



- ### Features
- Non-contacting magnetic technology
 - Highly resistant to vibration/shock
 - Highly resistant to fluid/dust ingress
 - Programmable slope
 - Robust design for industrial applications
 - Ideal memory positioning sensor
 - RoHS compliant*

AMM20B Multiturn Magnetic Position Sensor

Electrical Characteristics¹ (@ 25 °C)

VDD Supply Voltage.....	5 V ± 10 %
Supply Current ²	
For Low Speed Processing (Code L).....	12 mA max.
For High Speed Processing (Code H).....	15 mA max.
Output Signal (Single).....	Analog
Independent Linearity.....	±0.5 % (±0.3 % available on request)
Backlash.....	< 5 ° typ.
Effective Electrical Angle ³	
3-10 Turns.....	1080 °, 1440 °, 1800 °, 2160 °, 2520 °, 2880 °, 3240 ° or 3600 °
11-16 Turns.....	3960 °, 4320 °, 4680 °, 5040 °, 5400 °, 5760 °
Voltage Output (Programmable).....	1 to 99 % VDD ±1 %
Output Resolution.....	12 bit @ 3600 °
Load Resistance Recommended.....	10K ohms to ∞
Overvoltage Protection.....	+20 VDC
Reverse Voltage Protection.....	-10 VDC

Environmental Characteristics

Operating and Storage Temperature.....	-40 ° to +125 °C
Humidity.....	MIL-STD-202, Method 103, Condition B
Insulation Resistance @ 500 VAC.....	100 MΩ min.
Rotational Life (Shaft Revolutions).....	50 million
Vibration.....	15 G
Shock.....	50 G
IP Rating.....	IP50

Mechanical Characteristics (@ 25 °C)

Mechanical Angle	
3-10 Turns.....	3960 ° min.
11-16 Turns.....	6480 ° min.
Shaft/RPM.....	500 RPM max.
Torque	
Starting & Running.....	1.77 N-cm. (2.5 oz-in.) max.
Mounting.....	170-200 N-cm (15-18 lb.-in.) max.
Shaft Material.....	Stainless steel
Terminal Pins.....	Phos. Bronze, 100 % tin plated (e3)
Bearing.....	Bronze sleeve
Housing and Rear Lid.....	UL94V0
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

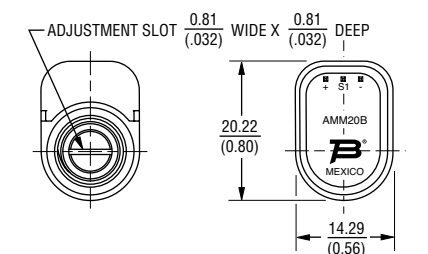
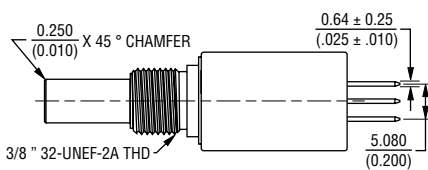
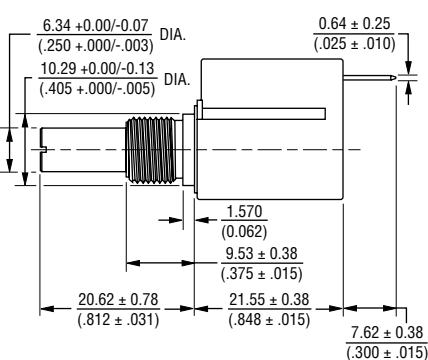
¹At room ambient: +25 °C nominal and 50 % relative humidity nominal, except as noted.
² See "Processing Speed" in How to Order selection guide.
³ Other Effective Electrical Angles available. See How to Order selection guide.

Resolution

No. of Turns	EEA	Resolution
3	1080	1228
4	1440	1638
5	1800	2047
6	2160	2456
7	2520	2866
8	2880	3275
9	3240	3685

No. of Turns	EEA	Resolution
10	3600	4094
11	3960	2816
12	4320	3072
13	4680	3328
14	5040	3584
15	5400	3840
16	5760	4096

Product Dimensions



TOLERANCES EXCEPT WHERE NOTED
 DECIMALS: .XX ± .50 (.02) .XXX ± .127 (.005)
 DIMENSIONS: $\frac{MM}{(INCHES)}$

BOURNS®

Asia-Pacific:
 Tel: +886-2 2562-4117
 Email: asiacus@bourns.com

Europe:
 Tel: +36 88 520 390
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 Email: americus@bourns.com

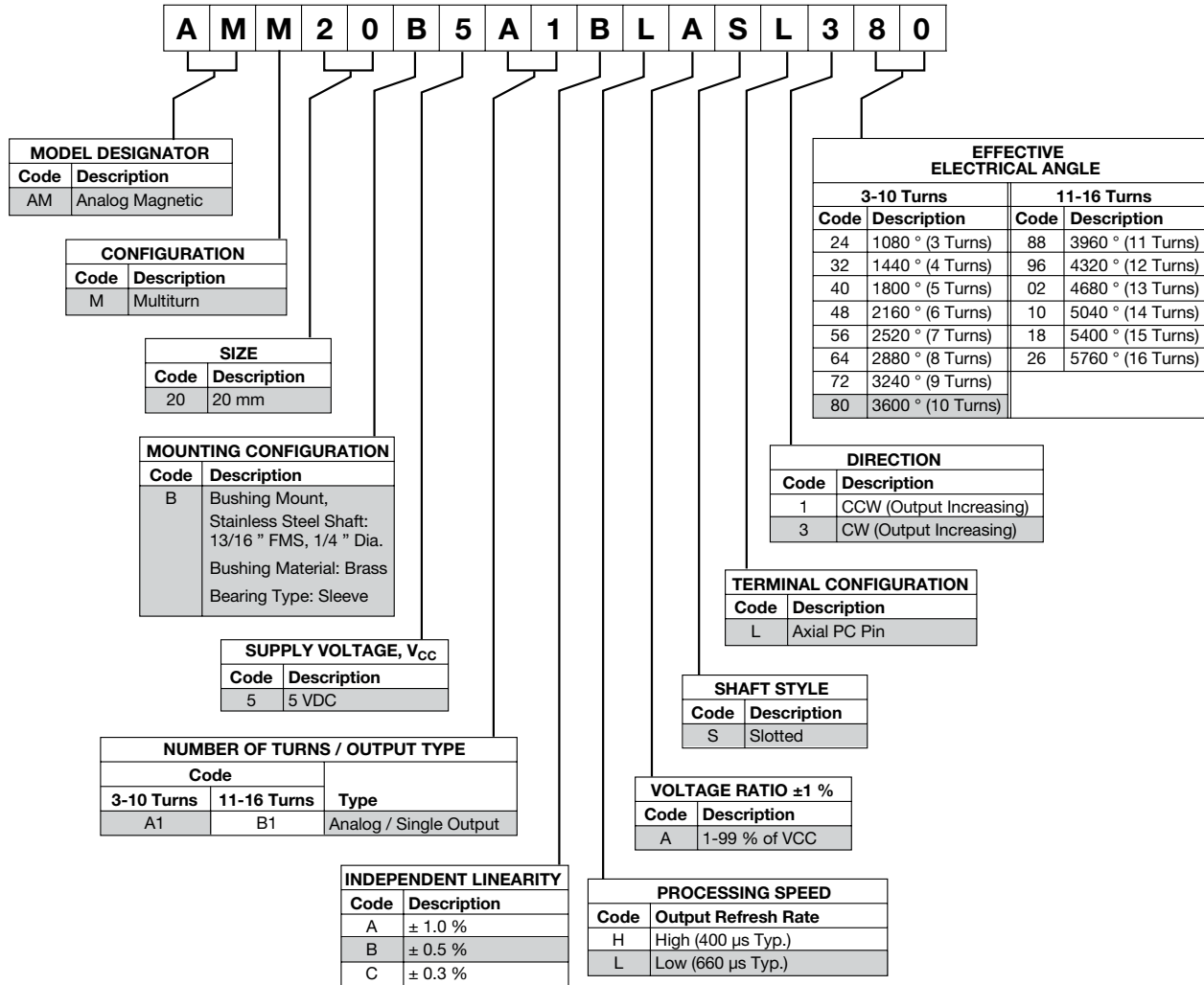
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*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
 Specifications are subject to change without notice.
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
 Users should verify actual device performance in their specific applications.

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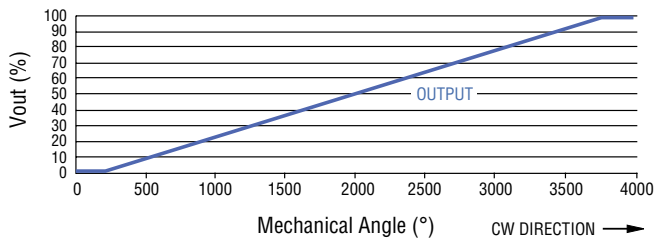
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How To Order

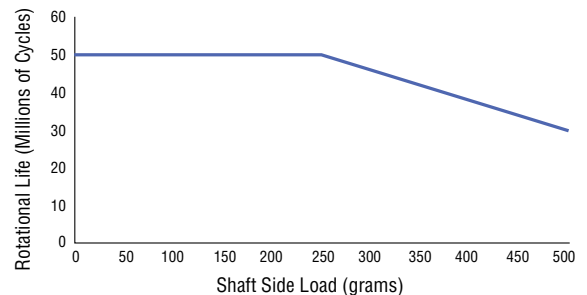


Shaded areas represent most common features.

Standard Output: 10-Turn CW Increasing (Code 380 Shown)



Rotational Life vs. Shaft Side Load



REV. 01/17

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