

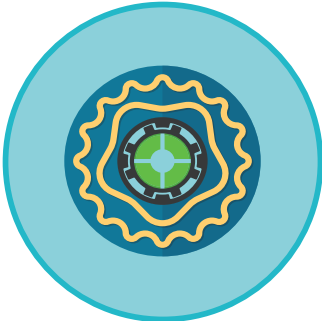
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# Motion & Control

## Rotary Encoders, Potentiometers & Stepper Servo Motors

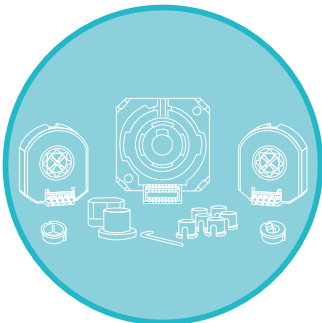
Our line of potentiometers, rotary encoders, and stepper servo motors offers a range of configurations to provide users with a highly reliable solution for almost any motion control application. Highlighting this product group is our groundbreaking AMT encoder line based on capacitive technology, which delivers unmatched flexibility and ruggedness without tradeoffs.

## Innovative Tech ○○○○○



### Capacitive Technology

Our AMT series of modular encoders utilizes capacitive technology to provide unmatched durability, flexibility, and programmability in an encoder. Used for years in digital Vernier calipers, capacitive technology incorporates two patterns of bars or lines, with one set on the fixed element and the other on the moving element. As the encoder rotates, a proprietary ASIC counts these line changes and interpolates to provide highly accurate position feedback.



### Encoder Kits

Our AMT all-in-one encoder kits offer hundreds of configurations in a single package. The kits include up to 9 sleeve options for mating with a wide range of motor shaft diameters as well as simple mounting tools to make assembly easy. Coupled with a selectable or programmable resolution range, the AMT kits provide engineers with a flexible platform in the development process and purchasing managers the ability to greatly reduce SKU count in production.

## Engineering Tools



### Resource Library

Gain access to a wide range of videos, blogs, ebooks, webinars, and more to assist in your next design.



### CAD Model Library

Save time and resources by utilizing our library of free, ready-made 3D models and PCB footprints to help you to streamline the design process.



### AMT Viewpoint™

Program a range of encoder parameters and access diagnostic data for quick analysis during design, allowing for an unprecedented level of visibility and control.

## Global Stock Availability

Our network of global distribution partners provides you with quick and easy access to motion control products, ready to ship same day across the globe.



# Motion & Control Product Line



## Incremental Encoders

### Resolutions from 10 to 5120 PPR

- Modular & panel mount package types
- 2-bit quadrature, CMOS voltage, line driver, open collector & voltage output types
- Operating temperature ranges up to -40 to 125°C
- Axial, radial, horizontal & vertical orientations
- 1 to 15.875 mm shaft bore diameters
- 2.97 to 5.5 Vdc input voltages
- 120 to 15,000 RPM max speeds
- 10 to 30 mm shaft lengths
- Cable, header, PCB pin & solder hole termination types



## Stepper Servo Motors

### AMT Encoder & Stepper Motor

- NEMA 8, 11, 14, 17, 23 frame sizes
- 3 to 270 oz-in (0.021 ~ 1.90 N-m) holding torques
- Provides closed-loop feedback for complete servo system
- 22 programmable incremental resolutions from 48 to 4096 PPR
- 1.8° step angle
- Digitally set zero position
- -20 to 50°C operating temperature range
- Patented capacitive encoder ASIC technology



## Absolute Encoders

### Resolutions up to 14 Bit

- Modular package type
- SPI, SSI & RS-485 interfaces
- Single-turn or multi-turn outputs
- Operating temperature ranges up to -40 to 125°C
- Axial & radial orientations
- 2 to 15.875 mm shaft bore diameters
- 3.8 to 5.5 Vdc input voltages
- 4,000 & 8,000 RPM max speeds
- Low current draw
- Compact design



## Potentiometers

### Rotary or Trimmer Models

- 1 to 2000 k $\Omega$  resistance ratings
- Linear, logarithmic, or reverse logarithmic tapers
- Wide variety of terminal configurations
- Available with or without center detent
- Shaft lengths of 15, 20, 25, or 30 mm
- D-cut or knurled shaft styles
- 0.05 to 0.15 W power ratings
- Single or dual-gang configurations
- -10 up to 75°C operating temperature range
- Rotational life of 10,000 cycles



## Commutation Encoders

### Resolutions from 48 to 4096 PPR

- Three phase U, V, W commutation signals
- CMOS voltage, commutation line driver, line driver & quadrature line drive output types
- Operating temperature ranges up to -40 to 125°C
- Axial & radial orientations
- 2 to 15.875 mm shaft bore diameters
- 4.5 to 5.5 Vdc input voltages
- Accommodates 2 to 20 pole brushless motors
- Low current draw
- Compact design