

AZ161

Battery powered Absolute Linear Encoder
with Position Indicator and Guide Carriage



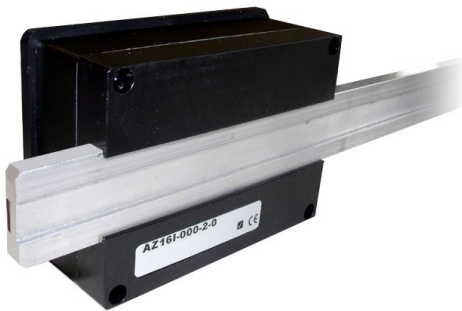
- Integrated absolute sensor with plastic sliding guide
- Stand-alone system, predestined for manual measurement applications, e. g. slides, guiding and stop systems
- Magnetic tape guide rails up to 2 m length available
- With 4 rails in series measuring lengths up to 8 m possible
- After setting the zero point no further referencing required
- 7 digit LCD display with sign, measurement units, special characters and ° symbol for angular measurements
- Numerous setting options, e. g. multiplication factor, counting direction and decimal place
- Automatic power safe mode (Auto-Power-Off/On)
- System resolution 0.1 mm
- Display mode for measurement units mm / m / Inch / °
- Fraction display in Inch mode possible
- Adjustable reference value and 3 tool offsets
- Relative / absolute measurement switchover
- No wiring required

AZ161 - Battery powered Absolute Linear Encoder with Position Indicator

General:

AZ161 is a complete stand-alone system consisting of a battery powered position indicator, an integrated absolute sensor and a plastic sliding guide located on the rear of the device.

Included in the delivery is a guide rail with the length of the distance, which has to be measured (please indicate the length with your order, max. length 2.0 m). It is possible to line up four 2 m rails to achieve the max. measuring length of 8 m. More information about the rail see on last page.



ELGO-Guide rails up to 2 m are already equipped with the necessary absolute encoded magnetic tape. The magnetic tape will be delivered separately if more than one guide rail is needed (measuring lengths longer than 2 m). Thanks to the absolute measuring method, no further referencing is necessary after setting the zero point once.

The carriage for the guide rail is mounted on the rear of the device and precisely matched to the available ELGO guide rails of the FS series. This ensures that the sensor (integrated in the indicator) keeps the correct distance to the magnetic tape along the entire measuring distance.

Display:

The display unit, which is equipped with a well legible 14 mm high LCD display, offers a wide range of parameterization options and can easily be adapted to the respective application. For example, the indicator is programmable to display values in length units as Millimeters, Meters or Inches. The exact layout and different possibilities of the LCD display are shown on the next page.

Programming and Interfaces:

The parameters are set via the membrane keyboard with short-stroke keys on the front face.

Battery Supply:

Due to the battery supply, the system operates completely independently and no connections or wiring are required. To increase battery life, the internal AUTO-POWER-SAFE mode with programmable start-up time can be used by activating the respective parameter.

Battery Change:

The two built-in mignon batteries (type AA) can be replaced by removing the 4 screws on the back and removing the plastic guide carriage. For an optimum durability, never use old and new batteries together. Please always replace both batteries at the same time.



Applications:

The absolute measuring and display unit AZ161 is particularly suitable for manual measuring applications at slides, guiding and stop systems.

Accessories:

Required accessories for the function of the AZ161 are the absolute encoded magnetic tape and the corresponding guide rails in the desired length. More information and the respective order designations can be found in the table on the last page.

AZ16I - Battery powered Absolute Linear Encoder with Position Indicator

Technical Data:

Mechanical Data	
Housing	mounted on guide carriage
Housing material	aluminium, black
Housing dimensions	W x H x D = 96 x 72 x 39 mm (incl. guide carriage)
Keyboard	foil with short stroke keys
Electrical Data	
Display	7 digit LCD (digit height 14 mm) with sign, battery state, measurement units and symbols
Perspective	12 o'clock
Measurement units	mm / Inch / m / °
Accuracy (indicator)	± 1 digit
Power supply voltage	2 x 1.5 V mignon cells (integrated)
Current consumption	< 1 mA at 1.5 V (with sensor)
Battery service life	up to 4 years (depending on power on time)
Connections	no connections required
Data memory	Flash
Environmental Conditions	
Operating temperature	0 ... +50° C
Storage temperature	-10 ... +60° C
Humidity	non-condensing, max. 80 %
Protection class (front)	IP54
Protection class (rear)	IP54
Internal Magnetic Sensor	
Required magnetic tape (see accessories)	AB20-40-10-1-R-11
Pole pitch of the tape	4 mm
Distance sensor - tape	fixed by guide carriage
Resolution	0.1 mm
Repeat accuracy	± 2 increments
Interface (absolute)	RS485
Max. measuring length	8 m
Operating speed	max. 2 m/s
Influence of external magnetic fields	External magnetic fields > 1 mT, which directly impinge upon the sensor can affect the system accuracy

Type Designation:

AZ16I - $\overline{A} \overline{A} \overline{A} - \overline{B} - \overline{C}$

A SN Number

000 = ELGO standard

001 = first special version

B Power Supply

2 = 2 integrated mignon cells type AA / 1.5 V

C Housing / Sliding Guide

0 = for ELGO FS guide rail* (25 x 6 mm)

**) The guide rail is not included in the scope of delivery. Please order as an accessory. For further information and order designation see last page.*

Order example:

AZ16I - $\underline{0} \underline{0} \underline{0} - \underline{2} - \underline{0}$
A A A - B - C

ELGO standard AZ16I with integrated battery power supply (type AA) and a 25 x 6 mm guide carriage for ELGO guide rails (type FS).

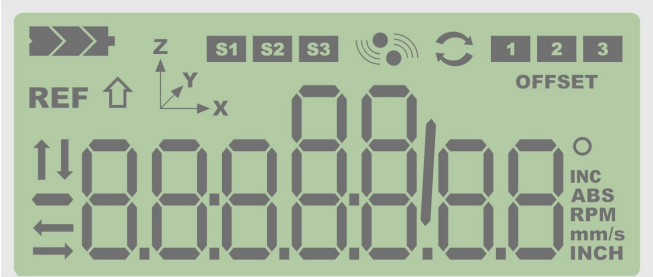
Rear Guide Carriage:



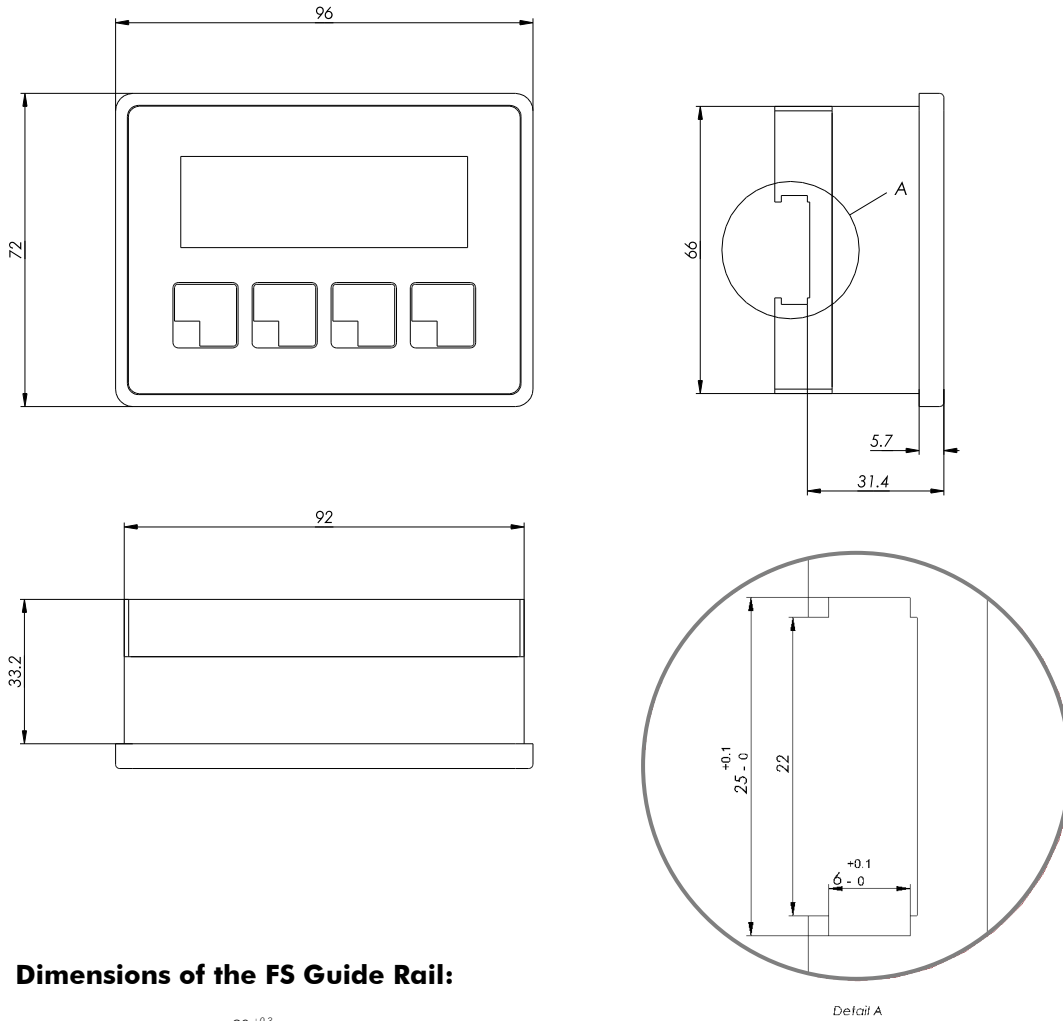
The guide carriage for the magnetic tape-assembled FS guide rail consists of an easily gliding plastic material.

Display Structure:

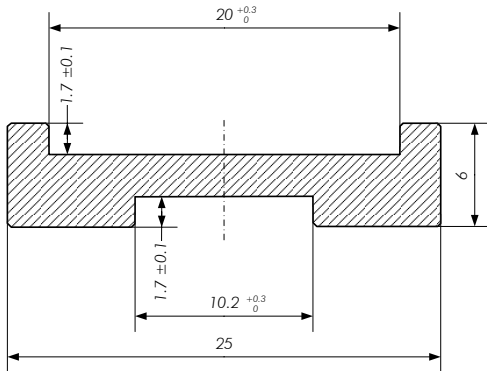
Structure of the LCD with special characters and symbols



Dimensions of AZ16I:



Dimensions of the FS Guide Rail:



Length = max. 2 m

Accessories for AZ16I:

Order Designation	Description
AB20-40-10-1-R-11	AZ14E magnetic tape - please indicate measuring length in X.X m (max. 8.0 m)
FS-XXXX*	Aluminium profile guide rail for the magnetic tape

*) XXXX = Length in mm

Example: To cover the maximum measuring length of 8 m, four 2 m rails can be installed in series.

⇒ Required order designation: „4 pieces FS-2000“

