GEFRAN BEYOND TECHNOLOGY 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

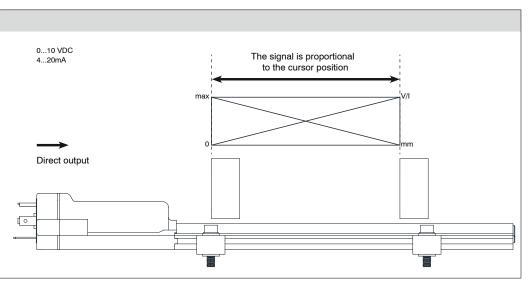


WPG Series Magnetostrictive Linear Position Sensor Slides Chart							
Part Number	Price	Drawing Link	Stroke	Output	Connection	Housing Material	
WPG-A-M-0050-E	\$239.00	PDF	50mm	4-20 mA			
WPG-A-M-0050-N	\$239.00	PDF	50mm	0-10 VDC			
WPG-A-M-0100-E	\$241.00	PDF	100mm	4-20 mA	- - - - - - - - - - - - - - - - - - -		
<u>WPG-A-M-0100-N</u>	\$241.00	PDF	100mm	0-10 VDC			
WPG-A-M-0150-E	\$242.00	PDF	150mm	4-20 mA			
WPG-A-M-0150-N	\$242.00	PDF	150mm	0-10 VDC			
WPG-A-M-0200-E	\$243.00	PDF	200mm	4-20 mA			
WPG-A-M-0200-N	\$243.00	PDF	200mm	0-10 VDC			
WPG-A-M-0250-E	\$244.00	PDF	250mm	4-20 mA		anodized aluminum	
<u>WPG-A-M-0250-N</u>	\$244.00	PDF	250mm	0-10 VDC			
WPG-A-M-0300-E	\$245.00	PDF	300mm	4-20 mA			
WPG-A-M-0300-N	\$245.00	PDF	300mm	0-10 VDC	-		
WPG-A-M-0400-E	\$259.00	PDF	400mm	4-20 mA			
<u>WPG-A-M-0400-N</u>	\$259.00	PDF	400mm	0-10 VDC			
WPG-A-M-0500-E	\$267.00	PDF	500mm	4-20 mA			
WPG-A-M-0500-N	\$267.00	PDF	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 ±%FS	stroke: 50 to 250mm with sliding cursors $\le \pm 0.150$ mm stroke > 250mm with sliding cursors $\le \pm 0.04\%$ F.S. (Min. ± 0.090 mm)				
Repeatability (mm)	≤ 0.01 (Typical)				
Hysteresis (mm)	≤ 0.02 (Typical)				
Displacement Speed	≤ 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	≤ 0.01% f.s. /°C (min. 0.015 mm/°C				
Vibration (DIN IEC68T2-6)	12g/102000 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 ± 20%					
Max. Power Ripple	1VDC					
Typical Current Consumption	35mA	60mA				
Output Load	≥10KΩ	50 to 500Ω				
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						

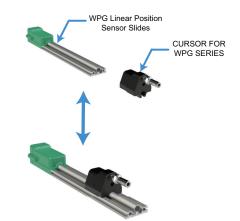
(*) Includes a 31V 1.7J voltage suppressor

Wiring Diagram

:	3
2	1
4	

V	Viring 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	
<u>PCUR220-1KJ</u>	\$35.50	Gefran cursor, 5mm axial joint low process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	PDF	
<u>PCUR221-1KJ</u>	\$37.50	Gefran cursor, 5mm axial joint high process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	PDF	
<u>PCUR222-1KJ</u>	\$37.50	Gefran cursor, 5mm axial joint process connection, slide mount. For use with Gefran WPG series magnetostrictive sensors.	PDF	





<u>PCUR211-1KJ</u>



PCUR212-1KJ

WPP Series Cursors					
Part Number	Price	Description	Drawing Link		
PCUR210-1KJ	\$35.50	Gefran cursor, 5mm axial joint low process connection, slide mount. For use with Gefran WPP series magnetostrictive sensors.	PDF		
<u>PCUR211-1KJ</u>	\$37.50	Gefran cursor, 5mm axial joint high process connection, slide mount. For use with Gefran WPP series magnetostrictive sensors.	PDF		
PCUR212-1KJ	\$37.50	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	
PCUR202-1KJ	\$32.00	Gefran cursor, floating mount. For use with Gefran WPG and WPP series magnetostrictive sensors.	PDF	

WPG Series Mounting Brackets				
Part Number	Price	Description	Drawing Link	
<u>PKIT590-1KJ</u>	\$8.75	Gefran mounting brackets, 42.5mm hole spacing. For use with Gefran WPG series magnetostrictive sensors.	<u>PDF</u>	
<u>PKIT591-1KJ</u>	\$8.75	Gefran mounting brackets, 50mm hole spacing. For use with Gefran WPG series magnetostrictive sensors.	PDF	

WPP Mounting Brackets				
Part Number	Price	Description	Drawing Link	
<u>PKIT090-1KJ</u>	\$8.75	Gefran mounting brackets, 42.5mm hole spacing. For use with Gefran WPP series magnetostrictive sensors.	PDF	
<u>PKIT091-1KJ</u>	\$8.75	Gefran mounting brackets, 50mm hole spacing. For use with Gefran WPP series magnetostrictive sensors.	PDF	



PCUR202-1KJ





PKIT590-1KJ



PKIT090-1KJ

Linear Position Sensors

tLPS-19