

SALES BULLETIN

HEIDENHAIN CORPORATION

333 East State Parkway
Schaumburg, IL 60173-5337
Telephone: (847) 490-1191
Fax: (847) 490-3931
E-mail: info@heidenhain.com

FROM: Kevin Kaufenberg – Product Manager
SUBJECT: LIC 2100 Product Presentation
DATE: June 24, 2014
BULLETIN #: SB – 0853

1. Introduction

HEIDENHAIN is adding another absolute encoder, the LIC 2100, to its product range of exposed linear encoders. The successful market introduction of the LIC 4000 has shown that there is a demand for exposed linear encoders with absolute position measurement capability and serial interfaces. The LIC 2100 was developed in addition to the LIC 4000 and LIC 4100 to provide an encoder for applications in which very high mounting tolerances and unlimited reliability are more important than maximum accuracy.

The LIC 2100 is intended for applications in various fields of the electronics industry, automation, medical technology and metrology, as well as in the machine tool sector.

First sample units have already been sent to customers and prospective customers since early 2013, and the feedback was entirely positive. More than 150 scanning heads and more than 100 meters of scale tape in total have been delivered to date.



2. Specifications and special characteristics

2.1 Measuring standard

The measuring standard of the LIC 2100 is a steel scale tape bearing an absolute graduation with pseudo random code. Unlike the LIC 4000 and LIC 4100, the LIC 2100 is a pure single-track system, which means that the position values are determined solely by means of the absolute graduation. The dimensions of the scale tape (12.7 mm x 0.2 mm) are identical to those of the LIDA 200 scale tape. The same applies to the scale-tape carriers and the fastener kit (LIC 21x7).

The standard maximum measuring length being offered is 3020 mm. Measuring lengths up to 6020 mm are possible upon request.

2.2 Mounting options

The measuring standard can be mounted in the following ways, which are already known from the LIDA 200:

- **LIC 21x7:** The steel scale tape is pulled into an aluminum scale-tape carrier and fixed at center with the fastener kit.



- **LIC 21x9:** The steel scale tape is glued onto the mounting surface by means of an adhesive film.

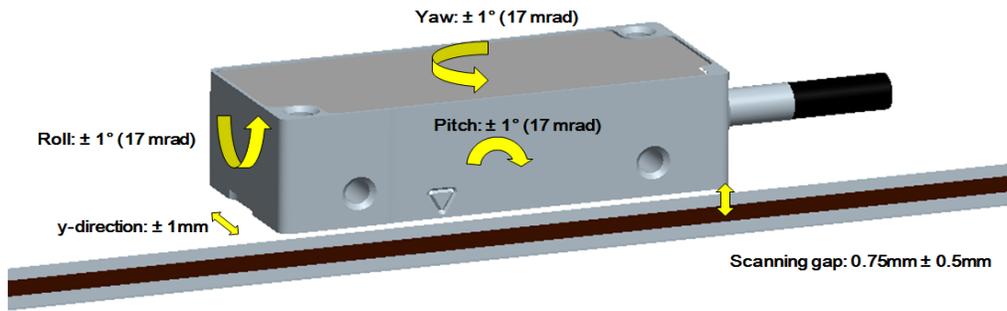


2.3 Mounting tolerances

The particularly high mounting tolerances of the LIC 2100 are a key feature of this encoder and a great advantage for the user. They make mounting and the mechanical design in the application much easier.

The mounting tolerances of the LIC 2100 are as follows:

- Scanning gap: 0.75 mm \pm 0.5 mm for LIC 21x9
0.75 mm + 0.5 mm / - 0.25 mm for LIC 21x7
- Roll/pitch/moiré \pm 1 degree (\pm 17 mrad)
- Line direction (y) \pm 1 mm



2.4 Interfaces

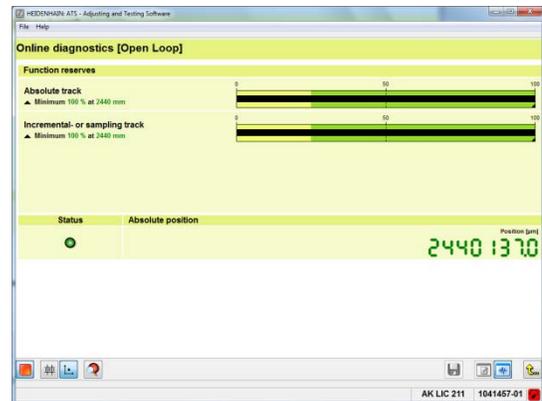
Numerous serial interfaces are available for the LIC 2100 to meet the requirements of different applications, as well as to take regional preferences into account. The following interfaces have therefore been integrated:

- EnDat 2.2 (EnDat22)
- Fanuc serial interface ai (Fanuc05)
- Mitsubishi high speed interface (Mit03-4 and Mit02-2)
- Panasonic serial interface (Pana01)

The Yaskawa interface will be integrated at a later date. You will receive separate information about this. An interim solution with external interface electronics (EIB 3391Y) is available, however.

2.5 Mounting and mounting inspection

Due to the large mounting tolerances, it is basically possible to mount the system simply to the mechanical stop, provided the tolerances are also maintained over the entire range of traverse during operation. The PWM 20 in combination with the current version of the Adjusting and Testing Software (ATS) can be used to check the mounting by means of valuation numbers and their optimization.



3. ID numbers and prices

See the attached price sheets.

4. Schedule

The series introduction of the LIC 2100 is planned for October 2014. Until then, customers can be provided with prototypes anytime. The standard delivery times apply.

5. Documentation

The LIC 2100 will be included in the revised Exposed Linear Encoders catalog, which will be published in May 2014 for the CONTROL trade show in Stuttgart, Germany. It contains the most important specifications and mating dimensions.

The corresponding mounting instructions are also available.

6. Trade show presentation

The LIC 2100 will not be presented with the usual trade show demonstration units for linear encoders, in which the scanning head is guided over a measuring standard, but rather with a demo unit in which the scanning head is moved manually over the affixed scale tape. In particular, this will allow the trade show visitor to experience the large mounting tolerances directly and to get a feeling for the behavior of the encoder in case of contamination.

7. Customer information

Please inform your customers about this new absolute exposed linear encoder in future development projects and also address potential customers in new markets who could not be served by our product program up to now.

Attachments:

- Price sheets
- Product Information