34 THE

Vishay Spectrol

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

FEATURES

- Accurate linearity down to: ± 0.5 %
- All electrical angles available up to: 3600°
- Very long life: 50M cycles for servo, 10M cycles for bushing
- Non contacting technology: Hall effect; true power on sensor
- Model dedicated to applications requiring long life
- Compliant to RoHS Directive 2002/95/EC

RoHS COMPLIANT

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 (crossed laws)	**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) **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 %				

For technical questions, contact: sfer@vishay.com

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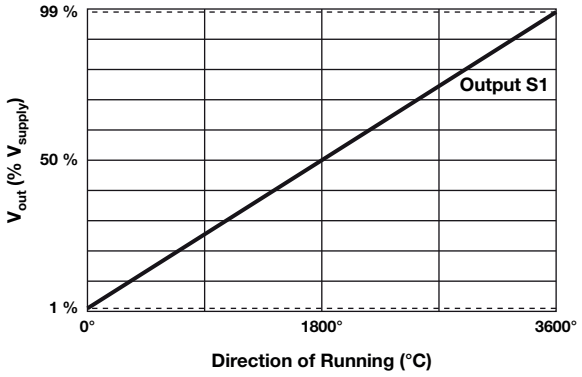
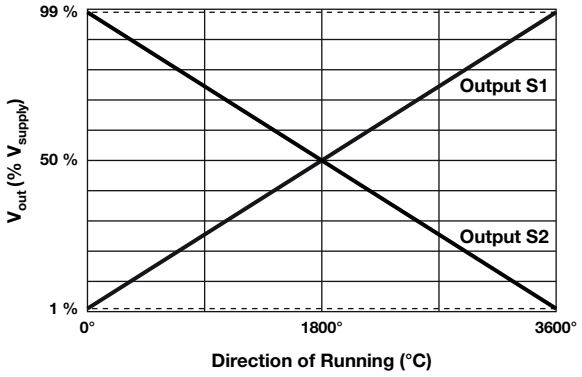
V_{OUT} ANALOG

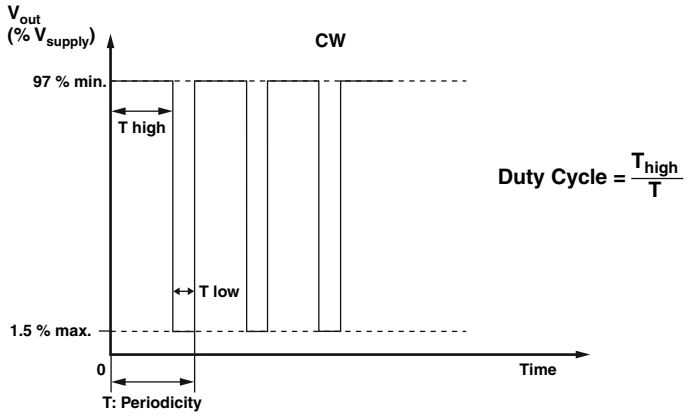
Single Output



Redundant Output



V_{OUT} PWM



V_{OUT} SPI

Notice on demand

Vishay Spectrol

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MECHANICAL SPECIFICATIONS		
Parameter	**Standard**	**Special**
Mounting Type	Servo mounting type or bushing mount (delivered with nut and washer)	
Housing	Anodized aluminum	
Shaft guiding	2 ball bearings for servo and sleeve bearing for bushing	
Shaft	Stainless steel Ø 3.175	Other on request
Outputs	Turrets	Other on request
Mechanical Travel	3600° and no stop	

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	- 40 °C; + 85 °C
Life	> 10M of cycles for bushing > 50M of cycles for servo
Rotational Speed (Max.)	1200 rpm
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 (Level A)
Radiated Electromagnetic Emissions	30 MHz/1 GHz < 30 dBµV/m, EN 61000-6-4 (Level A)
Electrostatic Discharges	Contact discharges: ± 4 kV Air discharges: ± 8 kV, EN 61000-4-2
Sine Vibration on 3 Axes	1.5 mm or 20 *g* from 10 Hz to 2000 Hz
Mechanical Shocks on 3 Axes	50 *g*, 11 ms, half sine

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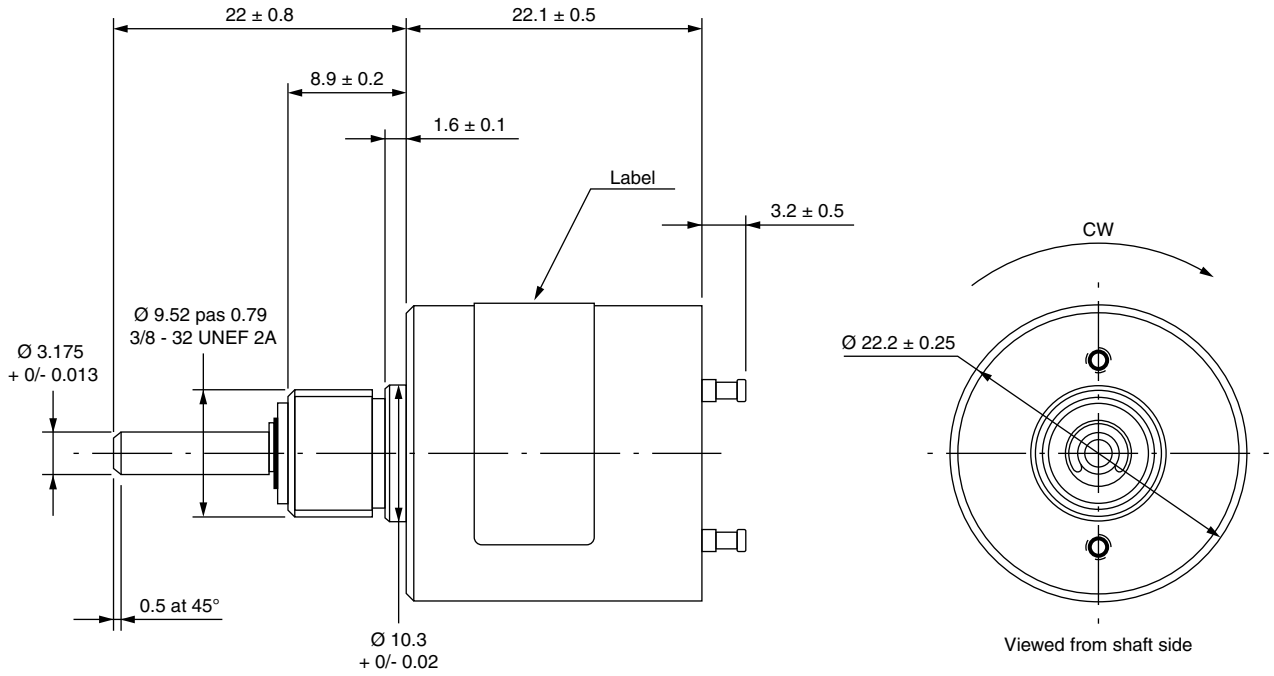
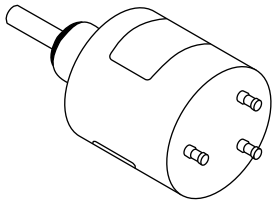
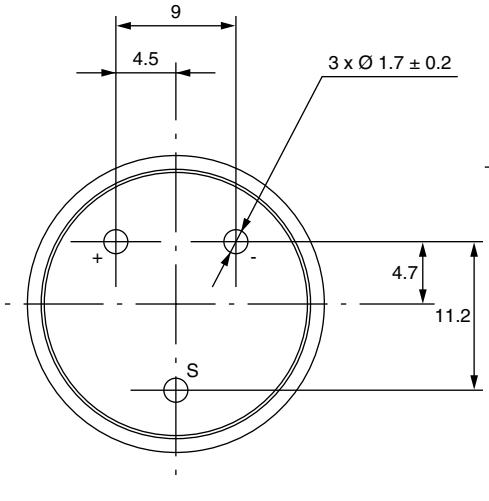
Ten Turns Servo or Bushing Mount Hall Effect Sensor in Size 09 (22.2 mm)

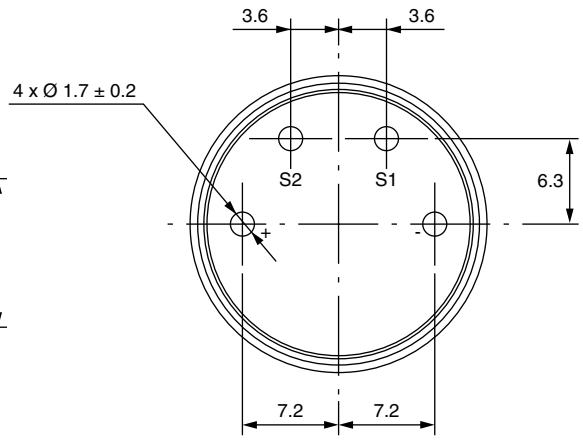
DIMENSIONS in millimeters







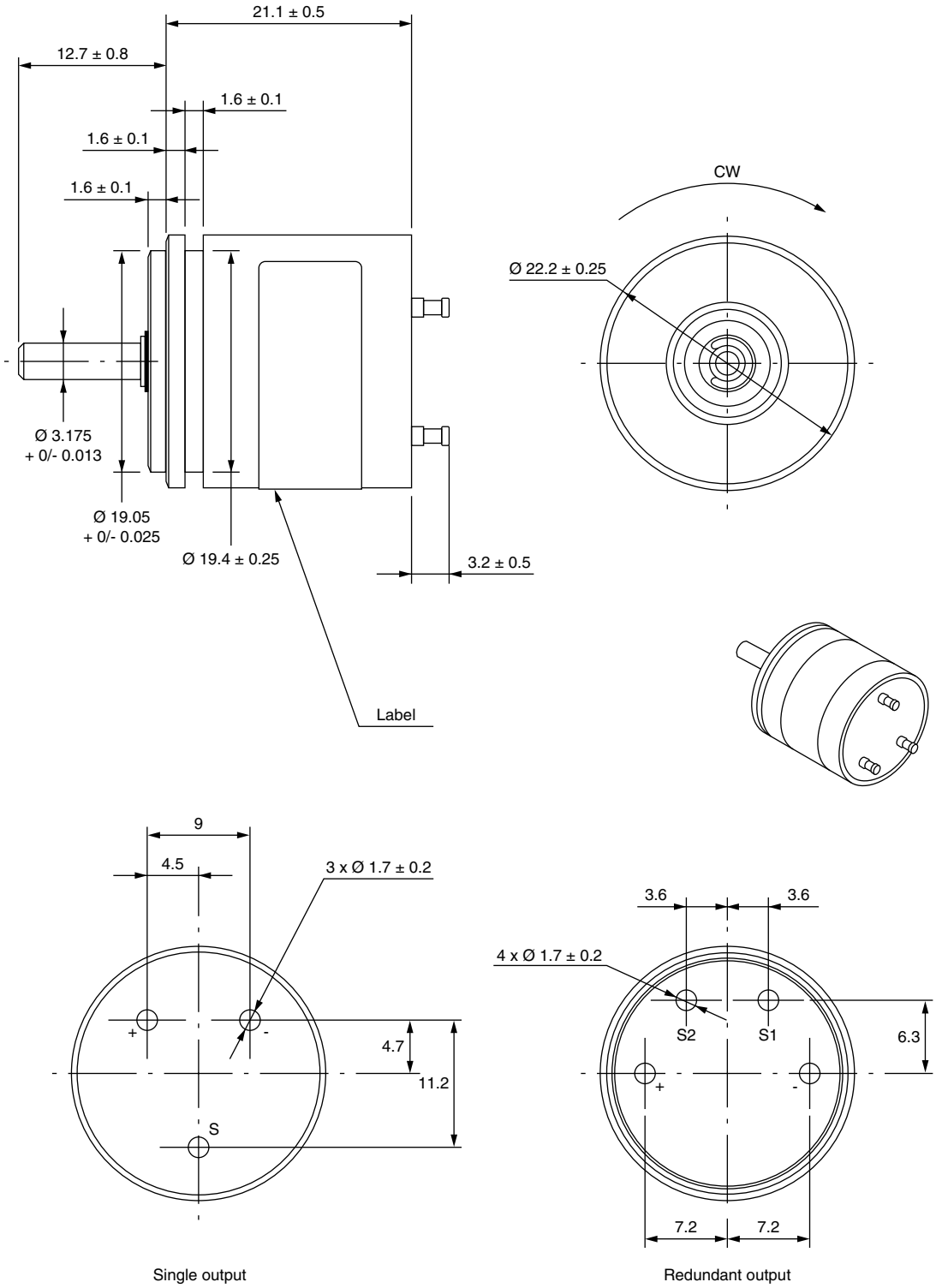
Single output



Redundant output

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

DIMENSIONS in millimeters



Single output

Redundant output

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