

Ten Turns Servo or 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: 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	$\pm 1\%$	$\pm 0.5\%$
Supply Voltage	$5 V_{DC} \pm 10\%$	Other upon request
Supply Current	$< 16\text{ mA}$ for single	$< 32\text{ mA}$ 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. $1\text{ k}\Omega$ 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: $\pm 1\%$ B: $\pm 0.5\%$	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

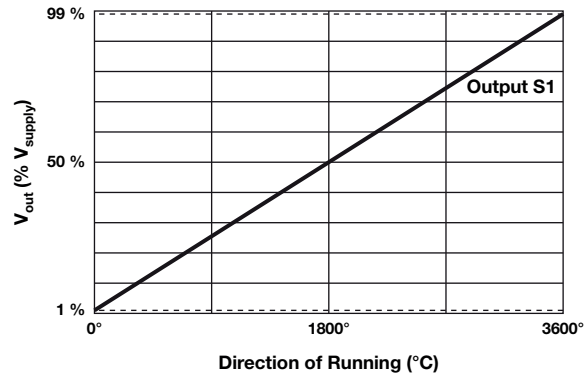
⁽¹⁾ SPI output → output type: Wires

SAP PART NUMBERING GUIDELINES

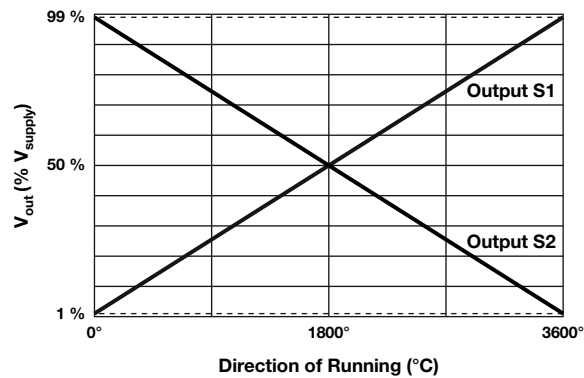
34 THE	S	2	B	T	C	2P12	XXXX
MODEL	SERVO TYPE	2 OUTPUT SIGNALS	LINEARITY	OUTPUT TYPE	OUTPUT SIGNAL	SHAFT TYPE	SPECIAL REQUEST
			B: $\pm 0.5\%$				

V_{OUT} ANALOG

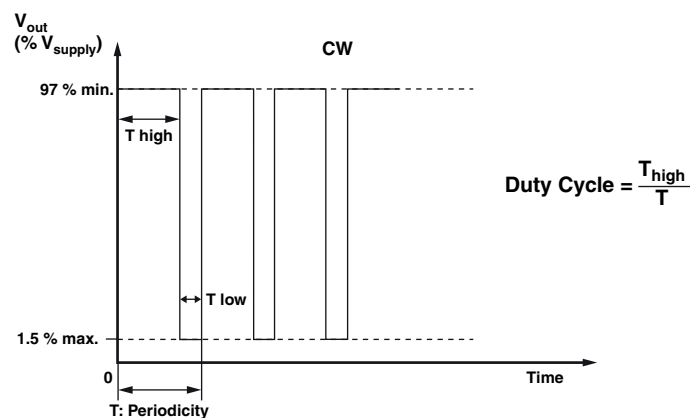
Single Output



Redundant Output



V_{OUT} PWM



V_{OUT} SPI

Notice on demand

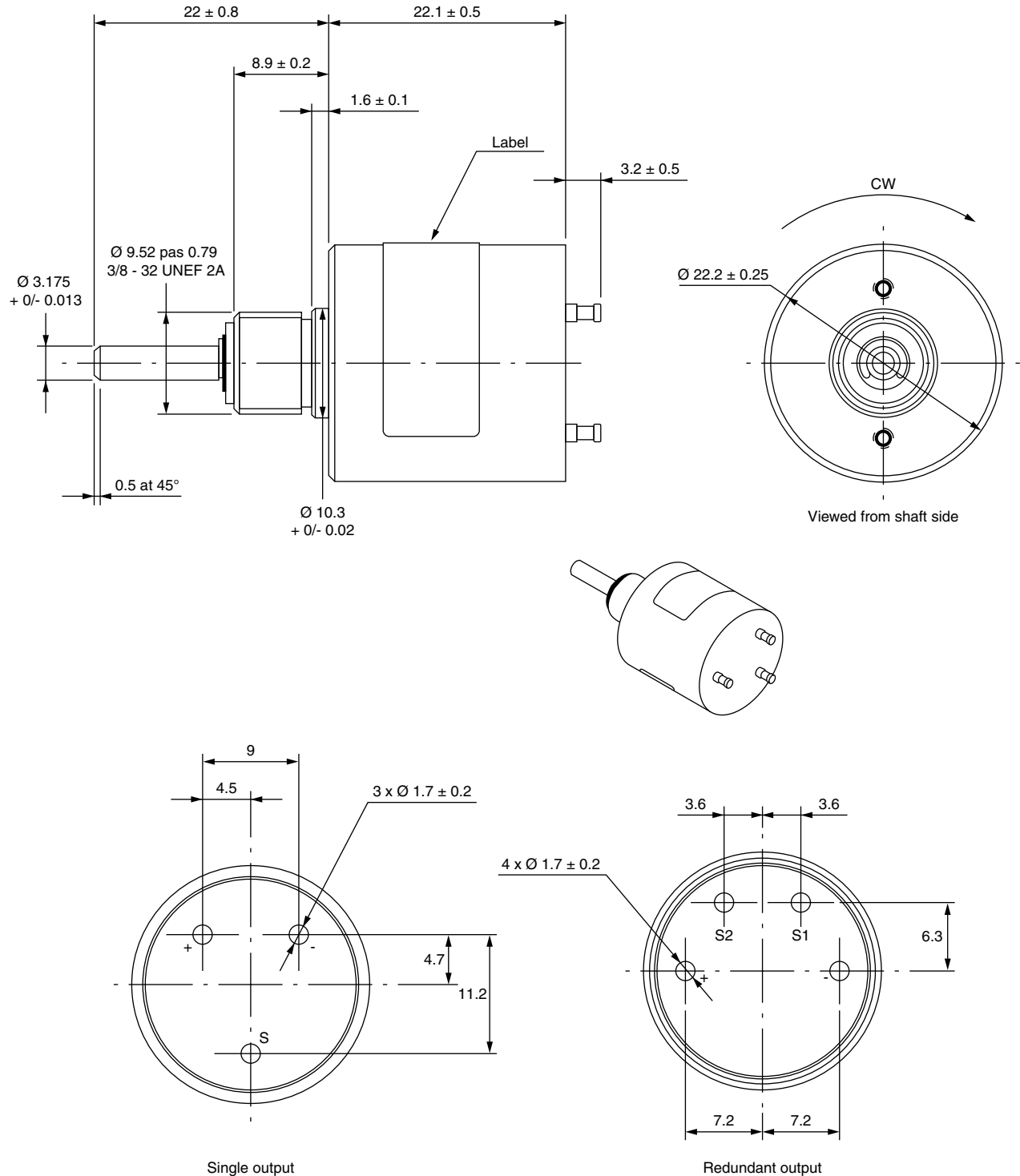
MECHANICAL SPECIFICATIONS

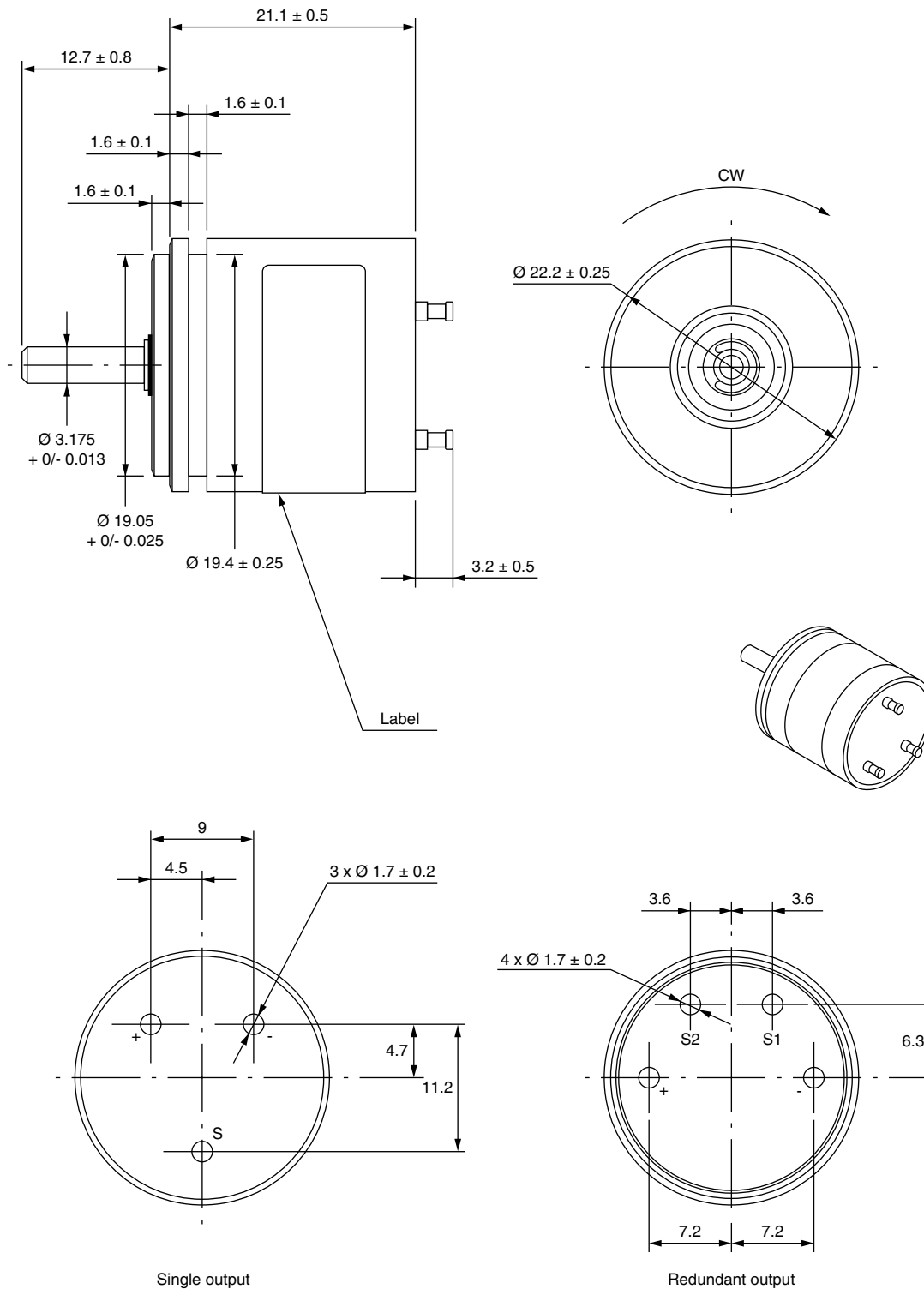
Parameter	Standard	Special
Mounting Type	Servo mounting type or bushing mount (delivered with nut and washer)	
Housing	Anodized aluminum	
Shaft guiding	2 ball bearings for servo and sleeve bearing for bushing	
Shaft	Stainless steel Ø 3.175	Other on request
Outputs	Turrets	Other on request
Mechanical 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

DIMENSIONS in millimeters



DIMENSIONS in millimeters



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