

AZ14E

Battery powered Mini Position Indicator with Absolute Encoder



- Battery powered measuring and display system
- After setting the zero point no further referencing required
- Magnetic sensors for measuring lengths up to 8 meters available
- 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
- System resolution 0.1 mm
- Automatic power safe mode (Auto-Power-Off/On)
- Display unit with selectable resolutions up to 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
- Fast and easy installation by snap-in housing
- Sensor cables lengths from 0.1 up to 20 m possible
- No connections or wiring required
- Predestined for mounting on movable machine parts, e. g. slide carriages, stop systems or guide units

AZ14E - Battery powered Mini Position Indicator with Absolute Encoder

General:

AZ14E is a combination of an absolute length measuring system and a compact miniature display unit. It consists of an external magnetic sensor, which is connected via drag-chain suitable cable to a position indicator.

For linear measurement, a coded magnetic tape is glued along the distance to be measured (up to 8 m possible). The magnetic tapes supplies the necessary information (current position) to the absolute sensor. The sensor is guided contactless and absolutely wear-free over the magnetic tape.

Sensor Variants

Two different sensor types are available for AZ14E. Standardly the unit is equipped with the **AZS-100** sensor which covers measuring distances up to 8 meters. For shorter distances up to 4 meters, the **AZS-50*** sensor type can be used.

**) additional option on request*

Both sensor types are protected by IP67 and thus insensitive against dust, dirt and water and can easily be integrated as well into existing as new machine constructions. A fixed cable outlet connects the sensor to the display unit.

Advantages and Applications

The most important advantage is the absolute measuring method, whereby no further referencing is required after a single definition of the zero point. Since no special tools, no wiring or electrical connections are required, the system is predestined for mounting on movable machine parts, e. g. slide carriages, stop systems or guide units.

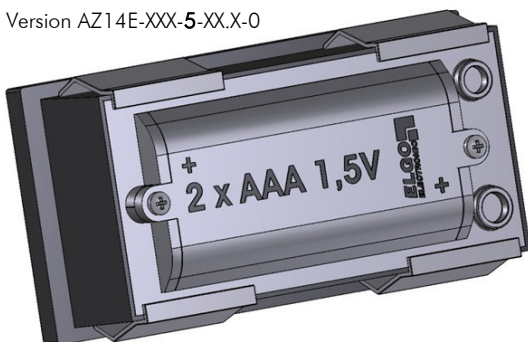
Display and Programming:

The compact display unit, which is nevertheless equipped with a well legible 9 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 mm / m / inch or as ° symbol for angle measurements. The exact layout and different possibilities of the LCD display are shown on the next page.

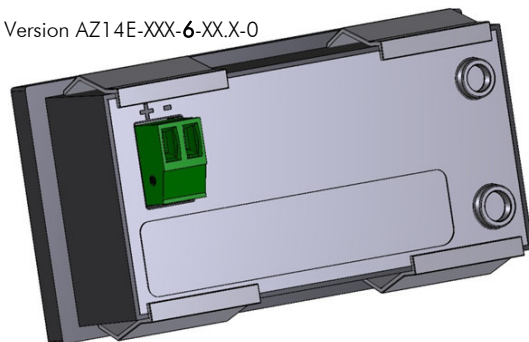
Battery Supply internal / external

Depending on the order, the **AZ14E** system can be delivered with an integrated battery case (incl. cover) or a pluggable screw terminal, which can be connected to an external battery case. External battery cases and holders are available as accessories (see table on the last page).

Version AZ14E-XXX-5-XX.X-0



Version AZ14E-XXX-6-XX.X-0



Installation / Mounting:

Due to the snap-in housing with 4 attached mounting clips (see figures above), the device can be quickly and easily installed into the panel cutout.

Accessories:

Available **AZ14E** accessories and the respective order designations can be found in the table on the last page.



AZ14E - Battery powered Mini Position Indicator with Absolute Encoder

Technical Data:

Mechanical Data	
Housing	norm panel housing
Housing material	plastic, black
Housing dimensions	W x H = 72 x 36 mm
Panel cutout	W x H = 67 x 34 mm
Keyboard	foil with short stroke keys
Installation depth (complete)	min. 30 mm (depends on version)
Electrical Data	
Display	7 digit LCD (digit height 9 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	battery (1.5 V resp. 3 V) integrated or external
Current consumption	< 1 mA at 1.5 V (with sensor)
Battery service life	up to 4 years (depending on battery type)
Connections	fixed cable outlet
Data memory	Flash
External inputs	1 x 5 ... 30 V (on request)
Environmental Conditions	
Operating temperature	0 ... +50° C
Storage temperature	-10 ... +60° C
Humidity	non-condensing, max. 80 %
Protection class (front)	IP54 (installed state)
Protection class (rear)	IP40
Magnetic Sensors AZS-100 / AZS-50	
Dimensions	AZS-100: 100 x 12 x 25 mm (standard) AZS-50: 50 x 12 x 25 mm (on request)
Required magnetic tape	AB20-40-10-1-R-11
Pole pitch of the tape	4 mm
Distance sensor - tape	max. 1.5 mm
Resolution	0.1 mm
Repeat accuracy	± 2 increments
Interface (absolute)	RS485
Maximum measuring length	AZS-100: 8 m / AZS-50: 4 m
Operating speed	max. 2 m/s
Housing material	ABS plastic
Protection class	IP67
Connection type	fixed connection with indicator
Sensor cable	drag chain suitable, highly flexible, 4-wires, shielded
Sensor cable length	0.1 m ... max. 20 m
Mounting position	arbitrary
Bending radius (cable)	min. 25 mm
Influence of external magnetic fields	External magnetic fields > 1 mT, which directly impinge upon the sensor can affect the system accuracy

Type Designation:

AZ14E - $\overline{A} \overline{A} \overline{A} - \overline{B} - \overline{C} \overline{C} . \overline{C} - \overline{D}$

A SN Number

000 = ELGO standard with AZS-100 sensor

B Power Supply

5 = integrated battery case with cover
(2 x type AAA / LR03 / micro)

6 = pluggable screw terminal
(2-pol. / 1 mm²) for 1.5 V or 3.0 V

C Signal Cable Length in XX.X m

02.0 = 2.0 m (example), max. 2m m possible

D Cable Option

0 = fixed cable outlet

Additional Options (only on request):

- Smaller AZS-50 sensor for measuring lengths up to 4 m
- External 5 ... 30 V input via cable outlet possible

Order example:

AZ14E - $\underline{0} \underline{0} \underline{0} - \underline{5} - \underline{0} \underline{2} \underline{0} - \underline{0}$
A A A - B - C C . C - D

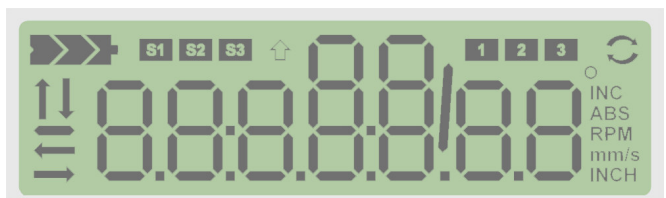
ELGO standard AZ14E with integrated battery case, 2.0 m long signal cable and fixed cable outlet (additional options on request available)

Version AZ14E-XXX-5-XX.X-0
with opened battery case

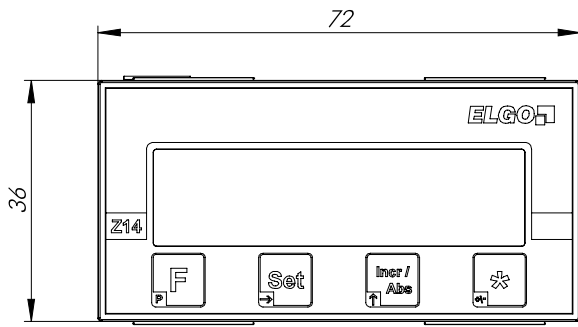


Display Structure:

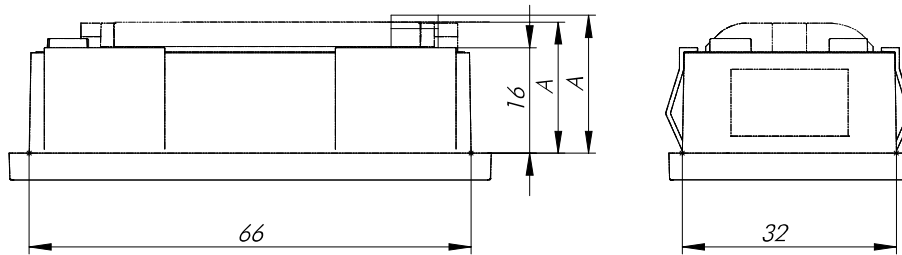
Structure of the LCD with special characters and symbols



Dimensions AZ14E:

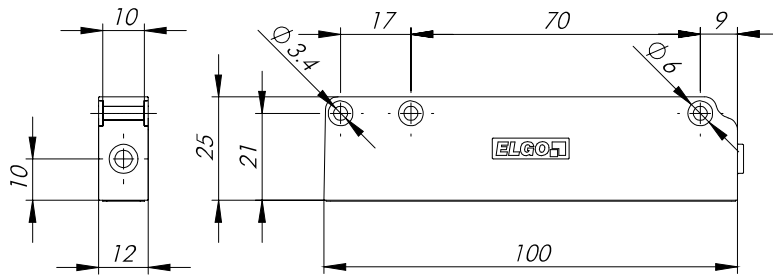


Type	A (mm)
AZ14E-XXX-5-XX.X-0	16.6
AZ14E-XXX-6-XX.X-0	20.6

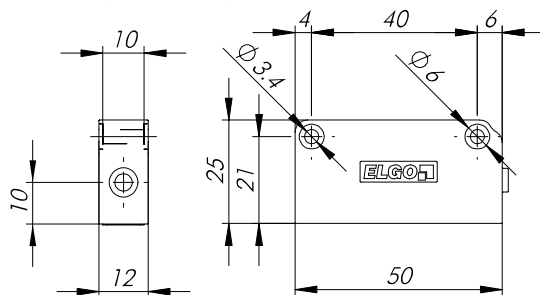


Sensor Dimensions:

AZS-100 (standard)



AZS-50 (on request)



Accessories for AZ14E:

Order Designation	Description
AB20-40-10-1-R-11	AZ14E magnetic tape - please indicate measuring length in X.X m (max. 8.0 m)
End cap set 10 mm	End caps for fixing 10 mm wide magnetic tapes
FS-XXXX	Aluminium profile guide rail for the magnetic tape (XXXX = length in m)
Battery holder-set 1 x C assembly	Consisting of battery holder (type C), battery and 2 cable shoes
Battery holder-set 1 x C open	Consisting of battery holder (type C), battery and 2 cable shoes

