

Q-MACS Process fibre

technical specification

The Q-MACS Process fibre is a portable monitoring system for on-line measurements of industrial processes. It is based on the Q-MACS Basic and features a two channel setup to achieve long-term stability and can be directly coupled to the measuring path via an IR-fibre. The system uses infrared absorption spectroscopy to measure absolute molecular concentrations.

general

description	two path infrared spectrometer with IR-light source, IR-fibre coupling
sensitivity	down to ppb range [1]
response time	down to milliseconds
time resolution	down to milliseconds, sub-microsecond time resolution on request
size	554 mm x 962 mm x 600 mm
weight	125 kg

components

parts	<ul style="list-style-type: none"> ▪ optical board ▪ light guide cable coupling ▪ industrial PC with acquisition hardware ▪ electronic supply system ▪ water cooling system
-------	--

parameter

power	<ul style="list-style-type: none"> ▪ 230 V, max. 2 A (switch-on current 6 A) ▪ 115 V, max. 4 A (switch-on current 12 A)
working range	+5 °C to +40 °C

QCL

tuning method	<ul style="list-style-type: none"> ▪ inter pulse mode (laser sweep mode) ▪ intra pulse mode (single pulse mode)
pulse width	8 ns* ... 256 ns** * depends on the QCL and QCL-voltage used ** longer pulses on request
pulse frequency	up to 1 MHz
QCL temperature range	-35 °C to +40 °C
QCL	tested and installed

[1] depends on species, temperature and pressure

