MAXI DIGITAL

Manually Operated Digital Measuring Stop

User Manual
2024

MAXI DIGITAL Measuring System

Instructions

The Maxi Digital Measuring stop is supplied with a IZ-16E ELGO Digital Display. This measuring system is ideal for linear measuring. The Maxi Digital can be install onto existing equipment or supplied OEM from AMS.

The Maxi Digital consists of an extruded aluminium rail which a sliding stop slides on. The Elgo display uses a magnetic reader head mounted just off a magnetic tape. The magnetic tape is located at the rear of the rail.

By using this system there is no need for gearbox, tachometer or any other mechanical means of measuring. By using the magnetic tape and reader there is virtually no wear in the system.

At the front of the rail there is still a provision for a standard tape measure to be inserted into the rail if so desired.

The Maxi Digital will give you years of accurate, trouble free operation and reduce costly mistakes.

Please read through this instruction manual before operating your Maxi Digital.

CAUTION!

Danger through non-conventional use!
Non-intended use and non-observance of this operation manual can lead to dangerous situations.
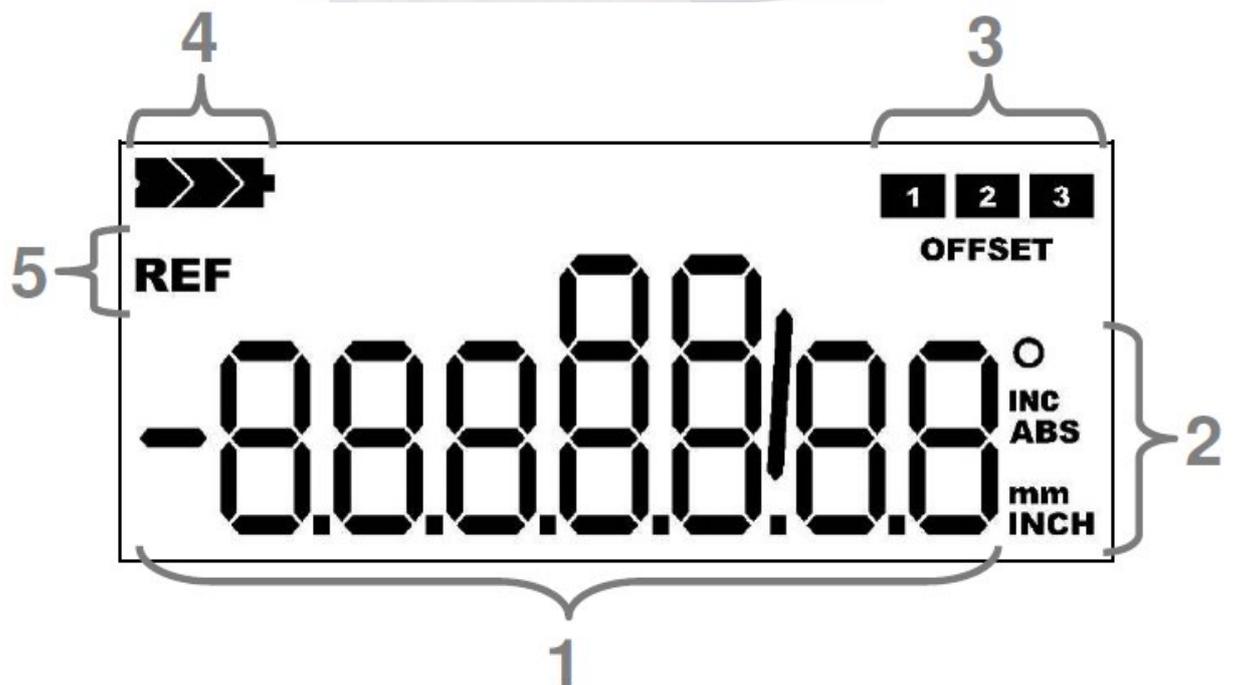Therefore:

- Use **IZ16E** only as described
- Strictly follow this manual

Avoid in particular:

Remodelling, refitting or changing of the device or parts of it with the intention to alter functionality or scope of the position indicator.
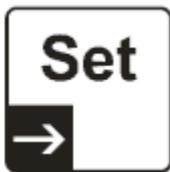
Main Screen IZ-16E

1	Segments for numeric and text display (including signs, decimal points, fraction display)
2	Symbols for units and display mode
3	Icons for active tool-offsets 1 … 3
4	Battery-Status Icons
5	REF symbol: unit needs to be referenced

Basic Button Function

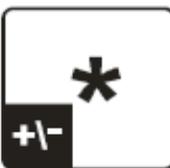**F / P** = Used to enter the Parameter Register List and other advanced functions.

Set / → = In metric mode there is no function. In Parameters Register List use SET button to move the editable number

Incr / Abs ↑ = Switch between INCREMENTAL or ABSOLUTE measuring mode. In Parameters Register List, use to change the value of the selected digit.

* / +\- = Tool offset (cycle between the three tool offsets if enabled).

Setting Calibration Value

1. Move the stop to your desired position and lock in place. Preferably a short size.

2. Make a test cut and measure the cut piece. Note the size.

3. Press and HOLD "F" and "Set" together until the Register P09 comes on screen. Using the "Set" and "Incr/abs" keys, edit the value to be the same size as the measured test piece.

4. Hold "F" to return to normal operating mode.

   DO NOT MOVE OR UNLOCK THE STOP!!!

5. Tap "F" and "Set" together quickly to change the display to the value just modified in Register P09.

6. Do another test cut and measure to make sure the numbers align. The unit is now calibrated correctly.

YOUTUBE VIDEO:
Maxi Digital - Quick Calibrate

YOUTUBE VIDEO:
Maxi Digital - Program new Datum

Register Parameters Explained

The Elgo IZ-16E can be configured for many different applications. Elgo includes several parameters (registers) that can be changed by the end user, depending on their particular application.

Editing the Registers

WARNING!!!
Under normal circumstances, there is no need to adjust these settings after installation.

ACCESS PARAMETER REGISTER

F / P   Hold for 3 seconds to enter the Parameter Register

Set →   Use this Key to select the flashing "Editable" number.

Incr / ↑ Abs   Use this Key to change the value of the selected number (0-9)

* +\\-   Used with some parameters to select a negative symbol.

YOUTUBE VIDEO:
Maxi Digital - Setting Parameters

Factory Register Values for Your Elgo IZ-16E

Register	Default Value
P01	_____ (Count Direction)
P02	0 (symbol display)
P03	1 (Decimal point, only in mm mode)
P05	000 (key lock)
P07	1 (Resolution)
P08	1.0000 (Multiplier, do not change)
P09	0 (Datum value)
P10	0 (Offset 1)
P11	0 (Offset 2)
P12	0 (Offset 3)
P13	0 (Offset lock)
P90	0 (No Function)
P99	Firmware Version

When finished, press and hold the "F" key to return the unit to normal operation.

Register List

The table below lists all possible settings for all registers.

Parameter:	Description:	Default:
P01: A	System configuration: A = 0: Counting Positively A = 1: Counting Negatively	0
P02: A	Display mode (affect only the display of symbols!) A = 0: mm-Mode / Display symbol "mm" A = 1: Inch-Mode / Display symbol "Inch" A = 2: mm-Mode / Display symbol "m" A = 3: mm-Mode / Display symbol "°" A = 4: mm-Mode / Display non symbol	0
P03: A	Decimal point (0 … 4) only for mm-Mode	2
P05: ABC	Keylock: A: Key "Set" (0 = activated / 1 = deactivated) B: Key "Incur/Abs" (0 = activated / 1 = deactivated) C: Key "*" (0 = activated / 1 = deactivated)	0
P07: A	Resolution: (starting with Firmware V1.50) A = 0: Resolution 0.01mm A = 1: Resolution 0.1mm	0
P08:	Multiplication factor (0.0001 … 9.9999)	1.0000
P09:	Reference Value (-9999999 … +9999999)	0
P10:	Offset 1 (-9999999 … +99999999)	0
P11:	Offset 2 (-9999999 … +9999999)	0
P12:	Offset 3 (-9999999 … +9999999)	0
P13: A	Configuration Offset (0 … 3) A = 0: Offset cannot be activated A = 1: offset 1 can be activated A = 2: offset 1 & 2 can be activated A = 3: offset 1, 2, & 3 can be activated	3
P90:	(Without function)	0
P99:	Indicator in the company version	x.xx

NOTE: If changing from tenths to hundredths of a millimetre, parameter P03 must be changed to the correct decimal place.

Maintenance

The Maxi Digital Stop requires very little maintenance. However, it is good practice to check the unit periodically.

Items to check:

• Inspect the nuts and bolts, adjust as required.
• Check the steel flag is aligned.
• Clean the stainless steel strip at the rear of the aluminium rail with a dry, clean rag. DO NOT USE AGGRESSIVE CLEANERS!
• Check the battery indicator. Replace battery if low.
• Inspect the aluminium rail for any damage. This should be free of burrs and foreign objects.

If any parts become damaged or worn, please contact Aluminium Machinery Solutions for replacement parts. AMS has a comprehensive range of spare parts in stock in Australia.

Changing the Battery

> **ADVERT**
>
> For a long operating time, the use of commercially branded batteries is recommended.
>
> If all the battery icons on the LCD-Display are extinguished, a battery change should be made as soon as possible.
>
> By changing the batteries strictly observe the polarity, take for orientation the markings on the battery-case!
>
> All data and parameters are obtained at the battery change, apart from the current actual value.

1. Lock the Flip Stop at the calibration size.
2. Change the battery.
3. Once the battery has been changed, press "F" & "Set" together.
4. Flip stop will be calibrated to the value stored in P09.
5. Make a test cut and measure.
6. Resume normal operation.

If the calibration value is not known, check the register value P09. This will show the stored calibration value.

Troubleshooting

In most cases, problems are caused by operators accessing the register list and changing register values. It is recommended to advise operators that under normal use, it is unnecessary to access the register list.

Note that the IZ-16E can have certain buttons "locked" to prevent operators from accessing the register list. Please see "Register Parameters Explained".

PROBLEM	SOLUTION
Display is blank	* Check that the battery is inserted correctly * Low battery. Replace battery
Random sizes are displayed or constant incorrect measuring.	* Check the reader head located at the rear of the stop. The distance between the reader head and the stainless steel tape should be between 0.1 and 0.5mm. * Clean the stainless steel tape with a clean rag. DO NOT USE AGGRESSIVE CLEANERS!!! * Check the register P08. This must be 1.0000
Counts in the wrong direction	* Check the register P01. Change the digit on the right.

Changing the Direction of the Count P01

Pressing and holding "F" for approximately 3 seconds will allow you to edit the register values.

The register number will be displayed. Pressing "F" will display its value.

P01   00 Direction (+)
P01   01 Direction (-)

Hold "F" for 3 seconds to return to normal operating mode.

Restore Default Settings

1. Remove Battery
2. Press "Inc/Abs" while replacing battery
3. This restores the original Elgo factory settings. The unit will require calibration before use.


Electro Magnetic Fields

!!! DO NOT PLACE UNIT NEAR EMF EMITTING DEVICES !!!

Magnetic interference can also cause the IZ16E Unit to malfuntion. Do not place the unit near magnetic fields. Do not allow the following device within a 3m radius of the Elgo unit or magnetic tape:

• Any device with a brush motor
• Frequency inverters
• Magnets of any kind
• Welders
• De-gauss equipment

Correct Installation of the Magnetic Reader Head
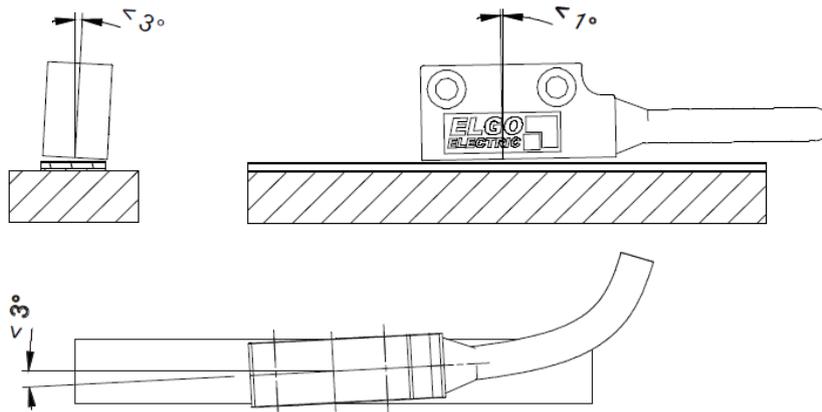
Note that the distance between the reader head and the magnetic tape must be between 0.1mm and 0.5mm.

- The sensor must never touch the magnetic tape. This will shorten the life of the tape and sensor.
- Never have the gap larger than 0.5mm. This will result in random errors and inaccurate measuring.

If you cannot resolve the issue with your Maxi Digital, please contact Aluminium Machinery Solutions:

Email: service@amsmachinery.com.au

Technical Specifications

Position Indicator IZ16E	
LCD-Display	7 decades (digit height 14mm) With sign, battery status and measurement units
Measuring unit	mm, m, Inch or °
Perspective	12 o'clock
Keyboard	Foil with softkeys
Measuring principle	Magnetic, theoretically absolute
Measurement	linear or rotative
Power supply	1.5 V or 3.0 V (+24V on request)
Power consumption (with measuring system)	< 1 mA with 1.5V
Battery life	1...3 years (depending on the battery-type)
Operating temperature	0 °C ... + 50 °C
Storage temperature	-10 °C ... +60 °C
Humidity	max. 80 %, non-condensing
Velocity	max. 4 m/s
Housing	Norm panel housing, ABS plastic, black
Housing dimensions	W x H = 96 x 72 mm
Installation depth	30 mm -> depending on the version, see section 6.1.2
Front panel cut out	W x H = 93 x 67 mm
Protection class front	IP 54 (when installed with sealing) IP 43 (when installed without sealing)
Protection class back	IP 40

AMS ALUMINIUM MACHINERY SOLUTIONS
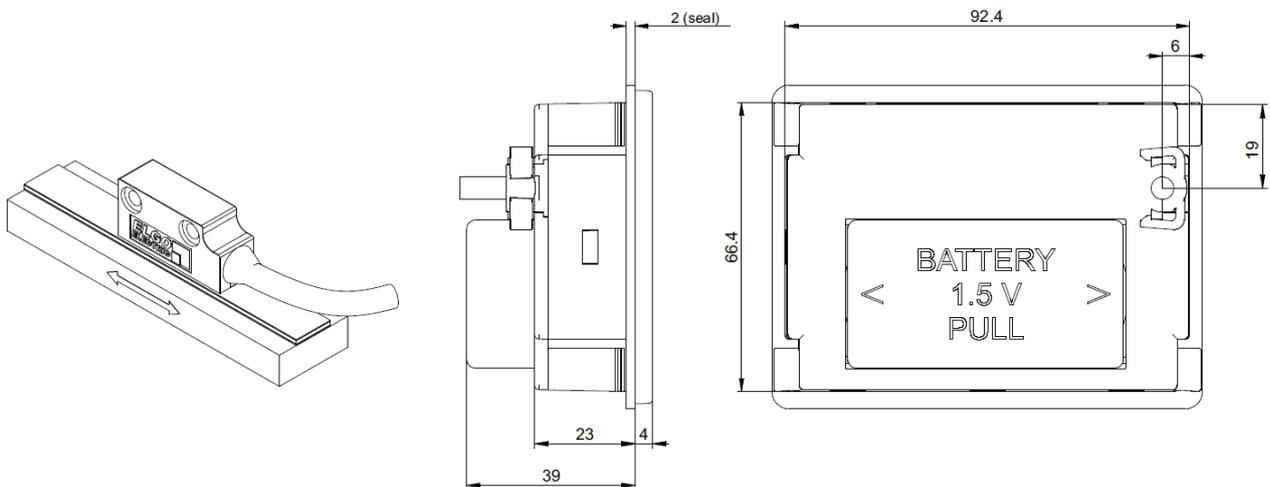
Check out our helpful YouTube Videos!

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Maxi Digital - Setting Parameters

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