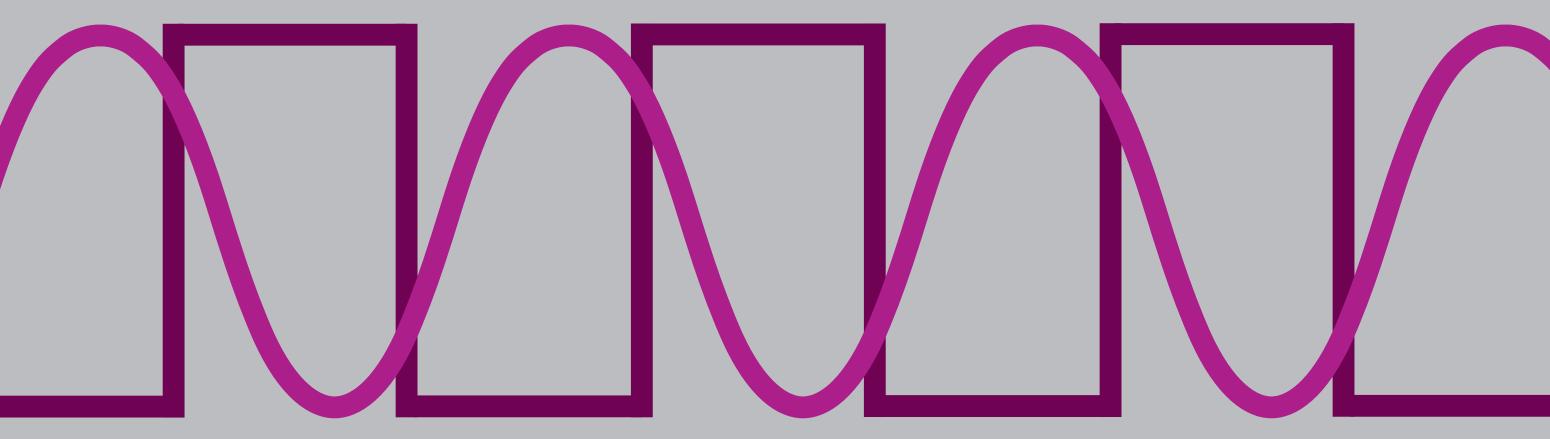# LEINE LINDE

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

LEINE LINDE

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Part no. 1156588-01, ver. 00

INTERFACES

FUNCTIONALITY TO SUIT YOUR APPLICATIONS

Connectivity matters
— interfaces for all industries

Leine & Linde provides a variety of different incremental outputs, absolute interfaces and systems for diagnostics — all to fulfil the industrial automation needs for feedback and control.

Interface overview

Type	Incremental						Absolute				Gateway
Encoder series	**2000**	**1000**	**800**	**700**	**500**	**300**	**1000**	**900**	**600**	**500**	**CRG**
Hollow shaft	✓		✓	✓	✓			✓	✓	✓	
Solid shaft		✓	✓		✓	✓	✓	✓	✓	✓	
HTL	✓	✓ ✗	✓ ✗	✓	✓ ✗	✓	✗	✗	✗ *		
HCHTL	✓	✓ ✗	✓ ✗	✓	✓ ✗		✗	✗			
TTL		✓ ✗	✓ ✗	✓	✓ ✗	✓	✗	✗			
1 Vpp			✓	✓					✗ **		
RS422	✓	✓ ✗	✓ ✗	✓	✓ ✗		✗	✗	✗ *		
SSI		✗			✗		✓ ✗	✓	✓	✓	
EnDat™		✗			✗		✓	✓	✓		
BiLL™		✗			✗		✓			✓	
Analogue		✗			✗		✓			✓	
Parallel		✗			✗		✓			✓	
PROFIBUS DP®		✗			✗		✓	✓	✓		✓
PROFINET IRT®		✗			✗		✓	✓	✓		✓
EtherNet/IP™		✗			✗		✓	✓	✓		✓
EtherCAT®					✗			✓	✓		
CANopen®		✗			✗				✓	✓	✓
DeviceNet™		✗			✗				✓		✓
DRIVE-CLiQ™					✗			✓	✓		
Overspeed monitor		✗	✗								✓
Options:											
Dual output	✓	✓	✓		✓		✓	✓	✓		
ADS Online™			✓								
ADS Classic™			✓								

✓ = Primary output

✗ = Available as a secondary output

* = Available with SSI as primary output

** = Available with EnDat or SSI as primary output

Other combinations can be available on request.

Short description

HTL
Incremental output signal with voltage level 9–30 Vdc and encoder supply voltage 9–30 Vdc.

HCHTL
Incremental output signal with voltage level 9–30 Vdc and encoder supply voltage 9–30 Vdc for long cables.

TTL
Incremental output signal with voltage level 5 Vdc and encoder supply voltage 5 Vdc.

1 Vpp
Sinusoidal incremental signal with amplitude of typically 1 V peak-to-peak.

RS422
Incremental output signal with voltage level 5 Vdc and encoder supply voltage 9–30 Vdc.

SSI
Absolute synchronous serial interface for point-to-point communication.

EnDat™
Absolute serial bi-directional interface for both reading and writing values from the encoder.

BiLL™
Absolute bi-directional master/slave interface developed by Leine & Linde.

Analogue
Absolute interface represented by an output current between 0–20 mA or 4–20 mA.

Parallel
Absolute output that provides real-time absolute position values.

PROFIBUS DP®
A standard for fieldbus communication in automation technology.

PROFINET IRT®
A standard for Industrial Ethernet communication based on PROFIBUS.

EtherNet/IP™
Fieldbus communication based on Ethernet standard combined with Common Industrial Protocol (CIP).

EtherCAT®
An open real-time Ethernet network originally developed by Beckhoff.

CANopen®
A CAN-based communication system.

DeviceNet™
A multi-drop network that connects and serves as a communication network between industrial controllers and I/O devices.

DRIVE-CLiQ™
Ethernet based interface from Siemens for connection of different kinds of components, like motors, frequency converters and encoders.

Overspeed monitor
Unit with programmable relays for overspeed, underspeed, standstill and direction monitoring.

ADS Online™
Ethernet-based diagnostic system that continuously monitors the encoder functions and ambient environmental parameters.

ADS Classic™
Advanced diagnostic system that continuously monitors the encoder functions.