

# WPP Series Magnetostrictive Linear Position Sensor Slides

## Overview

The WPP series are contactless linear position transducers with HYPERWAVE magnetostrictive technology.

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

The WPP series also has a high resistance to vibrations and mechanical shocks, ideal for use in a harsh industrial environment.

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

## Features

- Optimized mechanical structure
- Strokes from 50 to 500mm
- Purchase cursor separately
- Dual analog outputs (voltage or current options) represent direct and inverse measurement of displacement
- Power supply 24VDC ±20%
- Resistance to vibration (DIN IEC68T2/6 12g)
- IP67 protection
- Working temperature: -30 to +75°C [-22 to +167° F]
- High performance in terms of environmental IP protection and EMC immunity



**WPP-A-H-0100-E**

WPP Series Magnetostrictive Linear Position Sensor Slides Chart						
Part Number	Price	Drawing Link	Stroke	Output	Connection	Housing Material
<a href="#">WPP-A-H-0050-E</a>	\$337.00	<a href="#">PDF</a>	50mm	4-20 and 20-4 mA	8-pin M12 quick-disconnect	anodized aluminum
<a href="#">WPP-A-H-0050-N</a>	\$337.00	<a href="#">PDF</a>	50mm	0-10 and 10-0 VDC		
<a href="#">WPP-A-H-0100-E</a>	\$339.00	<a href="#">PDF</a>	100mm	4-20 and 20-4 mA		
<a href="#">WPP-A-H-0100-N</a>	\$339.00	<a href="#">PDF</a>	100mm	0-10 and 10-0 VDC		
<a href="#">WPP-A-H-0150-E</a>	\$341.00	<a href="#">PDF</a>	150mm	4-20 and 20-4 mA		
<a href="#">WPP-A-H-0150-N</a>	\$341.00	<a href="#">PDF</a>	150mm	0-10 and 10-0 VDC		
<a href="#">WPP-A-H-0200-E</a>	\$342.00	<a href="#">PDF</a>	200mm	4-20 and 20-4 mA		
<a href="#">WPP-A-H-0200-N</a>	\$342.00	<a href="#">PDF</a>	200mm	0-10 and 10-0 VDC		
<a href="#">WPP-A-H-0250-E</a>	\$344.00	<a href="#">PDF</a>	250mm	4-20 and 20-4 mA		
<a href="#">WPP-A-H-0250-N</a>	\$344.00	<a href="#">PDF</a>	250mm	0-10 and 10-0 VDC		
<a href="#">WPP-A-H-0300-E</a>	\$345.00	<a href="#">PDF</a>	300mm	4-20 and 20-4 mA		
<a href="#">WPP-A-H-0300-N</a>	\$345.00	<a href="#">PDF</a>	300mm	0-10 and 10-0 VDC		
<a href="#">WPP-A-H-0400-E</a>	\$361.00	<a href="#">PDF</a>	400mm	4-20 and 20-4 mA		
<a href="#">WPP-A-H-0400-N</a>	\$361.00	<a href="#">PDF</a>	400mm	0-10 and 10-0 VDC		
<a href="#">WPP-A-H-0500-E</a>	\$380.00	<a href="#">PDF</a>	500mm	4-20 and 20-4 mA		
<a href="#">WPP-A-H-0500-N</a>	\$380.00	<a href="#">PDF</a>	500mm	0-10 and 10-0 VDC		

Purchase cursor and mounting brackets separately.

### ANALOG OUTPUT

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

0...10 VDC  
4...20mA

The signal is proportional to the cursor position

10...0 VDC  
20...4mA

max  
0  
mm

Direct output

Reverse output

# WPP Series Magnetostrictive Linear Position Sensor Slides

## WPP Series Magnetostrictive Linear Position Sensor Slides Specifications

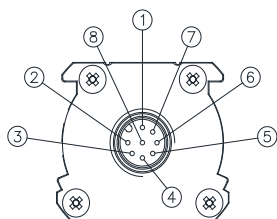
<b>Sampling Time</b>	50-300mm Stroke 0.5; 400-500mm Stroke 1
<b>Independent Linearity ±%FS</b>	Typical: $\leq \pm 0,02\%$ FS (min $\pm 0.060$ mm) with sliding cursor max: $\leq \pm 0,02\%$ FS with floating cursor at a distance between 2 and 5mm max: $\leq \pm 0,04\%$ FS with floating cursor at a distance between 5 and 7mm
<b>Repeatability (mm)</b>	$\leq 0.01$ (limited by the resolution of the output value)
<b>Hysteresis (mm)</b>	$\leq 0.02$ (limited by the resolution of the output value)
<b>Displacement Speed</b>	$\leq 10$ m/s
<b>Resolution</b>	16 bit (max electrical noise 5 mVpp)
<b>Operating Temperature</b>	-30 to +75°C [-22 to +167° F]
<b>Storage Temperature</b>	-40 to +100°C [-40 to 212°F]
<b>Temperature Coefficient</b>	0.005% F.S. / °C
<b>Vibration (DIN IEC68T2-6)</b>	12g/10...2000 Hz
<b>Shock (DIN IEC68T2-27)</b>	100g-11 ms - single shock
<b>Electromagnetic Compatibility</b>	EMC 2014/30/EU
<b>Terminations</b>	See wiring diagrams
<b>Connection</b>	8-pin M12 quick-disconnect
<b>Protection</b>	IP67

## WPP 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>	1Vpp	
<b>Max. Consumption</b>	70mA	90mA
<b>Max. Output Load</b>	5k $\Omega$	< 500 $\Omega$
<b>Max. Output Noise</b>	< 5mVpp	< 5mVpp
<b>Max. Output Value</b>	12V	30mA
<b>Alarm Output Value</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 30V 0.4 J voltage suppressor

## Wiring Diagram

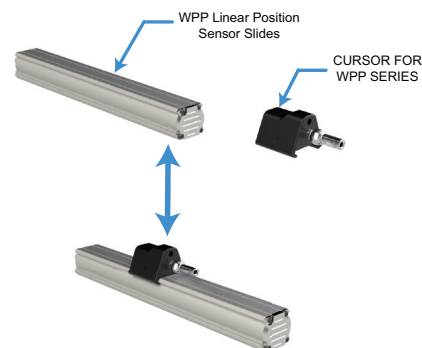


### Wiring Table

<b>Pin 1</b>	OV Output Cursor 1
<b>Pin 2</b>	OV Output Cursor 1
<b>Pin 3</b>	Invert Output Cursor 1
<b>Pin 4</b>	No Connection
<b>Pin 5</b>	Output Cursor 1
<b>Pin 6</b>	Power Supply -
<b>Pin 7</b>	Power Supply +
<b>Pin 8</b>	No Connection

Note: The transducer case must be grounded with the cable sheathing on the control system side only.

## 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