

IZ17E

Battery powered Position Indicator with Incremental Sensor



- Measurement and display system for linear or angular applications
- Suitable for magnetic tapes or rings with 2.5 or 5 mm pole pitch
- Large two-line LCD display, digit height 12.6 / 8.5 mm with sign, measurement units, special characters and universal symbols (e. g. ° degree 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
- Easy to install (mounting clips or frame) and no wiring required
- Predestined for mounting on movable machine parts, e. g. slide carriages, stop systems or guide units

IZ17E - Battery powered Position Indicator with Incremental Sensor

General:

IZ17E is combination of length measuring system and 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. Alternatively a threaded round plug connector is available (see cable option "1" in the type designation).

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. Optionally, a pluggable screw terminal (instead of the battery case) is available on the rear of the position indicator, which can be used to supply the device with a 1.5 resp. 3 VDC voltage or external batteries. External battery holders can be found in the table on the last page. On request, the screw terminal can be modified for external 24 VDC power supply.

Display, Programming and Interface:

The display unit, which is equipped with a two-line LCD display, offers a wide range of parameterization options and can easily be adapted to the respective application. The parameters are set via the membrane keyboard with short-stroke keys on the front face. For communication with a higher-level controller, an optional serial RS232 interface or a wireless 868 MHz module is available for IZ17E. The RS232 interface can be connected by an additional RJ45 socket on the rear.

Display Versions:

Two different LCD display types are available for the IZ17E position indicator:

- Standardly the unit is equipped with a 7 digit LCD with 12.6 mm high main segments.
- When order option **L1** (see Type Designation), the unit is equipped with a 7 digit LCD with 16.1 mm high main segments. Please note: Due to the larger main segments, this versions allows no fraction display.

The next page shows the different display structures with possible symbols and special characters.

Installation / Mounting:

There are two possibilities for mounting into a panel cutout:

- A) Fixing the unit from the rear by using a mounting frame (suitable for front panel strengths of 1.0 to 8.0 mm)
- B) Easy snapping into the cutout by using two mounting clips (suitable for front panel strengths of 1.5 to 3.0 mm)

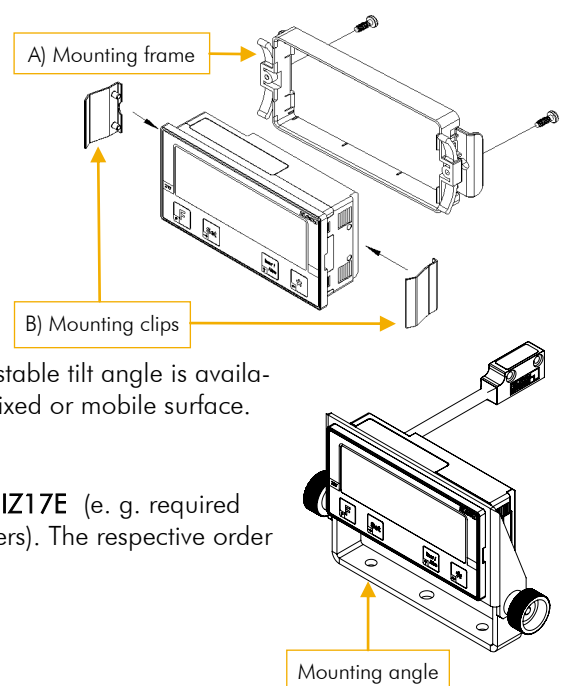
The mounting clips as well as the mounting frames are already included in the delivery.

Mounting on fixed or movable surfaces (e. g. stop system):

For this purpose, a mounting angle (type MW-IZ17E) with a freely adjustable tilt angle is available as a separate accessory. This part allows to fasten the device on a fixed or mobile surface.

Accessories:

In addition to the mounting angle, further accessories are available for IZ17E (e. g. required magnetic tapes, tape end caps, magnetic rings or external battery holders). The respective order designations can be found in the table on the last page.



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Technical Data:

Mechanical Data	
Housing	norm panel housing
Housing material	ABS-PC plastic, black
Housing dimensions	W x H = 96 x 48 mm
Panel cutout	W x H = 92 x 45 mm
Keyboard	foil with short stroke keys
Installation depth (complete)	approx. 30 mm (fixed cable outlet) approx. 60 mm (with round connector)
Electrical Data	
Display	2-line LCD, digit height 12.6 / 8.5 mm with sign, battery state, measurement units, special characters 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; 24 VDC on request
Current consumption	< 1 mA at 1.5 V (with sensor)
Battery service life	1 ... 5 years (depending on version and battery type)
Connections	standard: fixed cable outlet optional: round connector
Data memory	Flash
Interfaces (optionally)	RS232, RS485 or RF 868 MHz
External inputs	2 x 5 ... 30 V (on request)
External outputs	2 x 30 V open collector (on request)
Environmental Conditions	
Operating temperature	0 ... +50° C
Storage temperature	-10 ... +60° C
Humidity	non-condensing, max. 80 %
Protection class	IP54 (front) / IP40 (rear)
Magnetic Sensor	
Required magnetic tape (linear measurements)	standard: MB20-25-10-1-R option P5: MB20-50-10-1-R
Required magnetic ring (angular measurements)	standard: MR 3848 resp. option P5: MR 2012, MR 3824 or MR 7244
Pole pitch of the tape	2.5 mm (resp. 5 mm with option P5)
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 (resp. 2.5 mm with P5)
Influence of external magnetic fields	External magnetic fields > 1 mT, which directly impinge upon the sensor can affect the system accuracy

Type Designation:

IZ17E - $\overline{\text{A A A}} - \overline{\text{B}} - \overline{\text{C C.C}} - \overline{\text{D}} - \overline{\text{E}}$

A SN Number

- 000 = ELGO standard
- 100 = with serial RS232 interface (via RJ45 socket)
- 150 = with serial RS485 interface (via RJ45 socket)
- 600 = with integrated RF 868 MHz wireless module

B Power Supply

- 2 = integrated battery case with cover (2 x type AA / LR06 / mignon)
- 6 = pluggable screw terminal (2 pin / 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 Options

- 0 = fixed cable outlet
- 1 = round connector (threaded)

E Options*

- CAP = integrated voltage back-up capacitor for battery change without loss of actual value
- 24V = external power supply 10 ... 30 VDC**
- P5 = with sensor for 5 mm pole pitch (reduced operating speed 1 m/s instead of 4 m/s!)
- L1 = with LCD type 1 (large main segments, but without fraction display possibility)

*) Multiple indications possible **) on request

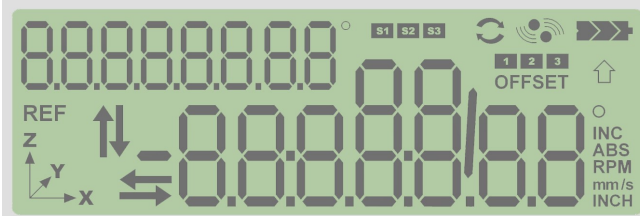
Order example:

IZ17E - 000 - 2 - 01.5 - 1 - CAP
A A A - B - C C.C - D - E

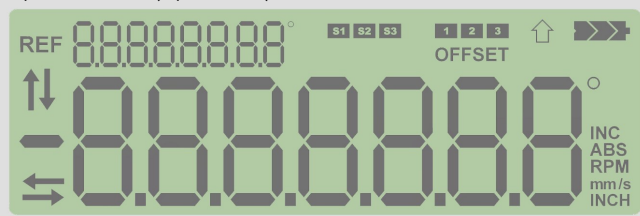
ELGO standard IZ17E with integrated battery case + cover, 1.5 m long signal cable, round connector and voltage back-up capacitor.

Display Versions:

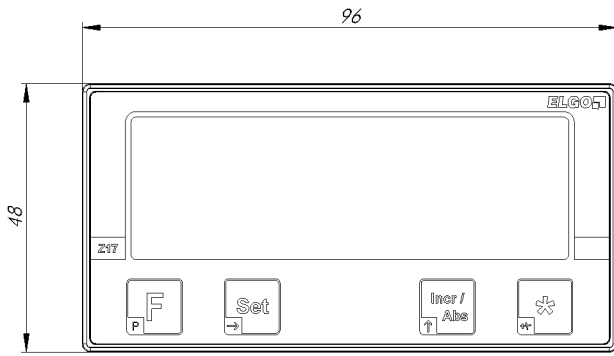
Standard LCD with fraction display



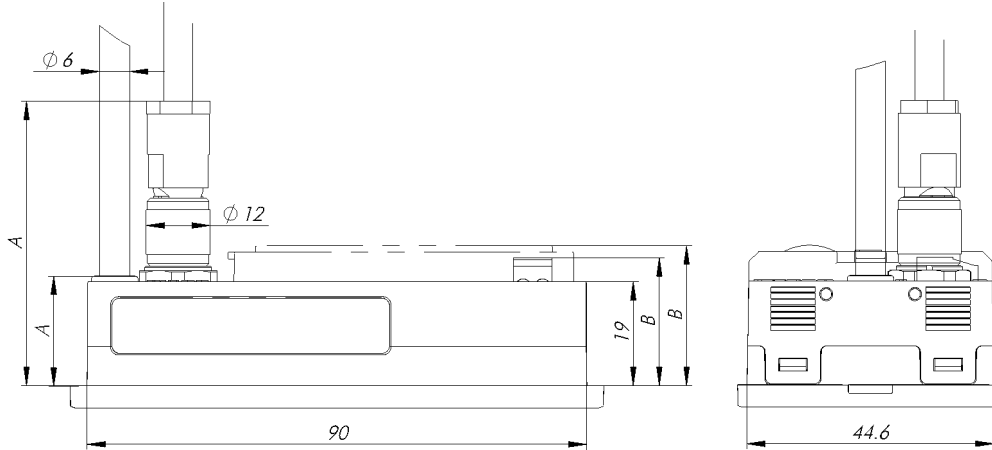
Special LCD (option L1)



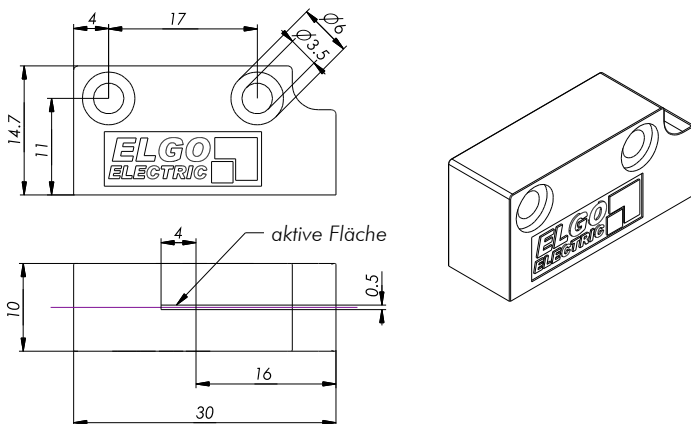
Dimensions IZ17E:



Type	A (mm)	B (mm)
IZ17E-XXX-6-XX.X-0	20	23
IZ17E-XXX-6-XX.X-1	53	23
IZ17E-XXX-2-XX.X-0	20	25
IZ17E-XXX-2-XX.X-1	53	25



Dimensions Sensor:



Accessories for IZ17E:

Order Designation	Description
MB20-25-10-1-R	Magnetic tape 2.5 mm "standard" (please indicate measuring length in XX.X m)
MB20-50-10-1-R	Magnetic tape 5.0 mm "option P5" (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
MR 3848*	Magnetic ring, 2.5 mm pole pitch (standard), 48 poles, ϕ outer 38 / inner 30 mm
MR2012 MR3824 MR7244*	Magnetic ring with 5 mm pole pitch for P5; 3 different ϕ (19,75 38 72 mm)
MW-IZ17E	Adjustable mounting angle for installation on fixed or movable surfaces
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

