

Rotational Absolute Magnetic Encoder Displacement Sensor



DESIGN SUPPORT TOOLS AVAILABLE



QUICK REFERENCE DATA				
Sensor type	ROTATIONAL, magnetic technology			
Output type	Cable			
Market appliance	Industrial, railway			
Dimensions	1 1/16" (27 mm)			

FEATURES





- OTP (one time programmable) technology
- Plug and play
- · Good magnetic immunity
- · Ball bearings
- · Stainless steel shaft
- · Housing protected
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

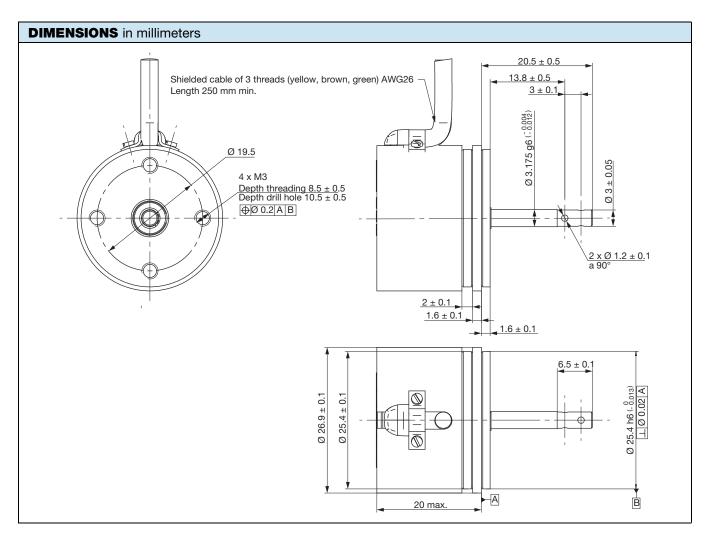
ELECTRICAL SPECIFICATIONS				
PARAMETER				
Voltage supply	5 V ± 0.25 V			
Current supply	\leq 20 mA at 5 V (with a load > 5 k Ω)			
Output	From 0.5 V_{DC} to 4.5 V_{DC}			
Connection	Shielded cable			
Useful electrical angle	360°			
Absolute accuracy at 25 °C	± 1.2° on 359° (0.33 %)			
Absolute accuracy at -25 °C to +85 °C	± 2.1° on 359° (0.58 %)			
Resolution	0.09° (~ 12 bits)			
Startup time	≤ 10 ms			
Response time	1 ms (for an angle of 20° in 6 ms)			
Dielectric strength	1000 V _{AC} / 1 min			
Insulation resistance	$>$ 50 M Ω / 500 V $_{DC}$			
Magnetic field	$<$ 10 mT with $\Delta U < 1^{\circ}$			

MECHANICAL SPECIFICATIONS				
PARAMETER				
Mechanical angle	360°			
Axial charge	3 N			
Radial charge	3 N			
Weight	≤ 50 g (with cable of 250 mm)			

SAP PART NUMBERING GUIDELINES									
TYPE	MODEL	DESIGN	SIZE (mm)	TYPE	FUNCTION	ACCURACY (BITS)	RESOLUTION (BITS)	OUTPUT	PACKAGING
R = rotational	AM	E = encoder with housing	027	R	1	07	12	A = analog CW	B = box



PERFORMANCE					
PARAMETER					
Operating temperature range	-25 °C to +75 °C				
Storage temperature range	-40 °C to +85 °C				
Protection class	IP55				
Life	50M cycles				
Vibration	CEI 61373, cat1, class B				
Shock	OLI 01373, Cdt1, Class B				



ELECTRICAL DIAGRAM

Yellow 5 V

Green 0 V

Brown output

Voltage increasing for clockwise (CW) direction viewed from control shaft side

OPTIONS (on request)

- Other accuracy
- Other resolution
- Other mechanical dimensions and mechanical interfaces
- Other electrical interface (for example: PWM, SSI, ...)
- Possibility of function redundant
- Increasing of temperature range



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