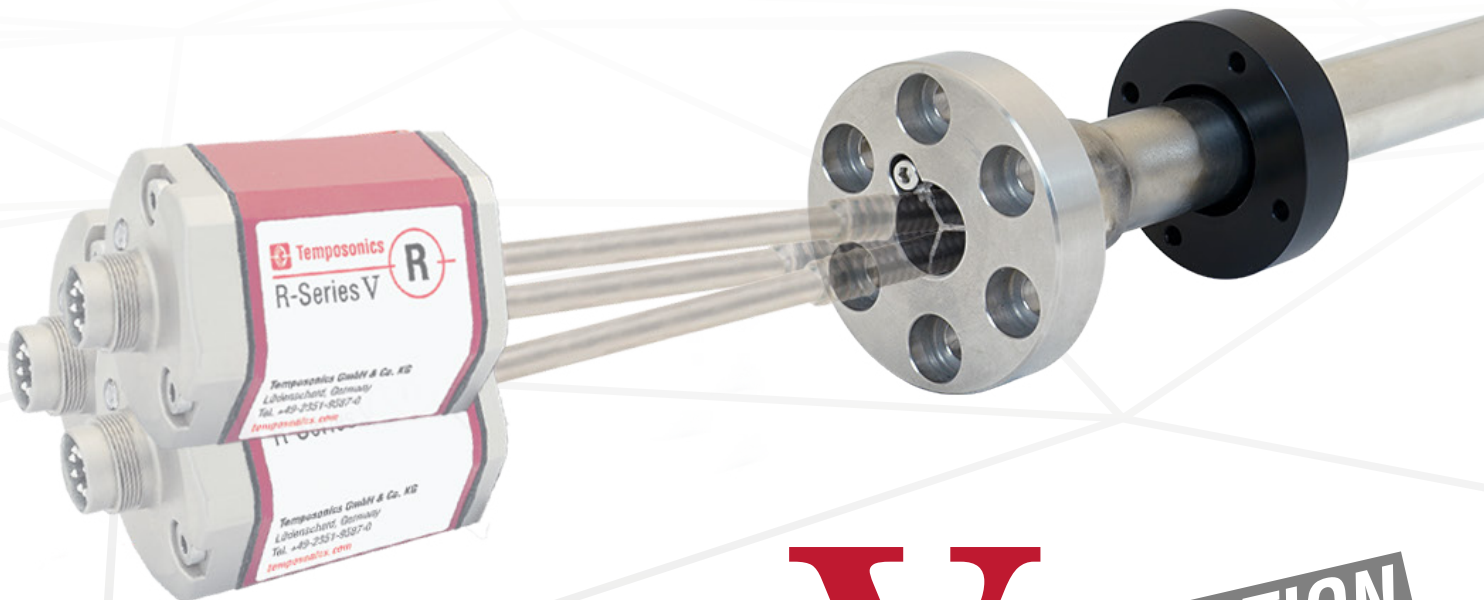


Data Sheet

H3 sensor rod for R-Series V RFV

- Increased availability due to combination of up to 3 RFV sensors
- Efficient design due to small outer diameter
- Easy replacement due to separate guiding of the RFV sensors



V
THE NEW GENERATION

MEASURING TECHNOLOGY

The absolute, linear position sensors provided by Temposonics rely on the company's proprietary magnetostrictive technology, which can determine position with a high level of precision and robustness. Each Temposonics® position sensor consists of a ferromagnetic waveguide, a position magnet, a strain pulse converter and supporting electronics. The magnet, connected to the object in motion in the application, generates a magnetic field at its location on the waveguide. A short current pulse is applied to the waveguide. This creates a momentary radial magnetic field and torsional strain on the waveguide. The momentary interaction of the magnetic fields releases a torsional strain pulse that propagates the length of the waveguide. When the ultrasonic wave reaches the beginning of the waveguide it is converted into an electrical signal. Since the speed of the ultrasonic wave in the waveguide is precisely known, the time required to receive the return signal can be converted into a linear position measurement with both high accuracy and repeatability.

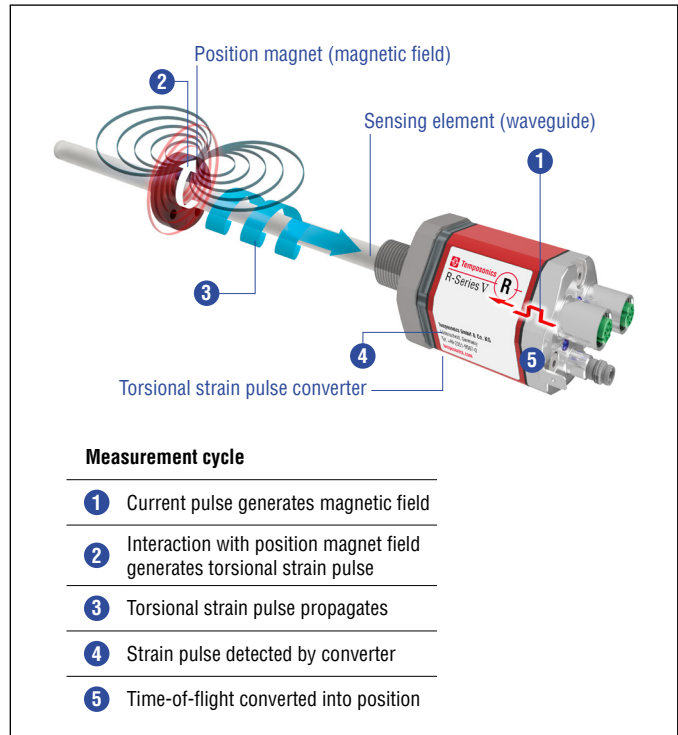
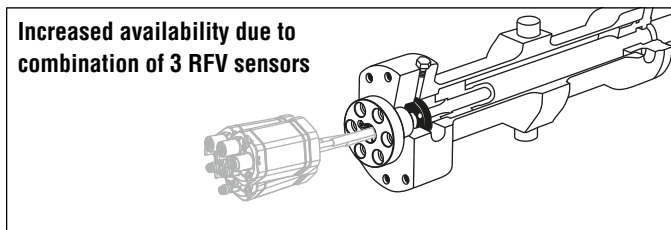


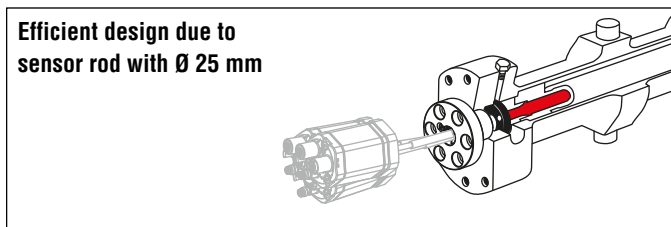
Fig. 1: Time-of-flight based magnetostrictive position sensing principle

PERFECT FIT FOR RFV SENSORS

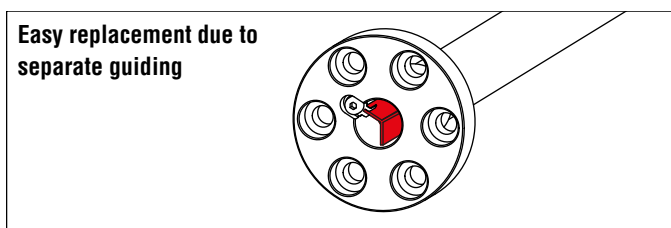
The pressure-resistant H3 sensor rod is specially designed for guiding 3 RFV sensors. Via a holder provided by the customer the 3 RFV sensors are mounted and guided into the sensor rod. The sensor rod offers the following advantages:



- The combination of three independent RFV sensors provides protection against unforeseen downtime and ensures **continuous operation**.
- Sensors with different outputs can be combined in one rod.



- The sensor rod has a **small outer diameter** of 25 mm. This means that only a relatively small bore is required in the piston rod to integrate 3 sensors.
- This enables an **beneficial design** of the cylinder.



- If necessary, the sensors can be exchanged without influencing each other. The sensor rod has 3 chambers inside so that **each flexible sensor rod is guided independently**.
- Since flange and sensor rod remain in the cylinder when a sensor is replaced, the **hydraulic circuit remains closed**.

TECHNICAL DATA

| Design/Material | |
|-----------------------|---|
| Flange | Stainless steel 1.4305 |
| Sensor rod | Stainless steel 1.4307 |
| Useable length | 50...5800 mm |
| Mechanical mounting | |
| Mounting | Fastening via 6 × cylinder head screws M8 on the cylinder (fastening torque 34 Nm/ISO 4762-M8 of A2-70) |
| Operating conditions | |
| Operating temperature | -40...+85 °C |
| Operating pressure | 350 bar |

TECHNICAL DRAWING

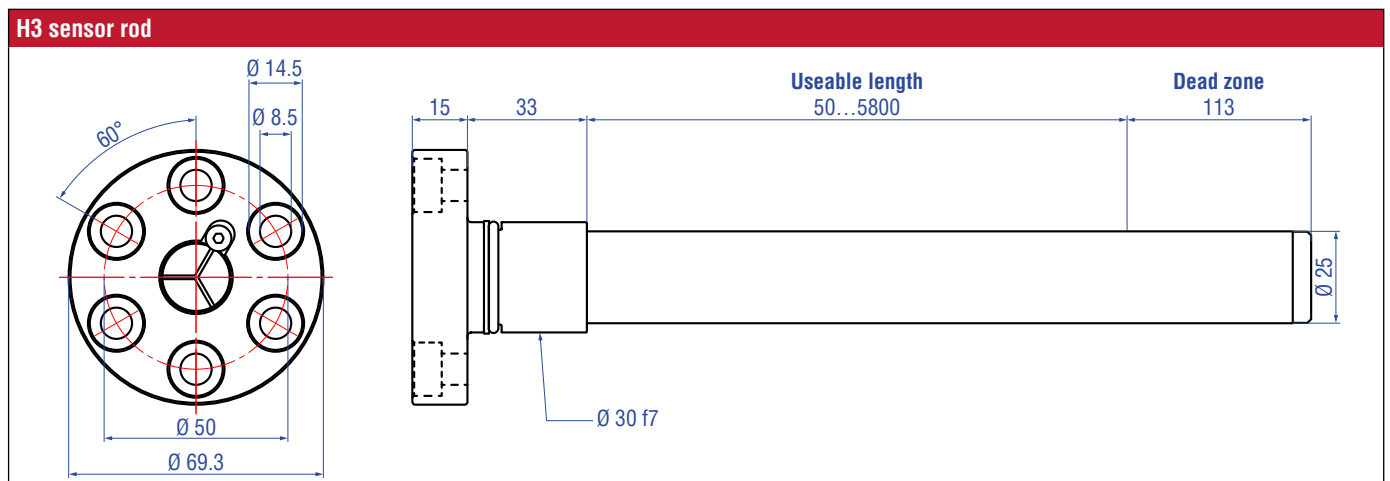


Fig. 2: Temposonics® H3 sensor rod

INSTALLATION EXAMPLE

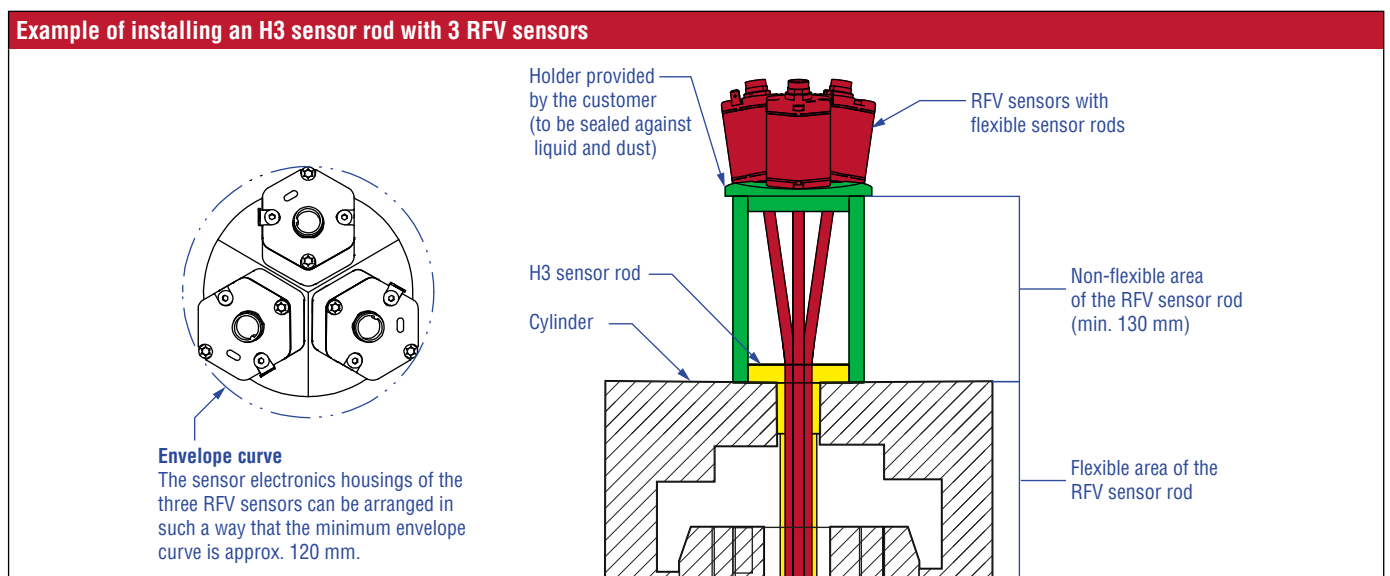


Fig. 3: Installation of a Temposonics® H3 sensor rod with 3 RFV sensors

ACCESSORIES

| Position magnet | O-ring | Back-up ring |
|---|---|---|
| | | |
| Ring magnet OD60 Part no. MT0162 | Ring magnet Part no. 401 468 | O-ring for pressure fit flange Ø 30 mm Part no. 562 062 |
| Material: AlCuMgPb, magnets compound-filled Weight: Approx. 90 g Surface pressure: Max. 20 N/mm ² Fastening torque for M4 screws: 1 Nm Operating temperature: -40...+75 °C (-40...+167 °F) | Material: PA ferrite Weight: Approx. 17 g Surface pressure: Max. 20 N/mm ² Operating temperature: -40...+100 °C (-40...+212 °F) Contact application engineering for handling guidelines. | Back-up ring for pressure fit flange Ø 30 mm Part no. 562 061 Material: Nitrile rubber Durometer: 90 Shore A |

Controlling design dimensions are in millimeters and measurements in () are in inches

ORDER CODE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| H | 3 | S | 0 | | | | | M |
| a | b | c | d | | | | | |

| | |
|-----------|--|
| a | Model |
| H 3 | Sensor rod with 3 chambers for 3 RFV sensors |
| b | Design |
| S | Pressure fit flange Ø 30 mm, Ø 25 mm rod |
| c | Options |
| 0 | No options |
| d | Useable length |
| X X X X M | 0050...5800 mm |

Order the RFV sensors right away.
Further information under:



[temposonics.com](https://www.temposonics.com)

DELIVERY

- H3 sensor rod**
- Sensor rod
 - O-ring
 - Back-up ring



Temposonics

AN AMPHENOL COMPANY

UNITED STATES
Temposonics, LLC
Americas & APAC Region
3001 Sheldon Drive
Cary, N.C. 27513
Phone: +1 919 677-0100
E-mail: info.us@temposonics.com

GERMANY
Temposonics
GmbH & Co. KG
EMEA Region & India
Auf dem Schüffel 9
58513 Lüdenscheid
Phone: +49 2351 9587-0
E-mail: info.de@temposonics.com

ITALY
Branch Office
Phone: +39 030 988 3819
E-mail: info.it@temposonics.com

FRANCE
Branch Office
Phone: +33 6 14 060 728
E-mail: info.fr@temposonics.com

UK
Branch Office
Phone: +44 79 21 83 05 86
E-mail: info.uk@temposonics.com

SCANDINAVIA
Branch Office
Phone: +46 70 29 91 281
E-mail: info.sca@temposonics.com

CHINA
Branch Office
Phone: +86 21 3405 7850
E-mail: info.cn@temposonics.com

JAPAN
Branch Office
Phone: +81 3 6416 1063
E-mail: info.jp@temposonics.com

Document part number:

552162 Revision A (EN) 02/2024



[temposonics.com](https://www.temposonics.com)

© 2024 Temposonics, LLC – all rights reserved. Temposonics, LLC and Temposonics GmbH & Co. KG are subsidiaries of Amphenol Corporation. Except for any third party marks for which attribution is provided herein, the company names and product names used in this document may be the registered trademarks or unregistered trademarks of Temposonics, LLC or Temposonics GmbH & Co. KG. Detailed trademark ownership information is available at www.temposonics.com/trademarkownership.