

# Portable O<sub>2</sub>-Analyzer BA 4000



The portable Buhler O<sub>2</sub> Analyzer is suitable for various applications in non-hazardous areas.

As an option the BA4000 can be equipped with an integrated sample gas pump. The optional sampling pump is required for applications at atmospheric pressure or light vacuum and is switched on and off by an intergated switch in the front panel.

Alarm set points can be adjusted individually to indicate deviations from predetermined values. The continuous output can be configured either as 0-1 V or 0/4-20 mA.

The calibration can be done easily with N<sub>2</sub> as zero gas and ambient air as the span gas. The calibration points can be adjusted using the potentiometers on the front panel.

An easily accessible fine filter protects the measurement cell from particulate contamination. If the unit must be used for wet sample gas, a portable sample conditioning system (Model TGAK) is required

The BA 4000 is powered by an integrated high capacity battery allowing it operate independently from a power supply for at least 14 hours.

- **Paramagnetic operating principle**
- **4-20 mA analog output**
- **Reliable, durable measuring cell**
- **Simple operation**
- **Fast accurate O<sub>2</sub> analysis**
- **Various ranges available**
- **Housing in IP 20**
- **Battery operated**

## Technical Data

### Measurement Parameter Oxygen

|                               |         |
|-------------------------------|---------|
| Range (vol.% O <sub>2</sub> ) | 0 - 10  |
| (indicate with order)         | 0 - 25  |
| (custom ranges avail.)        | 0 - 100 |

### Measurement Principle Paramagnetic

### Performance Characteristics

|   |        |
|---|--------|
| Accuracy (% O <sub>2</sub> absolute)    | 0.1    |
| Repeatability (% O <sub>2</sub> )       | ± 0.05 |
| Response time (sec T <sub>90</sub> )    | <10    |
| Zero-drift (vol.% O <sub>2</sub> /week) | ± 0.1  |
| Span drift (% range/week)               | ± 1    |

### Sample Requirements

|                           |          |
|---------------------------|----------|
| Inlet temperature(°F)     | 40 - 100 |
| Inlet pressure (min psig) | 0.15     |
| (max psig)                | 20       |
| w/internal pump psig      | -0.07    |

### Sample Flow

|                            |                 |
|----------------------------|-----------------|
| without pump (l/min)       | approx. 0.012   |
|                            | @ min. pressure |
| with internal pump (l/min) | approx. 0.5     |

### Sample Conditioning

|              |  |
|--------------|--|
| Dew point    | at least 40 °F below ambient temperature |
| Particulates | 8μ disposable filter fitted as standard  |

### Calibration Requirements

|          |                         |
|----------|-------------------------|
| Zero gas | Nitrogen                |
| Span gas | Air or bottled cal. gas |

### Environmental Conditions

|                           |           |
|---------------------------|-----------|
| Ambient temperature (°F)  | 50 - 110  |
| Storage temperature (°F)  | -10 - 150 |
| Relative humidity (% avg) | <75       |

### Analog Outputs

|               |                            |
|---------------|----------------------------|
| Signal output | 4-20 mA (max. 400 Ω )      |
|               | 0-1 V ( min. 1kΩ) optional |

### Readings

|         |                                  |
|---------|----------------------------------|
| Display | LCD 3½ digits                    |
| Flow    | Flow meter                       |
| Range   | 0-10 NI/min air (0 - 0.17 l/min) |

### Power Supply

|                  |  |
|------------------|--|
| Power supply     | 230 V, 50/60 Hz  |
|                  | 115 V, 50/60 Hz  |
| Internal battery | 12 V <sub>dc</sub> , 2.7 Ah (operating time approx. 14 hrs. w/out options) |

### Physical Characteristics

|                        |  |
|------------------------|--|
| Case Construction      | Aluminum alloy   |
| Protection degree      | IP20 (standard)  |
| Dimensions (H x W x D) | 145 x 182 x 240 mm   |
|                        | 5.7 x 7.2 x 9.4 (approx. in)                                       |
|                        | (standard housing)   |
| Weight                 | Approx. 4.5 kg (10 lb.)  |
| Gas inlet              | Filter with glass fiber element                                    |
| Gas connections        | 6 mm OD  |
|                        | 4 mm ID tube, push-on  |
| Sample wetted parts    | PVDF, glass, SS 1.4571, gold, viton, platinum-iridium, epoxy resin |

## Please indicate with order

(incl. power supply )

### Analyzer Models

|         |          |
|---------|----------|
| BA 4000 | 0 - 25%  |
| BA 4000 | 0 - 100% |

### Part No.

|           |
|-----------|
| 55 11 099 |
| 55 11 098 |

### Options for all analyzers

|                                      |
|--------------------------------------|
| Internal pump                        |
| Power supply 230 V, 50/60 Hz, 12 VDC |
| Power supply 115 V, 50/60 Hz, 12 VDC |
| Back pressure regulator ARP          |

### Part No.

|            |
|------------|
| 55 11 0991 |
| 55 11 0992 |
| 55 11 0993 |
| 46 00 999  |