

IZ14E

Battery powered Miniature Indicator with Incremental Sensor



- Measurement and display system for linear or angular applications
- Suitable for magnetic tapes or rings with 2.5 mm pole pitch
- 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
- 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
- No wiring required
- Predestined for mounting on movable machine parts, e. g. slide carriages, stop systems or guide units

IZ14E - Battery powered Miniature Indicator with Incremental Sensor

General:

IZ14E is a combination of 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. The magnetic tapes supplies the necessary information (current position) to the incremental sensor. The sensor is guided contactless and absolutely wear-free over the magnetic tape.



Alternatively, a magnetic ring (see photo left) is available for rotary applications (e. g. angle measurements).

Thanks to its high IP67 protection class, the external sensor is insensitive against dust, dirt and water. The compact sensor design allows an easy installation as well into existing as new machine constructions. A fixed cable outlet connects the sensor to the display unit.

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.

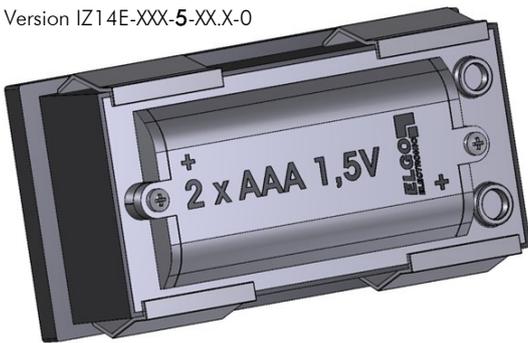
Display:

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.

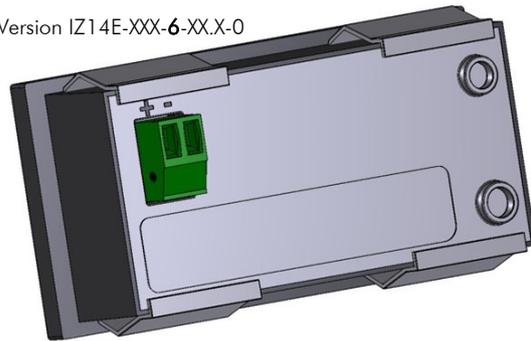
Battery Supply internal / external

Depending on the order, the IZ14E 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 or another 1.5 or 3.0 V voltage source. The integrated battery case contains 2 micro batteries (type AAA), while the external battery cases (see accessories on the last page) are designed for 1.5 V baby cells (type C) with a longer service life.

Version IZ14E-XXX-5-XX.X-0



Version IZ14E-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:

As accessories for IZ14E various products are available, e. g. required magnetic tape, magnetic tape end caps, magnetic rings or external battery holders. The respective order designations can be found in the table on the last page.

IZ14E - Battery powered Miniature Indicator with Incremental Sensor

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	0.5 ... 3 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 Sensor

Required magnetic tape	MB20-25-10-1-R (linear measurements)
Required magnetic ring	MR 3848 (angular measurements)
Pole pitch of the tape	2.5 mm
Sensor cable length	0.1 m ... max. 2.0 m
Sensor cable	drag chain suitable, 6-wire, twisted pairs and double shielded
Housing	zinc die cast
Protection class	IP67
Mounting position	arbitrary
Bending radius (cable)	min. 60 mm
Resolution	0.1 mm ... 0.01 mm
Repeat accuracy	± 2 increments
Distance sensor - tape	max. 0.8 mm
Influence of external magnetic fields	External magnetic fields > 1 mT, which directly impinge upon the sensor can affect the system accuracy

Type Designation:

IZ14E - $\overline{A} \overline{A} \overline{A} - \overline{B} - \overline{C} \overline{C} . \overline{C} - \overline{D}$

A SN Number

0 = ELGO Standard

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

01.5 = 1.5 m (example), max. 2 m possible

D Cable Option

0 = fixed cable outlet

Additional Option (only on request):

External 5 ... 30 V input via cable outlet possible

Order example:

IZ14E - 000 - 5 - 01.5 - 0
A A A - B - C C . C - D

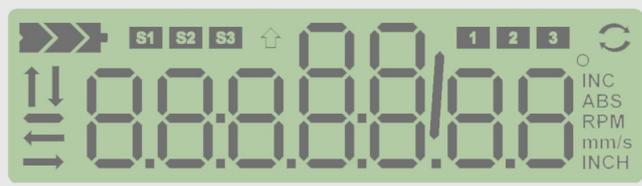
Standard IZ14E, with integrated battery case, sensor with a 1.5 m long cable and fixed cable outlet. (Additional options only on request).

Version IZ14E-XXX-5-XX.X-0
with opened battery case

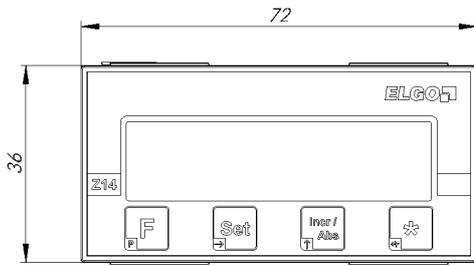


Display Structure:

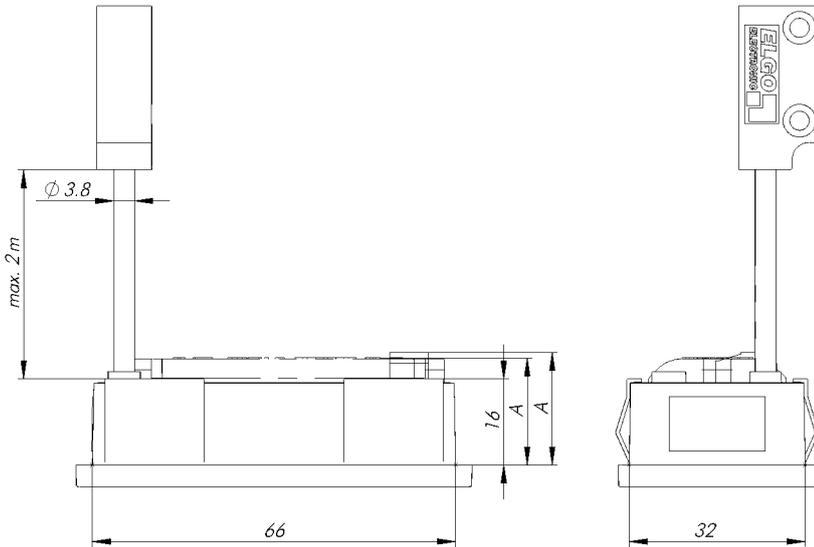
Structure of the LCD with special characters and symbols



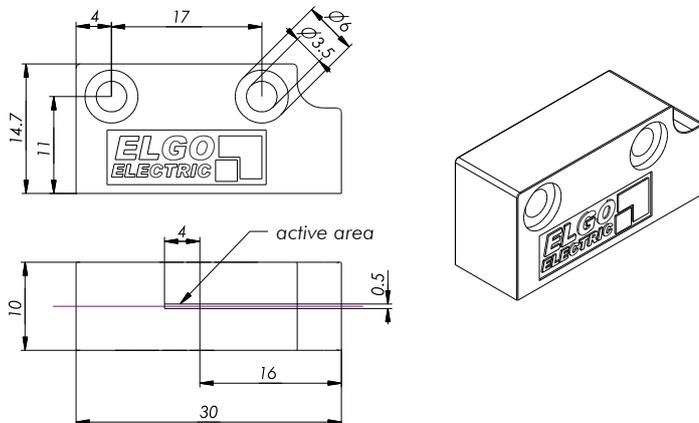
Dimensions IZ14E:



Type	A (mm)
IZ14E-XXX-5-XX.X-0	16.6
IZ14E-XXX-6-XX.X-0	20.6



Dimensions Sensor:



Accessories for IZ14E:

Order Designation	Description
MB20-25-10-1-R	Magnetic tape with 2.5 mm pole pitch (please indicate measuring length in XX.X 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)
FW-2060	Guide carriage for sensor head, suitable for guide rail FS-XXXX
MR3848*	Magnetic ring; pole pitch 2.5 mm; 48 poles; outer \varnothing 38 mm / inner \varnothing 30 mm
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

*) More details about magnetic rings on request

