OPTIMA 7
The true 7 gases Emission/Combustion Analyser

Our Price
From £2600

7 gases combustion emission analyser with CO2 % NDIR

OPTIMA 7 is the smallest hand held emission/combustion analyser capable to install up to 7 measurements cells simultaneously. It's has been designed and developed to meet increasing demand of combustion and emission analysis in hard to reach location such as stacks and industrial Flue. We have brought emission analysis to the palm of your hand

Measurement Functions

- Standard configuration fitted with O2 long life cell
- additional 6 toxic cells can be installed at the same for measurement of CO, LowCo, NO, Low NO, NO2, SO2, H2S, and CO2% using NDIR infrared technology
- Measure Temperature and differential Temperature
- Measure Pressure, draft and differential pressure
- Measure Flow Gas Velocity and total mass calculation
- Calculate all combustion parameters such as, CO2%, Efficiencies readings, Lamba, Excess Air and CO/CO2 Ratio, Air Ratio

Features

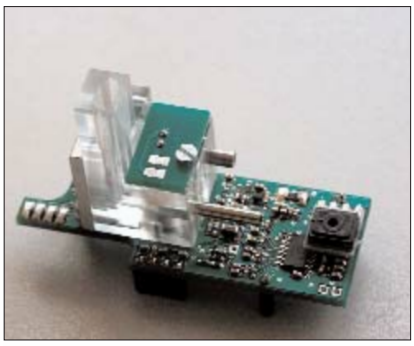
- Well readable 6 lines 3.5" TFT colour diplay
- Integrated advanced water trap with re-usable special coated filter
- Universal charging trough mini-usb port
- Integrated data memory with up to 1000 site- Optional SD card to extended memory logging
- Real time data transfer to a PC or Laptop
- USB data transfer or optional Blue tooth communication
- Documenting fetaures
- Highly Intuitive task driveb menu with direct function keys
- Protective rubber sleeve with magnet
- Fast Infrared printer
- Emission reporting both in mg/m3 or mg/sec
- Special selected Low CO and Low NO cells for 0.1 ppm resolution
- Choice of 10 fuel type and any addtional fuel user selctable

Space for 7 measurement gas sensors to meet most of the application

Each OPTIMA 7 is fitted as standard with an O2 measurement sensor – additional 5 electrochemical cells for HI CO, LowCO, NO, LowNO, NO2, SO2 and H2S measurements and a CO2%-IR bench can be installed simultaneously. There is no needs to swap sensors to measure different gases. The special selected and calibrated Low NO an Low CO read with resolution to 0.1 ppm. What is even more important, a combination of Low Range and high measurement range can be installed at the same time.

Instruments diagnostic
advance diagnostic menu shows in real time the sensors status along with other important information of the unit.

CO2-IR Bench
An optional CO2%-IR bench using non dispersive infrared technology can be installed for direct measurement of CO2% in industrial combustion process- In application such industrial boilers, stack measurements or processes where CO2% is released by raw material(such lime stone, bricks etc) it is imperative to measure CO2% value directly. In such cases calculated value can not be accepted as results as it is not possible to relay on formulas due to continuos changes in the process condition.

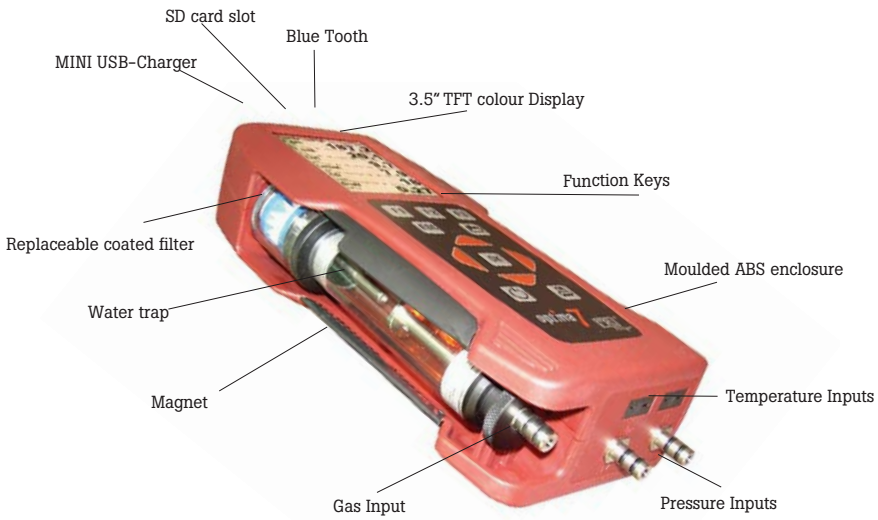


CO2% NDIR module- 63573

OPTIMA 7
The true 7 gases Emission/Combustion Analyser

Analyser Features

Engineered to with-stand harsh process conditions
- Robust ABS molded case protect from un-expected drops
- Stainless steel plugs
- Integrated removable water trap



New water trap offer additional sensor protection

Advanced Water trap enhance protection

Each OPTIMA 7 is fitted as standard witha new integrated condensate trap with PTFE coated filter eliminates the possibility of condensation accumulating inside the unit.The bottom part of the condensate trap is made of aluminum and act as a " natural cooler" to make the sampled gas condensate in the trap- A clean and dry gas is then delivered to the gas collector ready to be measured
An Additional internal filter is installed in the analyser to further prevent the measuring cell from contamination.

Intuitive task driven menu and advanced functionality

Easy to use task menu

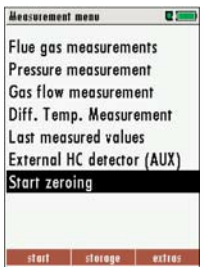
When using OPTIMA 7 from Environmental monitoring you will note the difference: there is no need to read any heavy manual. This unit is so easy to use, an additional help menu will help you in case you need it.
- Task oriented menu with separate pages for different configuration
- Function keys give you direct access to the desired function
- Dedicated measurement programmes can be edited and saved for recall on field
- Separate individual menu for Gas Analysis, temperature and pressure reading

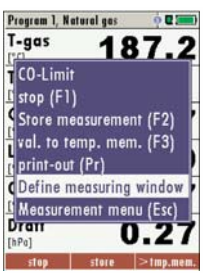
Emission Reporting

Most of the Environmental agencies worldwide require that emissions are reported to defined standards- OPTIMA 7 features:
- Variable 02 Reference user selectable for reporting purposes
- Emission measurement in mg/m3 or mg/sec as specified in the industry standard
- Low NOx reading to match specific application such as emission monitoring in gas turbine
- Unlimited choice of fuels

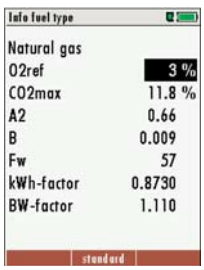
Gas and flow Measurement

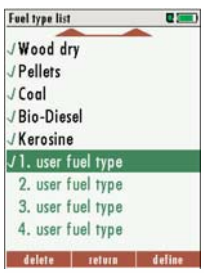
OPTIMA 7 measure gas flow velocity and an instant mass when used in conjuction with the Optional Pitot Tube.
The Gas Flow option include an high accuracy differential internal pressure sensor and a Barometric sensor for automatic compensation of change in ambient pressure



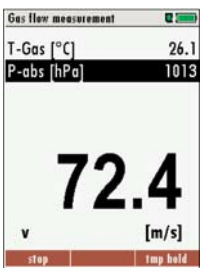


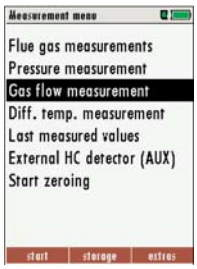
Display Examples





Display Examples





Display Examples

OPTIMA 7
The True 7 gases
Emission/Combustion Analyser

Specifications				
	Range	**Accuracy**	**resolution**	**Notes**
Measured Gases				
O2 measurement	0 to 21 % Volume Absolute	±0.2 Vol % abs	0.1 % Vol % abs	T90 < 20 ec
CO measurement (H2 compensated	0 to 10000 ppm	± 10 ppm or 5 % rdg (<4000 ppm) 10 % of rdg > 4000 ppm	1 ppm	T90 < 40 ec
Low CO measurement (H2 compensated)	0 to 300 ppm	± 2 ppm or 5 % rdg	0.1 ppm	T90 < 40 ec
CO measurement	0 to 20000 ppm	± 100 ppm or 5 % rdg (<4000 ppm) 10 % of rdg > 4000 ppm	1 ppm	T90 < 40 ec
CO measurement	0 to 10%	± 0.02 % of 5 % rdg (<0.4% ppm) 10% of rdg > 0.4 %	1 ppm	T90 < 40 ec
NO measurement	0 to 5000 ppm	± 5 ppm or 5 % rdg (<1000 ppm) 10 % of rdg > 1000 ppm	1 ppm	T90 < 30 ec
Low NO measurement	0 to 300 ppm	± 2 ppm or 5 % rdg	0.1 ppm	T90 < 30 ec
NO2 measurement	0 to 1000 ppm	± 5 ppm or 5 % rdg (<200 ppm) 10 % of rdg > 200 ppm	1 ppm	T90 < 60 ec
SO2 measurement	0 to 5000 ppm	± 10 ppm or 5 % rdg (<2000 ppm) 10 % of rdg > 200 ppm	1 ppm	T90 < 40 ec
H2S measurement	0 to 2000 ppm	± 5 ppm or 5 % rdg (<100 ppm) 10 % of rdg > 100 ppm	1 ppm	T90 < 40 ec
CO2 % NDIR	0 to 40%	± 0.4 % Abs	0.1 %	T90 < 30 ec
Temperature and Pressure				
Temperature measurement	-40 to 1200 Deg	± 1 °C (-40 to 200 °C) ± 1 % of rdg (200 to 1200 °C	0.1 °C	n/a
Draft measurement	± 40 hPa	±0.02 hPa or ±1 % of rdg	0.1 hPa	n/a
Pressure measurement (gauge, negative and differential)	± 300 hPa(mBar)	±0.02 hPa or ±1 % of rdg	0.1 hPa	n/a
Absolute Pressure measurement	0 to 1034 hPa	± 1 % of rdg	0.1 hPa	n/a
Calcolated value (Fuel dependant)				
CO2 %	0 to CO2% max	± 0.3 % Vol % abs	0.1 % of Vol	
Heat Losses	0 to 99.9	n/a		
Excess Air	1 to 9.99 %	n/a		
Efficiencies (ETA)	0 to 120 %	n/a	0.1%	
Flue Gas Dew Point	0 to 99.9 °C	n/a	0.1	
Other calcolated value				
Flow Mass , Gas Velocity (require Pitot Tube and Optional Flow velocity integrated module)				
Fuels	Natural GAs, LPG, Heavy/Light Oil, pellets, Bio Diesel , programmable list			
Emission Monitoring/Calcolation				
Converted value in mg/Nm3, NOx expressed as mg/m3 in term o NO2 and mg/sec- True NOx measurment (NO+NO2), O2 variable reference , CO/CO2 ratio				
Digital communicatio and data storage				
Digital ouput	Standard MINI USB port- Option BLUEdOOTH module- Real time data transfer			
Memory review	Trough Function key, measurement data are orginsed by measurements site- Sites can be created/edited by on board keyboard or directly imported by software.			
Memory Storage	Internal flash memory (up to 250 sites) - SD card more than 1000 sites			
Software	ONLINE VIEW softwar package for real time data transfer, data saving and memory organization.			
Display				
Display Type	3.5" TFT COLOUR backlit display with zoom function			
Display Line	6 Lines for simultaneous disaply 6 parameters simultaneously- User selectable and programmable- up to 4 measurement windows can be preset from keyboard and saved under customised measurement programme			
Display Indication	Display selected masured paramter with unit, measurement programme, fuel in use, charge bar and function menu icon			
Power				
Battery	Internal NiMh rechargeable battery, Optional LI-ION (Litium)high efficiency Battery			
Battery Operating Time	6 hours with standard battery, 15 continuos operation with optional Li-Ion			
Battery Charging	Trough USB charging port- Charger included			
AC Operation	110-240 VAC, 50/60 Hz			
Enviromental and mechanical design				
Operating Temperature	- 5 to 45 °C			
Storage Temperature	0 to 50 °C			
IP Protection	IP21			
Weight and Dimensions	750 grams, 110 x 225 x 52 mm (W x H x D)			
Housing	Robust ABS molded case			
Conformity	EN 50379-12- TUV approved BS EN 50379-1 & 50379-2			
Warranty	2 years analyser, 1 year O2, CO, NO ,NO2 , SO2 and H2S cell, 2 years CO2% NDIR, 1 year battery/charger and flue gas sampling probe			

OPTIMA 7
The true 7 gases Emission/Combustion Analyser

Great selection of flu gas samplig probes for every measure

Greatest choise of probes
Our rage of probes and sampling line cover every application with an extended temperature range up to 1700 C, different sizes and different lengths.All probes types have interchangeable shaft, posi- tioning cone and measure temperature by using an integrated thermocouple type K. The three path sampling line ensure measurement of the stack pressure, gas and temperature at the same time
A special viton sampling line is used to maximise the accuracy reading when measuring NO2 and SO2 gases.

modular sampling probes
To change the probe shaft is simply screwed to the probe handle. Different size, diamter and temperature ranges ensure high flexibility for every application

High Temperature probes
A new ceramic probe to with-stand gas sampling in procecess whit temperarure up to 1700 Deg C.

Data Loggin, digital communication and wirless printer

Online Data transfer and data storage
Print less, save paper- Save time in generate reporting- Increase personell safety by stay away from the hazardus area.
- View real time data on a Lap top/PDA via standard USB connection or wirelessy via the otional Bluetooth
-10 meter range
-Store data diretc on a PC or in the OPtima 7 inetrnal memory and/or SD card for later download
-Save paper and money- check the data before printing
-Remote data transfer increase personell safety and improve productivity

Powerful Software
Easy read, edit , manage and file your data using the onlien view software
• Import/Export customer details data base to the analyser
• Download stote data from the Analyser to the PC for reporting generation and data filing
• Real time data transfer via USB or optional Bluetooth
• View in numerical format, barograph, or graphical trend
• Display of Max, Min, AVG values and combustion parameters at a glance
• Quick and easy data transfer into Excel files

Fast Infrared printer
Print data on site trough our IRDA interface to our optional fast infrared printer. Try it and you will notice difference. Our new printer is feed free, and is powered via rechargeable batteries. It is much faster compared to the standard HP printers

Blue Tooth 63573

Software 15151

IR Printer 62693

AMTTQO

OPTIMA 7
The true 7 gases
Emission/Combustion Analyser

Analyser	Part number
OPTIMA 7, equipped with 02 sensor, Integrated rechargeable battery (Ni-HM), USB charger, integrated Temperature and Pressure measurement, Integrated water trap with filter, mini-USB, USB cable, SD card slot, IRDA infrared output, intergated magnet, calibration certifcate, instruction manual	410020
Optima 7 can be uquipped with maximum up to 7 cells (including 02). Maxium 6 additional cells can be selected from the table below	
Option: CO (H2) compensated- Range 0 to 10000 ppm	63132
Option:Low CO (H2) compensated- Range 0 to 300 ppm	63133
Option: CO- Range 0-20000 ppm	63057
Option: CO-Range 0 to 10 %	63134
Option:NO- Range 0 to 5000 ppm	63058
Option:Low NO- 0 to 300 ppm	63135
Option:NO2- Range 0-1000 ppm	
63059 Option:H2S- Range 0-2500 ppm	
63061	
Option:SO2- Range 0-1000 ppm	63060
Option:CO2% NDIR- Range 0-40 % Second pump (62727) can not be installed	63573
Option:CO2% NDIR -Range 0-40 % and H2S Range 0-2500 ppm use this option when both H2S and CO2 % NDIR are installed at the same time- When this option is installed, the 62727 second pump can not be installed	63585
Option: Additional Purge Pump for installation of Low CO and High CO at the same time (not retrofot)	62727
Option:BLUETOOTH module for wireless data transmittion including remote data software (no retrofit)	63064
Option:Universal AUX socket (Auxiliary Input) for additional external probe connection (no retrofit)	63136
Option: Gas Flow velocity/Mass flow calcolation intregrated module (no retrofit)	63139
Option: SD Card activation reader	63137
Accessories	**Part number**
Robust ABS carrying case, with customised foam/close cells for analayser, probes and acceesory- maximum probe lengh 500 mm	62931
OnLine Wiew Software package	15151
High Speed Infrared Printer (inlcude 1 paper roll)	62693
Gas Leak detector HC for combustible gas (requires AUX socket option)	63086
Spare SD card, 2GB	63137
Shoulder Strap	63218
Pitot Tubes	**Part Number**
Pitot Tube, 300 mm Long, 6 mm diamter	85120
Pitot Tube, 500 mm long, 6 mm diamter	85130
Pitot Tube, 800 mm long, 8 mm diameter	85132
Pitot Tube, 1000 mm long, 8 mm diameter	85133
Temperature probes	**Part Number**
Ambient temperature probe for separate Air Temperature measurement (short type style)	62934
Ambient temperature probe for separate Air Temperature measurement : long 65 mm, 2.7 m cable-	62928
Set of differential temperature probe for T Flow and T return measment.	9999-9999

Gas Sampling Probes	Part Number
Modular Industrial sampling line with replaceable shaft, available in two different lenght (2.7 m and 5 m) sampling special VITON line for optimal NO2/SO2 measurement, integrated thermoelement type K (NiCr-Ni) for exaust temperature measurement, continuos stack pressure measurement, with quick fit stainless steel connector for Analyser. Please select on or more replaceable shaft :	
2700 mm (2,7 m) sampling line lenght	62741
5000 mm (5.0 m) sampling line lengt	62747
Replaceable/interchangeable probe shaft available in difference lenghts- include integrated NICr-Ni *Type K) Thermocouple and positioning cone.	**Part Number**
Replaceable Shaft, 300 mm lenght, inlcluding positioning cone and intergrated NiCr-Ni (Type K), Tmax 850 Deg C	55583
Replaceable Shaft, 500 mm lenght, inlcluding positioning cone and intergrated NiCr-Ni (Type K), Tmax 850 Deg C	59292
Replaceable Shaft, 750 mm lenght, inlcluding positioning cone and intergrated NiCr-Ni (Type K), Tmax 850 Deg C	55672
Replaceable Shaft, 1000 mm lenght, inlcluding positioning cone and in- tergrated NiCr-Ni (Type K), Tmax 850 Deg C	55673
Replaceable Shaft, 1500 mm lenght, inlcluding positioning cone and in- tergrated NiCr-Ni (Type K), Tmax 850 Deg C	55674
Replaceable Shaft, 2000 mm lenght, inlcluding positioning cone and in- tergrated NiCr-Ni (Type K), Tmax 850 Deg C	55464
Replaceable Shaft, 500 mm lenght, inlcluding positioning cone and intergrated NiCr-Ni (Type K), Tmax 1 150 Deg C- Material Inconel 600	9999-9999
Replaceable Shaft, 750 mm lenght, inlcluding positioning cone and intergrated NiCr-Ni (Type K), Tmax 1 150 Deg C- Material Inconel 600	60626
Replaceable Shaft, 1000 mm lenght, inlcluding positioning cone and in- tergrated NiCr-Ni (Type K), Tmax 1 150 Deg C- Material Inconel 600	56737
Replaceable Shaft, 1500 mm lenght, inlcluding positioning cone and in- tergrated NiCr-Ni (Type K), Tmax 1 150 Deg C- Material Inconel 600	56738
Replaceable/interchangeable probe shaft available in difference lenghts- include integrated NICr-Ni *Type K Thermocouple and positioning cone and sinterised preliminary filter	**Part Number**
Replaceable Shaft, 750 mm lenght, inlcluding positioning cone and intergrated NiCr-Ni (Type K), sinterised metal filter, Tmax 500	60813
Replaceable Shaft, 1000 mm lenght, inlcluding positioning cone and in- tergrated NiCr-Ni (Type K), sinterised metal filter, Tmax 500	60814
Replaceable Shaft, 1500 mm lenght, inlcluding positioning cone and in- tergrated NiCr-Ni (Type K), sinterised metal filter, Tmax 500	60815
Sampling probe High Temperature	**Part Number**
Very high temperature probe WITH-OUT temperature measurement, with ceramic replaceable shaft, 1000 mm lenght, Max Temperature 1700 Deg C, with 2.7 m VITON gas sampling line and quick-fit connector to the analyser	63320

Consumable	Part number
Service and claning set	63140
Replaceable filter element	11165
Printer paper roll (1 box 5 roll)	59465

Ribust ABS Case
Vynil carryig case with vane for analyser, probe, accessoris and document wallet
Takes probe up 500 mm lenght

Vinyl Case
Vynil carryig case with vane for analyser, probe, accessories and document wallet
Takes probe up 300 mm lenght

Environmental Monitoring
Unit 9a Mint Bridge Rd
Lake district Business Park
Kendal, ENGLAND
LA9 6NH
www.em-monitor.co.uk
sales@environmonitoring.co.uk
01539 727878
T: 4