

Technical Information

Metrohm NIRS Analyzer Pro

Typical Performance

The Metrohm NIRS Analyzer Pro is one of the fastest spectrometers on the market with an acquisition time below 1 s. The NIRS PRO is designed to perform in challenging industrial environments thanks to its rugged enclosure. Indicated below is the **typical** performance of the NIRS Pro as measured with standard materials placed in the analyzer and at sample interface.

Parameter	
Wavelength Range (nm)	1 100–1 650
Detector	Indium Gallium Arsenide (InGaAs) Diode Array
Spectral dispersion (nm/pixel)	1.1
Analysis Time	5–50 ms / integration time; depends upon sample. Typical result time: 1–15 seconds
Wavelength Accuracy (nm)	0.5
Wavelength Precision (nm)	< 0.02
Wavelength Stability (nm/°C)	< 0.01
Bandwidth (nm)	9.5
Noise (μAu)	< 60
Absorbance	0–1.5
Lifetime of the light source (h)	Dual lamp system MTBF = 17,500
Random vibrations (Grms)	0.4 Grms at 10–150 Hz in accordance with IEC 60068-2-64 0.4 Grms at 10–1 250 Hz in accordance with international Metrohm standard (additional information available on request)

NIRS Pro Process Analyzer Installation Information

Metrohm NIRS Analyzer Pro

NIRS Pro analyzers are designed to provide precise and accurate results while operating in harsh environments. Please observe the following guidelines when selecting and installing your NIRS Pro instrument.

Site Requirements	
Operating Temperature Range	-5–40 °C (23–104 °F)
with Purge	-5–65 °C (23–149 °F)
Purge flow rate	Cooling air flow rate minimum 5 L/min > 99.9% water free > 99.9% free of oil and fine particles down to 0.3 µm
Relative Humidity	10–90% RH, non-condensing
Ingress Protection	IP 69K according to IEC 60529 and DIN 40050 part 9, NT ELEC 023
Enclosure certification	ATEX 20 ready
Enclosure material	1.5 mm (lid 2.5 mm) stainless steel EN 1.4301 (SS2333)
Weight	25 kg (55 lbs)
Dimensions (w × h × d)	420 × 420 × 130 mm (17" × 17" × 5")
Network Connections	Local Area Network (LAN) – Ethernet, RJ-45 connection

Process Communication Options	
Digital Protocols	MODBUS (TCP/IP or Serial), PROFIBUS
VISION I/O Module	12 Analog Outputs, 12 Digital Inputs, 12 Digital Outputs
OPC	USB or parallel port dongle

Electrical Requirements	
Power Supply	Isolated or conditioned supply line
Operating Voltage	100–240 VAC
Current	2 A
Power Consumption	150 W

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