



Features

- Non-contacting magnetic technology
- Highly resistant to vibration/shock
- Highly resistant to fluid/dust ingress
- Programmable at factory for zero position
- Robust design for industrial applications
- Highly repeatable

- RoHS compliant*

AMS22S Non-Contacting Analog Rotary Position Sensor

Electrical Characteristics¹ (@ 25 °C)

VDD Supply Voltage	5 V ± 10 %
Supply Current ²	
For Low Speed Processing (Code L)	10 mA max.
For High Speed Processing (Code H)	20 mA max.
Output Signal (Single)	Analog
Independent Linearity	±0.5 %
	(±0.3 % available on request)
Hysteresis	0.2 % VDD max.
Effective Electrical Angle ³	340 °
Programmable Electrical Angle	10 ° to 360 ° (10 ° increments)
Voltage Output (Programmable)	1 to 99 % VDD ±1 %
Output Resolution	12 bit @ 360 °
Load Resistance Recommended	10K ohms to ∞
Overvoltage Protection	+20 VDC
Reverse Voltage Protection	-10 VDC

Environmental Characteristics

Operating Temperature	-40 ° to +125 °C
Rotational Life (Shaft Revolutions)	50 million
Vibration	15 G
Shock	50 G
IP Rating	IP50
ESD Rating	2 kV max.

Mechanical Characteristics (@ 25 °C)

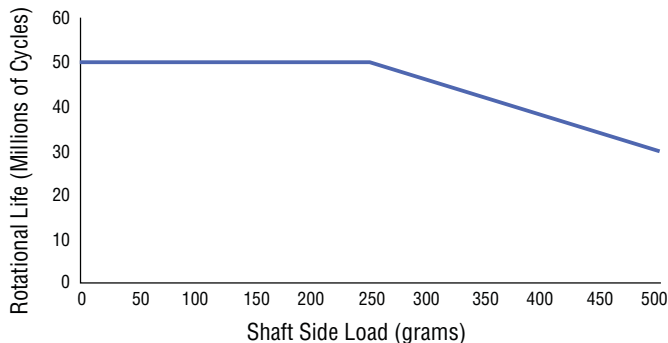
Mechanical Angle	Continuous
Shaft/RPM	120 RPM max.
Torque (Starting & Running)	1.06 N-cm. (1.5 oz-in.) max.
Shaft Material	Stainless steel
Terminals	Brass / 100 % matte tin over Ni Strike (e3)
Bearing	Bronze sleeve
Soldering Condition	
Manual Soldering	96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire; 370 °C (700 °F) max. for 3 seconds
Wave Soldering	96.5Sn/3.0Ag/0.5Cu solder with no-clean flux; 260 °C (500 °F) max. for 5 seconds
Wash processes	Not recommended

¹At room ambient: +25 °C nominal and 50 % relative humidity nominal, except as noted.

² See "Processing Speed" in How to Order selection guide.

³ Other Effective Electrical Angles available. See How to Order selection guide.

Rotational Life vs. Shaft Side Load



Product Dimensions

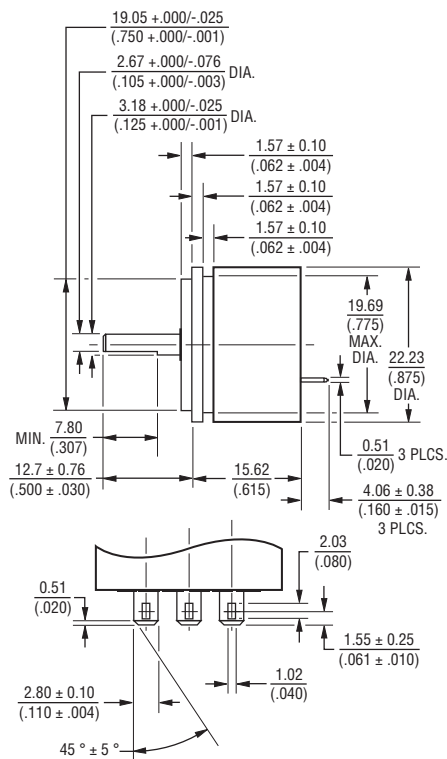
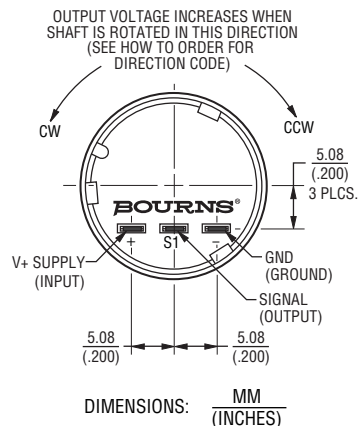
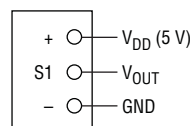


Figure 1



Schematic



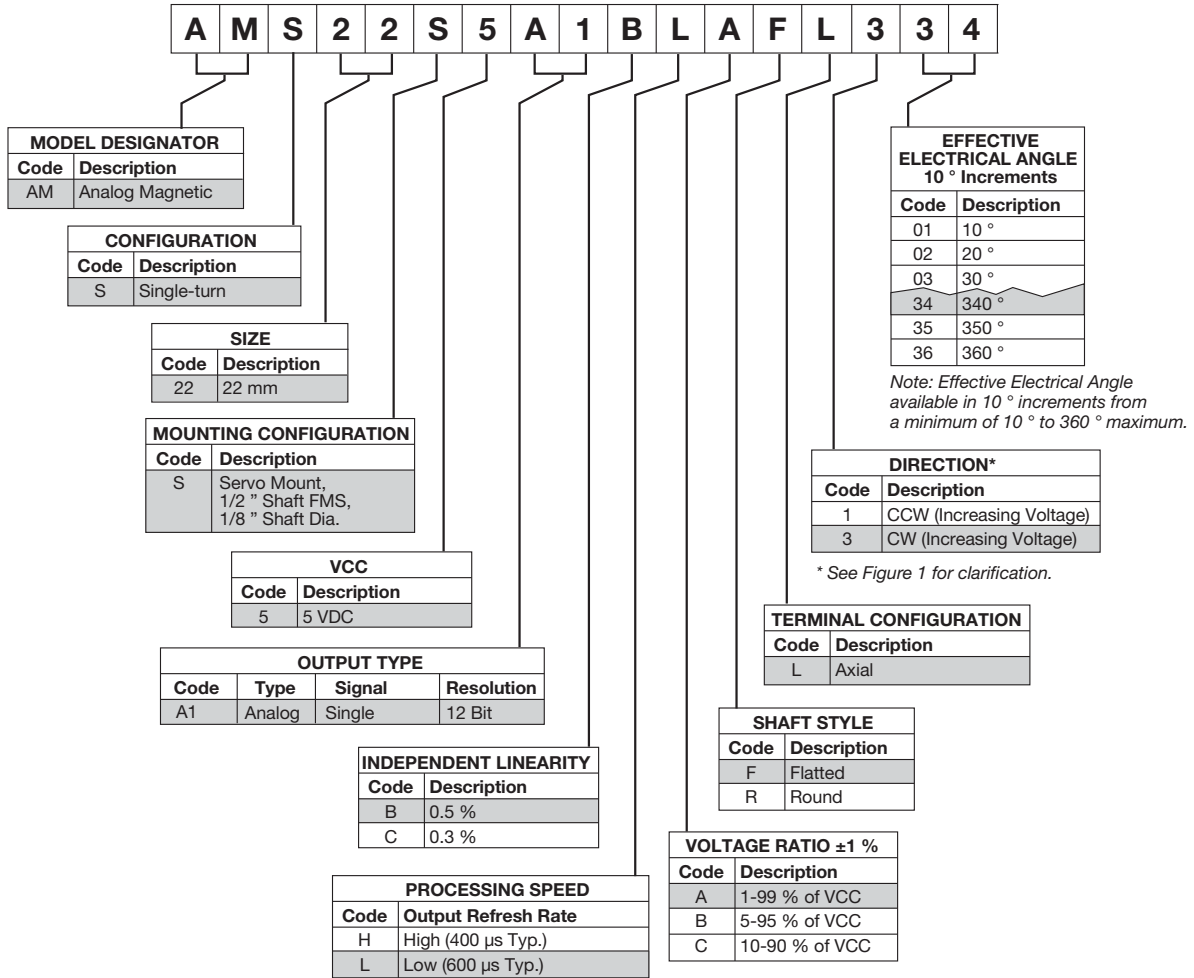
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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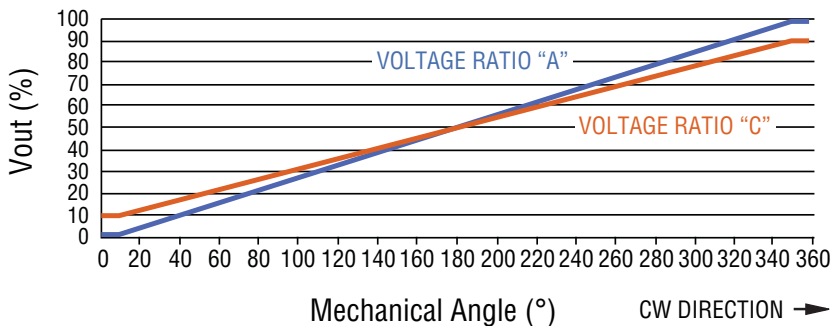
BOURNS®

How To Order



Shaded areas represent most common features.

Standard Output: 1-Turn CW Increasing (Code 334 Shown)



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REV. 07/13

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