Laser Diode Gas Analyser

The Opsis LD500 Analyser is the central unit in the laser diode gas monitoring system. It can house up to four laser diode heads. Each head is a complete laser control and data sampling system. A built-in PC with LCD display controls the function of the instrument.

The LD500 will emit light from the internal laser diode to an emitter via a fibre optic cable. A receiver converts the signal and sends it back via a second fibre optic communication cable to the LD500 analyser. The LD500 will process and evaluate the signals and provide measurement results with response times down to one second.

Please refer to page two for the gases that can be measured. The specifications for each gas are presented in the respective application sheet.

The system can be configured according to the system examples described on page four.

Altogether, the LD500 analyser can measure on up to eight paths.
Technical Specifications (standard)

Dimensions (L × W × H)  485 × 450 × 200 mm, 19” rack
Weight incl. case (approx.)  15 kg
Voltage supply  230 VAC (+6%, –10%) / 115 VAC (±10%) 50/60 Hz
Power consumption  110 W
Computer  PC compatible
CF memory  512 Mb
External modem  Hayes compatible
Serial outputs  RS 232
Ambient temperature  +15°C to +25°C
Degree of protection  IP 20

An LDS500 includes as standard
Central unit with 6.4” LCD monitor and keyboard
PC and slots for four laser modules
External modem
4 × RS 232
Communication card CC202L
USB port

Standard separately ordered
One laser head
One ER060L / ER080L / ER110L / ER150L emitter and receiver unit
or ER120L and RR090L transceiver and retro-reflector
One OF010/OF005 laser optical fibre cable
One CF120 optical communication fibre
Gas calibration EG002 (one for each gas)
LA060 light adjustment kit for the emitter/receiver heads

Specifications subject to change without notice

Laser Optical Fibre
OF010-xxx Laser fibre for modules
LHS11, LHS12, LHS13, LHS14 and LHS16
OF005-xxx Laser fibre for module
LHS15 and LHS17
-xxx = number of metres

Laser Heads
LHS11 H/F/H2O laser module
LHS12 HC/H2O laser module
LHS13 NH3/H2O laser module
LHS14 CO/CO2/H2S laser module
LHS15 O2 laser module
LHS16 CH4/H2O laser module
LHS17 H2O/Temperature laser module

Options
Additional laser heads (up to 4)
Additional monitoring paths (up to 8)
Additional serial ports
Additional communication card CC202L
RE060L-EEx receiver for use with EM060L emitter for explosion
classed areas Zone 1
External screen

Accessories
AC180 Air-conditioned cabinet
Auto-calibration equipment
MX10XL Multiplexer*
MXX01L Demultiplexer*
I/O Management software IO256
Digital and analogue input and output modules
Short-haul modems
Sensors
Dataloggers
EnviMan Software

* Please specify the number of inputs/outputs and type of laser(s)
System Configurations – 3 Examples

One laser module for two paths

Laser module  Multiplexer  Emitter  Receiver
Communication card

Two laser modules for one path

Laser module  Demultiplexer  Emitter  Receiver
Laser module
2×Communication card

Two laser modules for three paths

Laser module  Demultiplexer  Multiplexer  Emitter  Receiver
Laser module
2×Communication card