

G820: HIGH PRECISION CURRENT OUTPUT ANGLE SENSOR (ABSOLUTE VALUE ENCODER, ANGULAR DISPLACEMENT SENSOR)



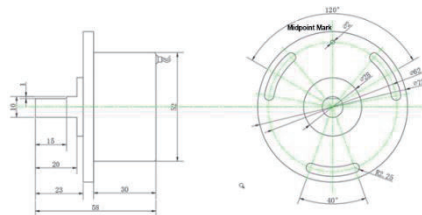
■ PRODUCT DESCRIPTION

The G820 series high-precision angle sensor is integrated with MEMS technology, low power consumption; By using magneto electric induction technology, precision bearings, differential array magnetic sensing elements, and non-contact measurement of the shaft, the parallel magnetic field strength of a permanent magnet installed at one end of the shaft is sensed and processed by MCU to achieve programmable intelligent control of linearity correction, temperature compensation, N-order digital filtering algorithm, zero point setting, and multiple different slope settings. The absolute angular position of the output sensor is achieved within the range of 0-360 °. Accuracy of 0.05 °, output RS232, TTL, RS485, CAN, 0-5V, 0.5, 4.5V, 0-10V, 4-20mA, 0-20mA optional.

■ PRODUCT MAIN SPECIFICATION

Parameter	Conditions	G820-90	G820-180	G820-270	G820-360	Unit
Measuring range ⁽¹⁾		0~90	0~180	0~270	0~360	°
Zero temperature drift ⁽²⁾	-40 ~ 85°	±0.002	±0.002	±0.002	±0.002	°/°C
Resolution ⁽³⁾		0.01	0.01	0.01	0.01	°
Accuracy ⁽⁴⁾	-40 ~ 85°C	0.05	0.1	0.2	0.3	°
Linearity		0.085	0.085	0.085	0.085	%FS
Power-on start time		0.2				s
Response time	Slow/Fast	500/200µs				
Output signal ⁽⁵⁾⁽⁶⁾	R _{load} =240 Ω	0~20mA, 4~20mA optional				
Noise		5mV				
Midpoint offset	midpoint output (Approach left and right)	4-20mA output 12mA 0-20mA output 10mA				
Average working hours		≥ 55000 hours/time				
Impact resistance		20000g, 0.5ms, 3 times/axis				
Anti-Vibration		10grms, 2 ~ 2000Hz				
Operating temperature		-40 ~ 85°C				
Waterproof level		IP66 (can be customized IP67)				
Cable		Standard 1.5 meter length, wear-resistant, oil-proof, wide temperature, shielded cable 3*0.3mm ²				
Weight		180g (excluding packaging box)				

■ PRODUCT DIMENSION



■ PRODUCT APPLICATION

- Motor control: servo system, corner position
- Valve: angle actuator
- Ship industry: ship rudder position and hatch door position
- Car safety control: steering wheel
- Coal mining machinery: coal washing machine, mineral concentrator, shield machine
- Textile machinery: tension control, shuttle wire diameter
- Engineering equipment such as cranes, cranes, and excavators
- Robot: attitude control, boom rotation