

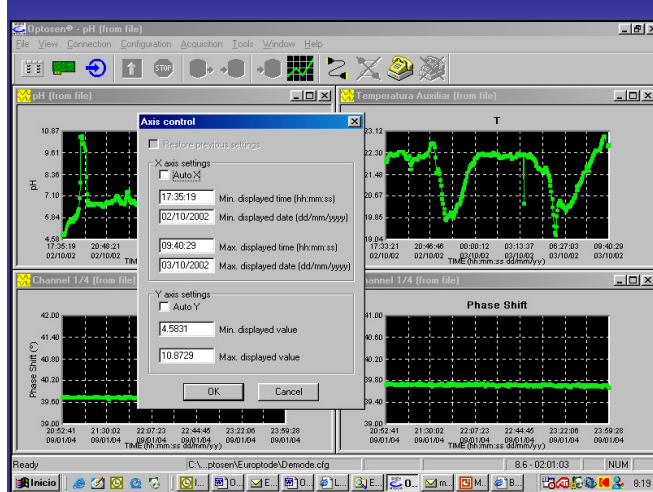
**MULTICHANNEL HIGH RESOLUTION FREQUENCY-DOMAIN FLUOROMETER**



**OPTOSEN® Technical Specifications**

<b>Measures</b>	Phase shift (Emission life-time) Emission Intensity	<b>Optical Channels</b>	Standard: 4 channel Optional: 8 – 12 Channel
<b>Resolution</b>	Phase shift 0.01° - 0.02° (frequency 40kHz) Depending on emission intensity	<b>Auxiliary Channels</b>	Up to 16 inputs and 8 outputs
<b>Excitation Source</b>	Ultra bright LED $\lambda_{max}$ 455, 470, 505, 530, 590 or 625 nm. Selectable by channel	<b>Photodetector</b>	PMT Hamamatsu. Depending on application, from 185 to 850 nm
<b>Excitation Filters</b>	Interference Filter	<b>Detection filter</b>	Longpass Glass Color filter. $\lambda_{cut}$ from 495 to 715 nm
<b>Configurable Excitation Parameters</b>	<ul style="list-style-type: none"> <li>▪ LED modulation Frequency: 20 to 300 kHz. (Emission life time from 0.3 to 20 <math>\mu</math>s)</li> <li>▪ LED Intensity</li> </ul> <p>For other modulation frequencies and emission life times contact Interlab IEC</p>	<b>Configurable Emission Parameters</b>	<ul style="list-style-type: none"> <li>▪ PMT voltage-gain.</li> <li>▪ Electronic Gain (40dB)</li> </ul> <p>Emission intensity range over 10<sup>4</sup></p>

OPTOSEN® Software



GRAPHIC DISPLAY OPTIONS

OPTICAL PARAMETERS CONFIGURATION

AUXILIARY SENSORS CONFIGURATION

THERMOSTATIC SYSTEM CONTROL

DOWNLOAD STORE DATA IN NO REAL TIME DISPLAY MODE

ANALOG AND DIGITAL I/O CONFIGURATION

Acquisition and Control Specifications

<b>Dimensions</b>	Cards: 160 x 220 mm 1 card for acquisition & control 1 card for optical channels Containing box: up to 400 x 300 x 150 mm	<b>Analog inputs</b>	16 inputs: (4 fully differential, 12 single) 0-5 V, 0-10 V, $\pm 5$ V, $\pm 10$ V, 0-20 mA, 4-20 mA
<b>Power supply</b>	220 V, 50Hz	<b>Analog outputs</b>	4 outputs: 0-5 V, 0-10 V, $\pm 5$ V, $\pm 10$ V, 4-20 mA
<b>Watchdog</b>	Guarantees the system uninterrupted operation	<b>Digital inputs</b>	4 differential inputs (RS485), with possibility of managing pulses and encoders 8 general purpose, extra inputs
<b>Backup battery</b>	No necessary due to the Flash memory Internal lithium battery for real-time clock	<b>Data format</b>	Excel compatible Includes: parameter name, parameter units, channel number, phase shift, intensity and time/date
<b>Memory</b>	Up to 128 MB of Flash storage 0.5 MB for OS & Application 0.5 MB RAM	<b>Graphic representation</b>	Real-Time data graphic representation mode.
<b>Real-Time clock</b>	Format: dd.mm.yyyy , hh:mm:ss SW updatable	<b>Communications</b>	2 RS-232 ports (GSM modem) 1 SPI port
<b>Temperature PID</b>	Optional thermostatic system using peltier cells to contro luminophore temperature		