

LEINE  LINDE



ENCODERS, SENSORS, SOLUTIONS

RELIABLE WORLDWIDE

Welcome to Leine Linde

Leine Linde is a modern company with its roots in Swedish industrial tradition – greatly characterised by an inquisitive and quality-oriented engineering culture that is never satisfied with second best. Leine Linde's products must be delivered on time without fail.

Exceptional requirements

Leine Linde's specially-adapted position and speed encoders can be found all over the world. You will find them in machines and applications operating under the toughest of conditions. Extreme environments where vibrations, moisture, disturbances, heat and cold mean exceptional requirements in terms of material and design.

Each application involves a unique environment – whether it be a mining locomotive thousands of metres underground, a hot rolling mill or a turbine in a wind farm far out to sea – with specific requirements for encoders. Developmental work therefore takes place in close collaboration between designer and customer. The result is robust encoder solutions that you can rely on.

Produced within 24 hours

Efficient process management enables rapid and quality-assured product development and production. It normally takes us two weeks to manufacture an encoder. 24-hour express manufacturing is available for urgent orders. 96 per cent of all orders are delivered on the promised delivery date.

Global presence

Leine Linde is a global company and part of the HEIDENHAIN group. In close cooperation with our sister company LTN Servotechnik we run the Leine Linde LTN sales offices. Here you will get help to find the right encoders, resolvers, slip rings and other technology for feedback and transmission of power and signals.

Local sales offices and dedicated sales teams also provide a structure for identifying technical trends and understanding new requirements for product development. We have more than 50 years of experience and the ambition to constantly push the industry standards forward. This is a good basis for delivering the most useful and reliable customized solutions to industries in demanding environments.





ENCODERS FOR AUTOMATION

Advanced machines with complex movement patterns means even greater monitoring requirements. More information needs to be sent, still at the same speed, to gain full control over the processes and what is happening in the machine in real time.

There are a number of different communication interfaces available in Leine Linde's product range for satisfying this need within industrial automation.



ENCODERS FOR DRIVES

In a drive system, the encoder provides the link between the motor and frequency converter. Leine Linde offers a wide range of encoders in various sizes and with varying robustness and functionality to suit the relevant application.

In demanding applications it is normal for the encoder signal to be supplemented with relay outputs that open in the event of overspeed. Leine Linde's range of encoders therefore includes an integrated, programmable speed monitor where up to four relay outputs can be programmed to the desired levels.



CONDITION MONITORING SOLUTIONS

Temperature, operating speed and vibration are examples of factors that affect the encoder's service life and that are unique for each installation. Depending on the ambient environment, the service life can vary from a couple of years to a couple of decades.

Stoppages are very costly in large, complex systems such as wind turbines or paper making machines, which is why it is of the utmost importance to monitor the condition of incoming components. Leine Linde developed and implemented the ADS solutions, advanced diagnostics systems that continually analyses the encoder's condition and status and warns of impending faults before they occur.



FUNCTIONAL SAFETY SOLUTIONS

Leine Linde's encoders are well-suited for use in safety-critical applications, which is why either the MTTF_d- (EN ISO 13849) or PFH_d- (IEC 61508) value is offered to ensure that they satisfy the risk level reduction requirements. In most industrial applications in which the encoders are used, SIL2/PLd is sufficient for satisfying the safety requirement. It is however possible to achieve different levels of risk reduction depending on the encoder data and system architecture, from a minimum level of SIL1/PLc to a maximum level of SIL3/PLe.

Solutions that work in demanding environments

Leine Linde encoders and sensors are known for their ability to withstand shock, vibrations, heat, dust, dirt, temperature fluctuations and other impact from mechanical forces. They are trusted in applications where production stoppages are very costly and their condition monitoring and functional safety functionalities are very appreciated. Find encoders with the right mechanics, electronics and certifications at www.leinelinde.com/productfinder.



Pulp & paper



Steel & metal



Mining



Cranes



Oil & gas



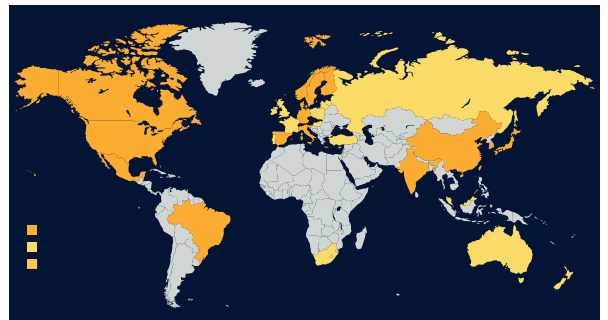
Marine



Wind power



Construction machinery



Customer support with high availability all over the world. Find your closest point of contact for sales or technical support at www.leinelinde.com or info@leinelinde.com.

Precision, confidence and flexibility – reliable encoders and sensors



1000 EXTREME

Extreme in every way. An encoder to handle most things.

The 1000 series was produced to be used in the very toughest applications where mechanical stress, vibrations and high temperatures mean that other encoders are not suitable.

This encoder series is available with both an incremental and an absolute signal or as a combined variant.



Variants with



900 PREMIUM

Absolute encoder taking functionality to a new level.

The 900 series is a solutions platform managing complex position feedback in the form of an encoder with different fieldbus and communication interfaces. It includes variants with an incremental output next to the absolute output, and can be provided with an integrated programmable functional safety system. Durable and resistant!



Variants with



800 HEAVY DUTY

The long-lasting incremental encoder champion.

Are you looking for a robust, maintenance-free and cost-effective encoder with a long service life? Then the 800 series is the right solution, and it's also the first choice of most engineers!

The 800 series can be equipped with Leine Linde's advanced diagnostics system, ADS, for condition-based maintenance.



700 COMPACT

Compact yet robust to cope with high mechanic stress.

With its short build length the 700 series answers well to the need for heavy-duty incremental encoders in installations where space is limited.

The series include through-going hollow shaft variants and cover both inch- and millimeter-based standard dimensions.



Variants with



600 INDUSTRIAL

Absolute encoder for demanding automation.

The 600 series encoder is available in singleturn and multiturn variants, and if needed, in stainless steel and with ATEX/IECEX certifications. It comes with serial interfaces or with fieldbus interfaces such as PROFINET, PROFIBUS, EtherNet/IP, EtherCAT, CANopen, DeviceNet or DRIVE-CLiQ.



500 ROBUST

Versatile and modular encoders.

These encoders conform to European industrial standards and are available in a hollow-shaft or shaft design, ensuring simple installation.

The 500 series is the right choice if you are looking for a standard encoder with unrivalled performance.

Precision, confidence and flexibility – reliable encoders and sensors



300 MINIATURE

Robust and extremely reliable miniature encoders.

These incremental encoders are only 30 millimetres in diameter and intended for installation in applications where space is restricted.



MECHANICAL ACCESSORIES

Leine Linde offers a wide range of shaft couplings, connectors and cables, measuring wheels, adapter flanges, mounting brackets, torque arms or tether arms – just as important as the encoder itself.



OTHER ACCESSORIES

Several types of gateways and modules can adjust the encoder signals and enhance the usability.

Convert or split the signals, enable fieldbus communication, optolink transmission, or add a module for overspeed monitoring with programmable speed switch functionality.



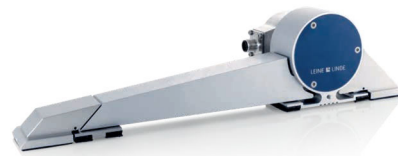
4000 LINEAR

Linear inductive encoder for position feedback.

Extremely robust and fast high-resolution linear measurement for roll-gap control or similar applications, withstanding shock, vibrations and high temperatures.

This encoder design with plug-and-play features has eliminated the need for a separate air compression or filtering system.

With solid encapsulation and inductive scanning all models are well protected and resistant to disturbance.



ESR STRAIN SENSORS

Precise strain measurement for demanding environments

The ESR Strain sensors provide digital high-resolution strain measurement and can be used for monitoring structural health or improving machine control. Additional sensor diagnostic and digital type label can be read-out.

ESR sensors are very simple to mount, with adhesive, screw-on, or magnet installation alternatives.



Variants with



ADS UPTIME

2000 BEARINGLESS

For large shafts, tight spaces and long durability

Certain motors require an encoder for speed feedback for the main shaft, where space is often limited.

The 2000 series is based on a concept comprising a rotating magnetic ring with one or several scanning units to read out the high-resolution measurement and generate incremental signals.



The best encoders and sensors are those you never have to think about! Those that simply do their job – year after year. Leine Linde develops and manufactures customized encoder and sensor solutions for demanding environments, advanced measuring systems for accurate feedback of speed, position or strain.

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