

Raman Rxn-41 probe

Offering simplified, reduced cost installation in the process environment



More information and current pricing:

www.ca.endress.com/KR41

Benefits:

- Constructed to individual site requirements
- Sealed probe design
- Integrated “laser on” indicator
- One in/one out fiber optics
- Direct insertion compatibility
- Meets Category 1 pressure equipment safety standards
- Suitable for hazardous area/classified environments

Specs at a glance

- **Laser wavelength** 532 nm, 785 nm, 1000 nm
- **Wetted materials** 316L option Metal: 316L stainless steel Window: High-purity sapphire C276 option Metal: C276 alloy Window: High-purity sapphire Titanium option Metal: Grade 2 titanium Window: High-purity sapphire Hybrid metal combination option Metal: 316L stainless steel, C276 alloy Window: High-purity sapphire
- **Hazardous area certifications** ATEX, CSA, IECEx

Field of application: The Raman Rxn-41 probe is a rugged, process insertion probe with no sample handling system. Its single cable design streamlines installation, eliminates risk scenarios, and minimizes installation cost for long fiber runs in the process environment. The Rxn-41 probe is ideally suited for use in chemical plants and refineries to measure batch or continuous flow production. For direct measurements in cryogenic fluids, an optimized cryogenic version of the Raman Rxn-41 probe is available.

Features and specifications

Liquids

Measuring principle

Raman spectroscopy

Laser wavelength

532 nm, 785 nm, 1000 nm

Spectral coverage

Probe spectral coverage is limited by the coverage of the analyzer being used.

Maximum laser power into probehead (mW)

<499

Sample interface

Temperature 1" standard configuration:

-30 to 120 °C (316L stainless steel)

-30 to 150 °C (C276 alloy)

-30 to 150 °C (Grade 2 titanium)

Temperature 1" cryogenic configuration:

-196 to 70°C (C276 alloy)

-196 to 70 °C (Hybrid metal combination)

Temperature 2.375" standard configuration:

-30 to 120°C (316L stainless steel)

-30 to 150 °C (C276 alloy)

Temperature ramp: ≤30 °C/min

Flange: up to 305 mm diameter, ASME B16.5 or DIN EN1092 Type B

flanges available upon request

Relative humidity: up to 95%, non-condensing

Liquids

Pressure

Min pressure (Bara):

Full vacuum (0 Bara) but not ultrahigh vacuum (UHV) where outgassing maybe a concern

Max Pressure (Barg)

1" probe:

77.0 (316L stainless steel)

98.5 (C276 alloy)

76.0 (Grade 2 titanium)

1" cryogenic probe:

111.0 (C276 alloy)

87.5 (Hybrid metal combination)

2.375" probe (Barg):

42.7 (316L stainless steel)

66.1 (C276 alloy)

Wetted materials

316L option

Metal: 316L stainless steel

Window: High-purity sapphire

C276 option

Metal: C276 alloy

Window: High-purity sapphire

Titanium option

Metal: Grade 2 titanium

Window: High-purity sapphire

Hybrid metal combination option

Metal: 316L stainless steel, C276 alloy

Window: High-purity sapphire

Fiber optic cable

Cable sold separately

Length

Maximum immersible length is dependent on material choice

Liquids

Diameter (mm)

25.4 or 60.325

(25.4 only for Grade 2 Titanium)

Hazardous area certifications

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