

## Data Sheet

# R-Series V RDV EtherNet/IP™

## Magnetostrictive Linear Position Sensors

- Space-saving installation due to detached sensor electronics housing
- Backwards compatible with RD4 generation
- All advantages of the R-Series V



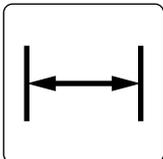
**V**  
THE NEW GENERATION

## 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 a 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.

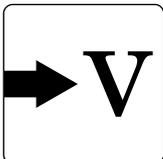
## R-SERIES V RDV EtherNet/IP™

The Temposonics® R-Series V brings very powerful sensor performance to meet the many demands of your application. The sensor RDV is the version of the R-Series V with a detached sensor electronics. The main advantages of the version RDV are:



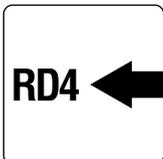
### Space-saving installation

The detached sensor electronics allow space-saving installation of the compact measuring rod.



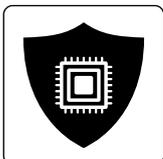
### R-Series V platform

The detached sensor electronics is based on the R-Series V and offers all advantages of the innovative series.



### Backwards compatible

Mechanically and electrically, the sensors are backwards compatible with the RD4. This means that the sensor rod or the sensor electronics can be replaced without any problems.



### Protection of the sensor electronics

By separating the robust sensor rod from the complex evaluation electronics improved protection against process influences can be realized.

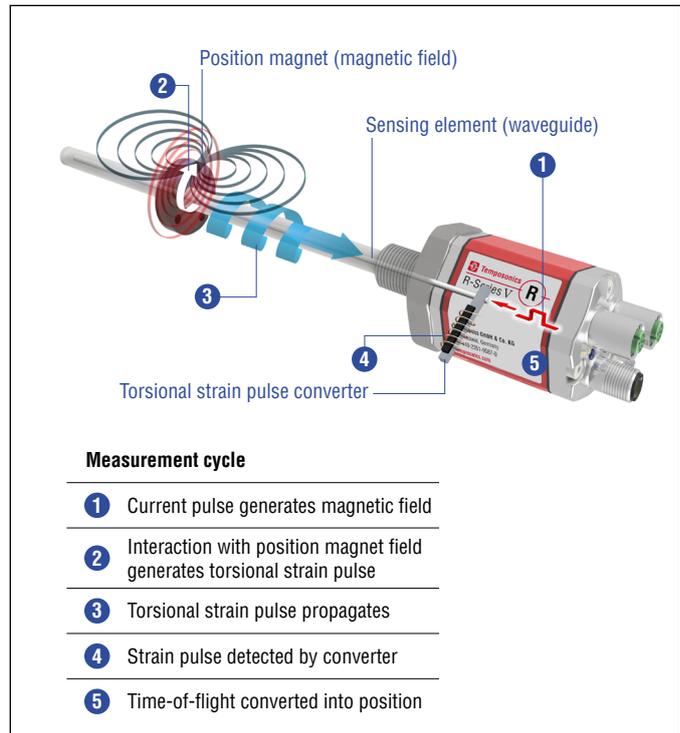


Fig. 1: Time-of-flight based magnetostrictive position sensing principle

In addition the R-Series V EtherNet/IP™ scores with the following features:



### 20 positions simultaneously

The R-Series V EtherNet/IP™ can detect and report the position and velocity of up to 20 magnets simultaneously.



### R-Series V EtherNet/IP™

The sensor supports DLR. The DLR capability provides a fault-tolerant network so that the sensor can be used in ring connection topologies when reliable continuous system operation is required.

### All settings under control with the smart assistants for the R-Series V

The TempoLink® and the TempoGate® smart assistants support you in setup and diagnostics of the R-Series V. For more information of these assistants please see the data sheets:

- TempoLink® smart assistant (Document part number: [552070](#))
- TempoGate® smart assistant (Document part number: [552110](#))



## TECHNICAL DATA

Output				
Interface	EtherNet/IP™			
Data protocol	Encoder CIP device profile with CIP Sync™ and DLR capabilities			
Data transmission rate	100 MBit/s (maximum)			
Measured value	Position, velocity/option: Simultaneous multi-position and multi-velocity measurements up to 20 magnets			
Measurement parameters				
Resolution: Position	1...500 µm (selectable)			
Cycle time	Stroke length	≤ 2000 mm	≤ 4800 mm	5080 mm
	Cycle time	1.0 ms	2.0 ms	3.0 ms
Linearity deviation <sup>1, 2</sup>	Stroke length	≤ 500 mm	> 500 mm	
	Linearity deviation	≤ ±50 µm	< 0.01 % F.S.	
	Optional internal linearity: Linearity tolerance (applies for the first magnet for multi-position measurement)			
	Stroke length	25...300 mm	300...600 mm	600...1200 mm
	typical	± 15 µm	± 20 µm	± 25 µm
	maximum	± 25 µm	± 30 µm	± 50 µm
Repeatability	< ±0.001 % F.S. (minimum ±2.5 µm) typical			
Hysteresis	< 4 µm typical			
Temperature coefficient	< 15 ppm/K typical			
Operating conditions				
Operating temperature	-40...+85 °C (-40...+185 °F)			
Humidity	90 % relative humidity, no condensation			
Ingress protection	Sensor electronics: IP67 (with correctly mounted housing and connectors) Measuring rod with connecting cable for side cable entry: IP65 Measuring rod with single wires and flat connector with bottom cable entry: IP30			
Shock test	100 g/11 ms, IEC standard 60068-2-27			
Vibration test	10 g/10...2000 Hz, IEC standard 60068-2-6 (excluding resonant frequencies)			
EMC test	Electromagnetic emission according to EN 61000-6-3 Electromagnetic immunity according to EN 61000-6-2 The RDV sensors fulfill the requirements of the EMC directives 2014/30/EU, UKSI 2016 No. 1091 and TR CU 020/2011 under the condition of an EMC compliant installation <sup>3</sup>			
Operating pressure	350 bar (5076 psi)/700 bar (10,153 psi) peak (at 10 × 1 min) for sensor rod			
Magnet movement velocity	Any			
Design/Material				
Sensor electronics housing	Aluminum (painted), zinc die cast			
Sensor rod with flange	Stainless steel 1.4301 (AISI 304)			
RoHS compliance	The used materials are compliant with the requirements of EU Directive 2011/65/EU and EU Regulation 2015/863 as well as UKSI 2022 No. 622			
Stroke length	25...2540 mm (1...100 in.) for pressure-fit flange »S« 25...5080 mm (1...200 in.) for all threaded flanges			

Technical data “Mechanical mounting” and “Electrical connection” on [page 4](#)

1/ With position magnet # 251 416-2

2/ For rod style »S« the linearity deviation can be higher in the first 30 mm (1.2 in.) of stroke length

3/ The cable between the sensor element and the electronic housing must be mounted in an appropriately shielded environment.

## Temposonics® R-Series V RDV EtherNet/IP™

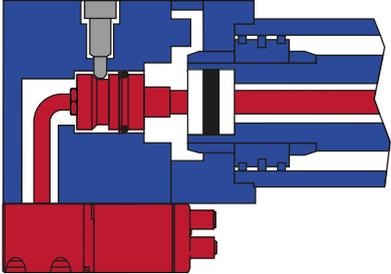
### Data Sheet

Mechanical mounting	
Mounting position	Any
Mounting instruction	Please consult the technical drawings on <a href="#">page 5</a> , <a href="#">page 6</a> and <a href="#">page 7</a> and the operation manual (document number: <a href="#">551971</a> )
Electrical connection	
Connection type	2 × M12 female connectors (5 pin), 1 × M12 male connector (4 pin) 2 × M12 female connectors (5 pin), 1 × M8 male connector (4 pin)
Operating voltage	+12...30 VDC ±20 % (9.6...36 VDC)
Power consumption	Less than 4 W typical
Dielectric strength	500 VDC (DC ground to machine ground)
Polarity protection	Up to -36 VDC
Overvoltage protection	Up to 36 VDC

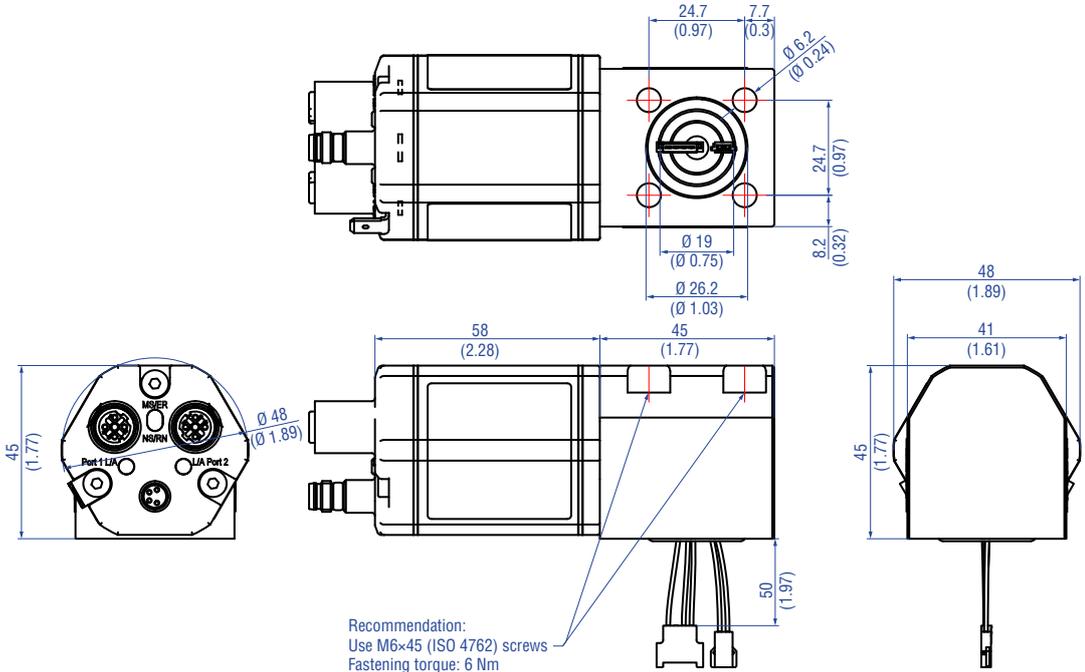
**TECHNICAL DRAWING**

**RDV with bottom cable entry**

- The connecting cables between the sensor electronics housing and the rod are routed into the interior via the bottom of the sensor electronics housing
- Rod and connecting cable are fully encapsulated and protected against external disturbances



**RDV with bottom cable entry, example: Connector D56 (connector outlet)**



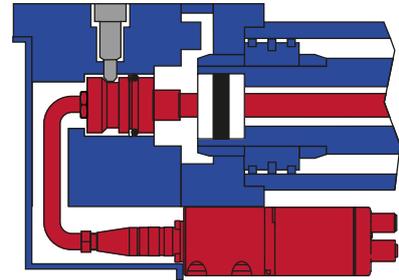
Recommendation:  
Use M6x45 (ISO 4762) screws  
Fastening torque: 6 Nm

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

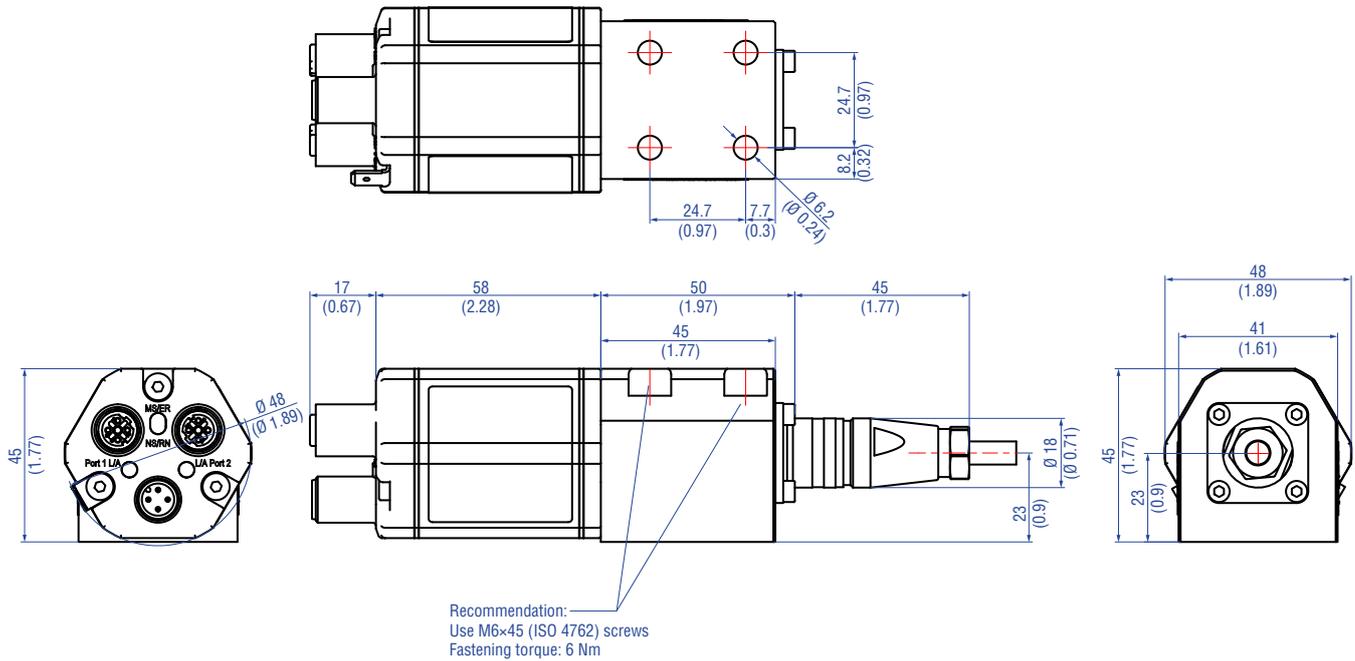
Fig. 2: Temposonics® RDV sensor electronics housing with bottom cable entry

**RDV with side connection**

- The connecting cable between the sensor electronics housing and the rod is connected to the side of the sensor electronics housing
- Rod and connecting cable are sealed against dust and protected against water jets



**RDV with side cable entry, example: Connector D58 (connector outlet)**

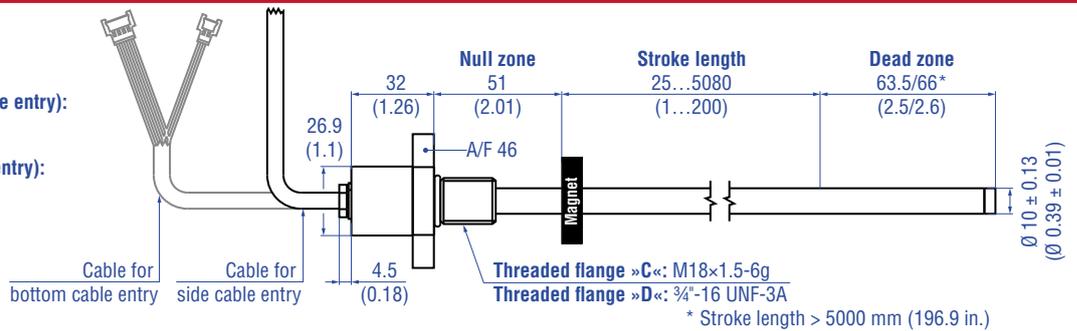


Controlling design dimensions are in millimeters and measurements in ( ) are in inches

Fig. 3: Temposonics® RDV sensor electronics housing with side cable entry

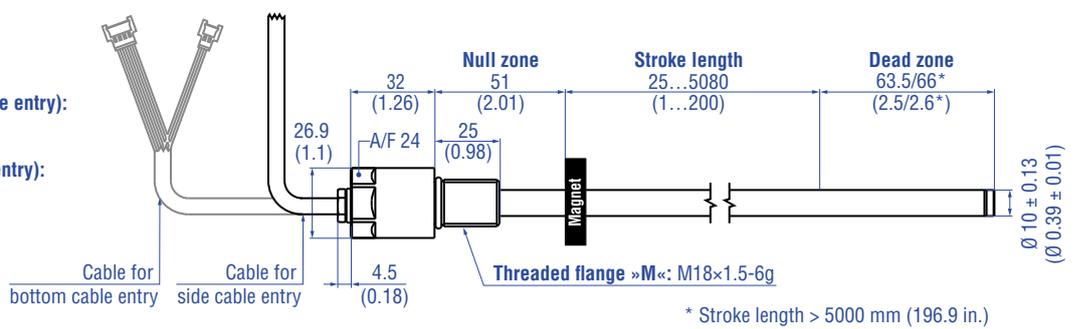
**Threaded flange »C« & »D« (for bottom or side cable entry)**

**PUR cable:**  
Ø 6 (Ø 0.24)  
**Bending radius:**  
> 24 (> 0.94)  
**Cable length (bottom cable entry):**  
65/170/230/350  
(2.6/6.7/9.1/13.8)  
**Cable length (side cable entry):**  
250/400/600  
(9.8/15.7/23.6)



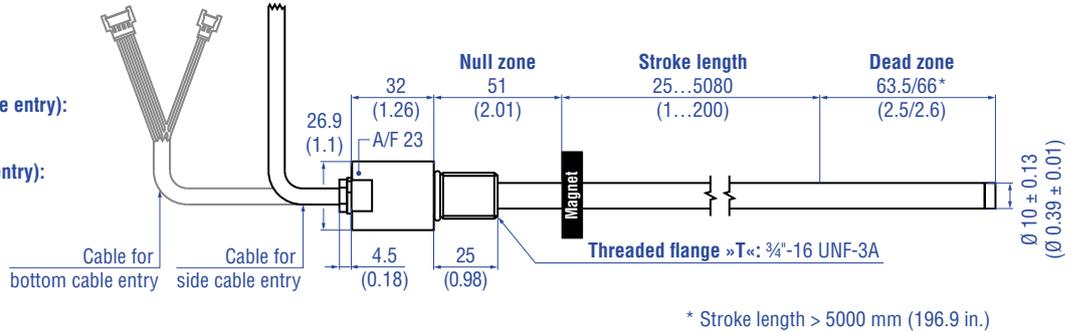
**Threaded flange »M« (for bottom or side cable entry)**

**PUR cable:**  
Ø 6 (Ø 0.24)  
**Bending radius:**  
> 24 (> 0.94)  
**Cable length (bottom cable entry):**  
65/170/230/350  
(2.6/6.7/9.1/13.8)  
**Cable length (side cable entry):**  
250/400/600  
(9.8/15.7/23.6)



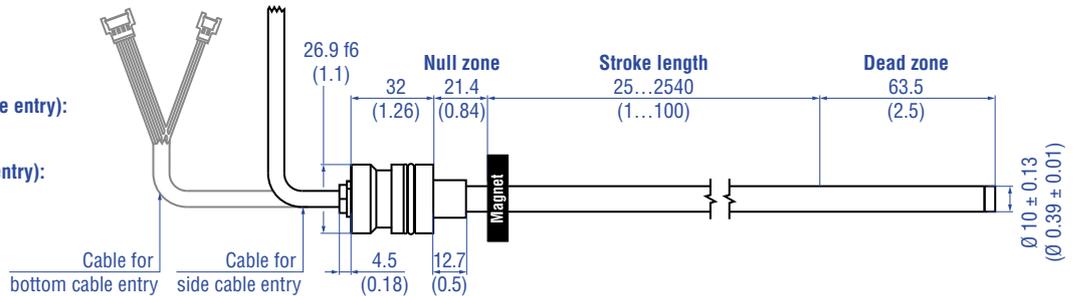
**Threaded flange »T« (for bottom or side cable entry)**

**PUR cable:**  
Ø 6 (Ø 0.24)  
**Bending radius:**  
> 24 (> 0.94)  
**Cable length (bottom cable entry):**  
65/170/230/350  
(2.6/6.7/9.1/13.8)  
**Cable length (side cable entry):**  
250/400/600  
(9.8/15.7/23.6)



**Pressure fit flange »S« (for bottom or side cable entry)**

**PUR cable:**  
Ø 6 (Ø 0.24)  
**Bending radius:**  
> 24 (> 0.94)  
**Cable length (bottom cable entry):**  
65/170/230/350  
(2.6/6.7/9.1/13.8)  
**Cable length (side cable entry):**  
250/400/600  
(9.8/15.7/23.6)



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

Fig. 4: Temposonics® RDV flange types

## CONNECTOR WIRING

D58		
<b>Port 1 – Signal</b>		
<b>M12 female connector (D-coded)</b>	<b>Pin</b>	<b>Function</b>
 <p>View on sensor</p>	1	Tx (+)
	2	Rx (+)
	3	Tx (-)
	4	Rx (-)
<b>Port 2 – Signal</b>		
<b>M12 female connector (D-coded)</b>	<b>Pin</b>	<b>Function</b>
 <p>View on sensor</p>	1	Tx (+)
	2	Rx (+)
	3	Tx (-)
	4	Rx (-)
<b>Power supply</b>		
<b>M12 male connector (A-coded)</b>	<b>Pin</b>	<b>Function</b>
 <p>View on sensor</p>	1	+12...30 VDC (±20 %)
	2	Not connected
	3	DC Ground (0 V)
	4	Not connected

Fig. 5: Connector wiring D58

D56		
<b>Port 1 – Signal</b>		
<b>M12 female connector (D-coded)</b>	<b>Pin</b>	<b>Function</b>
 <p>View on sensor</p>	1	Tx (+)
	2	Rx (+)
	3	Tx (-)
	4	Rx (-)
<b>Port 2 – Signal</b>		
<b>M12 female connector (D-coded)</b>	<b>Pin</b>	<b>Function</b>
 <p>View on sensor</p>	1	Tx (+)
	2	Rx (+)
	3	Tx (-)
	4	Rx (-)
<b>Power supply</b>		
<b>M8 male connector</b>	<b>Pin</b>	<b>Function</b>
 <p>View on sensor</p>	1	+12...30 VDC (±20 %)
	2	Not connected
	3	DC Ground (0 V)
	4	Not connected

Fig. 6: Connector wiring D56

**FREQUENTLY ORDERED ACCESSORIES** – Additional options available in our [Accessories Catalog](#) 551444

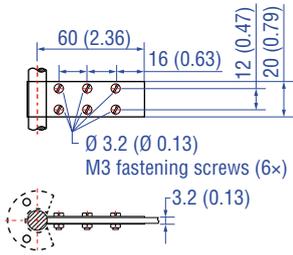
Position magnets			
<p><b>U-magnet OD33</b> Part no. 251 416-2</p> <p>Material: PA ferrite GF20 Weight: Approx. 11 g Surface pressure: Max. 40 N/mm<sup>2</sup> Fastening torque for M4 screws: 1 Nm Operating temperature: -40...+105 °C (-40...+221 °F)</p> <p>Marked version for sensors with internal linearization: Part no. 254 226</p>	<p><b>Ring magnet OD33</b> Part no. 201 542-2</p> <p>Material: PA ferrite GF20 Weight: Approx. 14 g Surface pressure: Max. 40 N/mm<sup>2</sup> Fastening torque for M4 screws: 1 Nm Operating temperature: -40...+105 °C (-40...+221 °F)</p> <p>Marked version for sensors with internal linearization: Part no. 253 620</p>	<p><b>Ring magnet OD25.4</b> Part no. 400 533</p> <p>Material: PA ferrite Weight: Approx. 10 g Surface pressure: Max. 40 N/mm<sup>2</sup> Operating temperature: -40...+105 °C (-40...+221 °F)</p> <p>Marked version for sensors with internal linearization: Part no. 253 621</p>	<p><b>Ring magnet OD17.4</b> Part no. 401 032</p> <p>Material: PA neobond Weight: Approx. 5 g Surface pressure: Max. 20 N/mm<sup>2</sup> Operating temperature: -40...+105 °C (-40...+221 °F)</p>

Magnet spacer		O-rings	
<p><b>Magnet spacer</b> Part no. 400 633</p> <p>Material: Aluminum Weight: Approx. 5 g Surface pressure: Max. 20 N/mm<sup>2</sup> Fastening torque for M4 screws: 1 Nm</p>	<p><b>O-ring for threaded flange M18x1.5-6g</b> Part no. 401 133</p> <p>Material: Fluoroelastomer Durometer: 75 ± 5 Shore A Operating temperature: -40...+204 °C (-40...+400 °F)</p>	<p><b>O-ring for threaded flange 3/4"-16 UNF-3A</b> Part no. 560 315</p> <p>Material: Fluoroelastomer Durometer: 75 ± 5 Shore A Operating temperature: -40...+204 °C (-40...+400 °F)</p>	<p><b>O-ring for pressure fit flange Ø 26.9 mm</b> Part no. 560 705</p> <p>Material: Nitrile rubber Operating temperature: -53...+107 °C (-65...+225 °F)</p>

O-rings	Mounting accessories		
<p><b>Back-up ring for pressure fit flange Ø 26.9 mm</b> Part no. 560 629</p> <p>Material: Polymyte Durometer: 90 Shore A</p>	<p><b>O-ring for mounting block with bottom entry</b> Part no. 561 435</p> <p>Material: FKM Durometer: 80 ± 5 Shore A Operating temperature: -15...+200 °C (5...+392 °F)</p>	<p><b>Hex jam nut M18x1.5-6g</b> Part no. 500 018</p> <p>Material: Steel, zinc plated</p>	<p><b>Hex jam nut 3/4"-16 UNF-3A</b> Part no. 500 015</p> <p>Material: Steel, zinc plated</p>

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

### Mounting accessories

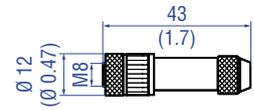
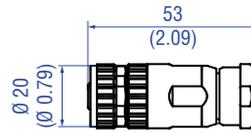
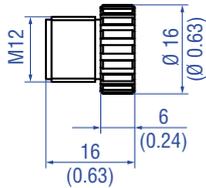
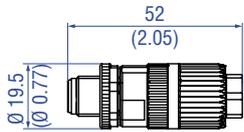


#### Fixing clip Part no. 561 481

Application: Used to secure sensor rods ( $\varnothing 10$  mm ( $\varnothing 0.39$  in.)) when using an U-magnet or block magnet  
Material: Brass, non-magnetic

Cable connectors\* – Signal

Cable connectors\* – Power



**M12 D-coded male connector (4 pin), straight**  
Part no. 370 523

**M12 connector end cap**  
Part no. 370 537

**M12 A-coded female connector (4 pin/5 pin), straight**  
Part no. 370 677

**M8 female connector (4 pin), straight**  
Part no. 370 504

Material: Zinc nickel-plated  
Termination: Insulation-displacement  
Cable Ø: 5.5...7.2 mm (0.2...0.28 in.)  
Wire: 24 AWG – 22 AWG  
Operating temperature:  
–25...+85 °C (–13...+185 °F)  
Ingress protection: IP65 / IP67 (correctly fitted)  
Fastening torque: 0.6 Nm

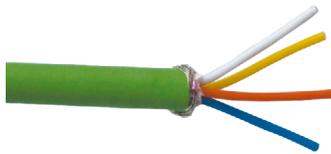
Female connectors M12 should be covered by this protective cap  
Material: Brass nickel-plated  
Ingress protection: IP67 (correctly fitted)  
Fastening torque: 0.39...0.49 Nm

Material: GD-Zn, Ni  
Termination: Screw  
Contact insert: CuZn  
Cable Ø: 4...8 mm (0.16...0.31 in.)  
Wire: 1.5 mm<sup>2</sup>  
Operating temperature:  
–30...+85 °C (–22...+185 °F)  
Ingress protection: IP67 (correctly fitted)  
Fastening torque: 0.6 Nm

Material: CuZn nickel plated  
Termination: Solder  
Cable Ø: 3.5...5 mm (0.14...0.28 in.)  
Wire: 0.25 mm<sup>2</sup>  
Operating temperature:  
–40...+85 °C (–40...+185 °F)  
Ingress protection: IP67 (correctly fitted)  
Fastening torque: 0.5 Nm

Cables

Cable sets



**PUR signal cable**  
Part no. 530 125

**PVC power cable**  
Part no. 530 108

**Signal cable with M12 D-coded male connector (4 pin), straight – M12 D-coded, male connector (4 pin), straight**  
Part no. 530 064

**Signal cable with M12 D-coded male connector (4 pin), straight – RJ45 male connector, straight**  
Part no. 530 065

Material: PUR jacket; green  
Features: Cat 5, highly flexible, halogen free, suitable for drag chains, mostly oil & flame resistant  
Cable Ø: 6.5 mm (0.26 in.)  
Cross section: 2 × 2 × 0.35 mm<sup>2</sup> (22 AWG)  
Bending radius: 5 × D (fixed installation)  
Operating temperature:  
–20...+60 °C (–4...+140 °F)

Material: PVC jacket; gray  
Features: Shielded, flexible, mostly flame resistant  
Cable Ø: 4.9 mm (0.19 in.)  
Cross section: 3 × 0.34 mm<sup>2</sup>  
Bending radius: 5 × D (fixed installation)  
Operating temperature:  
–30...+80 °C (–22...+176 °F)

Material: PUR jacket; green  
Features: Cat 5e  
Cable length: 5 m (16.4 ft)  
Cable Ø: 6.5 mm (0.26 in.)  
Ingress protection: IP65, IP67, IP68 (correctly fitted)  
Operating temperature:  
–30...+70 °C (–22...+158 °F)

Material: PUR jacket; green  
Features: Cat 5e  
Cable length: 5 m (16.4 ft)  
Cable Ø: 6.5 mm (0.26 in.)  
Ingress protection M12 connector: IP67 (correctly fitted)  
Ingress protection RJ45 connector: IP20 (correctly fitted)  
Operating temperature:  
–30...+70 °C (–22...+158 °F)

\*/ Follow the manufacturer's mounting instructions  
Controlling design dimensions are in millimeters and measurements in ( ) are in inches  
Color of connectors and cable jacket may change. Colors of the cores and technical properties remain unchanged.

Cable sets		Programming tools	
			
<p><b>Power cable with M8 female connector (4 pin), straight – pigtail</b>  <b>Part no. 530 066 (5 m (16.4 ft.))</b>  <b>Part no. 530 096 (10 m (32.8 ft.))</b>  <b>Part no. 530 093 (15 m (49.2 ft.))</b></p>	<p><b>Power cable with M12 A-coded female connector (5 pin), straight – pigtail</b>  <b>Part no. 370 673</b></p>	<p><b>TempoLink® kit for Temposonics® R-Series V</b>  <b>Part no. TL-1-0-EM08 (D56)</b>  <b>Part no. TL-1-0-EM12 (D58)</b></p>	<p><b>TempoGate® smart assistant for Temposonics® R-Series V</b>  <b>Part no. TG-C-0-Dxx</b>          (xx indicates the number of R-Series V sensors that can be connected (even numbers only))</p>
<p>Material: PUR jacket; gray          Features: Shielded          Cable Ø: 5 mm (0.2 in.)          Operating temperature:          -40...+90 °C (-40...+194 °F)</p>	<p>Material: PUR jacket; black          Features: Shielded          Cable length: 5 m (16.4 ft)          Ingress protection: IP67 (correctly fitted)          Operating temperature:          -25...+80 °C (-13...+176 °F)</p>	<ul style="list-style-type: none"> <li>• Connect wirelessly via Wi-Fi enabled device or via USB with the diagnostic tool</li> <li>• Simple connectivity to the sensor via 24 VDC power line (permissible cable length: 30 m)</li> <li>• User friendly interface for mobile devices and desktop computers</li> <li>• See data sheet “TempoLink® smart assistant” (document part no.: <a href="#">552070</a>) for further information</li> </ul>	<ul style="list-style-type: none"> <li>• OPC UA server for diagnostics of the R-Series V</li> <li>• For installation in the control cabinet</li> <li>• Connection via LAN and Wi-Fi</li> <li>• See data sheet “TempoGate® smart assistant” document part no.: <a href="#">552110</a> for further information</li> </ul>

Color of connectors and cable jacket may change. Colors of the cores and technical properties remain unchanged.

## ORDER CODE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
R	D	V										D	5		1	U	2		1
a			b	c	d						e	f			g	h			

a	Design
R D V	Detached sensor electronics "Classic"

b	Design
C	Threaded flange M18×1.5-6g (A/F 46)
D	Threaded flange ¾"-16 UNF-3A (A/F 46)
M	Threaded flange M18×1.5-6g (A/F 24)
S	Pressure fit flange Ø 26.9 mm f6
T	Threaded flange ¾"-16 UNF-3A (A/F 23)

c	Mechanical options
For side cable entry	
A	PUR cable with M16 connector, 250 mm length
B	PUR cable with M16 connector, 400 mm length
C	PUR cable with M16 connector, 600 mm length
For bottom cable entry	
2	Single wires with flat connector, 65 mm length
4	Single wires with flat connector, 170 mm length
5	Single wires with flat connector, 230 mm length
6	Single wires with flat connector, 350 mm length

d	Stroke length
X X X X M	Flange »S«: 0025...2540 mm Flange »C«, »D«, »M«, »T«: 0025...5080 mm
Stroke length (mm)	Ordering steps
25... 500 mm	5 mm
500... 750 mm	10 mm
750... 1000 mm	25 mm
1000... 2500 mm	50 mm
2500... 5080 mm	100 mm
X X X X U	Flange »S«: 001.0...100.0 in. Flange »C«, »D«, »M«, »T«: 001.0...200.0 in.
Stroke length (in.)	Ordering steps
1... 20 in.	0.2 in.
20... 30 in.	0.4 in.
30... 40 in.	1.0 in.
40... 100 in.	2.0 in.
100... 200 in.	4.0 in.
Non standard stroke lengths are available; must be encoded in 5 mm/0.1 in. increments	

e	Number of magnets
X X	01...20 position(s) (1...20 magnet(s))

f	Connection type
D 5 6	2 × M12 female connectors (D-coded), 1 × M8 male connector
D 5 8	2 × M12 female connectors (D-coded), 1 × M12 male connector (A-coded)

g	System
1	Standard

h	Output
U 2 0 1	EtherNet/IP™, position and velocity (1...20 magnet(s))
U 2 1 1	EtherNet/IP™, position and velocity, internal linearization (1...20 magnet(s))

NOTICE
<ul style="list-style-type: none"> <li>Specify number of magnets for your application and order the magnets separately.</li> <li>The number of magnets is limited by the stroke length. The minimum allowed distance between magnets (i.e. front face of one to the front face of the next one) is 75 mm (3 in.).</li> <li>Use magnets of the same type for multi-position measurement.</li> <li>If the option for internal linearization (U211) in <b>h</b> "Output" is chosen, select a suitable magnet.</li> </ul>

## DELIVERY

	<b>RDV-C/-D/-M/-T:</b> Sensor, O-ring	Accessories have to be ordered separately.
	<b>RDV-S:</b> Sensor, O-ring, back-up ring	

Manuals, Software & 3D Models available at:  
[www.temposonics.com](http://www.temposonics.com)

## GLOSSARY

### C

#### **CIP Sync™**

Synchronization services in CIP (**C**ommon **I**ndustrial **P**rotocol) provide the increased control coordination to achieve real-time synchronization between distributed devices and systems. CIP Sync™ is compliant with IEEE-1588™ standard and allows synchronization accuracy between two devices of fewer than 100 nanoseconds.

### D

#### **DLR**

The **D**evice **L**evel **R**ing (DLR) protocol provides a means for detecting, managing and recovering from faults in a ring-based network.

### E

#### **EDS**

The properties and functions of an EtherNet/IP™ device are described in an EDS file (**E**lectronic **D**ata **S**heet). The XML-based EDS file contains all relevant data that are important for the implementation of the device in the controller as well as for data exchange during operation. The EDS file of the R-Series V EtherNet/IP™ is available on the homepage [www.temposonics.com](http://www.temposonics.com).

#### **EtherNet/IP™**

EtherNet/IP™ (**E**thernet **I**ndustrial **P**rotocol) is an Industrial Ethernet interface and is managed by the **O**pen **D**evice**N**et **V**endor **A**ssociation (ODVA). The R-Series V EtherNet/IP™ and its corresponding EDS file are certified by the ODVA.

### I

#### **Internal linearization**

The internal linearization offers an improved linearity for an overall higher accuracy of the position measurement. The internal linearization is set for the sensor during production.

### M

#### **Measuring direction**

When moving the position magnet, the position and velocity values increase in the measuring direction.

- Forward: Values increasing from sensor electronics housing to rod end/profile end
- Reverse: Values decreasing from sensor electronics housing to rod end/profile end

#### **Multi-position measurement**

During the measurement cycle, the positions of every magnet on the sensor are simultaneously reported. The velocity is continuously calculated based on these changing position values as the magnets are moved.

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