

# 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 ±20%
- Electromagnetic compatibility EMC 2014/30/EU



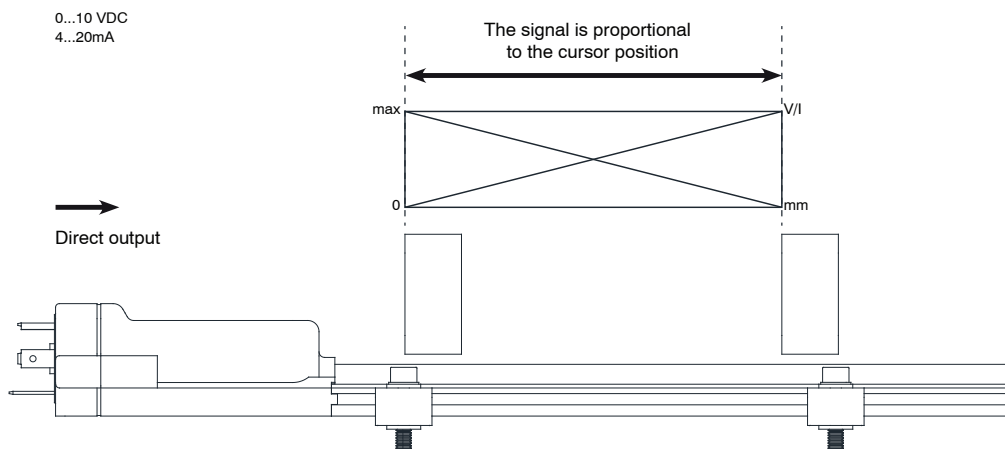
**WPG-A-M-0100-E**

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>	\$222.00	<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>	\$222.00	<a href="#">PDF</a>	50mm	0-10 VDC		
<a href="#">WPG-A-M-0100-E</a>	\$224.00	<a href="#">PDF</a>	100mm	4-20 mA		
<a href="#">WPG-A-M-0100-N</a>	\$224.00	<a href="#">PDF</a>	100mm	0-10 VDC		
<a href="#">WPG-A-M-0150-E</a>	\$225.00	<a href="#">PDF</a>	150mm	4-20 mA		
<a href="#">WPG-A-M-0150-N</a>	\$225.00	<a href="#">PDF</a>	150mm	0-10 VDC		
<a href="#">WPG-A-M-0200-E</a>	\$226.00	<a href="#">PDF</a>	200mm	4-20 mA		
<a href="#">WPG-A-M-0200-N</a>	\$226.00	<a href="#">PDF</a>	200mm <td 0-10 VDC			
<a href="#">WPG-A-M-0250-E</a>	\$227.00	<a href="#">PDF</a>	250mm	4-20 mA		
<a href="#">WPG-A-M-0250-N</a>	\$227.00	<a href="#">PDF</a>	250mm	0-10 VDC		
<a href="#">WPG-A-M-0300-E</a>	\$228.00	<a href="#">PDF</a>	300mm	4-20 mA		
<a href="#">WPG-A-M-0300-N</a>	\$228.00	<a href="#">PDF</a>	300mm	0-10 VDC		
<a href="#">WPG-A-M-0400-E</a>	\$241.00	<a href="#">PDF</a>	400mm	4-20 mA		
<a href="#">WPG-A-M-0400-N</a>	\$241.00	<a href="#">PDF</a>	400mm	0-10 VDC		
<a href="#">WPG-A-M-0500-E</a>	\$248.00	<a href="#">PDF</a>	500mm	4-20 mA		
<a href="#">WPG-A-M-0500-N</a>	\$248.00	<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.



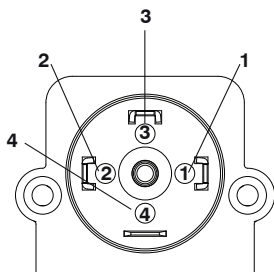
# WPG Series Magnetostrictive Linear Position Sensor Slides

WPG Series Magnetostrictive Linear Position Sensor Slides Specifications	
Sampling Time	1ms
Independent Linearity $\pm\%$ FS	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)
Repeatability (mm)	$\leq 0.01$ (Typical)
Hysteresis (mm)	$\leq 0.02$ (Typical)
Displacement Speed	$\leq 10$ m/s
Resolution	INFINITE (only limited by the electrical noise max 5 mVpp)
Operating Temperature	-20 to +75°C [-4 to +167°F]
Storage Temperature	-40 to +100°C [-40 to +212°F]
Temperature Coefficient	$\leq 0.01\%$ f.s./°C (min. 0.015 mm/°C)
Vibration (DIN IEC68T2-6)	12g/10...2000 Hz
Shock (DIN IEC68T2-27)	100g-11ms - single shock
Electromagnetic Compatibility	EMC 2014/30/EU
Terminations	See wiring diagrams
Connection	18mm DIN 43650, Form A, CON006-1KJ
Protection	IP67

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

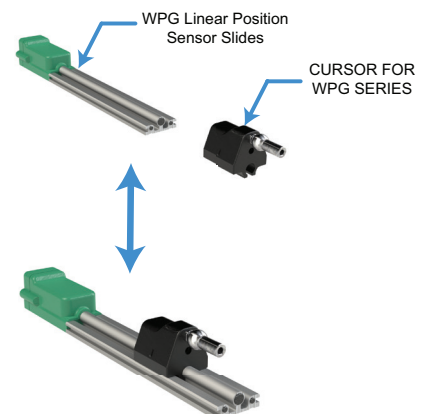
(\*) Includes a 31V 1.7J voltage suppressor

## Wiring Diagram



Wiring Table	
Pin 1	Power Supply -
Pin 2	Direct Output
Pin 3	Power Supply +
Pin 4	Shield

## Cursor Assembly



# WPG and WPP Series Accessories



PCUR220-1KJ



PCUR221-1KJ



PCUR222-1KJ

WPG Series Cursors			
Part Number	Price	Description	Drawing Link
<a href="#">PCUR220-1KJ</a>	\$33.00	Gefran cursor, 5mm axial joint low process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>
<a href="#">PCUR221-1KJ</a>	\$35.00	Gefran cursor, 5mm axial joint high process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>
<a href="#">PCUR222-1KJ</a>	\$35.00	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
<a href="#">PCUR210-1KJ</a>	\$33.00	Gefran cursor, 5mm axial joint low process connection, slide mount. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>
<a href="#">PCUR211-1KJ</a>	\$35.00	Gefran cursor, 5mm axial joint high process connection, slide mount. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>
<a href="#">PCUR212-1KJ</a>	\$35.00	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
<a href="#">PCUR202-1KJ</a>	\$30.00	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
<a href="#">PKIT590-1KJ</a>	\$8.00	Gefran mounting brackets, 42.5mm hole spacing. For use with Gefran WPG series magnetostrictive sensors.	<a href="#">PDF</a>
<a href="#">PKIT591-1KJ</a>	\$8.00	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
<a href="#">PKIT090-1KJ</a>	\$8.00	Gefran mounting brackets, 42.5mm hole spacing. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>
<a href="#">PKIT091-1KJ</a>	\$8.00	Gefran mounting brackets, 50mm hole spacing. For use with Gefran WPP series magnetostrictive sensors.	<a href="#">PDF</a>



PKIT090-1KJ