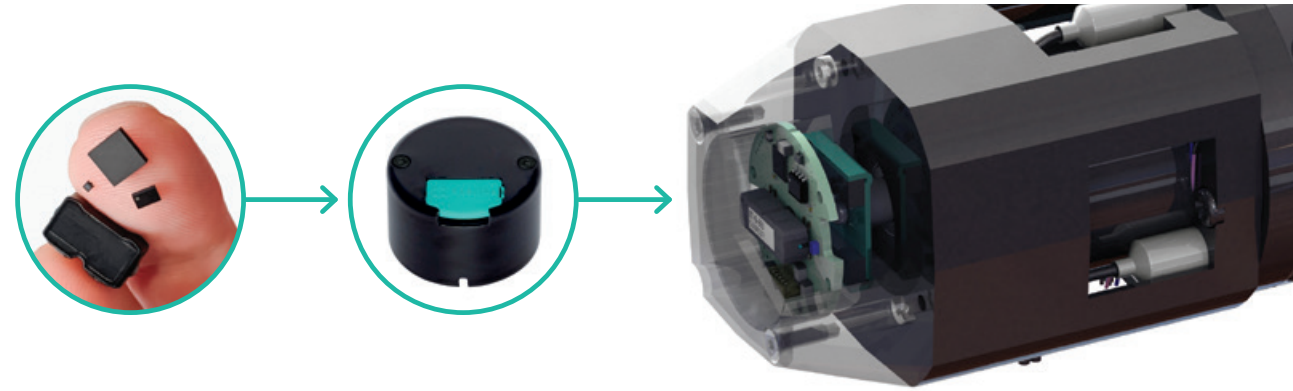


ENERGY HARVESTING – NO BATTERIES



Innovative Technology

The revolution counter is powered by UBITO's (POSITAL's sister company) Wiegand energy harvesting system, eliminating the need for backup batteries or complex gear. At any speed, even very slow, the Wiegand effect generates short voltage pulses with each full rotation. These pulses power the counter and electronics, ensuring accurate rotation tracking even without external supply. Proven since 2005, this principle guarantees reliable, maintenance-free multiturn absolute position measurements.

The Wiegand Advantage



Self-powered Operation

Harvests its own energy for signal and processing.



Dependable Counting

Clear, consistent pulses that never fade.



No Wear & Tear

No moving parts or battery changes needed.

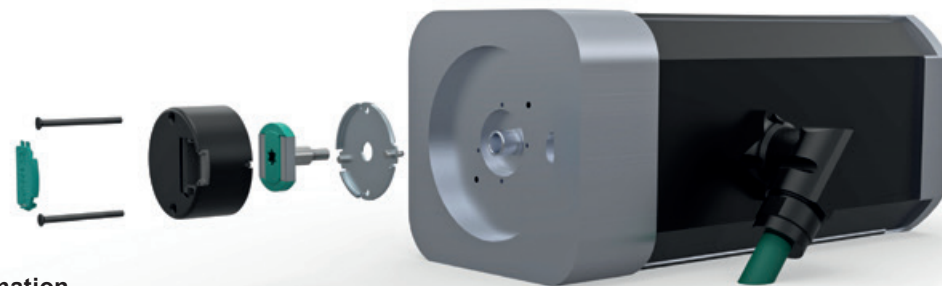


Sustainably Smart

Durability that cuts waste and reduces environmental impact.

Plug and Play Encoder System

An integrated auto-calibration function removes the need for complex production tools. With BiSS commands, the encoder can be programmed for key performance parameters and initiate calibration or test routines while rotating. Embedded software monitors electronic health, providing diagnostics over its lifetime. Robust magnetic sensing makes POSITAL kit encoders resistant to dust and moisture, ensuring reliable operation in factory environments.



Scan for More Information
about Wiegand Sensors

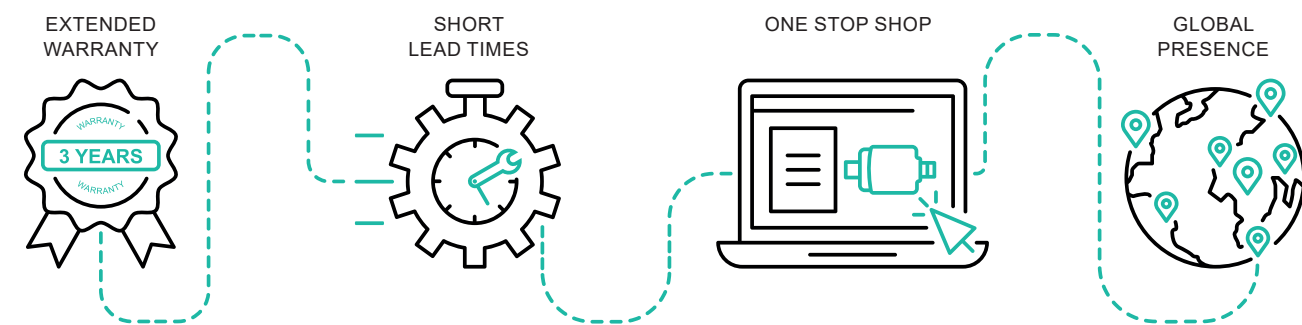
POSITAL AT A GLANCE



POSITAL designs and manufactures motion control sensors, including rotary encoders, inclinometers, and linear position sensors. These products play a key role in modern manufacturing, robotics, mobile machinery and material handling applications, enabling accurate automation, dependable processes, and higher efficiency.

With its roots in the FRABA Group, founded in Cologne, Germany in 1918, POSITAL benefits from over a century of technological expertise combined with a strong spirit of innovation. Leveraging advanced design methods and highly flexible manufacturing processes, the company ensures that customers worldwide enjoy the advantages of cutting-edge technology, a broad range of options, superior product quality, and long service lifetimes.

- Leaders in Innovation Technology
- No Battery, No Maintenance, Based on Wiegand
- Built to Order Production System
- 200+ Distributors Worldwide
- Large Product Portfolio – Mass Customization
- Short Lead Times
- Over 60 Years' Experience in Absolute Encoders
- 36 Month Warranty



MULTITURN KIT ENCODERS

No Battery – Robust – Easy to Install

OUR SOLUTIONS



Multiturn & Incremental Kit Encoders Without Battery

POSITAL kit encoders are modular encoders without integral ball bearings. They provide smart, maintenance-free and cost-efficient solutions for the most challenging tasks in real time motion feedback. Fusion of sensing technologies results in unique designs with uninterruptable, battery-free multiturn function, powered by a Wiegand pulse with every rotation. The gear-free, compact and economically optimized concept is ideal for integration into servo, stepper or BLDC motors. No special equipment is required for the installation.

Our Portfolio



- **Multiturn Kit Encoders With Solid Shaft**
36mm Diameter
Up to 19 bit Resolution
BiSS-C, BiSS Line, SSI
No Battery, No Gears
Based on Wiegand Technology



- **Multiturn Miniature Kit Encoders**
20mm Diameter
Up to 19 bit Resolution
BiSS-C, SSI
Hub Shaft Ø 2, 3, 4 mm
Based on Wiegand Technology



- **Multiturn Kit Encoders With Hub Shaft**
36mm Diameter
Up to 19 bit Resolution
BiSS-C, BiSS Line, SSI
Hub Shaft 4 to 10 mm
(incl. 1/4" and 3/8")



- **Multiturn Counter**
Up to 40 Bit Revolution
SPI Interface
Upgrade a Motor to Multiturn
Extensive Diagnostics
No Battery, No Gears



- **Incremental Kit Encoders**
Up to 1024 PPR Resolution
Hub Shaft 3 to 8 mm (incl. 1/4")
RS2422, TTL
Easy To Install
Based on Optical Technology



- **Through Hollow Shaft Kit Encoders**
Shafts 30 mm or 50 mm
Slim Design (18 mm Thickness)
Up to 19 bit Resolution
BiSS-C, SSI
Easy to Install



20 mm Multiturn Kit Encoder
Compact Design, No Batteries

POSITAL kit encoders combine advanced sensing with a rugged, compact design to deliver reliable motion feedback in demanding environments. At their core, TMR (tunneling magneto resistance) sensors ensure exceptional precision, high resolution of up to 19-bit, and stable performance across wide temperature ranges. Multiturn versions incorporate Wiegand technology to capture every shaft rotation without batteries or external power, safeguarding data even during power loss. Engineered with sealed housings, they resist dust and moisture, making them well-suited for robotics, packaging, automation systems, and machine tools. Simplified installation and robust construction enable long-lasting, cost-effective performance while supporting the needs of modern motion systems.

- **Absolute Multiturn Measurement, Up to 19 Bit**
- **No Battery, No Maintenance**
- **Insensitive to Dust and Moisture**
- **Temperature Range: -40° to +105°C**



Scan for More Information
about Kit Encoders

Applications

POSITAL kit encoders deliver battery-free, cost-efficient motion control for servo and stepper motors. Proven across robotics, packaging, automation, and machine tools, they ensure precise positioning and improved performance, providing reliable feedback for controlled rotation in diverse applications.



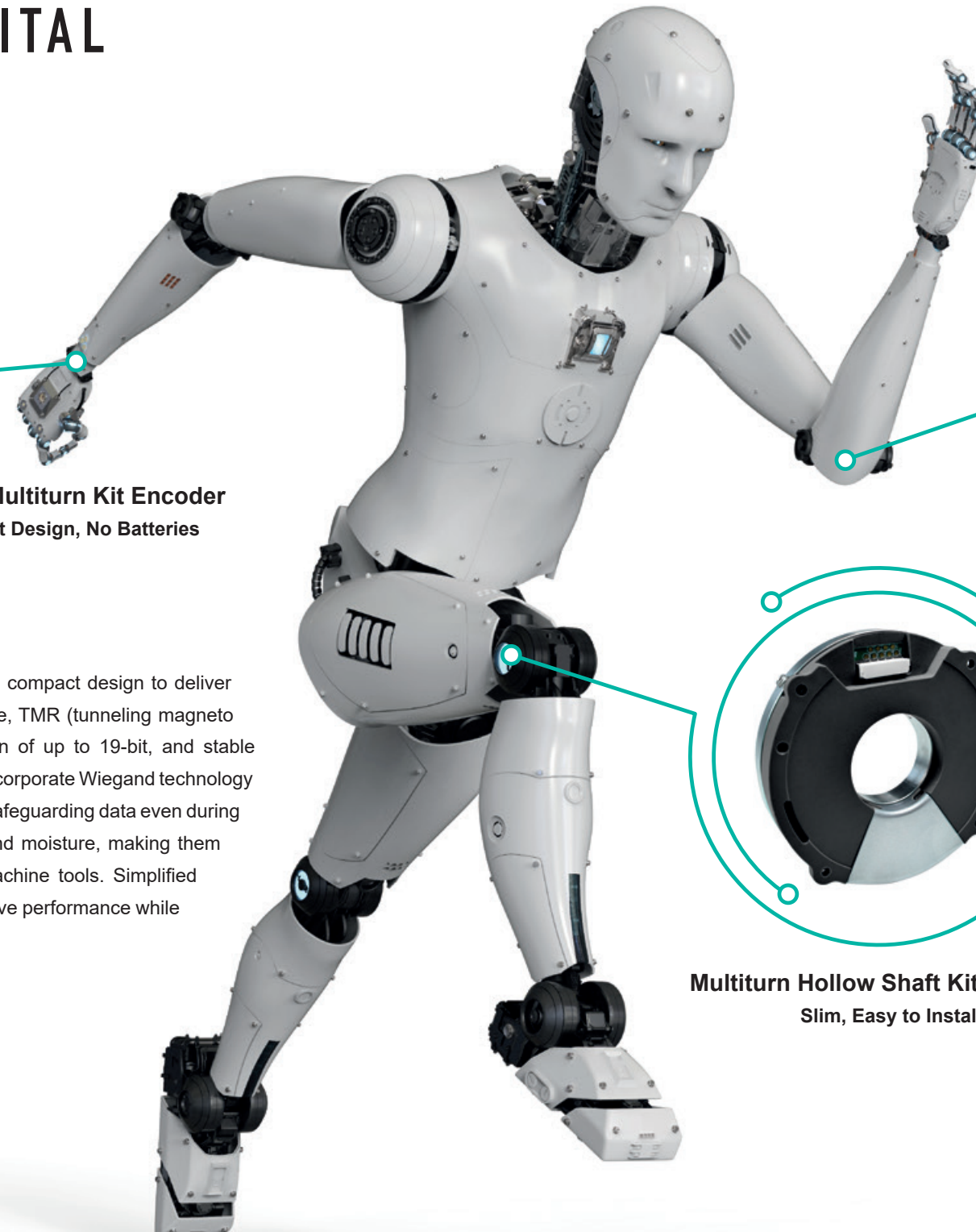
➤ **Linear Actuator**



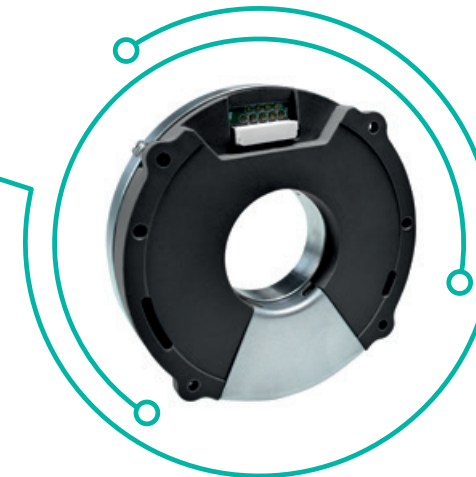
➤ **Stepper / Servo Motor**



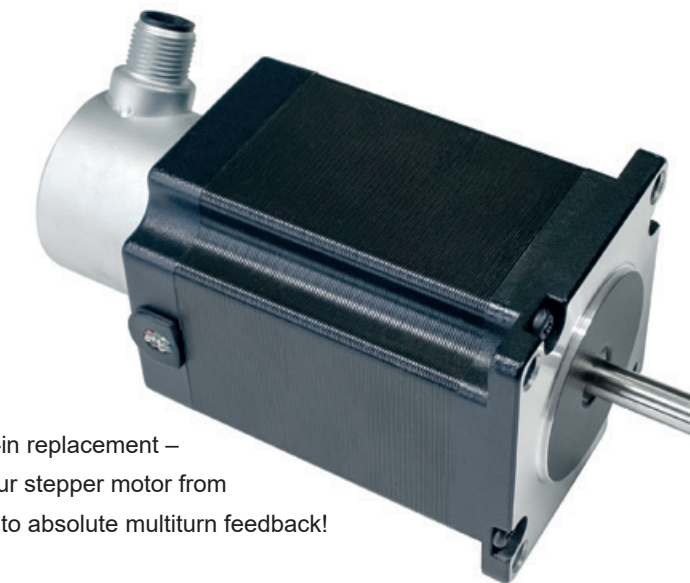
➤ **AGV**



36 mm Multiturn Kit Encoder
BiSS-C, BiSS-Line, SSI



Multiturn Hollow Shaft Kit Encoders
Slim, Easy to Install



Drop-in replacement –
Easily upgrade your stepper motor from
incremental to absolute multiturn feedback!

The Smallest Multiturn Encoder

POSITAL's 20 mm multiturn kit encoder is the most compact solution for precise motion feedback! It delivers up to 19 bit resolution and battery-free multiturn functionality powered by Wiegand technology. For easy installation, it features BiSS-C and SSI interfaces along with an updated flex JST connector, enabling quick integration even in the tightest spaces.



- **20mm Diameter**
Fits in the smallest devices and compact designs
- **Wiegand Technology**
Multiturn tracking without battery or gear
- **Easy to Install**
No calibration or special equipment required