



 **PROCESS**



Wide dynamic range
Real time
Low maintenance

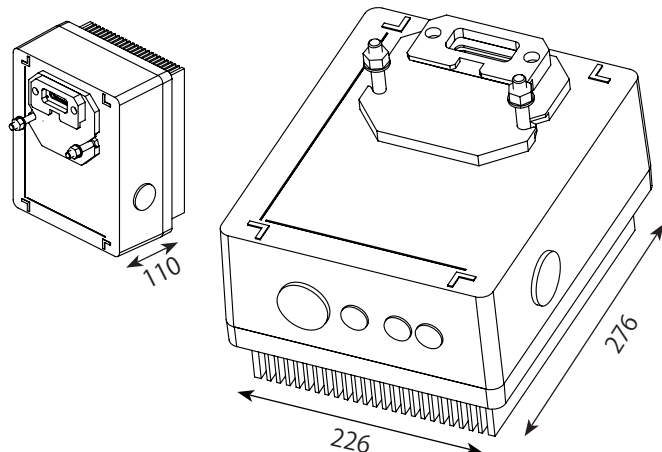
ONLINE GAS ANALYSIS

Cascades Process product range is targeted at online gas analysis for process driven applications. Exploiting the latest developments in Quantum Cascade Lasers (QCL's), the product provides a step change in performance compared to conventional technologies. Configurable for both in-situ and extractive measurement, the product platform is fully configurable in terms of target gases and measurement range and offers in addition sub second response time and a wide dynamic range.

Dimensions

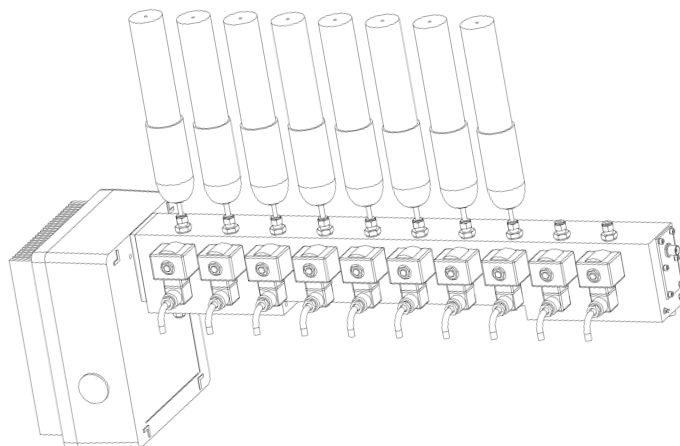
Dimensions in mm:

226x276x110



Extractive Manifold

The manifold can be tailored to various requirements.



Operating Environment

Operating temperature range	
for sensor unit	-20...+70°C
for Manifold*	Max +180°C
Compliances pending	Marine type approval, MCERTS
Laser Safety	Class 1

* Manifold parameters can vary depending on applications and specific needs.

Technique & Performance

Measurement Technique	MidIR Absorption Spectroscopy
Mid IR Source	Quantum Cascade Laser
Number of gases	Up to 8 depending on setup
Response Time	Sub Second
Linearity	< 2% of full range
Accuracy	<2%
Ambient air temperature dependance over T range	0.095% per C of full range
Stability	0.01% of full range / 24 Hrs
Zero Drift	0.003% of full range / 24Hrs

Inputs and Outputs

Power Supply	
Input Range	90-264 VAC
Sensor Power Consumption	
Max	150W
Typical	Dependant upon stack temperature

Mechanics

Housing Material	Powder coated aluminium Al 5:12
Weight	9kgs sensor unit
Mounting flange	Standard flange is PN10 4"
Protection classification	IP65
Manifold Material	Electroless Nickel coated aluminium
Min. gas flow rate	10l./min.
Min. Cell refresh rate	5s.

Main Gases*

CO	Carbon Monoxide	NH3	Ammonia
CO2	Carbon Dioxide	H2O	Water
N2O	Nitrous Oxide	CxHy (x=1 to 5)	Hydrocarbons
NO	Nitric Oxide	SF6	Sulphur Hexafluoride
NO2	Nitrogen Dioxide	Other gases on request	
SO2	Sulphur Dioxide		

*Please note that the measuring range and resolution varies depending upon applications and setup.