



Sendix Encoders

Overcome Space Constraints in Motor-Driven Systems

SENDIX 5000/5020 TECHNICAL FEATURES

- Safety-Lock™ bearings
- High resolution up to 5,000 ppr
- High shaft load capacity: 100 N (radial) and 50 N (axial)
- Temperatures up to 85°C
- Compatible with all US and European standards
- IP67 environmental rating
- M23, M12 and MIL connectivity

NORD Drivesystems manufactures drive technology—gear drives, electric motors, drive electronics—for a variety of mechanical and electronic applications. For these motor-driven systems, the company uses Sendix 5020 incremental encoders from Kuebler. Thanks to their rugged design features, these encoders can take on the kind of demanding applications NORD motors are often used for—from conveyors to overhead hoists.

In order to integrate the Sendix encoders into one of their motors, however, NORD engineers had to overcome several space-related design challenges. The encoder had to mount on the back of the motor underneath a protective fan shroud and, as a result, required a smaller mounting depth, as well as new cable outlet and termination solutions.

Here's how Kuebler engineers overcame these challenges to fit the requirements of the motor.

A Custom Solution For Limited Space

To meet the requirements of the NORD motor, Kuebler engineers made several custom design tweaks to the Sendix encoders. For one, they changed the location of the clamping ring, moving it from the front to the back for easier installation. They also developed a special tangential cable outlet, in which the cable comes out at an angle from where it attaches to the encoder.

Engineers also needed to figure out how to terminate the cable where it exited the fan shroud. Because of the limited space, engineers narrowed their solutions down to two options: inserting a grommet into the fan shroud where the cable passes through or using a bulkhead connector. Either option works well in this type of application.

Thanks to these slight design modifications, engineers successfully mounted the encoder to the motor despite the limited space. The motor has since been used in a variety of demanding applications, including conveyors, packaging machines, overhead hoists and large industrial doors.



Tangential Cable Outlet



NORD Motor Images

Rugged Sendix 5000/5020 Encoders

As this recent case example demonstrates, Sendix 5000/5020 shaft and hollow shaft incremental encoders are both rugged and versatile. They feature Kuebler's proprietary Safety-Lock™ design, which integrates interlocked bearings, strengthened outer bearings and large bearing size relative to the size of the encoder—enabling them to resist shock, vibration and misalignment due to installation.

Additionally, the encoders' solid die-cast housing, with its IP67 protection rating, stays sealed even when subjected to harsh environmental conditions. Other robust mechanical features that help avoid field breakdowns include a wide temperature range (-40°C to +85°C) and high shaft load capacities of 100 N (radial) and 50 N (axial). And in terms of versatility, these encoders are compatible with U.S. and European standards and can be used with a variety of mounting accessories. They also support M23, M12 or MIL cable connections, as well as Push-Pull, RS422 or Open Collector interfaces.

To learn more about Sendix 5000/5020 encoders, visit www.kueblernews.com/sendix