



- Robust Linear Absolute encoder
- SSI / EnDat 2.2
- Robust inductive scanning



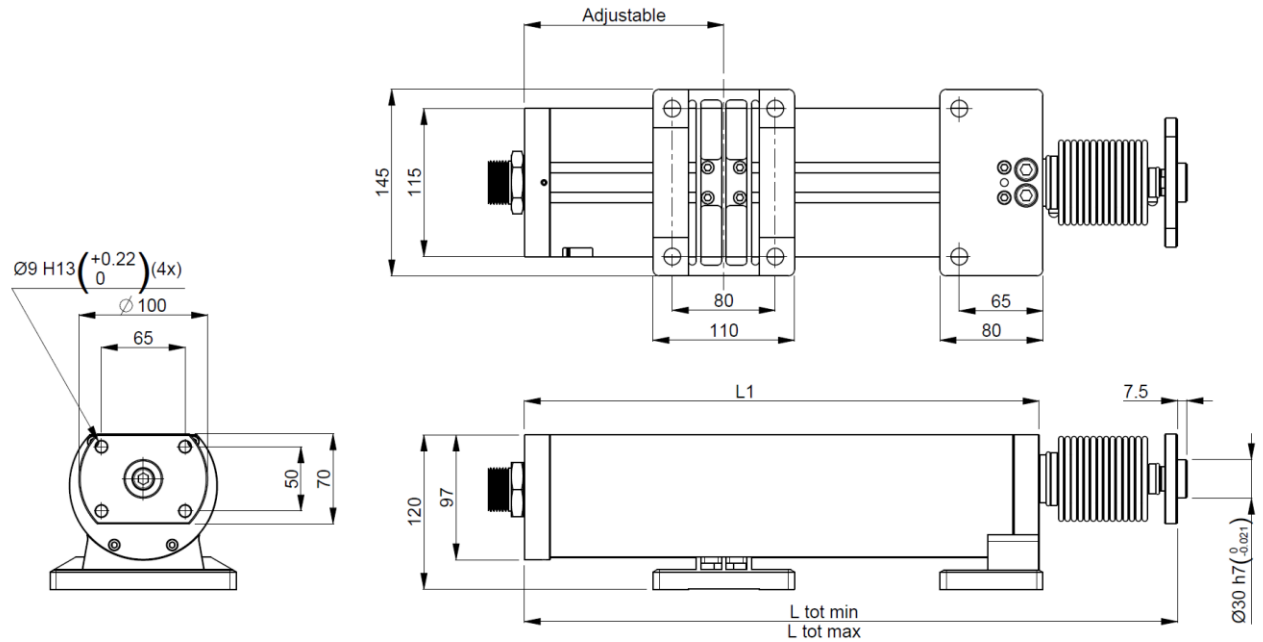
Technical data

	SSI	EnDat 2.2
Operating temperature	-10°C...+80°C	
Ingress protection class [IEC 60529]	IP67	
Power supply	3,6-14 Vdc	
Clock frequency	≤ 1 MHz	≤ 16 MHz
Clock pulses per position	28	32
Vibration [IEC 60068-2-6]	≤ 200 m/s ² 55Hz – 2000Hz	
Shock [IEC 60068-2-27]	≤ 2000 m/s ² 6ms	
Cover material	Anodized aluminium	
Piston material	Stainless steel	
Bellow	FPM / Viton	
Typical current consumption	300 mA at 5 Vdc	
Grating period	1000 µm	
Resolution	0,25 µm	0,1 µm
Accuracy within the grating period	± 2 µm	± 0,5 µm
Linearity	± 5µm/m	
Temperature coefficient	< 11 ppm / K	

Encoder configuration

Type	RLA
Model	4000
Measuring lengths	140, 200, 260 mm
Connection type	8 pin M12

Dimensions



Dimension chart

Scale length	L1	L tot min	L tot max
140	400	508	648
200	460	568	768
260	520	628	888

Pin Configuration

Function	Pin
+E Volt	8
+E Volt Sense	2
0 Volt	5
0 Volt sense	1
Data +	3
Data -	4
Clock +	7
Clock -	6



RLA 4000

Interfaces

EnDat

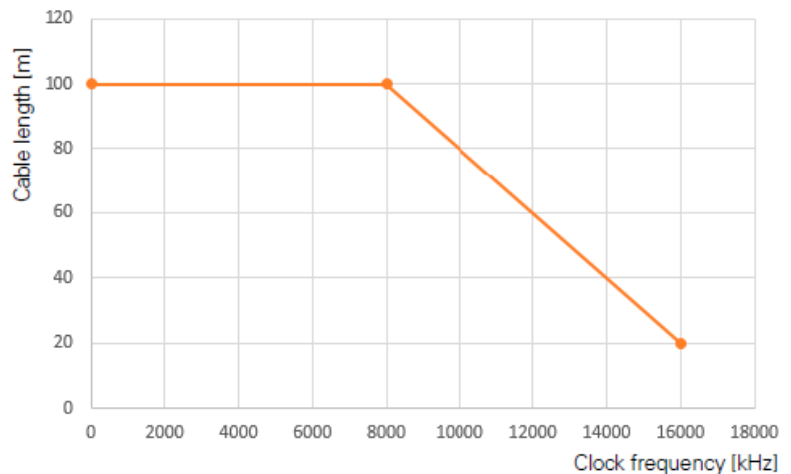
The EnDat-Interface is a digital, **bi-directional** Interface for measuring systems. With this interface you can read out position values and in the measuring system saved informations. This values can also be updated or new values can be saved. Due to the serial data transfer four signal wires are enough. The Data DATA gets transferred synchronously to the from the subsequent electronics given clock frequency CLOCK. The selection from the mode of transmission (position values, parameter, diagnostics,...) is done with mode- commands which are sent from the subsequent electronics to the measuring system.

The clock frequency is variable - depending on the cable length (max. 100m). With propagation electronics, either clock frequencies up to 16 MHz are possible or cable length up to 100m. For EnDat encoders the maximum clock frequency is stored in the encoder memory. Propagation-delay compensation is provided for EnDat 22.

Transmission frequencies up to 16MHz in combination with large cable length place high technological demands on the cable. Greater cable lengths can be realized with an adapter cable no longer than 6m and an extension cable.

As a rule, the entire transmission path must be designed for the respective clock frequency.

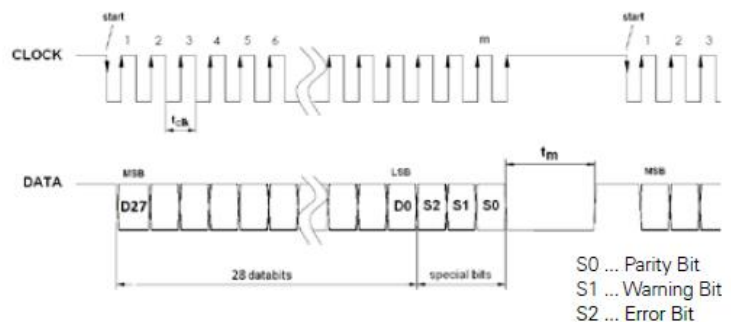
Order Code	Instruction Set	Incremental signals
EnDat22	EnDat 2.2	Without



When use of Leine & Linde interface gateways maximum cable length from encoder is limited to 40m

SSI

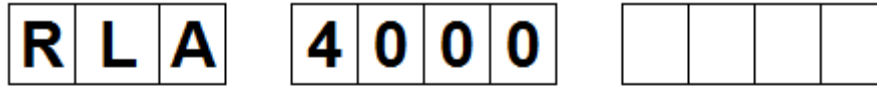
SSI Interface is an unidirectional Interface which can output position values. The Data DATA gets transferred synchronously to the from the subsequent electronics given Clock frequency CLOCK. Additionally three special Bits (Error, Warning and Parity) will be transferred.



Encoder model

RLA 4000

Ordering information



Stroke length

01 = 140 mm

02 = 200 mm

03 = 260 mm

Interface

01 = EnDat

M12 connector, 8 pin

03 = SSI

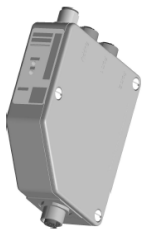
M12 connector, 8 pin

Accessories & interface electronics

Description	Part number
Hydraulic hose pipe 90°	1188799-02
PROFIBUS Gateway	680113-01
PROFINET Gateway	802553-01
EtherNet/IP Gateway	1153130-01



Hydraulic hose Pipe 90°



Interface Gateway

13 November 2017. Specifications can be changed without prior notice.