20 mA signal output
- Auto Sense – automatically detects probes when they are wired into the system
- Generates up to 4 signals (4-20 mA) as programmable averages
- Failed or calibrating probes are automatically removed from the average
- Individual probe readings remain autonomous and are unaffected by any potential failure of the OxyBalance unit
- Variable time scale trends for each individual probe value, as well as for up to 4 averages
- Password protection for setup menus
- No single point of failure – individual probe 4-20 mA signals going to the DCS are unaffected by a power supply or other failure of the OxyBalance



## Specifications<sup>1</sup>

### Ambient Environment:

#### Temperature Specification

-5°C to 35°C

#### Ambient temperature effect on electronics:

less than .01% of reading per 10°C

#### Vibration

IEC 68-2-6 and ISA S37.3

#### Shock

IEC 68-2-31 and ISA S37.3

#### Enclosure

NEMA 4X

#### Area Classification

General Purpose

### Power Requirements:

110V/240 V, 50/60 Hz

### I/O:

#### Analog Inputs

4-20 mA (qty. 1 to 8 O<sub>2</sub> probes) input impedance – 275 ohms

#### Analog Outputs

4-20 mA (qty. 1 to 8 pass through for each probe, qty. 4 programmable averages)

#### Analog Output Resolution (for averages)

12 bit

#### Analog Output Resistive Load

< 500 ohms

#### Discrete Inputs

“IN CAL” (qty. 2 to 8 from individual probes)

#### On-state current

Minimum – 2.0 mA @ 10V dc  
Maximum – 12.0 mA @ 30V dc

#### Relay Outputs

“LOSS OF PLC”

“AVERAGE WARN” if one or more probes drop out of an average  
“AVERAGE FAILED” for each average when only one probe in the average remains valid

#### Relay contact ratings

120/220V ac	2.5A
125V dc	1.0A
24V dc	2.0A

### Logic:

4 programmable averages from 2-8 probes

#### Individual probes removed from average if

- 1) Probe fails (4-20 mA to default condition of 3.5 mA or 21 mA)
- 2) Probe is in cal (SPS/IMPS contact, must share with control room)

### Signal Security:

Each probe utilizes its own autonomous signal conditioning electronics, including its own power supply. Any failure in the OxyBalance System will not affect the individual probe 4-20 mA signals going to the control room from each probe.

### Personnel Security:

Password protection configuration changes in programmable averages.

### Color Graphic Display:

#### Size

6” diagonal

#### Type

Color Active Matrix, TFT LCD

#### Resolution

320 by 240 min.  
Touch screen operator interface

#### Note

Panelvision Color Graphic Display may be separately mounted into a panel. 15 feet of interconnecting cable is included.

### Ordering Information:

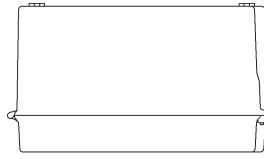
#### NEMA 4X Box

2 - 4 probes - 6A00203G01  
5 - 8 probes - 6A00203G02

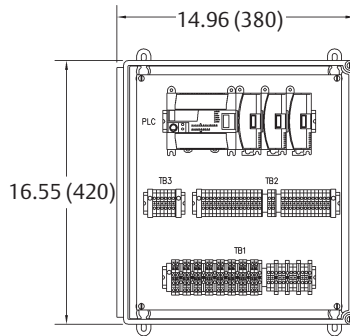
#### Plate Mount

2 - 4 probes - 6A00203G11  
5 - 8 probes - 6A00203G12

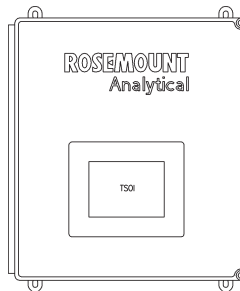
## Dimensions



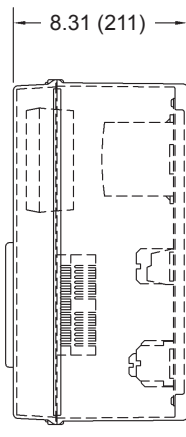
TOP



FRONT (DOOR REMOVED)



FRONT



RIGHT

All dimensions in inches  
(mm in parentheses)

## Rosemount Analytical Oxymitter Oxygen Probes (ordered separately)

- 18" to 18' long
- Accuracy  $\pm .75\%$  of reading, or  $.05\% \text{ } ^2$
- Fully field-repairable
- Rugged construction
- Integral or remote electronics

## Autocalibration Systems

- 1 to 4 probes per box
- Calibration recommended diagnostic
- "in cal" contact



Integral electronics



Remote electronics

<http://www.EmersonProcess.com>



<http://www.analyticexpert.com>



<http://twitter.com/RAIhome.com>

### Rosemount Analytical

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Scan this QR code to  
open the PDS 106-4050  
product information web  
page.



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