

10 Turns Servo or Bushing Mount Hall Effect Sensor in Size 09 (22.2 mm)



KEY BENEFITS

- All electrical angles available up to 3600°
- Accurate linearity down to $\pm 0.5\%$
- Very long life: 50M cycles for servo, 10M cycles for bushing
- Non contacting Hall effect technology: true power on sensor
- Model dedicated to applications requiring long life
- Single and redundant signals available
- 3 types of output signals: analog or PWM or SPI

APPLICATIONS

- Marine applications
- Off-road applications

RESOURCES

- Datasheet: 34 THE - <http://www.vishay.com/doc?57114>
- For technical questions contact sferprecisionpot@vishay.com
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>



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QUICK REFERENCE DATA

Sensor type	Multi Turn ROTATIONAL, hall effect
Output type	Wires or rear turrets
Market appliance	Industrial
Dimensions	7/8" (22.2 mm)

ELECTRICAL SPECIFICATIONS

PARAMETER	STANDARD	SPECIAL
Electrical angle	10 turns 3600°	Any other angle upon request
Linearity	± 1 %	± 0.5 %
Supply voltage	5 V _{DC} ± 10 %	Other upon request
Supply current	< 16 mA for single	< 32 mA for redundant
Output signal	Analog ratiometric 1 % to 99 % of V _{supply} (other on request) or PWM 1 kHz, 10 % to 90 % duty cycle or SPI binary on 5 V or binary on 3.3 V	
Over voltage protection	+ 20 V _{DC}	
Reverse voltage protection	- 10 V _{DC}	
Load resistance recommended	Min. 1 kΩ for analog output and PWM output	
Hysteresis static	10° on drive shaft	

MECHANICAL SPECIFICATIONS

PARAMETER	
Mechanical travel	3600° continuous
Bearing type	A sleeve bearing for bushing model/2 ball bearings for servo model
Standard	IP 50; other on request
Resolution	12 bits for analog and PWM, 14 bits for SPI

ORDERING INFORMATION/DESCRIPTION

34 THE	B	1	A	T	A	2S22	XXXX	BO 1	e1
MODEL	MOUNTING TYPE	NUMBER OF SIGNALS	LINEARITY	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST	PACKAGING	LEAD FINISH
	B: Bushing S: Servo	1: Single 2: Redundant	A: ± 1 % B: ± 0.5 %	T: Turrets Z: Custom W: Wires	A: Analog CW B: Analog CCW C: PWM CW D: PWM CCW E: SPI CW ⁽¹⁾ F: SPI CCW ⁽¹⁾ G: Analog inverted slope H: PWM inverted slope K: SPI inverted slope ⁽¹⁾ Z: Other output	2: 3.175 mm 9: Special P: Plain S: Slotted Z: Other type		Box of 1 piece	
Shaft length from mounting face standard: 22 mm									

Note

⁽¹⁾ SPI output → output type: Wires

SAP PART NUMBERING GUIDELINES

34 THE	S	2	B	T	C	2P12	XXXX
MODEL	SERVO TYPE	2 OUTPUT SIGNALS	LINEARITY	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST
			B: ± 0.5 %				

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