



## COA-2010-F

### Electronic CO<sub>2</sub> Analyzer

New electronic CO<sub>2</sub> analyzer specifically designed to monitor CO<sub>2</sub> and temperature for the verification of incubators in research and pharmaceutical markets. This unit has been developed to incorporate the latest technology and specification requirements, that provide the user with a fast, simple to use and accurate piece of laboratory kit.

#### Benefits

- Improved accuracy on CO<sub>2</sub> readings
- Quick verification of CO<sub>2</sub> incubator levels
- Time saving with dual temperature probes
- Large data storage and user friendly software and download
- Easy to read large well lit display
- Built in gas moisture removal

#### Applications

- Calibration of inbuilt CO<sub>2</sub> sensor in Esco CelCulture® CO<sub>2</sub> incubators
- Calibration of inbuilt temperature sensor in Esco CelCulture® CO<sub>2</sub> incubators
- Measurement of CO<sub>2</sub> level in CO<sub>2</sub> incubators
- Measurement of temperature in CO<sub>2</sub> incubators



### Product Specification

#### COA-2010-F (Electronic CO<sub>2</sub> Analyzer)

##### Gas Ranges

Gas Measured	CO <sub>2</sub>	By custom dual wavelength infra-red cell reference channel
Range	CO <sub>2</sub>	0-20%
Measurement Accuracy	Gas	CO <sub>2</sub>
	CO <sub>2</sub>	Accuracy ± (1% range +2% of reading) at reference conditions Temperature dependence ± 0.2% reading °C (typical at 5% CO <sub>2</sub> ) Pressure dependence ± 0.02% of reading/hPa (typical at 5% CO <sub>2</sub> )
Response Time T <sup>90</sup>	CO <sub>2</sub>	≤20 seconds

##### Facilities

Temperature (Optional)	x2 using optional probes 0°C to +50°C
Temperature Accuracy, Typical	± 0.2°C from 32 to 44°C, ± 0.5°C over the rest of range
Barometric Pressure	800-1200 mbar
Visual and Audible Alarm	Selectable CO <sub>2</sub> alarm levels
Communications	USB type B mini-connector, HID device class
Data Storage	1000 reading sets + 270 events

Environmental Conditions	
Operating Temperature Range	5°C - 40°C
Barometric Pressure	± 500 mbar from calibration pressure
IP Rating	IP40
Power Supply	
Battery Type	Li Ion
Battery Life	10 hours (8 hours with pump)
Battery Lifetime	>300 Cycles
Battery Charger	5 V DC external power supply and internal charging circuit
Charge Time	3 hours
Alternative Power	USB connector DC power supply
Pump	
Flow	100 cc/min typically
Environmental Conditions	
Operating Temperature Range	5°C - 40°C
Barometric Pressure	± 500 mbar from calibration pressure
Physical	
Case Material	ABS / Polypropylene with silicone rubber inserts
Keys	17 Resin-capped silicone rubber keys
Display	Liquid crystal display, 128 x 64 pixel with RGB LED backlight
Gas Sample Filters	Built-in gas dryer tube to remove moisture Replaceable PTFE water trap filter
Weight	495 g
Dimension (W x D x H)	165 x 100 x 55 mm (6.5" x 3.9" x 2.2")

# COA-2016-F

## Electronic CO<sub>2</sub> Analyzer

New electronic CO<sub>2</sub> analyzer specifically designed to monitor CO<sub>2</sub>, O<sub>2</sub> and temperature for the verification of incubators in research, IVF, and pharmaceutical markets. This unit has been developed to incorporate the latest technology and specification requirements, that provide the user with a fast, simple to use and accurate piece of laboratory kit.

### Benefits

- Improved accuracy on CO<sub>2</sub> and O<sub>2</sub> readings
- Quick verification of CO<sub>2</sub> and O<sub>2</sub> incubator levels
- Time saving with dual temperature probes
- Large data storage and user friendly software and download
- Easy to read large well lit display
- Built in gas moisture removal

### Applications

- Calibration of inbuilt CO<sub>2</sub> sensor in Esco CelCulture® CO<sub>2</sub> incubators
- Calibration of inbuilt temperature sensor in Esco CelCulture® CO<sub>2</sub> incubators
- Measurement of CO<sub>2</sub> and O<sub>2</sub> levels in CO<sub>2</sub> incubators
- Measurement of temperature in CO<sub>2</sub> incubators



## Product Specification

### COA-2016-F (Electronic CO<sub>2</sub> Analyzer)

#### Gas Ranges

Gas Measured	CO <sub>2</sub>	By custom dual wavelength infra-red cell reference channel
	O <sub>2</sub>	By internal electrochemical cell
Range	CO <sub>2</sub>	0-20%
	O <sub>2</sub>	0-100%
Measurement Accuracy	Gas	CO <sub>2</sub> / O <sub>2</sub>
	CO <sub>2</sub>	Accuracy ± (1% range +2% of reading) at reference conditions Temperature dependence ± 0.2% reading °C (typical at 5% CO <sub>2</sub> ) Pressure dependence ± 0.02% of reading/hPa (typical at 5% CO <sub>2</sub> )
	O <sub>2</sub>	±1.0% Full scale at constant temperature and pressure ±2.0% Full scale over operating temperature range
Response Time T <sup>90</sup>	CO <sub>2</sub>	≤20 seconds
		≤60 seconds

#### Facilities

Temperature (Optional)	x2 using optional probes, range 0°C to +50°C
Temperature Accuracy, Typical	± 0.2°C from 32 to 44°C, ± 0.5°C over the rest of range
Barometric Pressure	800-1200 mbar
Visual and Audible Alarm	Selectable CO <sub>2</sub> and O <sub>2</sub> alarm levels
Communications	USB type B mini-connector, HID device class
Data Storage	1000 reading sets +270 events

Environmental Conditions	
Operating Temperature Range	5°C - 40°C
Barometric Pressure	± 500 mbar from calibration pressure
IP Rating	IP40
Power Supply	
Battery Type	Li Ion
Battery Life	10 hours (8 hours with pump)
Battery Lifetime	>300 Cycles
Battery Charger	5 V DC external power supply and internal charging circuit
Charge Time	3 hours
Alternative Power	USB connector DC power supply
Pump	
Flow	100 cc/min typically
Environmental Conditions	
Operating Temperature Range	5°C - 40°C
Barometric Pressure	± 500 mbar from calibration pressure
Physical	
Case Material	ABS / Polypropylene with silicone rubber inserts
Keys	17 Resin-capped silicone rubber keys
Display	Liquid crystal display, 128 x 64 pixel with RGB LED backlight
Gas Sample Filters	Built-in gas dryer tube to remove moisture Replaceable PTFE water trap filter
Weight	495 g
Dimension (W x D x H)	165 x 100 x 55 mm (6.5" x 3.9" x 2.2")

# COA-2017-F

## Electronic CO<sub>2</sub> Analyzer

New electronic CO<sub>2</sub> analyzer specifically designed to monitor CO<sub>2</sub>, O<sub>2</sub>, %RH and temperature for the verification of incubators in research, IVF, and pharmaceutical markets. This unit has been developed to incorporate the latest technology and specification requirements, that provide the user with a fast, simple to use and accurate piece of laboratory kit.

### Benefits

- Improved accuracy on CO<sub>2</sub> and O<sub>2</sub> readings
- Quick verification of CO<sub>2</sub> and O<sub>2</sub> incubator levels
- Time saving with dual temperature probes
- Large data storage and user friendly software and download
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### Applications

- Calibration of inbuilt CO<sub>2</sub> sensor in Esco CelCulture® CO<sub>2</sub> incubators
- Calibration of inbuilt temperature sensor in Esco CelCulture® CO<sub>2</sub> incubators
- Measurement of CO<sub>2</sub> and O<sub>2</sub> levels in CO<sub>2</sub> incubators
- Measurement of temperature in CO<sub>2</sub> incubators
- Measurement of Relative Humidity

### Product Specification

#### COA-2017-F (Electronic CO<sub>2</sub> Analyzer)

##### Gas Ranges

Gas Measured	CO <sub>2</sub>	By custom dual wavelength infra-red cell reference channel
	O <sub>2</sub>	By internal electrochemical cell
Relative Humidity	%RH	By capacitive measurement
Range	CO <sub>2</sub>	0-20%
	O <sub>2</sub>	0-100%
	%RH	1%-95%
Measurement Accuracy	Gas	CO <sub>2</sub> / O <sub>2</sub>
	CO <sub>2</sub>	Accuracy ± (1% range +2% of reading) at reference conditions Temperature dependence ± 0.2% reading °C (typical at 5% CO <sub>2</sub> ) Pressure dependence ± 0.02% of reading/hPa (typical at 5% CO <sub>2</sub> )
	O <sub>2</sub>	±1.0% Full scale at constant temperature and pressure ±2.0% Full scale over operating temperature range
	%RH	±1.3 %RH at 31°C
Response Time T <sup>90</sup>	CO <sub>2</sub>	≤20 seconds
	O <sub>2</sub>	
	%RH	

##### Facilities

Temperature (Optional)	x2 using optional probes, range 0°C to +50°C
Temperature Accuracy, Typical	± 0.2°C from 32 to 44°C, ± 0.5°C over the rest of range
Barometric Pressure	800-1200 mbar
Visual and Audible Alarm	Selectable CO <sub>2</sub> and O <sub>2</sub> alarm levels
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