

## Single Turn Bushing Mount Hall Effect Sensor in Size 09 (22.2 mm)



### FEATURES

- Accurate linearity down to:  $\pm 0.5\%$
- All electrical angles available up to:  $360^\circ$  (no dead band)
- 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](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### QUICK REFERENCE DATA

Sensor type	ROTATIONAL, single turn hall effect
Output type	Wires
Market appliance	Industrial
Dimensions	7/8" (22.2 mm)

### ELECTRICAL SPECIFICATIONS

PARAMETER	STANDARD	SPECIAL
Electrical angle	$90^\circ, 180^\circ, 270^\circ, 360^\circ$	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 for PWM output
Output signal	Analog ratiometric 10 % to 90 % of $V_{supply}$ or PWM 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		$< 0.35^\circ$

### MECHANICAL SPECIFICATIONS

PARAMETER	
Mechanical travel	$360^\circ$ continuous, stops upon request: $340^\circ \pm 3^\circ$
Bearing type	Sleeve bearing
Standard	IP 50; other on request
Weight	20 g $\pm$ 2 g

### ORDERING INFORMATION/DESCRIPTION

351HE	0	A	1	W	A	1S22	XXXX	BO 10	e1
MODEL	FEATURES	LINEARITY	ELECTRICAL ANGLE	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST	PACKAGING	LEAD FINISH
<b>0:</b>	Continuous rotation and antirotation pin	<b>A:</b> $\pm 1\%$ <b>B:</b> $\pm 0.5\%$	<b>1:</b> $90^\circ$ <b>2:</b> $180^\circ$ <b>3:</b> $270^\circ$ <b>4:</b> $360^\circ$ <b>9:</b> Other angles	<b>W:</b> Wires <b>Z:</b> Custom	<b>A:</b> Analog CW <b>B:</b> Analog CCW <b>C:</b> PWM CW <b>D:</b> PWM CCW <b>Z:</b> Other output	<b>0:</b> 6 mm <b>1:</b> 6.35 mm <b>2:</b> 3.175 mm <b>9:</b> Special <b>P:</b> Plain <b>S:</b> Slotted <b>Z:</b> Other type		Box of 10 pieces	
<b>1:</b>	Continuous rotation and no antirotation pin								
<b>2:</b>	Stops at $330^\circ$ and antirotation pin								
<b>3:</b>	Stops at $330^\circ$ and no antirotation pin								
Shaft length from mounting face 22 mm to 72 mm max. per step of 5 mm									

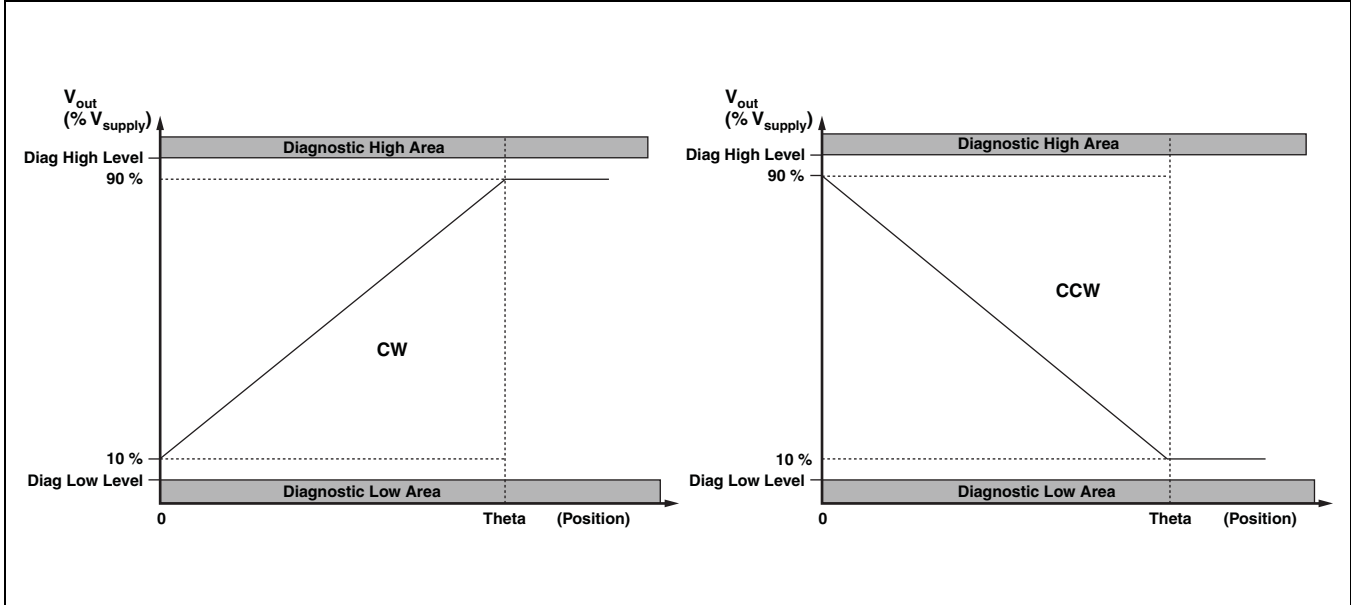
### SAP PART NUMBERING GUIDELINES

351HE	1	B	9	Z	C	0P27	XXXX
MODEL	MECHANICAL FEATURES	LINEARITY	ELECTRICAL TYPE	OUTPUT ANGLE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST



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

Operating temperature	85 °C	125 °C
Diagnostic high level	96 % min.	96 % min.
Diagnostic low level	2 % max.	4 % max.



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

