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Installation Guide
MHM-97864 , Rev 1.5

PR9350 / K20-315

Linear Displacement Transducer

EMERSON

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Patents

The product(s) described in this manual are covered under existing and pending patents.

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1 General

1.1 About this manual

This operating manual contains information on the correct use of the sensor PR9350 and the set K20-315.

For the correct and safe use of the device, this operating manual must be read completely before starting the installation and operation. Particularly, all safety instructions of the manual have to be taken into account.

The device may only be passed on to third parties by including the operating manual.

Note
At any correspondence regarding this device, please indicate type and serial number as shown on the type plate.

Table 1-1 shows a list of documents that are referred to in this operating manual.

Table 1-1: Referenced documents

MHM-97873	Operating Manual A6500-LC LVDT Converter
MHM-97878	Operating Manual A6500-UM Universal Measurement Card

1.2 Symbols

Note
This symbol marks passages that contain important information.

⚠ CAUTION

This symbol marks operations that can lead to malfunctions or faulty measurements, but will not damage the device.

⚠ DANGER

A danger indicates actions that can lead to property damage or personal injury.

	According to IEC 61010, this symbol means that the documentation of the device must completely be read and understood before installing and commissioning of the device. Observe all safety related instructions in this document.

1.3 Liability and guarantee

Emerson is not liable for damages that occur due to improper use. Proper use also includes the knowledge of, and compliance with, this document.

Customer changes to the device that have not been expressly approved by Emerson will result in the loss of guarantee.

Due to continuous research and further development, Emerson reserves the right to change technical specifications without notice.

1.4 Incoming goods inspection

Check the content of the shipment to ensure that it is complete; visibly inspect the goods to determine if the device may possibly have been damaged during transport. The following parts are included in the scope of delivery and must be contained in the shipment.

- PR9350/.. or K20-315/.. with accessories according to Accessories.

If the contents are incomplete, or if any defects are observed, a complaint must be filed with the carrier immediately. Moreover, the responsible Emerson sales organization must be informed to enable replacement of the device. In this case, a non-detachable tag with customer name and defect observed must be attached to the device.

Work with the opened device should be only performed by a specialist who is familiar with the associated hazards.

1.5 Technical support

You may need to ship this product for return, replacement, or repair to an Emerson Product Service Center. Before shipping this product, contact Emerson Product Support to obtain a Return Materials Authorization (RMA) number and receive additional instructions.

Product Support

Emerson provides a variety of ways to reach your Product Support team to get the answers you need when you need them:

Phone	Toll free 1 800 833 8314 (U.S. and Canada) +1 512 832 3774 (Latin America) +63 2 8702 1111 (Asia Pacific, Europe, and Middle East)
Email	Guardian.GSC@Emerson.com
Web	http://www.emerson.com/en-us/contact-us

To search for documentation, visit http://www.emerson.com.

To view toll free numbers for specific countries, visit

http://www.emerson.com/technicalsupport.

Note
If the equipment has been exposed to a hazardous substance, a Material Safety Data Sheet (MSDS) must be included with the materials returned. An MSDS is required by law to be available to people exposed to specific hazardous substances.

1.6 Storage and transport

Store and transport the device only in its original packaging. Technical data specifies the environmental conditions for storage and transport.

1.7 Disposal of the device

Provided that no repurchase or disposal agreement exists, recycle the following components at appropriate facilities:

- Recyclable metal
- Plastic elements

Sort the remaining components for disposal, based on their condition. National laws or provisions on waste disposal and protection of the environment apply.

Note
Environmental hazards! Electrical waste and electronic components are subject to treatment as special waste and may only be disposed by approved specialized companies.

1.8 China RoHS Compliance

Our products manufactured later than June 30, 2016, and those which are sold in the People's Republic of China are marked with one of the following two logos to indicate the Environmental Friendly Use Period in which it can be used safely under normal operating conditions.

Products that do not have the following marking were either manufactured before June 30, 2016, or are not electrical equipment products (EEP).

Circling arrow symbol with "e": The product contains no hazardous substances over the Maximum Concentration Value and it has an indefinite Environmental Friendly Use Period.

Circling arrow symbol with a number: This product contains certain hazardous substances over the Maximum Concentration Value and it can be used safely under normal operating conditions for the number of years indicated in the symbol. The names and contents of hazardous substances can be found in chapter "Certificates".

2 Safety instructions

To ensure safe operation, carefully follow all the instructions in this manual.

The correct and safe use of this device requires that both operating and service personnel understand and comply with general safety guidelines and observe the special safety comments listed in this manual. Where necessary, safety-sensitive points on the device are marked.

⚠ DANGER

Because the device is electrical equipment, only specially trained and authorized personnel may commission, service, and maintain this equipment.

2.1 Using the device

Install and use the device as specified in this document.

If the device is used in a manner not specified by the manufacturer, the functions and protection provided by the device may be impaired.

2.2 Radio interference

The device is carefully shielded and tested to be technically immune to radio interference and complies with current standards. However, if you operate this device together with other peripheral devices that are not properly shielded against radio interference, disturbances and radio interferences may occur.

2.3 Owner's responsibility

If there is a reason to suspect that hazard-free operation, and thus, adequate machine protection is no longer possible, take the device out of operation and safeguard it from unintentional operation. This is the case:

- if the device shows visible damage.
- if the device no longer works.
- after any kind of overload that has exceeded the permissible limits (see technical data of the device for permissible limits).

⚠ DANGER

If device tests must be completed during operation or if the device must be replaced or decommissioned, it will impair the machine protection and may cause the machine to shut down. Make sure to deactivate machine protection before starting such work and reactivate it after work has been completed.

2.4 ESD safety

⚠ DANGER

Internal components can be damaged or destroyed due to electrostatic discharge (ESD) during the handling of the device.

Take suitable precautions before handling the device to prevent electrostatic discharges through the electronics. Such measures might include, for example, wearing an ESD bracelet. Transport and storage of electronic components may only be made in ESD-safe packaging.

Handle the device with particular care during dry meteorological conditions with relative humidity below 30% as electrostatic discharges can occur more frequently.

3 Application and design

3.1 Application

The inductive transducers PR9350 or the set K20-315 serve the measurement of static and dynamic displacements and in connection with carrier frequency measuring bridges – of physical quantities (tensile and compressive forces, pressure of gases and liquids, thickness of materials, transverse moments) which may in any way be converted to linear movements by using relevant accessories.

The special features of these transducers are a high resolution over the entire measuring range, small hysteresis, compact construction and the little mass of the tracing pin (solenoid plunger). Thus, the controlling forces on the measuring target may be neglected.

The temperature drift is extremely small because the compensation coil is wound directly over the measuring coil.

Installation of these transducers are imaginably easy. The transducer permits dynamic measurements up to 1250 Hz.

The differential coil of the PR9350 series consists of a coil form with two windings and a tracing pin with a ferromagnetic core which moves within the coil. If the tracing pin is placed precisely in the middle of the coil, the impedance of both windings are identical. The impedance of the windings will increase on one side and decrease on the other side – if the tracing pin with the ferromagnetic core moves from the middle position to one end of the transducer.

By complementing the windings with resistors to a Wheatstone bridge, and by supplying this bridge with a carrier frequency, the measuring output of the bridge reads a voltage which is proportional to the displacement of the tracing pin. The tracing pin is freely movable and has a threaded rod (M3) for the mechanical adaptation to the measuring target. On top of the housing there is a 3-pole Cannon socket for the electric connection. Inductive transducers of type PR9350 or the set K20-315 are preferably used with the A6500-LC LVDT Converter and the A6500-UM Universal Measurement Card.

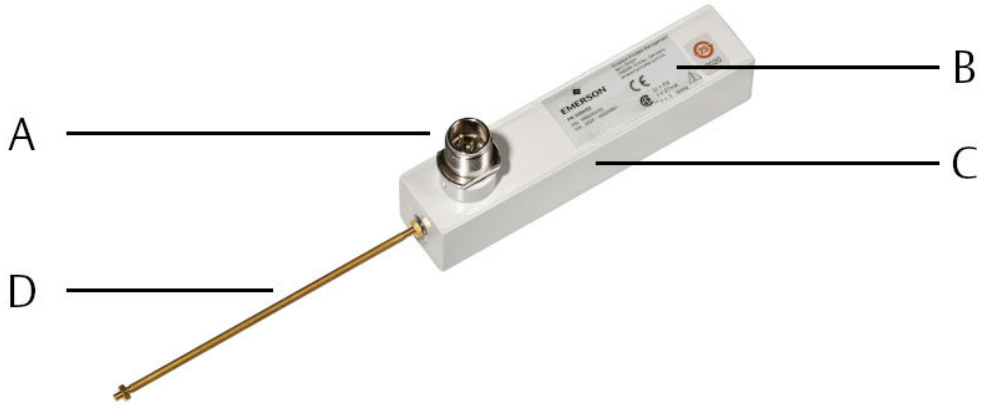
The PR9350 is available with several measuring ranges from ±12 mm up to ±150 mm.

The set K20-315 consists of a PR9350 sensor mounted in a housing inclusive connection cable.

3.2 Design

Figure 3-1 shows the sensor PR9350/02 with a ±25mm measuring range. The sensor housing is hermetically encapsulated and equipped with a 3-pole Cannon connector. The tracing pin has a M3 thread at the tip for mechanical connection to the measuring object.

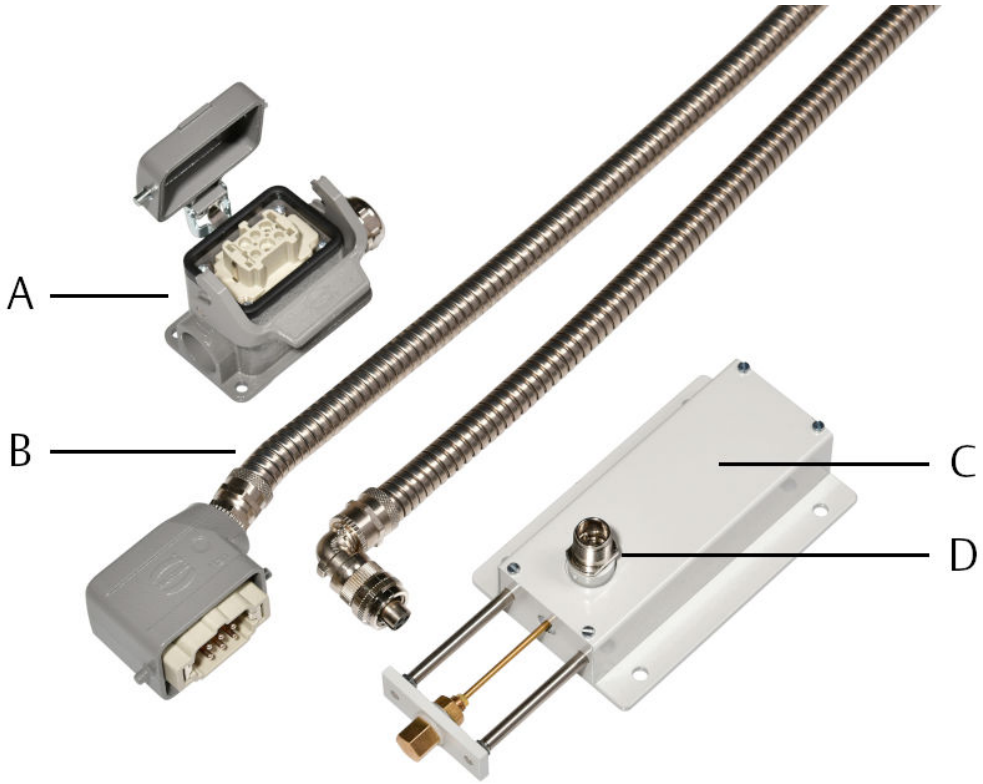
Figure 3-1: Sensor PR9350



A. 3-pole connector
B. Type label
C. Housing
D. Tracing pin

Figure 3-2 shows a K20-315 set with armed sensor cable and Harting connection.

Figure 3-2: Set K20-315



A. Harting connector
B. Connection cable with metal protection tube and connectors
C. Housing with integrated PR9350
D. 3-pole connector

4 Mounting and installation

4.1 CSA – Conditions of acceptability

⚠ CAUTION

The sensor PR9350/xx may only be operated with devices that are supplied with safety low voltage (5 V). For this reason a power supply unit is required that meets the specifications of LPS (Low Power Source) according the EN/IEC 60950-1 or LV/LC (Low Voltage/Low Current) according the EN/IEC 61010-1.

In addition, care should be exercised in the physical installation of the sensor. Wrong polarity and/or improper installation can result in false signals, which do not represent actual measured quantities.

4.2 PR9350

For mounting, the sensor PR9350 is equipped with fixing holes with an internal M4 thread. The Figure 4-1 and Table 4-1 shows the dimension of the single sensor type and the position of the fixing holes. The tracing pin will be mechanical connected to the measuring target by means of the M3 thread at the tracing pin end.

Figure 4-1: Dimensions and position of fixing holes

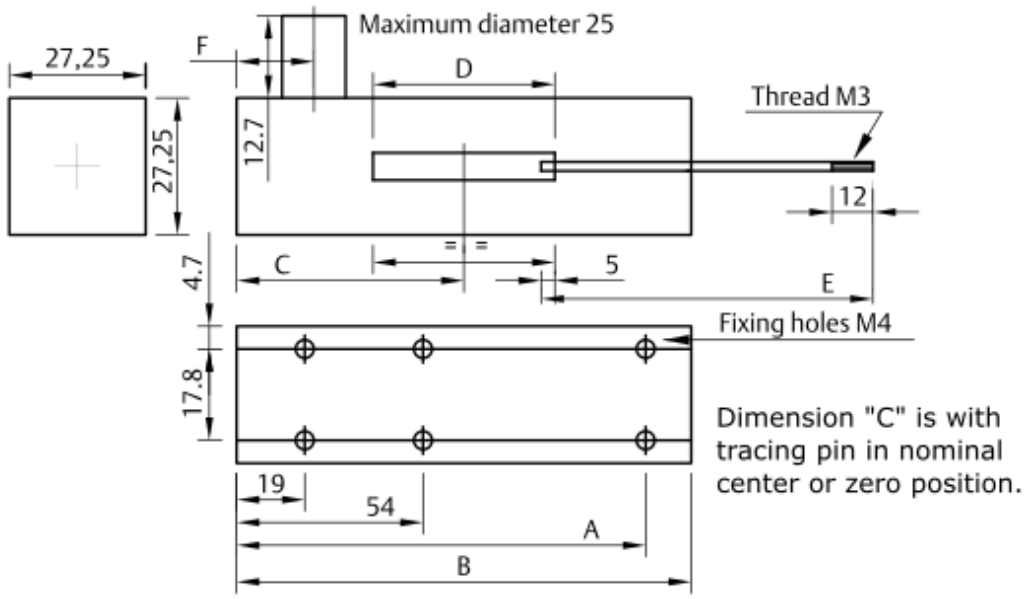


Table 4-1: Dimensions depending on sensor type

Type	Nominal measuring range [mm]	Dimensions [mm]					
		A	B	C	D	E	F
PR9350/01	-12...0...+12	4 holes	79.6	39.2	60.3	85.1	16.0
PR9350/02	-25...0...+25	108.0	127.0	65.4	76.2	123.2	25.4
PR9350/04	-50...0...+50	197.0	229.0	112.0	150.0	144.1	25.4
PR9350/06	-75...0...+75	331.0	330.0	169.5	200.0	238.1	25.4
PR9350/08	-100...0...+100	413.0	432.0	218.8	247.7	292.1	25.4
PR9350/12	-150...0...+150	616.0	635.0	319.9	342.9	311.2	25.4

4.3 K20-315

Four mounting holes are available for mounting the K20-315. Figure 4-2 and Table 4-2 show the position and dimension of this mounting holes. The tracing pin of the PR9350 is connected to the movable part of the K20-315. This movable part touches the measuring target as a machine housing to measure housing expansion.

Figure 4-2: Dimensions and position of fixing holes

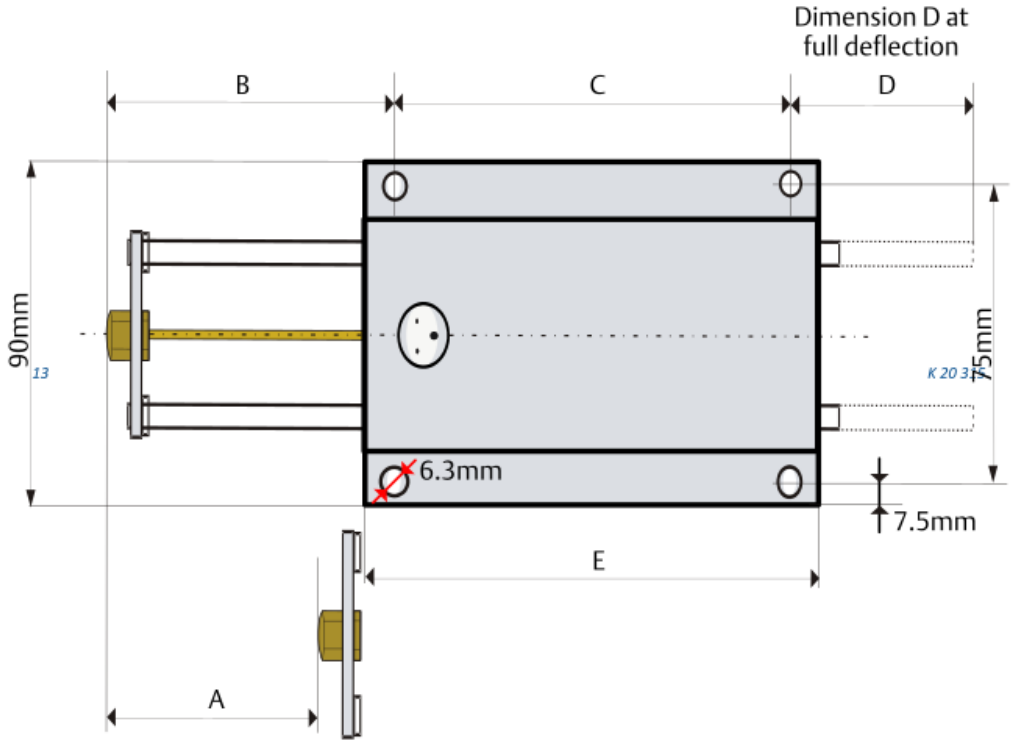


Table 4-2: Dimensions depending on sensor type

Type	Nominal measuring range [mm]	Dimensions [mm]				
		A	B	C	D	E
K20-315/01	-12...0...+12	24	79	110	65	143
K20-315/02	-25...0...+25	50	95	110	75	143
K20-315/03	-25...0...+25	50	95	110	75	143
K20-315/03-S	-25...0...+25	50	95	110	75	143
K20-315/10	-50...0...+50	100	145	210	125	243
K20-315/11	-50...0...+50	100	145	210	125	243

4.4 Connection of PR9350 and K20-315

Figure 4-3 shows the pin assignment of the 3-pole connector.

Figure 4-3: Connection diagram 3-pole connector

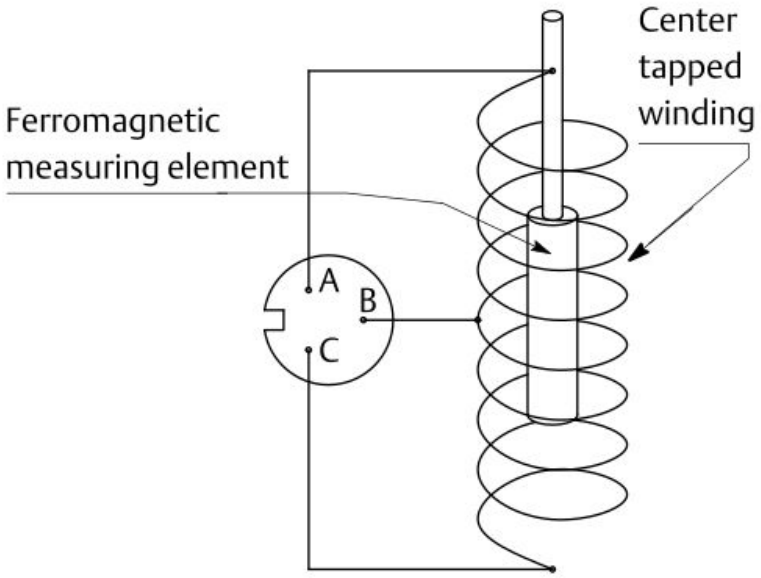
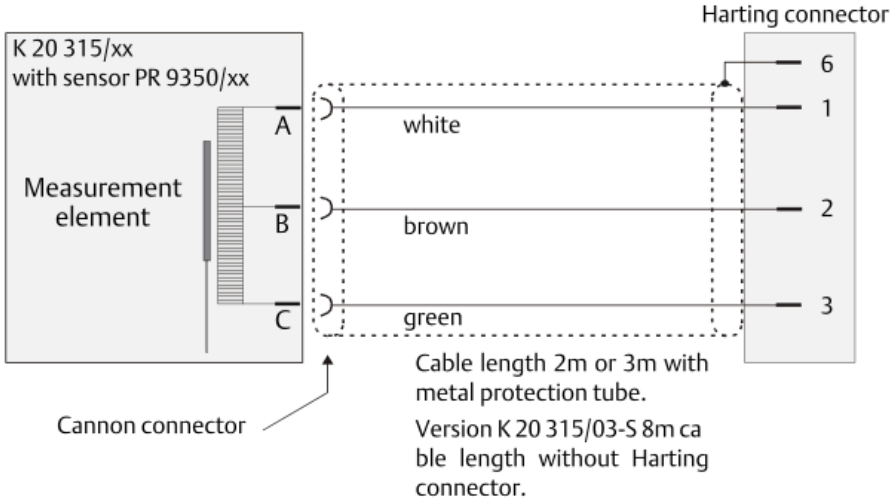


Figure 4-4 shows the pin assignment of the Harting connector of set K20-315. The version K20-315/03-S has open cable ends. The wire colors are assigned to the sensor connector as shown below.

Figure 4-4: Connection diagram Harting connector



The following PR9350 versions have a fixed cable with open cable ends. For assignment of the wire colors to the coil connections, see Figure 4-4.

- PR9350/02-S
- PR9350/02-S1
- PR9350/02-S2
- PR9350/04-S2

4.5 Commissioning

The manuals of the A6500-LC LVDT Converter and the manual of the A6500-UM Universal Measurement Card contain further information regarding commissioning and installation of PR9350 sensors and the K20-315 set.

5 Function check

The PR9350 sensor can be checked by measuring the internal sensor resistance at the connection terminals of the sensor (for pin assignment see Figure 4-3). This resistance is an indicator for sensor problems. Table 5-1 shows resistances and their meaning.

⚠ CAUTION

Before starting this work, inform the responsible specialist and, if necessary, let them deactivate the machine protection.

Having finished the work, the machine protection has to be reactivated immediately by the responsible staff.

Table 5-1: Coil resistance

Resistance	Meaning / Error
0 Ω	Short circuit
PR9350/01 ≈ 38.4 Ω ... 40.6 Ω [between A and C] ≈ 19.2 Ω ... 20.3 Ω [between A and B / B and C]	Internal resistance → OK
PR9350/02 ≈ 66.0 Ω ... 73.6 Ω [between A and C] ≈ 33.0 Ω ... 36.8 Ω [between A and B / B and C]	
PR9350/04 ≈ 46.0 Ω ... 54.0 Ω [between A and C] ≈ 23.0 Ω ... 27.0 Ω [between A and B / B and C]	
PR9350/06 ≈ 61.6 Ω ... 69.8 Ω [between A and C] ≈ 30.8 Ω ... 34.9 Ω [between A and B / B and C]	
PR9350/08 ≈ 65.4 Ω ... 70.6 Ω [between A and C] ≈ 32.7 Ω ... 35.3 Ω [between A and B / B and C]	
PR9350/12 ≈ 35.2 Ω ... 49.2 Ω [between A and C] ≈ 17.6 Ω ... 24.6 Ω [between A and B / B and C]	
∞ Ω	Cable break Connection to the sensor has been interrupted

6 Technical data

Only specifications with tolerances or limit values are guaranteed. Data without tolerances or without error limits are for information only and not guaranteed. Technical modifications are subject to changes without notice.

Sensitivity	
Diagonal voltage, bridge output per 1V supply voltage	
PR9350/01	110 mV/V
PR9350/02	270 mV/V
PR9350/04	270 mV/V
PR9350/06	310 mV/V
PR9350/08	310 mV/V
PR9350/12	340 mV/V

Measuring range	
PR9350/01	-12 mm ... 0 ...+12 mm
PR9350/02	-25 mm ... 0 ... +25 mm
PR9350/04	-50 mm ... 0 ... +50 mm
PR9350/06	-75 mm ... 0 ... +75 mm
PR9350/08	-100 mm ... 0 ... +100 mm
PR9350/12	-150 mm ... 0 ... +150 mm
K20-315/01	-12 mm ... 0 ...+12 mm
K20-315/02	-25 mm ... 0 ... +25 mm
K20-315/03	-25 mm ... 0 ... +25 mm
K20-315/03-S	-25 mm ... 0 ... +25 mm
K20-315/10	-50 mm ... 0 ... +50 mm
K20-315/11	-50 mm ... 0 ... +50 mm

Sensor supply	
Voltage	5 V_{rms}
Current	27 to 50 mA
Carrier frequency	3 to 5 kHz

Accuracy		
Type	**Linearity error at**	
	100% of measuring range	**60 % of measuring range**
PR9350/01	±3.5%	±1.0%
PR9350/02	±3.5%	±0.5%
PR9350/04	±2.5%	±0.5%
PR9350/06	±2.0%	±0.5%
PR9350/08	±2.0%	±0.2%
PR9350/12	±1.5%	±0.2%
Temperature influence		
On measuring value	< 3%, within whole temperature range -35°C to +120°C	

Nominal inductance (typical values A-C)	
PR9350/01	
Tracing pin ...	
... in middle position	13 mH
... maximum displacement	12 mH
... min displacement	12 mH
... driven out	5.0 mH
PR9350/02	
Tracing pin ...	
... in middle position	19 mH
... maximum displacement	17 mH
... min displacement	17 mH
... driven out	9.2 mH
PR9350/04	
Tracing pin ...	
... in middle position	16 mH
... maximum displacement	15 mH
... min displacement	15 mH
... driven out	7.8 mH
PR9350/06	
Tracing pin ...	
... in middle position	16 mH
... maximum displacement	14 mH
... min displacement	14 mH
... driven out	7.8 mH

Nominal inductance (typical values A-C)	
PR9350/08 Tracing pin ...	
... in middle position	12 mH
... maximum displacement	11 mH
... min displacement	12 mH
... driven out	6.3 mH
PR9350/12 Tracing pin ...	
... in middle position	10 mH
... maximum displacement	10 mH
... min displacement	10 mH
... driven out	5.4 mH

Resistance (Measured between A-B / B-C)	
PR9350/01	19.2 ... 20.3 Ω
PR9350/02	33.0 ... 36.8 Ω
PR9350/04	23.0 ... 27.0 Ω
PR9350/06	30.8 ... 34.9 Ω
PR9350/08	32.7 ... 35.3 Ω
PR9350/12	17.6 ... 24.6 Ω

Environmental conditions	
Permissible temperature	-20°C ... 0 ... +100°C
Temperature for storage and transport	-40°C ... 0 ... +70°C
Vibration and shock	Comply with EN 60068-2-6 and -2-29
Relative humidity	0 ... 95% (non-condensing)
Allowed degree of pollution	Category 2
Over voltage	Category II
Operating altitude	<2000 m above see level
Environmental area	Indoor use only

Mechanical design	
Dimensions	for PR9350/.. see Figure 4-1 for K20-315/.. see Figure 4-2
K20-315/.., spring force on measuring object	/01; /02; /03 and /03-S: max. 3.5 Nm /10 and /11: max. 5.0 Nm

Mechanical design	
Approx. weight (without cable and package)	PR9350/01: 170 g PR9350/02: 255 g PR9350/04: 370 g PR9350/06: 510 g PR9350/08: 660 g PR9350/12: 860 g K20-315/01: 950 g K20-315/02: 950 g K20-315/03: 950 g K20-315/03-S: 950 g K20-315/10: 1500 g K20-315/11: 1500 g

Accessories

Included accessories	
PR9350/..	Connector Cannon CA06COME10SL3S44 ITT Can Tracing pin (solenoid plunger) with M3 threaded rod
K20-315/01; /02 and /10	2m connection cable with cannon plug CA06COME10SL3S44 ITT Can Tracing pin (solenoid plunger) with M3 threaded rod Metal protection tube and Harting - connector
K20-315/03 and /11	3m connection cable with cannon plug CA06COME10SL3S44 ITT Can Tracing pin (solenoid plunger) with M3 threaded rod Metal protection tube and Harting - connector.
K20-315/03-S	8m connection cable with open cable end and metal protection tube Tracing pin (solenoid plunger) with M3 threaded rod

Special PR9350 versions

Version	Specification
PR9350/02-S	• Measuring range: ±25 mm • Fixed cable with open cable ends • Cable length: 3 m • Oil proof
PR9350/02-S1	• Measuring range: ±25 mm • Fixed cable with open cable ends • Cable length: 5 m • Oil proof

Version	Specification
PR9350/02-S2	• Measuring range: ±25 mm • Fixed cable with open cable ends • Cable length: 10 m • Oil proof
PR9350/04-S2	• Measuring range: ±50 mm • Fixed cable with open cable ends • Cable length: 10 m • Oil proof

7 Certificates

CE

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EU-Declaration of Conformity (Translation)

We: epro GmbH, Jöbkesweg 3, 48599 Gronau

declare under our sole responsibility that following product(s):

Product description:	**Linear Displacement Transducer**
Part numbers Sensors	**PR9350/xx** **PR9350/xx-x** **PR9350/xx-xx**
Part numbers Housings	**K20-315/xx** **K20-315/xx-x**

are in conformity with the terms of the directives mentioned below including any amendment valid at the date of declaration:

2014/30/EU	Electromagnetic compatibility
2011/65/EU	The restriction of the use of certain hazardous substances in electrical and electronic equipment

Following harmonized standards have been applied:

2014/30/EU	EN 61326-1	Electrical equipment for measurement, control and laboratory use. EMC requirements. Part 1. General requirements
2011/65/EU	EN 63000	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Authorized person for technical documentation:
Bruno Hecker, Jöbkesweg 3, 48599 Gronau

Gronau, 08. August 2022		B. Hecker
Place, Date	**Managing Director**	**Quality**

EMERSON
Process Management

Emerson Process Management
1100 W. Louis Henna Blvd.
Round Rock, TX 78681

Statement Regarding the China RoHS Compliance of Emerson Product - PR9350/01

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。 X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572							
环保期限（EFUP） 的产品及其部件是每个列出的符号，除非另有标明。使用期限只适用于产品在产品手册中规定的条件下工作 The Environmentally Friendly Period (EFUP) for the product and its parts are per the symbol listed, unless otherwise marked. Use Period is valid only when the product is operated under the conditions defined in the product manual.							

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表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	**镉** Cadmium (Cd)	**六价铬** Hexavalent Chromium (Cr (VI))	**多溴联苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。 X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572							
环保期限（EFUP） 的产品及其部件是每个列出的符号，除非另有标明。使用期限只适用于产品在产品手册中规定的条件下工作 The Environmentally Friendly Period (EFUP) for the product and its parts are per the symbol listed, unless otherwise marked. Use Period is valid only when the product is operated under the conditions defined in the product manual.							

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Statement Regarding the China RoHS Compliance of Emerson Product - PR9350/02-S

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr (VI))	多溴联苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25

O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下
O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.

X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。
X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572

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Statement Regarding the China RoHS Compliance of Emerson Product - PR9350/02-S1

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - PR9350/02-S2

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - PR9350/04

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - PR9350/06

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - PR9350/12

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - K20-315

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	**镉** Cadmium (Cd)	**六价铬** Hexavalent Chromium (Cr (VI))	**多溴联苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
电缆 CABLE ASSY	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - K20-315/01

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - K20-315/02

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
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Statement Regarding the China RoHS Compliance of Emerson Product - K20-315/03

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - K20-315/03-S

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - K20-315/10

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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Statement Regarding the China RoHS Compliance of Emerson Product - K20-315/11

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements
表1： 有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	**汞** Mercury (Hg)	镉 Cadmium (Cd)	**六价**铬 Hexavalent Chromium (Cr (VI))	**多溴**联**苯** Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	O	O	O	O	O	25
O 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
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