



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

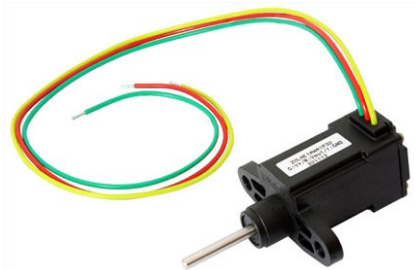
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Linear Position Sensor in Hall Effect Technology (0 mm to 10 mm max.)


FEATURES

- Accurate linearity down to: $\pm 1\%$
- Electrical strokes from 0 mm to 10 mm
- Long life: Greater than 10M cycles
- Non contacting technology: Hall effect
- Model dedicated to all applications in harsh environments
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

QUICK REFERENCE DATA

Sensor type	LINEAR, non contacting hall effect
Output type	Wires
Market appliance	Industrial
Dimensions	46 mm x 20.8 mm x 37 mm

ELECTRICAL SPECIFICATIONS

PARAMETER	STANDARD
Electrical stroke	Up to 10 mm
Linearity	$\pm 2\%$ or $\pm 1\%$
Supply voltage	$5 V_{DC} \pm 10\%$
Supply current	< 16 mA typical
Output signal	Analog ratiometric 10 % to 90 % of V_{supply} or PWM 10 % to 90 % duty cycle
Over voltage protection	+ 20 V_{DC}
Reverse voltage protection	- 10 V_{DC}
Load resistance recommended	Min. 1 k Ω for analog output and PWM output
Hysteresis	Static: 0.1 % of V_{supply} /Dynamic: 0.25 % of V_{supply}
Resolution	12 bits

MECHANICAL SPECIFICATIONS

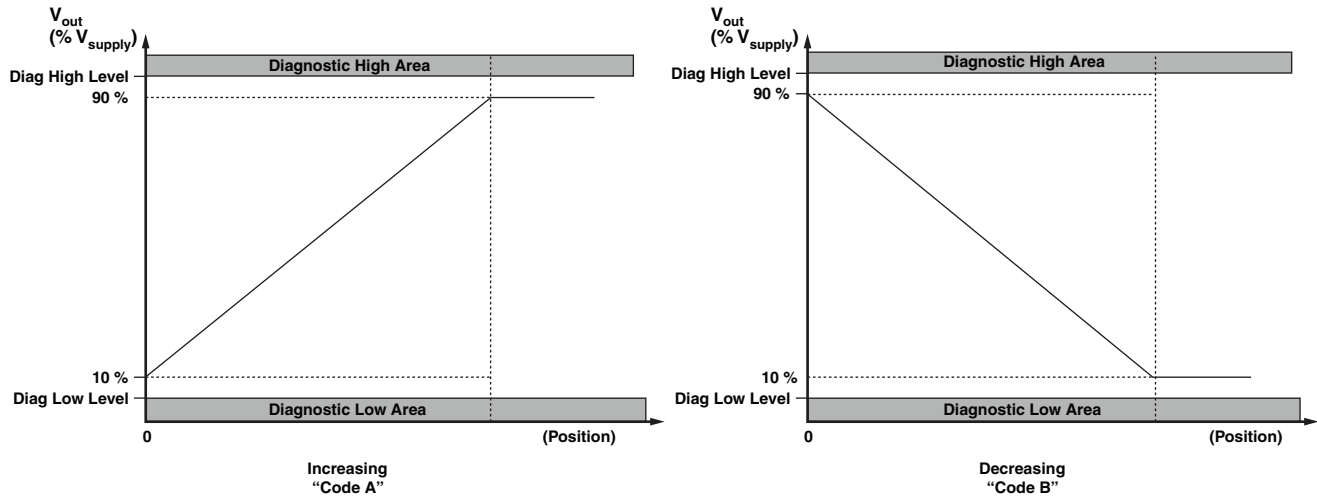
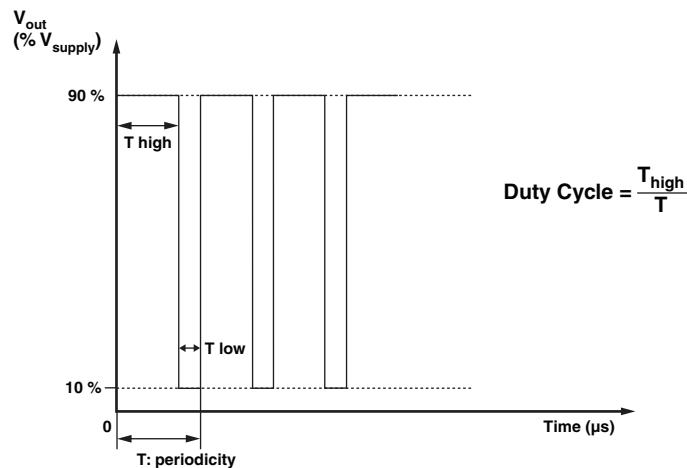
PARAMETER	
Mechanical travel	12 mm max.
Bearing type	Sleeve bearing
Standard	For spring loaded model: IP 51/without spring: Other on request
Weight	26 g \pm 4 g

ORDERING INFORMATION/DESCRIPTION

20 LHE	1	A	W	A	1P30	xxxx	e1
MODEL	FEATURES	LINEARITY	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST	LEAD FINISH
	1: Spring return 2: Without spring	X: $\pm 2\%$ A: $\pm 1\%$	W: Wires Z: Custom	A: Analog increasing B: Analog decreasing C: PWM increasing D: PWM decreasing	1: 3.175 mm 9: Special P: Plain T: Threaded M3 x 6 Z: Other type		
Shaft length from mounting face 30 mm when full extended							

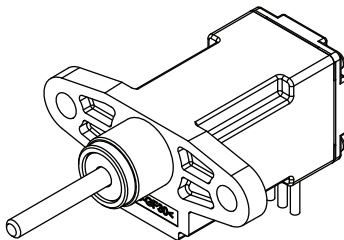
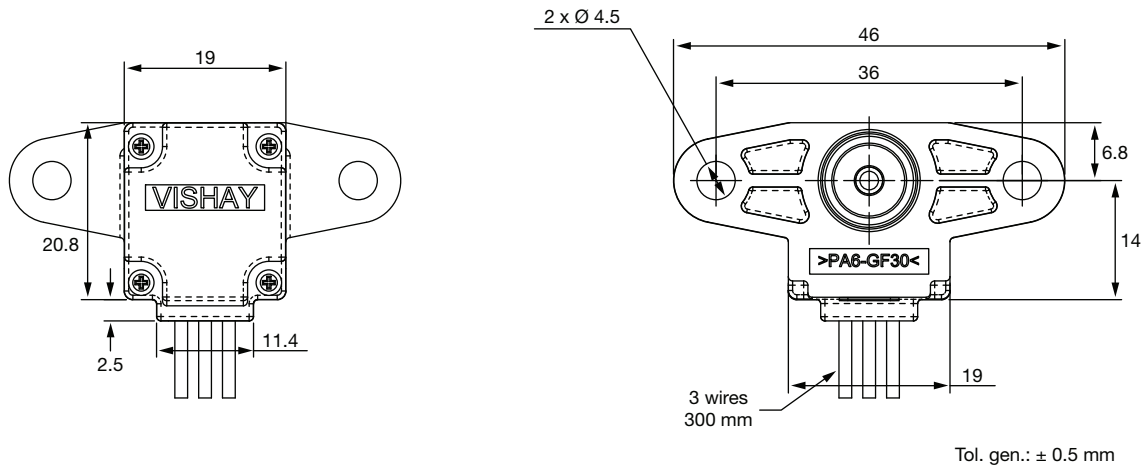
SAP PART NUMBERING GUIDELINES

20 LHE	2	X	Z	C	1T35	xxxx
MODEL	FEATURES	LINEARITY	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST
	Without spring return system	$\pm 2\%$	"Custom"	PWM increasing		

V_{OUT} ANALOG

V_{OUT} PWM

ENVIRONMENTAL SPECIFICATIONS

Vibrations	20 g from 10 Hz to 2000 Hz
Shocks	3 shocks/axis; 50 g half a sine 11 ms
Operating temperature range	- 40 °C; + 85 °C
Life	> 10M of cycles
Speed (max.)	60 mm/s
Immunity to radiated electromagnetic disturbances	200 V/m 150 kHz/1 GHz IEC 62132-2 part 2 (level A)
Immunity to power frequency magnetic field	200 A/m 50 Hz/60 Hz EN 61000-4-8
Radiated electromagnetic emissions	30 MHz/1 GHz < 30 dBμV/m EN 61000-6-4
Electrostatic discharges	Contact discharges: ± 4 kV Air discharges: ± 8 kV EN 61000-4-2
Immunity to radiated RF field	10 V/m 80 MHz to 1 GHz EN6100-4-3

ENVIRONMENTAL SPECIFICATIONS	
Materials	
Housing	Thermoplastic housing
Mounting type	Flange with 2 holes \varnothing 4.5 mm
Shaft	\varnothing 3.175 mm (stainless steel)
Output	3 lead wires (AWG 20) Length: 300 mm
Centering diameter	\varnothing 12 mm
Spring force	From 1.5 N to 7 N along stroke (typical)

DIMENSIONS in millimeters


Wire	
YELLOW	GND (-)
RED	SIGNAL
GREEN	V _{cc} (+)



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