

AZ16E

Battery powered Position Indicator with Absolute Encoder



- 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
- 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
- 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

AZ16E - Battery powered Position Indicator with Absolute Encoder

General:

AZ16E consists of an absolute linear encoder which is combined with a display unit. 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. Thanks to the absolute measurement, no further referencing is necessary after setting the zero point once.

Sensor Variants (accessorial parts):

Two different sensor types are available for AZ16E. Standardly the AZS-100 sensor is used, which covers measuring distances up to 8 meters. For shorter distances up to 4 meters the smaller AZS-50* sensor type can be used which is available as an option. Both types protected by IP67 and thus resistant to dust, dirt and water.

*) on request

To connect the drag chain suitable signal cable to the indicator, a pluggable RJ45 connector is used.

Power Supply:

Since no special tools, no wiring or electrical connections are required, the AZ16E 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 "Accessories" on the last page. On request, the screw terminal can be modified for external 24 VDC power supply.

Display:

The well legible 14 mm high LCD display can be programmed individually. For example to display values in length units as mm / m / inch or as ° symbol for angle measurements.

Programming:

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

Installation / Mounting:

With panel housing (standard):

Due to the snap-in housing with 4 attached mounting clips, the device can be quickly and easily installed into the panel cutout. The rubber seal (supplied with the delivery) increases the front protection class against dust, dirt and splash and should generally be used.

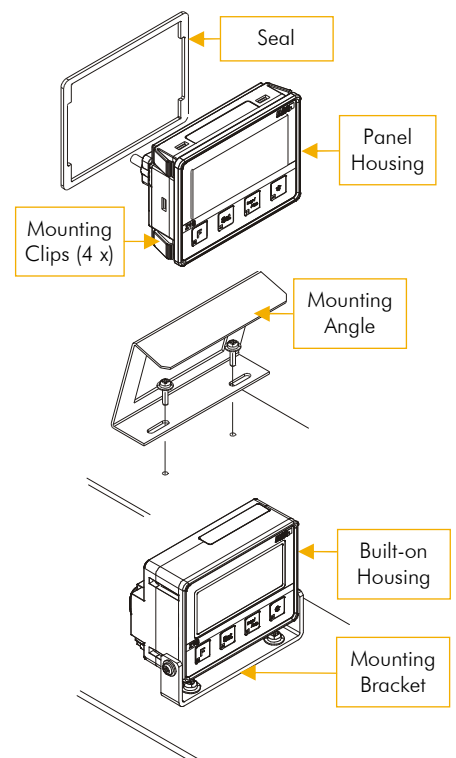
If no panel cutout available, or if the display unit should be mounted on a fixed or movable surface, the accessorial mounting angle MW-IZ16E (made of 2 mm galvanized steel sheet) can be used. This is provided with a suitable cutout for the display housing, which can be snapped in as described above. In this case, the rubber seal additionally improves the fit in the cutout. The inclination of the mounting angle ensures good readability of the display.

With built-on housing (option AG):

The built-on housing (available as an option) is equipped with an inclinable mounting bracket, which can be screwed on a fixed or movable surface. The viewing angle can be adjusted by tilting the indicator to the optimum position.

Accessories:

Further accessories as well as the respective order designations can be found in a separate table on the last page.



AZ16E - Battery powered Position Indicator with Absolute Encoder

Technical Data:

Mechanical Data	
Housing	norm panel housing
Housing material	plastic, black
Housing dimensions	W x H = 96 x 72 mm
Panel cutout	W x H = 93 x 67 mm
Keyboard	foil with short stroke keys
Installation depth	approx. 66 mm (incl. sensor connector)
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	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	up to 4 years (depending on power on time)
Connections	RJ45 socket
Data memory	Flash
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 (front)	IP54 (installed state with seal) IP40 (installed state without seal) IP50 (option AG)
Protection class (rear)	IP40 (standard) / IP50 (option AG)
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
Max. 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	RJ45 (male) connector
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:

AZ16E - $\bar{A} \bar{A} \bar{A} - \bar{B} - \bar{C} \bar{C} \bar{C} \bar{C} - \bar{D} - \bar{E}$

A SN Number

- 000 = ELGO standard version
- 001 = first customer specified version etc.

B Power Supply

- 1 = integrated battery case with cover
1x type C / LR14 / baby / 1.5 V
- 6 = pluggable screw terminal
2-pin / 1 mm² for 1.5 V or 3 V
- 8 = integrated battery case with cover
1x type D / LR20 / mono / 1.5 V
(only with built on housing option „AG“!)

C Signal Cable Length in XX.X m

XX.X = defined by AZ sensor (see below)

D Cable Option

- 1 = sensor pluggable via RJ45 socket

E Options*

- 24V = external 10 ... 30 VDC power supply**
 - AG = built on housing with mounting bracket (IP50)
- *) multiple indications possible **) on request

Order Example:

AZ16E - $\bar{0} \bar{0} \bar{0} - \bar{1} - \bar{X} \bar{X} \bar{X} - \bar{1} - \bar{X}$
A A A - B - C C C - D - E

ELGO standard AZ16E with integrated battery case incl. cover and female RJ45 connector. Additional options on request available.

Type Designation AZ Sensor: (please order separately)

AZS - $\bar{A} \bar{A} \bar{A} - \bar{B} - \bar{C} \bar{C} \bar{C} - \bar{D}$

A SN Number

- 000 = ELGO standard
- 001 = first special version

B Sensor Type

- 1 = AZ-100 (L=100 mm, max. 8 m measuring length)
 - 2 = AZ-50* (L=50 mm, max. 4 m measuring length)
- *) on request

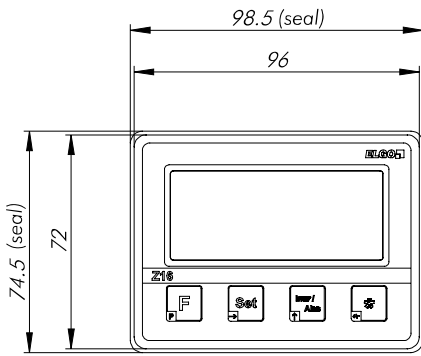
C Sensor Cable Length in XX.X m

- 02.0 = 2.0 m (example)
- Available standard lengths: 1 / 2 / 3 / 5 m
(further lengths available at extra charge; max. 20 m)

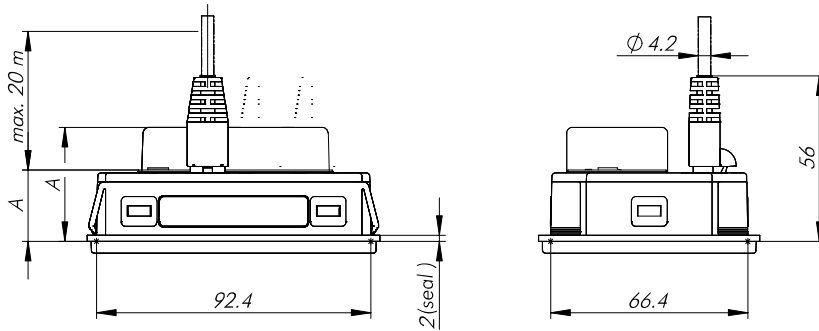
D Cable Option

- 1 = Cable outlet with RJ45 connector (standard)

Dimensions of AZ16E:



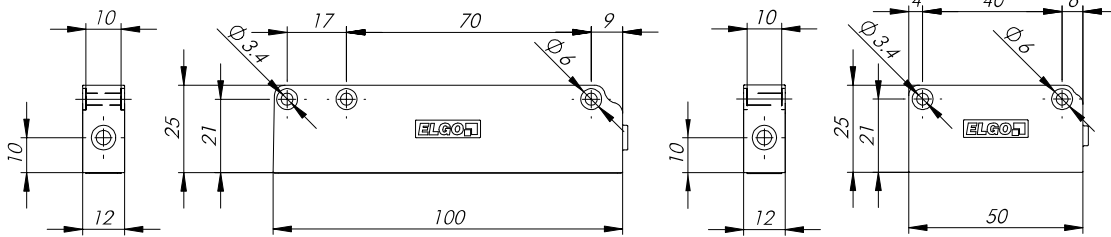
Type	A (mm)
AZ16E-XXX-1-XX.X-1	37
AZ16E-XXX-6-XX.X-1	25



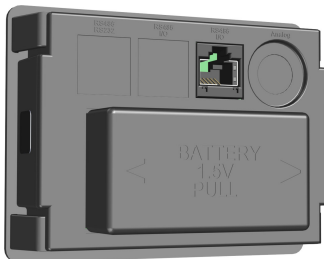
Sensor Dimensions:

AZS-100 (standard)

AZS-50 (on request)



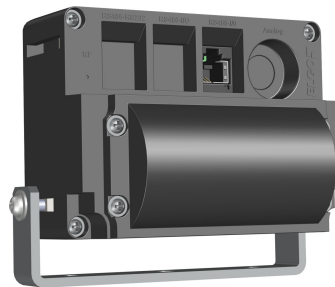
Power Supply and Housing Versions:



AZ16E-000-1-XX.X-1-X



AZ16E-000-6-XX.X-1-X



AZ16E-000-8-XX.X-1-AG

Accessories for AZ16E:

Order Designation	Description
AB20-40-10-1-R-11	AZ16E 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)
MW-IZ16E	Mounting angle with suitable AZ16E cutout; made of 2 mm galvanized steel sheet
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

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Subject to modifications - © 2018

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ELGO Electronic GmbH & Co. KG

Measuring | Positioning | Control

Carl - Benz - Str. 1, D-78239 Rielasingen

Fon: +49 (0) 7731 9339-0, Fax: +49 (0) 7731 28803

Internet: www.elgo.de, Mail: info@elgo.de

