

## Throttle Position Sensor in Hall Effect Technology Hollow and D-Shaft Versions



### FEATURES

- Accurate linearity down to:  $\pm 0.5\%$
- Easy mounting principle
- Non contacting technology: Hall effect
- Model dedicated to all applications in harsh environments
- Spring loaded types available



**RoHS**  
COMPLIANT

ELECTRICAL SPECIFICATIONS		
PARAMETER	STANDARD	SPECIAL
Electrical Angle	90°, 120°, 180°, 270°, 360°	Any other angle upon request
Linearity	$\pm 1\%$	$\pm 0.5\%$
Supply Voltage	$5 V_{DC} \pm 10\%$	Other upon request
Supply Current	10 mA typical/16 mA max.	16 mA for PWM output
Output Signal	Analog ratiometric 10 % to 90 % of $V_{supply}$ or PWM 1 kHz, 10 % to 90 % duty cycle	Other upon request
Over Voltage Protection		+ 20 $V_{DC}$
Reverse Voltage Protection		- 10 $V_{DC}$
Load Resistance Recommended	Min. 1 k $\Omega$ for analog output and PWM output	
Hysteresis Static (D-Shaft Version)		< 0.3°

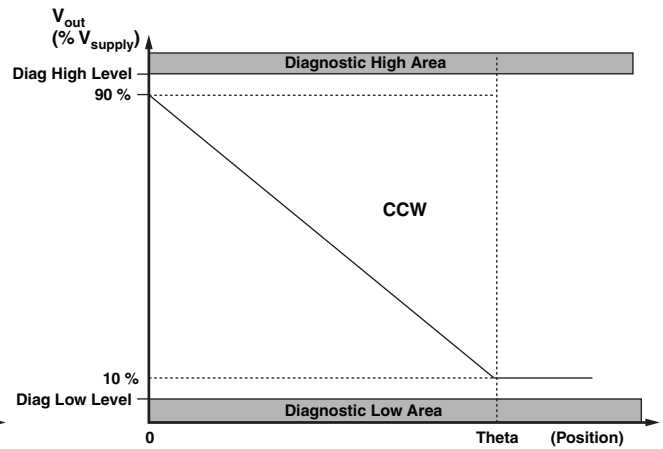
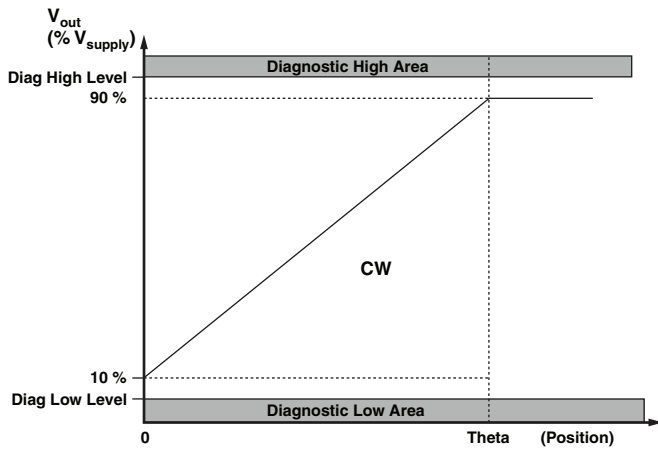
MECHANICAL SPECIFICATIONS	
PARAMETER	
Mechanical travel	360° continuous, stops upon request: 124° $\pm$ 3°
Bearing type	Sleeve bearing
Standard	IP 50; other on request
Weight	19 g $\pm$ 2 g Hollow shaft model/22 g $\pm$ 2 g D-Shaft model

ORDERING INFORMATION/DESCRIPTION									
981HE	0	A	1	W	A	1F16	XXXX	BO 10	e1
MODEL	FEATURES	LINEARITY	ELECTRICAL ANGLE	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST	PACKAGING	LEAD FINISH
0:	Continuous rotation and antirotation pin	A: $\pm 1\%$ B: $\pm 0.5\%$	1: 90° 2: 180° 3: 270° 4: 360° 5: 120° 9: Other angles	W: Wires Z: Custom	A: Analog CW B: Analog CCW C: PWM CW D: PWM CCW Z: Other output	1: 6.35 mm 9: Special P: Plain F: Flatted S: Slotted Z: Other type		Box of 10 pieces	
Shaft length from mounting face (Standard: 16 mm) 8H00 Hollow shaft 8H01 Hollow D-Shaft									

SAP PART NUMBERING GUIDELINES							
981HE	1	B	9	Z	C	8H01	XXXX
MODEL	MECHANICAL FEATURES	LINEARITY	ELECTRICAL ANGLE	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST



**V<sub>OUT</sub> ANALOG**



**V<sub>OUT</sub> PWM**

