

# WPG Series Magnetostrictive Linear Position Sensor Slides

## Overview

The WPG series are contactless linear position transducer with magnetostrictive technology for longer lifetime.

The absence of electrical contact on the cursor eliminates all wear and almost guarantees an infinite life.

The performance gained from EMC immunity makes the WPG series suitable for use in industrial environments where electromagnetic interferences are present.

MAGNETOSTRICTIVE HYPERWAVE uses the magnetic characteristic and micro-elastic deformation of the primary element to pinpoint the exact position of the cursor.

## Features

- Strokes from 50 to 500mm
- Purchase cursor separately
- Analog output represents direct measurement of displacement
- Working temperature: -20 to +75°C [-4 to +167°F]
- IP67 protection
- Power supply 24VDC  $\pm 20\%$
- Electromagnetic compatibility EMC 2014/30/EU

**HYPERWAVE**  
HIGH-PERFORMANCE MAGNETOSTRICTIVE TECHNOLOGY



**WPG-A-M-0100-E**



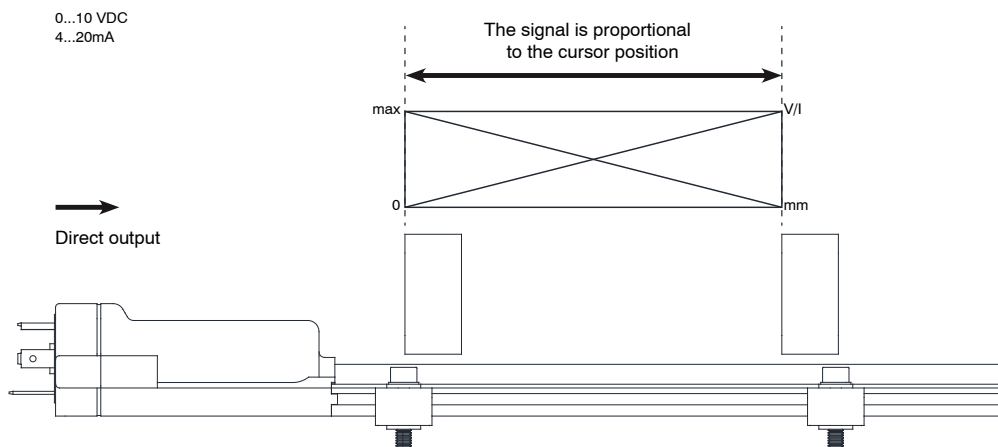
**WPG Series Magnetostrictive Linear Position Sensor Slides Chart**

Part Number	Price	Drawing Link	Stroke	Output	Connection	Housing Material
<a href="#">WPG-A-M-0050-E</a>	\$-056i5:	<a href="#">PDF</a>	50mm	4-20 mA	18mm DIN 43650 Form A(CON006-1KJ)	anodized aluminum
<a href="#">WPG-A-M-0050-N</a>	\$-056i6:	<a href="#">PDF</a>	50mm	0-10 VDC		
<a href="#">WPG-A-M-0100-E</a>	\$-056i7:	<a href="#">PDF</a>	100mm	4-20 mA		
<a href="#">WPG-A-M-0100-N</a>	\$-056i8:	<a href="#">PDF</a>	100mm	0-10 VDC		
<a href="#">WPG-A-M-0150-E</a>	\$-056i9:	<a href="#">PDF</a>	150mm	4-20 mA		
<a href="#">WPG-A-M-0150-N</a>	\$-056ia:	<a href="#">PDF</a>	150mm	0-10 VDC		
<a href="#">WPG-A-M-0200-E</a>	\$-056ib:	<a href="#">PDF</a>	200mm	4-20 mA		
<a href="#">WPG-A-M-0200-N</a>	\$-056ic:	<a href="#">PDF</a>	200mm	0-10 VDC		
<a href="#">WPG-A-M-0250-E</a>	\$-056id:	<a href="#">PDF</a>	250mm	4-20 mA		
<a href="#">WPG-A-M-0250-N</a>	\$-056ie:	<a href="#">PDF</a>	250mm	0-10 VDC		
<a href="#">WPG-A-M-0300-E</a>	\$-056if:	<a href="#">PDF</a>	300mm	4-20 mA		
<a href="#">WPG-A-M-0300-N</a>	\$-056ig:	<a href="#">PDF</a>	300mm	0-10 VDC		
<a href="#">WPG-A-M-0400-E</a>	\$-056ih:	<a href="#">PDF</a>	400mm	4-20 mA		
<a href="#">WPG-A-M-0400-N</a>	\$-056ii:	<a href="#">PDF</a>	400mm	0-10 VDC		
<a href="#">WPG-A-M-0500-E</a>	\$-056ij:	<a href="#">PDF</a>	500mm	4-20 mA		
<a href="#">WPG-A-M-0500-N</a>	\$-056ik:	<a href="#">PDF</a>	500mm	0-10 VDC		

Purchase cursor and mounting brackets separately

## ANALOG OUTPUT

The WPG-A magnetostrictive transducers provide a direct voltage or current analog output proportional to the magnetic cursor's position. Since the output is direct, no signal electronic processing is required if interfaced with controllers or measurement instruments.



# WPG Series Magnetostrictive Linear Position Sensor Slides

## WPG Series Magnetostrictive Linear Position Sensor Slides Specifications

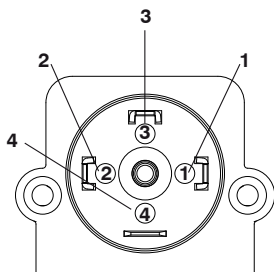
<b>Sampling Time</b>	1ms
<b>Independent Linearity <math>\pm\%</math>FS</b>	stroke: 50 to 250mm with sliding cursors $\leq \pm 0.150$ mm stroke > 250mm with sliding cursors $\leq \pm 0.04\%$ F.S. (Min. $\pm 0.090$ mm)
<b>Repeatability (mm)</b>	$\leq 0.01$ (Typical)
<b>Hysteresis (mm)</b>	$\leq 0.02$ (Typical)
<b>Displacement Speed</b>	$\leq 10$ m/s
<b>Resolution</b>	INFINITE (only limited by the electrical noise max 5 mVpp)
<b>Operating Temperature</b>	-20 to +75°C [-4 to +167°F]
<b>Storage Temperature</b>	-40 to +100°C [-40 to +212°F]
<b>Temperature Coefficient</b>	$\leq 0.01\%$ f.s./°C (min. 0.015 mm/°C)
<b>Vibration (DIN IEC68T2-6)</b>	12g/10...2000 Hz
<b>Shock (DIN IEC68T2-27)</b>	100g-11ms - single shock
<b>Electromagnetic Compatibility</b>	EMC 2014/30/EU
<b>Terminations</b>	See wiring diagrams
<b>Connection</b>	18mm DIN 43650 Form A, CON006-1KJ
<b>Protection</b>	IP67

## WPG Series Magnetostrictive Linear Position Sensor Slides Electrical Data

Series	-N models	-E models
<b>Output Signal</b>	0 to 10V	4 to 20mA
<b>Nominal Power Supply</b>	24VDC $\pm 20\%$	
<b>Max. Power Ripple</b>	1VDC	
<b>Typical Current Consumption</b>	35mA	60mA
<b>Output Load</b>	$\geq 10K\Omega$	50 to 500 $\Omega$
<b>Max. Output Value</b>	12V	30mA
<b>Output Signal in Absence of Cursor</b>	10.5 V	21mA
<b>Electrical Isolation (*)</b>	500V	
<b>Protection Against Polarity Inversion</b>	Yes	
<b>Protection Against Overvoltage</b>	Yes	
<b>Protection Against Power Supply in Output</b>	Yes	

(\*) Includes a 31V 1.7J voltage suppressor

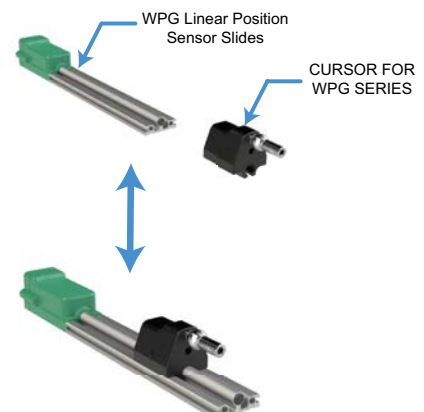
## Wiring Diagram



### Wiring Table

<b>Pin 1</b>	Power Supply -
<b>Pin 2</b>	Direct Output
<b>Pin 3</b>	Power Supply +
<b>Pin 4</b>	Shield

## Cursor Assembly



# WPG and WPP Series Accessories

**PCUR220-1KJ****PCUR221-1KJ****PCUR222-1KJ**

## WPG Series Cursors

Part Number	Price	Description	Drawing Link
<b><u>PCUR220-1KJ</u></b>	\$-56j5:	Gefran cursor, 5mm axial joint low process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>
<b><u>PCUR221-1KJ</u></b>	\$-56j6:	Gefran cursor, 5mm axial joint high process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>
<b><u>PCUR222-1KJ</u></b>	\$-56j7:	Gefran cursor, 5mm axial joint process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>

**PCUR210-1KJ****PCUR211-1KJ****PCUR212-1KJ**

## WPP Series Cursors

Part Number	Price	Description	Drawing Link
<b><u>PCUR210-1KJ</u></b>	\$-56j2:	Gefran cursor, 5mm axial joint low process connection, slide mount. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>
<b><u>PCUR211-1KJ</u></b>	\$-56j3:	Gefran cursor, 5mm axial joint high process connection, slide mount. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>
<b><u>PCUR212-1KJ</u></b>	\$-56j4:	Gefran cursor, 5mm axial joint process connection, slide mount. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>

## WPG and WPP Series Cursor Floating Mount

Part Number	Price	Description	Drawing Link
<b><u>PCUR202-1KJ</u></b>	\$-56j1:	Gefran cursor, floating mount. For use with Gefran WPG and WPP series magnetostrictive sensors.	<a href="#">PDF</a>

**PCUR202-1KJ**

## WPG Series Mounting Brackets

Part Number	Price	Description	Drawing Link
<b><u>PKIT590-1KJ</u></b>	\$-56i:	Gefran mounting brackets, 42.5mm hole spacing. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>
<b><u>PKIT591-1KJ</u></b>	\$-56j0:	Gefran mounting brackets, 50mm hole spacing. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>

**PKIT590-1KJ**

## WPP Mounting Brackets

Part Number	Price	Description	Drawing Link
<b><u>PKIT090-1KJ</u></b>	\$-56i!:	Gefran mounting brackets, 42.5mm hole spacing. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>
<b><u>PKIT091-1KJ</u></b>	\$-56i?:	Gefran mounting brackets, 50mm hole spacing. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>

**PKIT090-1KJ**