

# ELGO

## ELECTRONIC



### Measure

#### Sensors

Our measuring systems bring it to the point.

Our magnetic-based length measuring systems set new standards where lengths and radii have to be measured.

### Control

#### Position Indicators

Being always at the exact spot when positioning.

We develop and produce reliable position indicators with our own research & development and with the latest technology.

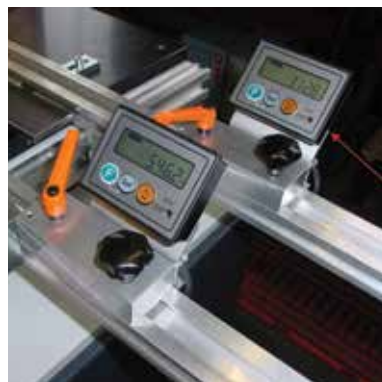
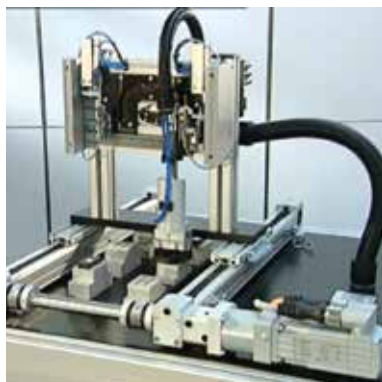
### Positioning

#### Controls

With these controls you can reach your goal precisely.

Whether for axes positioning, angle adjustment or speed monitoring: We produce all necessary functions for the perfect controller.





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# Magnetic Linear Encoders

LMIX Series		
	Common Features	<ul style="list-style-type: none"> <li>• Magnetic linear encoder with index pulse every 5mm.</li> <li>• Resolution = 0.025 mm (at 4 edge triggering)</li> <li>• Repeating accuracy +/- 0.025 mm</li> <li>• 40kHz output per channel</li> <li>• 5VDC or 10-30VDC</li> <li>• 2mm maximum offset from tape</li> <li>• Requires MB.20.50 magnetic tape</li> </ul>
	LMIX1	<ul style="list-style-type: none"> <li>• IP67 Sensor 30x10x15mm</li> <li>• 30m max cable length</li> <li>• 9-pin D-sub connection</li> </ul>
	LMIX2	<ul style="list-style-type: none"> <li>• IP67 Sensor 30x25x12.5mm</li> <li>• 50m max cable length @ 10-30VDC in / 5V out</li> <li>• 30m max cable length @ 10-30VDC in/out</li> <li>• 10m max cable length @ 5V in/out</li> <li>• Tails for screw connection</li> </ul>
	LMIX3	<ul style="list-style-type: none"> <li>• IP54 Sensor 50x24x26mm (option V=IP67)</li> <li>• 50m max cable length @ 10-30VDC in / 5V out</li> <li>• 30m max cable length @ 10-30VDC in/out</li> <li>• 10m max cable length @ 5V in/out</li> <li>• Tails for screw connection</li> </ul>

EMIX Series		
	Common Features	<ul style="list-style-type: none"> <li>• Magnetic linear encoder with index pulse every 2mm.</li> <li>• Resolution = 0.01 mm (at 4 edge triggering)</li> <li>• Repeating accuracy +/- 0.01 mm</li> <li>• 40kHz output per channel</li> <li>• 5VDC or 10-30VDC</li> <li>• 0.8mm maximum offset from tape</li> <li>• Requires MB.20.20 magnetic tape</li> </ul>
	EMIX1	<ul style="list-style-type: none"> <li>• IP67 Sensor 30x10x15mm</li> <li>• 30m max cable length</li> <li>• 9-pin D-sub connection</li> </ul>
	EMIX2	<ul style="list-style-type: none"> <li>• IP67 Sensor 30x25x12.5mm</li> <li>• 50m max cable length @ 10-30VDC in / 5V out</li> <li>• 30m max cable length @ 10-30VDC in/out</li> <li>• 10m max cable length @ 5V in/out</li> <li>• Tails for screw connection</li> </ul>
	EMIX3	<ul style="list-style-type: none"> <li>• IP54 Sensor 50x24x26mm (option V=IP67)</li> <li>• 50m max cable length @ 10-30VDC in / 5V out</li> <li>• 30m max cable length @ 10-30VDC in/out</li> <li>• 10m max cable length @ 5V in/out</li> <li>• Tails for screw connection</li> </ul>

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Ordering Key = Series – 000 – Cable – 1 – V in V out – Options			
Series	LMIX1 / LMIX2 / LMIX3 / EMIX1 / EMIX2 / EMIX3		
Cable xx.x	Cable length in metres. E.g. 01.0 for a 1 metre cable		
V in	Voltage supplied to encoder: 0 = 10-30VDC , 1 = 5VDC		
V out	Voltage output from encoder: 0 = 10-30VDC , 1 = 5VDC		
Options	'D' D-sub connection	'L' Vertical sensor position for E/LMIX2	'V' IP67 for E/LMIX3

## Battery Powered Position Indicators

### IZ16E Series Incremental Linear Measuring System



#### Features

- Magnetic sensor MS20.25 included
- 7 Digit LCD Display
- Resolution up to 0.01mm
- 2 External inputs and outputs
- Simple Installation (snap-in housing)
- Units: mm, m, inch and degrees
- Adjustable datum, offsets (3) and multiplication factor
- Possible interfaces: RS232/RS422/RS485/868MHZ
- Power supply: 1.5V battery (C)
- Operating temperature 0 - 50°C

Housing	Housing Dimensions	Installation Depth	Panel Cut Out	Protection Class
	W X H = 96 X 72 mm	30mm (depending on version)	W x H = 93 x 67 mm	Front: IP43 (IP54 with sealing) Back: IP40
Sensor	Part Number	Cable Length	Cable Details	Protection Class
	MS20.25	0.1 – 2.0m	Highly Flexible, 3 twisted pairs, double shielded, minimum bend 60mm	IP67
Tape	Part Number	Dimensions		
	MB.20.25	Width: 10mm, Bending Radius: 150mm, Maximum Length 32m		

### AZ16E Series Absolute Linear Measuring System



#### Features

- 6 Digit LCD Display
- Measuring distance up to 8 meters
- 0.1mm Resolution
- Unique definition of the zero point
- Permanent retention of settings
- Switchable absolute/incremental mode
- Millimetres or inches mode
- Adjustable reference value and 3 offsets
- Power supply: 1.5V battery (C)
- Operating temperature 5 - 50°C

Housing	Housing Dimensions	Installation Depth	Panel Cut Out	Protection Class	
	W x H = 96 x 72 mm	53mm	W x H = 93 x 67 mm	Front: IP43	
Sensor	Part Number	Cable Length	Cable Details	Protection Class	Dimensions
	AZS	0.1 – 20.0 m	Highly Flexible, 2 pair, shielded, minimum bend 25mm	IP67	100 x 12 x 25mm
Tape	Part Number	Dimensions			
	AB20-40-10-1-R-11	Width: 10mm, Bending Radius: 150mm, Maximum Length 32m			

### Ordering Key = Series – 000 – 1 – Cable – Plug – Options

Series	IZ16E / AZ16E		
Cable xx.x	Cable length in metres. E.g. 01.0 for a 1 metre cable		
Plug	0 = Fixed sensor cable, 1 = plugable sensor cable		
Options	CAP Capacitor to store data during battery exchange	24V for external power supply 10-30VDC	

## 24VDC Position Indicators

### Z25 Single-Axis-Version - Absolute Linear Measuring System



#### Features

- 7-digit LCD display (digit height 8 mm)
- Measure in m, mm, inch and degree
- Snap-in installation
- Tool offset function
- Adjustable reference value
- Adjustable pulse scaling factor
- Operation modes up/down or differential counter
- Power down memory
- No sensor or tape included

Housing	Housing Dimensions	Installation Depth	Panel Cut Out	Protection Class	Display	Operating Temp
	74 x 50 x 23mm	27mm	W x H = 68 x 45mm	IP54	LCD, 7 digits, 8mm High	0-50°C
Inputs	Power Supply	Consumption	Measuring system input options		Compatible Elgo Encoders	
	24VDC	25mA @24VDC +measuring system	A, B @ 24V / 24V A,A',B,B',Z,Z' @ 24 V / 5VDC RS422		PMIX, LMIX, EMIX, EMAX	

### Z60 Single-Axis-Version - Absolute Linear Measuring System



#### Features

- Large LCD display
- Can display signs & bitmaps
- 3 digital external inputs
- 1 optional analog input
- 2 outputs open drain
- 2 relay outputs
- Tool offset function
- Adjustable datum, scaling factor
- Operation modes up/down or differential counter
- Power down memory
- No sensor or tape included
- Serial Interface

Housing	Housing Dimensions	Installation Depth	Panel Cut Out	Protection Class	Display	Operating Temp
	96 x 72mm	33mm (without connectors)	W x H = 93 x 67mm	IP43	LCD, 120 x 80 pixels	0-50°C
Inputs	Power Supply	Consumption	Encoder Voltages Supply/input	Measuring system input options	External Inputs	
	24VDC	120mA @ 24VDC +measuring system	24VDC/24VDC 24VDC/5VDC 5VDC/5VDC RS422	A, B, Z 100 KHz A,A',B,B',Z,Z' 100KHz A,A',B,B',Z,Z' 500KHz RS422	24VDC, used to activate each axis	

### Ordering Key = Z25 / Z60 – 000 – 024 – Inputs – Options

Inputs	A,B	A,B,Z	A,A',B,B',Z,Z'	To suit Elgo System
	0 = 24V/24V (Z25 Only)	1 = 24V/24V 100KHz (Z60 Only) 6 = 5V/5V 100KHz (Z25/Z60)	2 = 24V/5V 100KHz (Z60 Only) 3 = 5V/5V 100KHz (Z60 Only) 7 = 24V/5V 500KHz (Z60 Only) 8 = 5V/5V 500KHz (Z60 Only) 9 = 24V/24V 500KHz (Z60 Only)	4 = FMAX (Z25/Z60) 5 = EMAX (Z25/Z60)
Options	F = Analogue output 0... 10 V (Z60 Only) G = Analogue output 0... 20 mA (Z60 Only) H = Analogue output 4... 20 mA (Z60 Only)			

# Position Controller

## P40 Single-Axis-Version - Absolute Linear Measuring System



### Features

- Relay or Analog output signals
- Display of required and actual position
- Up to 500 address lines programmable
- Absolute or incremental positioning
- Reference or homing sequence
- Units either mm/inch
- Pulse multiplication factor
- Tolerance windows
- Software stroke limits
- Backlash compensation
- Offset calculation
- Pulse monitoring
- Quantity counter
- Manual mode
- 20 offset values
- Parameters stored in EEPROM

Housing	Housing Dimensions	Installation Depth	Panel Cut Out	Protection Class	Display	Operating Temp
	W x H = 144 x 144 mm	75mm,(110mm with D-Sub connections)	W x H = 138 x 138mm	Front: IP43	Backlit LCD	0-50°C
Inputs	1 Measuring System input	Digital inputs	Minimum pulse time	Maximum input current	Input function examples	
	Supply 24VDC (optionally 5VDC), A, A', B, B', Z, Z'	8 at 24VDC (optionally 16)	300ms per input	10mA per input	Start, Stop, Datum, Counter, End limits, System reset	
Outputs	Control output type	Optional outputs	Function output type	Output function examples	Maximum output current	
	Digital PNP (Option R floating relays as normally open)	PID Analog +/- 10VDC	Digital PNP 24VDC	Position reached, quantity reached, mode of operation	10mA per output	

2-Axis Version	Additional measuring system input	Additional control output
	5VDC, 24VDC, or 1-2 analog inputs for 2nd axis only	Digital (PNP) or PID Analog +/- 10VDC (Analog output not available with analog input selected.)

## Ordering Key = P40 - 000 - 024 - I<sub>1</sub>I<sub>2</sub> - O<sub>1</sub>O<sub>2</sub> - Options

I <sub>1</sub> I <sub>2</sub>	I <sub>1</sub> = Input type for Axis 1, I <sub>2</sub> = Input type for Axis 2	X = axis is not used 1 = A, B, Z (PNP) 24 VDC supply voltage for encoders/24 VDC –100 KHz 2 = A, A', B, B', Z, Z' 24 VDC supply voltage for encoders/ 5 V-TTL – 100 KHz 3 = A, A', B, B', Z, Z' 5 VDC supply voltage for encoders 5 V-TTL – 100 KHz 4 = one analog input (only for 2nd axis) 5 = two analog inputs (only for 2nd axis)
O <sub>1</sub> O <sub>2</sub>	O <sub>1</sub> =Output type for Axis 1, O <sub>2</sub> =Output type for Axis 2	X = axis is not used 0 = digital outputs (transistor outputs PNP) 1 = PID analog output +/- 10VDC (not possible with analog measuring input on the same axis)
Options		C= screw clamps 8 = 8 digital Inputs / 8 digital outputs S = Serial interface RS232 N= digital inputs NPN
Example: P40-000-024-15-10-CS		P40 in standard design with 24 VDC power supply, 1 encoder input with A, B, Z signals and 2 analog inputs, for the first axis controlled analog outputs and for the second axis transistor outputs, connection with screw clamps and RS232 interface.