List of BRANDS | DYNAPAR

DYNAPAR™
INNOVATION - CUSTOMIZATION - DELIVERY

Dynapar offers the world's broadest range of encoders, resolvers and accessories for motion feedback control. For 50 years, the four brands of Dynapar have been providing innovative, customized system solutions for virtually any heavy-, industrial, servo- or light-duty application.
We've been able to stay at the forefront of innovation because we listen to you, our customer. You want your products a certain way and we are here to deliver. Our unique customization capabilities mean that no matter your industry, no matter your application, Dynapar will deliver the product that fits your needs perfectly. And with our fast delivery guarantee, you get it right when you need it.

Rotary Encoders

Dynapar offers a wide variety of rotary encoders for every feedback application including incremental, absolute, miniature and heavy duty rotary encoders. Rotary encoders come in 3 major mounting styles: hollow-shaft (hollow-bore or through shaft), hub-shaft (hub-bore) or shafted. Hollow-shaft and hub-shaft rotary encoders mount directly to a motor shaft typically using a tether. Shafted rotary encoders mount using a flexible coupling.

Absolute Encoders

Absolute rotary encoders measure actual position by generating a stream of unique digital codes (instead of pulses) that represent the encoder's actual position. Single turn absolute encoders output codes that are repeated every full revolution and do not output data to indicate how many revolutions have been made. Multi-turn absolute encoders output a unique code for each shaft position through every rotation, up to 4,096 revolutions. Unlike incremental encoders, absolute encoders will retain correct position even if power fails without homing at startup.

Incremental Encoders

Incremental encoders provide speed, direction and relative position feedback by generating a stream of binary pulses proportional to the rotation of a motor or driven shaft. Dynapar offers both optical and magnetic incremental encoders in 4 mounting options: shafted with coupling, hollow-shaft, hub-shaft or bearingless. Single channel incremental encoders can measure speed which dual channel or quadrature encoders (AB) can interpret direction based on the phase relationship between the 2 channels. Indexed quadrature encoders (ABZ) are also available for homing location are startup.

Optical Rotary Encoders

Optical encoders provide high resolution, high operating speeds and reliability Dynapar offers both mask type and phased array sensing technology. Optical encoders with Dynapar's phased array technology can operate in high shock and vibration environments and are typically rated at 400 G shock and 20 G vibration. Optical encoders work by shining a light source through a patterned disc that is read by a photo-detector. Optical encoders engines can be implemented as incremental or absolute encoders and are available in various mounting styles.

Magnetic Rotary Encoders

Because magnetic rotary encoders are based on an inductive effect, they do not require bearings, which removes a point of failure from the system. Combined with encapsulated electronics, magnetic rotary encoders are extremely robust, can handle extreme temperatures, shock, vibration and ideal for environments with dirt, dust and oil. Dynapar offers incremental magnetic rotary encoders with up to 2,048 PPR resolution and absolute models with up to 16 bit multi-turn resolution.

Hollow-Shaft Encoders

Dynapar offers both incremental and absolute hollow-shaft encoders in a variety of sizes and resolutions. Hollow-shaft encoders can be directly mounted to a motor shaft and affixed using a flexible tether or torque arm to prevent the encoder from rotating. Hollow-shaft encoders are easier to install than shafted encoders, eliminating the need for a coupling and do not require motor shaft alignment with respect to the encoder.

List of BRANDS | DYNAPAR

DYNAPAR™
INNOVATION - CUSTOMIZATION - DELIVERY

Hub-Shaft Encoders

Similar to hollow-shaft encoders, hub-shaft rotary encoders offer direct mounting to a motor shaft or driven shaft but do not require the shaft to the shaft to extend through the encoder. Hub-shaft encoders are ideal for direct mounting in limited space and offer improved sealing with no opening on the back of the encoder. Hub-shaft encoders are mounted with a tether point to prevent free encoder rotation and a plastic sleeve or insert is typically used to isolate the encoder from motor shaft current.

Shaft Encoders

Dynapar offers a wide range of shafted rotary encoders that mount to a motor or driven shaft via a flexible coupling. By changing the coupling, shafted encoders can be matched with a variety of motors, even non-standard or older motors. The coupling can also provide electrical isolation from the motor and absorb shaft movement or compensate for shaft misalignments making shaft encoders ideal for strenuous applications. The shaft coupling is usually covered with a bracket or "flower-pot" mounting fixture to provide support and protect the coupling.

Miniature Encoders

Dynapar offers miniature rotary encoders and commutation encoders with diameters less than 2 inch for feedback applications in tight spaces. Several super-compact modular encoders for small servo and stepper motor feedback are also available designed to replace size 10, 11, 15 resolvers in motor applications. Models with h phased array sensor technology allows for axial shaft play and provide high performance encoder feedback in high shock or vibration environments. Dynapar also offers miniature encoders designed with wide operating temperature ranges and various PPRs up to 5,000 PPR and commutation track or pole options.

Hazardous Area Encoders

Hazardous area encoders are used where flammable liquids, vapors, gases or combustible dusts are likely to occur including oil & gas exploration, grain silos as well as paint and other chemical production. Dynapar offers several rotary encoders designed for these environments with varying degrees of zone and class/div protection ratings and certified by organizations including UL, ATEX, IECEx and CSA. Intrinsically safe encoders are used in conjunction with a barrier which limits the energy in the encoder so that any arcs or sparks do not have enough energy to ignite. Dynapar's flameproof encoders are designed to withstand an internal explosion and include an internal flamegap or labyrinth to allow escaping gases to cool before leaving the encoder. Dynapar also offers encoders with encapsulated electronics which have their components encased in resin.

Non Contact Encoders

Non contact encoders or shaftless encoders offer a compact, rugged package with no shaft, couplings, bearings or seals to wear out. Designed with the form factor of a traditional proximity sensor, our non contact encoders or non contact rotary sensors can offer position data. A wide sensing envelope and means design flexibility and allows for the sensor to work even the magnet is misaligned or offset from the sensor. Encapsulated electronics with no moving parts means Dynapar's non contact encoders excel in environments with extreme temperature, moisture, high shock and vibration , such as agriculture, farming, construction, forestry and food and beverage.