

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 $\pm 20\%$
- 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

HYPERWAVE
HIGH-PERFORMANCE MAGNETOSTRICTIVE TECHNOLOGY



WPP-A-H-0100-E



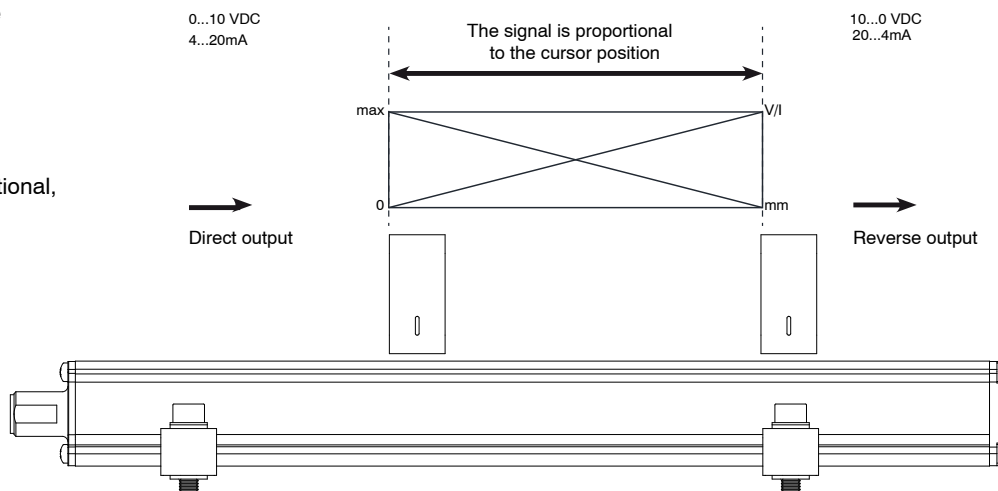
WPP Series Magnetostrictive Linear Position Sensor Slides Chart

Part Number	Price	Drawing Link	Stroke	Output	Connection	Housing Material
WPP-A-H-0050-E	\$-056il:	PDF	50mm	4-20 and 20-4 mA	8-pin M12 quick-disconnect	anodized aluminum
WPP-A-H-0050-N	\$-056in:	PDF	50mm	0-10 and 10-0 VDC		
WPP-A-H-0100-E	\$-056io:	PDF	100mm	4-20 and 20-4 mA		
WPP-A-H-0100-N	\$-056ip:	PDF	100mm	0-10 and 10-0 VDC		
WPP-A-H-0150-E	\$-056iq:	PDF	150mm	4-20 and 20-4 mA		
WPP-A-H-0150-N	\$-056is:	PDF	150mm	0-10 and 10-0 VDC		
WPP-A-H-0200-E	\$-056it:	PDF	200mm	4-20 and 20-4 mA		
WPP-A-H-0200-N	\$-056iu:	PDF	200mm	0-10 and 10-0 VDC		
WPP-A-H-0250-E	\$-056iv:	PDF	250mm	4-20 and 20-4 mA		
WPP-A-H-0250-N	\$-056ix:	PDF	250mm	0-10 and 10-0 VDC		
WPP-A-H-0300-E	\$-056iy:	PDF	300mm	4-20 and 20-4 mA		
WPP-A-H-0300-N	\$-056iz:	PDF	300mm	0-10 and 10-0 VDC		
WPP-A-H-0400-E	\$-056i]:	PDF	400mm	4-20 and 20-4 mA		
WPP-A-H-0400-N	\$-056i[:	PDF	400mm	0-10 and 10-0 VDC		
WPP-A-H-0500-E	\$-056i_:	PDF	500mm	4-20 and 20-4 mA		
WPP-A-H-0500-N	\$-056i#:	PDF	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.



WPP Series Magnetostrictive Linear Position Sensor Slides

WPP Series Magnetostrictive Linear Position Sensor Slides Specifications

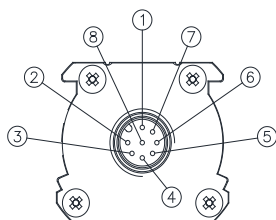
Sampling Time	50-300mm Stroke 0.5; 400-500mm Stroke 1
Independent Linearity $\pm\%$FS	Typical: $\leq \pm 0,02\%$ FS (min ± 0.060 mm) with sliding cursor max: $\leq \pm 0,02\%$ FS with floating cursor at a distance between 2 and 5mm max: $\leq \pm 0,04\%$ FS with floating cursor at a distance between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

WPP 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	1Vpp	
Max. Consumption	70mA	90mA
Max. Output Load	5k Ω	< 500 Ω
Max. Output Noise	< 5mVpp	< 5mVpp
Max. Output Value	12V	30mA
Alarm Output Value	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 30V 0.4 J voltage suppressor

Wiring Diagram

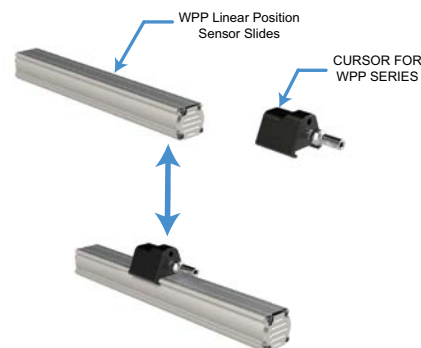


Wiring Table

Pin 1	OV Output Cursor 1
Pin 2	OV Output Cursor 1
Pin 3	Invert Output Cursor 1
Pin 4	No Connection
Pin 5	Output Cursor 1
Pin 6	Power Supply -
Pin 7	Power Supply +
Pin 8	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
<u>PCUR220-1KJ</u>	\$-56j5:	Gefran cursor, 5mm axial joint low process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	PDF
<u>PCUR221-1KJ</u>	\$-56j6:	Gefran cursor, 5mm axial joint high process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	PDF
<u>PCUR222-1KJ</u>	\$-56j7:	Gefran cursor, 5mm axial joint process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	PDF

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

WPP Series Cursors

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

WPG and WPP Series Cursor Floating Mount

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

**PCUR202-1KJ**

WPG Series Mounting Brackets

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

**PKIT590-1KJ**

WPP Mounting Brackets

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

**PKIT090-1KJ**