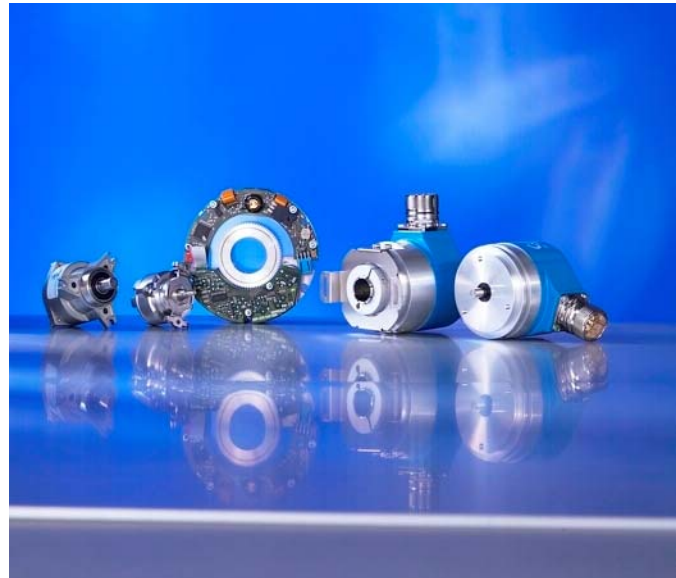


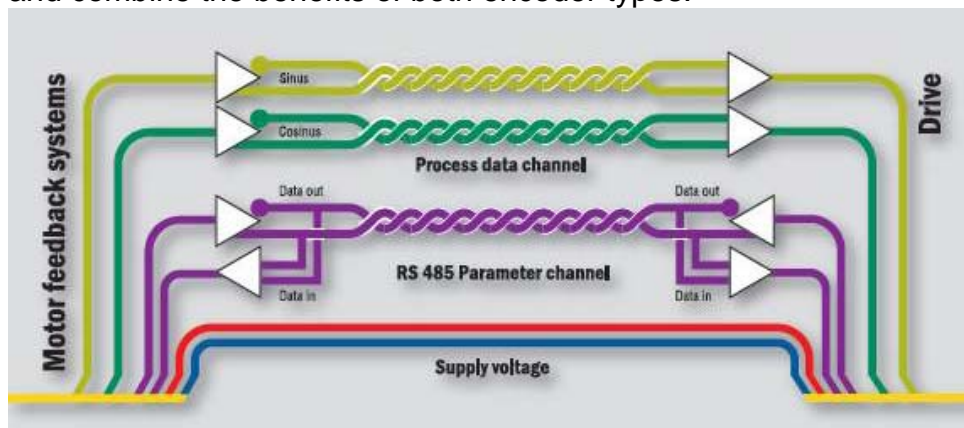
Overview

Stegmann is a leading supplier of motor feedback systems that meet critical requirements, such as temperature resistance, high resolution, multi-turn design with internal gearing, high interference immunity and, importantly, small dimensions, enabling short motor build lengths. Via the electronic type label, and the integrated HIPERFACE® interface, the motor and its characteristics are automatically recognized.



Stegmann developed the **HIPERFACE®** technology in order to provide high performance motor feedback that includes commutation, absolute position and speed information.

HIPERFACE® motor feedback systems are a mix of incremental encoders and absolute encoders and combine the benefits of both encoder types.



Initially, the absolute value is only formed when the device is powered up and is communicated to the external counter in the controller via the bus-enabled RS 485 parameter interface. From this absolute value, the controller continues to count incrementally using the analogue sine/cosine signals. The use of highly-linear sine and cosine signals achieves the high resolution (**millions** of counts per revolution) required for precise speed and position control (interpolation within the drive/controller). However, the signal frequencies to be transmitted remain relatively low. For instance a unit with 512 periods per revolution, operating at a very high speed of 12,000 RPM, only generates an output frequency of 102.4 kHz which can be easily transmitted over a long

distance. **HIPERFACE®** retains only one interface with 8 lines, for reduced cabling work.

Products

The following encoders are available for demanding motor feedback applications:

SinCos SCK/SCL25-53

- HIPERFACE® interface
- Large hollow bore design, ideal for direct drive systems
- 16,384 Absolute steps per revolution
- 4,096 Multi-turn revolutions (SCL)
- 1,024 sine/cosine cycles per revolution
- Operating speed up to 6,000 rpm
- High shock and vibration resistance
- Operating temperature range -10 ... +100 °C



SinCos SEK52

- HIPERFACE® interface
- Cost-effective, capacitive based position measurement
- 512 Absolute steps per revolution
- 16 sine/cosine cycles per revolution
- Operating speed up to 6,000 rpm
- High shock and vibration resistance
- Operating temperature range -40 ... +115 °C
- Narrow package size



SinCos SKS/SKM36

- HIPERFACE® interface
- 4,096 Absolute steps per revolution
- 4,096 Multi-turn revolutions (SKM)
- 128 sine/cosine cycles per revolution
- Operating speed up to 12,000 rpm (SKS)
- High shock and vibration resistance
- Operating temperature range -20 ... +110 °C
- Compact package size
- Available in stand-alone version



SinCos SRS/SRM50 and SRS/SRM60

- HIPERFACE® interface
- 32,768 Absolute steps per revolution
- 4,096 Multi-turn revolutions (SRM)
- 1,024 sine/cosine cycles per revolution
- Operating speed up to 6,000 rpm
- High shock and vibration resistance
- Operating temperature range -20 ... +115 °C
- Various shaft styles available
- Available in stand-alone version



VFS60 Series

- Programmable 128 to 65,536 lines per revolution
- Operating speed up to 12,000 rpm
- Operating temperature range -20 ... +100 °C
- Maximum pulse frequency 820kHz
- High shock and vibration resistance
- Available with TTL or 24V interface
- Available with insulated hollow shaft
- Various diameter sizes
- IP65 rated



DiCoder Series (encoder with commutation tracks)

Model CKS36

- Lines per revolution 1...2,048
- Pole pairs per revolution 1...32
- 90° or 180° index pulse
- Operating speed up to 12,000 rpm
- Operating temperature range -20 ... +110 °C
- Small size
- Available in a user-programmable version



Model CNS50

- Lines per revolution 1,000...4,096
- Pole pairs per revolution 1...8
- Operating speed up to 6,000 rpm
- Operating temperature range -20 ... +110 °C
- Small size



For more information about any of the above topics or general questions or comments, please contact us:



Motion Designs is a technical sales and engineering company with extensive machine and motion control experience. We work with some of the best manufacturers in the industry as witnessed by our present line card:

- www.arcus-technology.com: Arcus Technology manufactures stepper motor, drive and controller technology, providing USB, Ethernet and Mod-Bus connectivity.
- www.ctc-control.com: Control Technology is a leader in automation control technology with extensive network connectivity capabilities.
- www.ixxat.com: Ixxat is a leading supplier of products and services for the data communication in industrial and mobile systems.
- www.stegmann.com: Stegmann is a leader in high performance motor feedback solutions.
- www.technosoftmotion.com: TSM is a leading DSP motion control technology company specialized in the development, design and manufacture of digital motor drive products and custom motion systems.

