

**Linear Position Sensor, Non-Contacting Hall Effect Technology,
Short Strokes: ≤ 10 mm**



KEY BENEFITS

- Long lifespan (no contact, no wear)
- 10 million cycles minimum
- Offered with a spring return system
- True power-on sensor
- Output mode can be either analog ratiometric of voltage supply or digital PWM
- Accurate linearity down to ± 1 %
- Easy and fast mounting principle

END PRODUCTS

- Fork lift truck steering
- Tractor gear shifts
- Tilt sensors for trucks
- Driver presence detection (security function)
- Pressure measurement
- Pedal displacement

RESOURCES

- Datasheet: 20 LHE - <http://www.vishay.com/doc?57115>
- For technical questions, contact: sfer@vishay.com

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FEATURES

- Accurate linearity down to: ± 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
- Compliant to RoHS Directive 2002/95/EC


RoHS
COMPLIANT

ELECTRICAL SPECIFICATIONS	
PARAMETER	STANDARD
Electrical stroke	Up to 10 mm
Linearity	± 2 % or ± 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: ± 2 % A: ± 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	± 2 %	"Custom"	PWM increasing		

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