

# Raman Rxn4 analyzer

## Rugged, reliable Raman analyzer ensuring 24/7 process and quality monitoring



Meer informatie en actuele prijzen:

[www.be.endress.com/KRXN4B](http://www.be.endress.com/KRXN4B)

### Voordelen:

- Robust, reliable, and highly accurate
- Easy installation and minimal maintenance/downtime
- 24/7 inline, online, or at-line process measurement and monitoring
- Unified internal construction enables straightforward model transfer to support redundant analyzer systems
- Intuitive, fully embedded Raman RunTime control software via touchscreen or remote interface
- Scale-up, scale-out, and cGMP/pilot-plant compatible
- Suitable for outputs into hazardous area/classified environments

### Overzicht specificaties

- **Laser wavelength** Base model: 532 nm, 785 nm, 1000 nm  
Hybrid: 785 nm
- **Spectral coverage** Base Model: 150-4350 cm<sup>-1</sup> (532 nm)  
150-3425 cm<sup>-1</sup> (785 nm) 200-2400 cm<sup>-1</sup> (1000 nm) Hybrid:  
175-1890 cm<sup>-1</sup> (785 nm)

**Toepassingsgebied:** The Raman Rxn4 analyzer powered by Kaiser Raman technology is the optimal choice for manufacturing or process environments. Raman Rxn4 provides high-resolution performance for in situ, real-time measurement and control. It features unique self-monitoring, diagnostics, and self-calibration to ensure the validity of each measurement. Stackable in a standard 19" rack, the Raman Rxn4 saves valuable space on the production floor. It is also offered with an optional stainless steel NEMA 4X enclosure.

### Kenmerken en specificaties

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**Liquid****Meetprincipe**Raman spectroscopy

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**Laser wavelength**

Base model: 532 nm, 785 nm, 1000 nm

Hybrid: 785 nm

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**Spectral coverage**

Base Model:

150-4350 cm<sup>-1</sup> (532 nm)150-3425 cm<sup>-1</sup> (785 nm)200-2400 cm<sup>-1</sup> (1000 nm)Hybrid: 175-1890 cm<sup>-1</sup> (785 nm)

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**Spectral resolution**

Base model (average):

5 cm<sup>-1</sup> (532 nm)4 cm<sup>-1</sup> (785 nm)5 cm<sup>-1</sup> (1000 nm)

Hybrid:

4 cm<sup>-1</sup> (785 nm) average

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**Channels**

Base model:

Up to four channels

Hybrid:

Up to two channels

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**Temperature**

Base model:

Operating: 5 to 35 °C (532 nm, 785 nm); 5 to 30 °C (1000 nm)

Storage: -15 to 50 °C

Hybrid:

Operating: 5 to 35 °C

Storage: -15 to 50 °C

Enclosure configuration:

Operating: 5 to 50 °C (all wavelengths)

Storage: -15 to 50 °C

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## Liquid

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### Relative humidity

20-80% RH, non-condensing

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### Input voltage

Base model and Hybrid:  
100-240 V, 50-60 Hz,  $\pm 10\%$   
Enclosure configuration:  
115 V  $\pm 10\%$ , 60 Hz -OR-  
230 V  $\pm 10\%$ , 50/60 Hz

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### Power consumption (W)

Base model and Hybrid:  
400 (max)  
250 (typical start-up)  
120 (typical running)  
Enclosure configuration:  
1560 (max)  
1560 (typical start-up)  
750 (typical running)

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### Warm up time (minutes)

Base model and Hybrid:  
120  
Enclosure configuration:  
240

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### Unit dimensions (width x height x depth in mm)

Base model and Hybrid:  
483 x 267 x 556  
Enclosure configuration:  
1175 x 1480 x 826 (with optional trolley)

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### Weight (kg)

Base model and Hybrid:  
28.5  
Enclosure configuration:  
185.5 (with optional trolley)

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## Liquid

### Sampling probe compatibility

Base model and enclosure configuration:

Raman Rxn-10 (with accessory optics), Rxn-40, Rxn-41, Rxn-45, Rxn-46

Hybrid:

Channel 1 - Raman Rxn-20 (with accessory optics)

Channel 2 - Raman Rxn-10 (with accessory optics), Rxn-40, Rxn-41, Rxn-45, Rxn-46

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### Automation interface

OPC

Modbus

HTTPS

(contact us for other options)

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### Installation options

Base model and Hybrid:

19-inch rack package

Enclosure configuration:

NEMA 4X enclosure; wall-mountable, mobile trolley, or fixed stand

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### Hazardous area certifications

Base model and Hybrid:

ATEX, CSA, IECEx

Enclosure configuration:

Call support for options

## Solids

### Measurement principle

Raman spectroscopy

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### Laser wavelength

Base model: 532 nm, 785 nm, 1000 nm

Enclosure configuration: 532 nm, 785 nm, 1000 nm

Hybrid: 785 nm

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## Solids

### Spectral coverage

Base Model and Enclosure configuration:

150-4350 cm<sup>-1</sup> (532 nm)

150-3425 cm<sup>-1</sup> (785 nm)

200-2400 cm<sup>-1</sup> (1000 nm)

Hybrid: 175-1890 cm<sup>-1</sup> (785 nm)

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### Spectral resolution

Base model and Enclosure configuration (average):

5 cm<sup>-1</sup> (532 nm)

4 cm<sup>-1</sup> (785 nm)

5 cm<sup>-1</sup> (1000 nm)

Hybrid:

4 cm<sup>-1</sup> (785 nm) average

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### Channels

Base model and Enclosure configuration:

Up to four channels

Hybrid:

Up to two channels

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### Temperature

Base model:

Operating: 5 to 35 °C (532 nm, 785 nm); 5 to 30 °C (1000 nm)

Storage: -15 to 50 °C

Hybrid:

Operating: 5 to 35 °C

Storage: -15 to 50 °C

Enclosure configuration:

Operating: 5 to 50 °C (all wavelengths)

Storage: -15 to 50 °C

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### Relative humidity

20-80% RH, non-condensing

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## Solids

### **Input voltage**

Base model and Hybrid:  
100-240 V, 50-60 Hz,  $\pm 10\%$   
Enclosure configuration:  
115 V  $\pm 10\%$ , 60 Hz -OR-  
230 V  $\pm 10\%$ , 50/60 Hz

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### **Power consumption (W)**

Base model and Hybrid:  
400 (max)  
250 (typical start-up)  
120 (typical running)  
Enclosure configuration:  
1560 (max)  
1560 (typical start-up)  
750 (typical running)

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### **Warm up time (minutes)**

Base model and Hybrid:  
120  
Enclosure configuration:  
240

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### **Unit dimensions (width x height x depth in mm)**

Base model and Hybrid:  
483 x 267 x 556  
Enclosure configuration:  
1175 x 1480 x 826 (with optional trolley)

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### **Weight (kg)**

Base model and Hybrid:  
28.5  
Enclosure configuration:  
185.5 (with optional trolley)

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## Solids

### Sampling probe compatibility

Base model and enclosure configuration:

Raman Rxn-10 (with accessory optics)

Hybrid:

Channel 1 - Raman Rxn-20 (with accessory optics)

Channel 2 - Raman Rxn-10 (with accessory optics)

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### Automation interface

OPC

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HTTPS

(contact us for other options)

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### Installation options

Base model and Hybrid:

19-inch rack package

Enclosure configuration:

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### Hazardous area certifications

Base model and Hybrid:

ATEX, CSA, IECEx

Enclosure configuration:

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## Gases

### Measurement principle

Raman spectroscopy

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### Laser wavelength

Base model: 532 nm

Enclosure configuration: 532 nm

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### Spectral coverage

Base Model and Enclosure configuration:

150-4350 cm<sup>-1</sup> (532 nm)

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## Gases

### **Spectral resolution**

Base model and Enclosure configuration (average):  
5 cm<sup>-1</sup> (532 nm)

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### **Channels**

Base model and Enclosure configuration:  
Up to four channels

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### **Temperature**

Base model:  
Operating: 5 to 35 °C  
Storage: -15 to 50 °C  
Enclosure configuration:  
Operating: 5 to 50 °C (all wavelengths)  
Storage: -15 to 50 °C

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### **Relative humidity**

20-80% RH, non-condensing

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### **Input voltage**

Base model:  
100-240 V, 50-60 Hz, ±10%  
Enclosure configuration:  
115 V ±10%, 60 Hz -OR-  
230 V ±10%, 50/60 Hz

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### **Power consumption (W)**

Base model:  
400 (max)  
250 (typical start-up)  
120 (typical running)  
Enclosure configuration:  
1560 (max)  
1560 (typical start-up)  
750 (typical running)

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## Gases

### Warm up time (minutes)

Base model:

120

Enclosure configuration:

240

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### Unit dimensions (width x height x depth in mm)

Base model:

483 x 267 x 556

Enclosure configuration:

1175 x 1480 x 826 (with optional trolley)

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### Weight (kg)

Base model:

28.5

Enclosure configuration:

185.5 (with optional trolley)

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### Sampling probe compatibility

Raman Rxn-30

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### Automation interface

OPC

Modbus

HTTPS

(contact us for other options)

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### Installation options

Base model and Hybrid:

19-inch rack package

Enclosure configuration:

NEMA 4X enclosure; wall-mountable, mobile trolley, or fixed stand

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## Gases

### Hazardous area certifications

Base model and Hybrid:

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