



MarqMetrix All-In-One X Process Raman Analyzer

Enabling accurate, real-time results for process monitoring in hazardous locations

System overview

The Thermo Scientific™ MarqMetrix™ All-In-One X Process Raman Analyzer is a compact, portable spectrometer designed for fast deployment and ease of use. Built for industries where rapid time-to-results is critical, it is designed to be intrinsically and inherently safe for operation within hazardous locations, in such applications as:

- Midstream and downstream oil & gas operations
- Chemical and polymer applications
- Pharmaceutical development and manufacturing

The MarqMetrix All-In-One X Analyzer offers multiple operational advantages:

- Analysis without sample preparation, delivering Raman spectral results in real time
- Easy setup and deployment by non-spectroscopists
- Intrinsically and inherently safe optical power to robust probes, which can be deployed in hazardous locations: up to ATEX Zone 0 (Europe & Middle East), IECEx (Asia), and Class 1 Div 1 (North America)
- Nondestructive workflows to protect precious samples
- A small footprint for convenient deployment
- Factory calibration for hardware stability and portability

The MarqMetrix All-In-One X Process Raman Analyzer is designed for out-of-the-box use, enabling you to be ready in less than 15 minutes to collect highly accurate Raman measurements. Pack this analyzer in a protective case and take it to the point of need; its factory calibration ensures continuous and precise analysis on the go.

Easily integrate the MarqMetrix All-In-One X Process Raman Analyzer into your existing process without the need for costly technical expertise. Once implemented, the analyzer enables operators in hazardous locations to make faster, safer, and smarter decisions by delivering real-time compositional insights directly on site.



MarqMetrix All-In-One X Process Raman Analyzer specifications

Performance	
Excitation wavelength	785 nm
Excitation power	35 mW (maximum allowable laser energy in ATEX Zone 0 environments)
Detector	Thermally stabilized CCD (2-stage TEC)
Spectral range	100–3,250 cm ⁻¹
Resolution	6.5 cm ⁻¹ average across spectral range
RMS dark noise	≤16.5 counts at 10 sec integration
Physical properties	
Size	H: 11.5 cm W: 25 cm D: 25 cm
Fiber conditions	FC/PC (both excitation and collection)
Probe	Process BallProbe™ probe or FlowCell probe
Mounting options	Stackable
Operating temperature range	15°C to 30°C
Operating humidity range	Noncondensing
Included peripherals	Wireless mouse, HDMI cable, and monitor
Product safety	
Safety features	Keyed laser interlock switch Electronic laser trigger
Laser certification	Class 3B laser device Reported to the FDA ATEX II (2)(1) G Ex [ia Ga] [op sh Gb] IIC IECEx Ex [ia Ga] [op sh Gb] IIC North America Class I, Division 1, Groups A, B, C and D or [Ex ia] Class I, Division 1, Groups A, B, C, and D: [Ex ia Ga] IIC Class I, Division 2, Groups A, B, C and D: [Ex ia Ga] [op sh Gb] IIC
Electrical properties	
Input voltage	90–264 VAC 50–60 Hz
Operating voltage	12 VDC, 2 A
Onboarding control system	
Software	MarqMetrix All-In-One X Process Raman Analyzer Raman suite
Operating system	Integrated PC (Microsoft™ Windows™ 10 operating system)
Onboard storage	1RJ-45 Ethernet port 3 USB 3.0
Video output	HDMI (VGA, DVI, or HDMI with adapter)

Product ordering information

Description	
MarqMetrix All-In-One X Process Raman Analyzer	
MarqMetrix All-In-One X Process Raman Analyzer with Thermo Scientific™ MarqMetrix™ 1/2 in Process BallProbe™ Sampling Optic	
MarqMetrix All-In-One X Process Raman Analyzer with Thermo Scientific™ MarqMetrix™ 3/8 in Process BallProbe™ Sampling Optic	
MarqMetrix All-In-One X Process Raman Analyzer with Thermo Scientific™ MarqMetrix™ with Low-Pressure FlowCell (Gold seal)	
MarqMetrix All-In-One X Process Raman Analyzer with Thermo Scientific™ MarqMetrix™ with Low-Pressure FlowCell (Kalrez seal)	

 Learn more or request a demo at thermofisher.com/marqmetrixaiox

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