Technical Information

Raman Rxn-46 calibration and verification kit

Endress+Hauser

People for Process Automation

Table of Contents

Function and system design

Raman Rxn-46 calibration and verification kit contents

The Raman Rxn-46 calibration and verification kit includes all the necessary hardware for calibrating and verifying the calibration of the Rxn-46.

Kit contents:

Hardware	Description
Rxn-46 calibration cell	Accessory used to calibrate the probe
Rxn-46 verification cell	Accessory used to verify the system performance to the calibration
Temperature display	Plugs into the Rxn-46 calibration cell to provide device temperature reading
Flash drive with calibration files	Flash drive containing the necessary calibration files
Syringe	Used when the Rxn-46 verification cell requires servicing
Syringe tips (2)	Used when the Rxn-46 verification cell requires servicing
Lens cleaning wipes	Used for cleaning the optical surface of the Rxn-46 calibration or verification cell

Rxn-46 calibration cell

The Rxn-46 calibration cell is used for standardizing Raman instruments and analyzers to give precise spectral intensity measurements. When used with the recommended calibration protocol, the calibration cell ensures different instruments generate similar spectra when measuring a given sample. The Rxn-46 calibration cell was created specifically for use with Raman instruments and analyzers manufactured by Endress+Hauser.

Rxn-46 verification cell

The Rxn-46 verification cell is used to verify the calibration results using a standard reference sample. The verification sample initially provided and required for use with the multi optic verification is 70 % isopropyl alcohol (IPA).

Temperature display

A temperature display with the recommended precision and accuracy is provided with the kit and connects to the temperature measurement sensor contained within the Rxn-46 calibration cell. The cell temperature is entered into the Raman RunTime software of the Raman analyzer during calibration. This requires a Raman analyzer with Raman RunTime 6.2.2+ embedded software.

Syringe and tips

A syringe with leur lock tips (2) is included in the kit for servicing the Rxn-46 verification cell. Refer to the *Raman Rxn-46 calibration and verification kit Operating Instructions (BA02324C)* for maintenance instructions.

Layout   The external and internal views of the Rxn-46 calibration and verification kit are shown below.
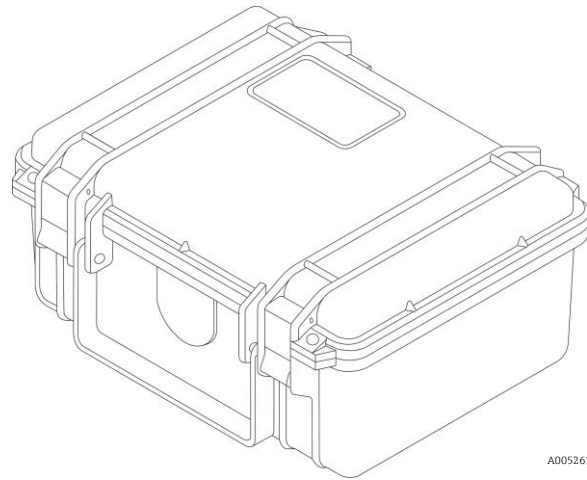

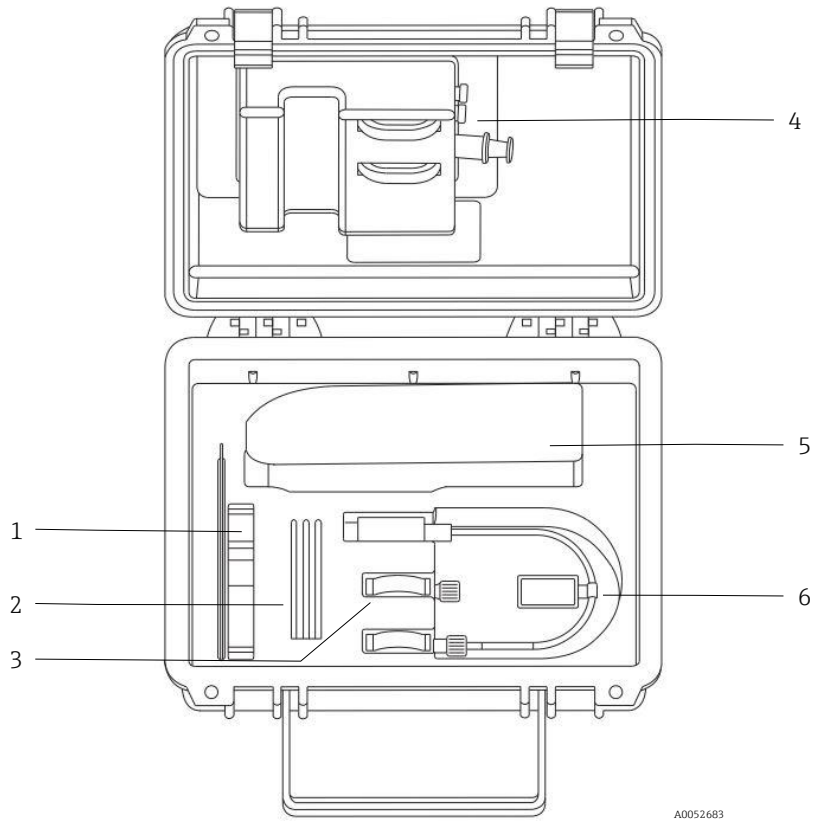*Figure 1. External view of the Rxn-46 calibration and verification kit*

Figure 2. Internal view of the Rxn-46 calibration and verification kit

#	Description
1	Flash drive
2	Lens wipes
3	Rxn-46 verification cell
4	Syringe and tips
5	Temperature display
6	Rxn-46 calibration cell and temperature sensor connector

Specifications

Dimensions: Rxn-46 calibration and verification kit

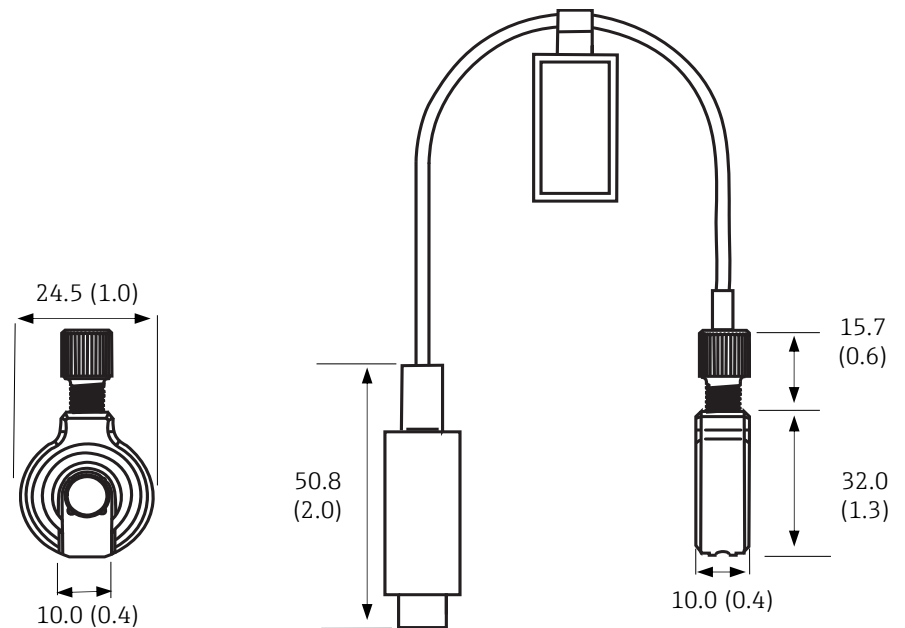The dimensions of the Rxn-46 calibration and verification kit are shown below.

85 (3.4)

235 (9.3)

192 (7.6)
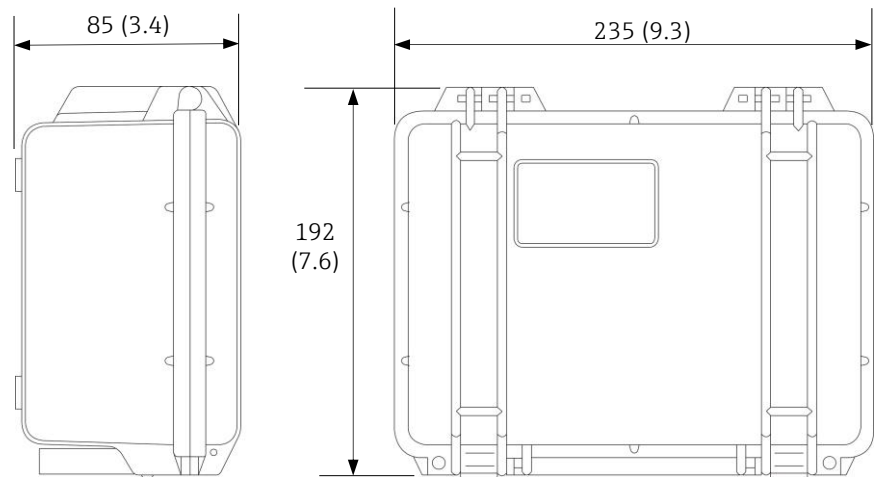
A0052649

Figure 3. Rxn-46 calibration and verification kit. Dimensions: mm (in)

Dimensions: Rxn-46 calibration cell

The dimensions of the Rxn-46 calibration cell are shown below.

24.5 (1.0)

10.0 (0.4)

50.8 (2.0)

15.7 (0.6)

32.0 (1.3)

10.0 (0.4)

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Figure 4. Rxn-46 calibration cell. Dimensions: mm (in)

Dimensions: Rxn-46 verification cell The dimensions of the Rxn-46 verification cell are shown below.

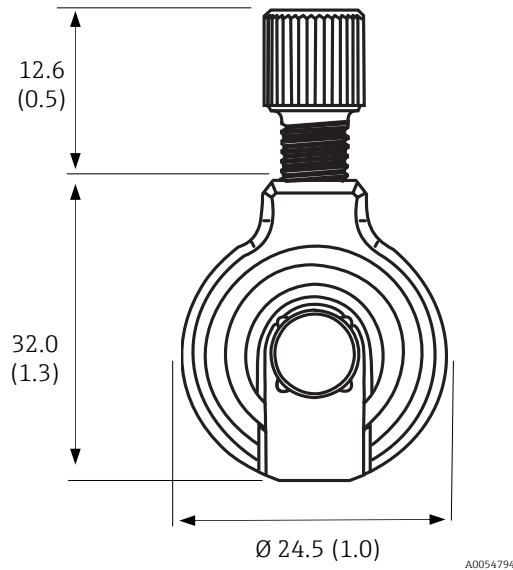12.6 (0.5)

32.0 (1.3)

Ø 24.5 (1.0)

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Figure 5. Rxn-46 verification cell. Dimensions: mm (in)

General specifications Additional Rxn-46 calibration and verification kit specifications are listed below.

Item	Description
Spectral intensity reference	calibration reference standard (CRS)
Data file spectral range	CRS-785: 790.7 to 1074.5 nm
Spectral intensity output	< ±2 %
Total long term spectral uncertainty (at any wavelength)	CRS-785: ± 6.05 %
Calibration kit weight	1.5 kg (3.3 lbs)
IP rating	IP20
Operating conditions	0 to 40 ℃ (32 to 104 ℉) < 80 % humidity, non-condensing
Recommended storage conditions	−15 to 50 ℃ (5 to 122 ℉) < 80 % humidity, non-condensing