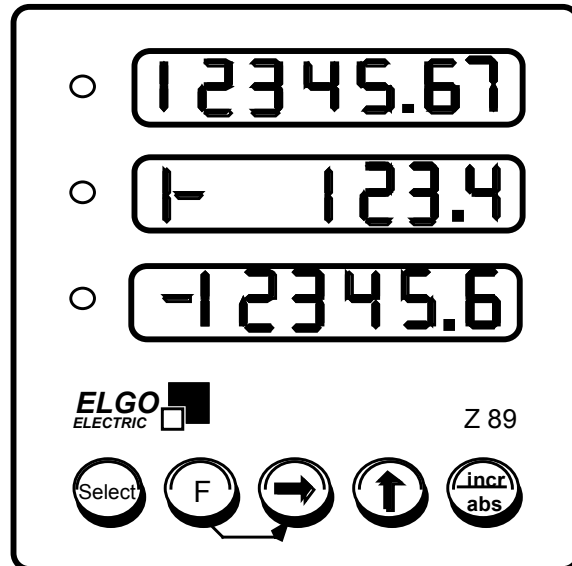# SERIES Z-89

2/3 Axis Position Indicator

- **Power down memory**
- **Selectable decimal point**
- **Multi edge function**
- **Pulse factor**
- **Reference value**
- **External reset or preset inputs**
- **Digital brightness control**

1. Operation

Select　　　To select Axis by pressing sequentially. LED of selected axis illuminates

F　　　　　1. To select desired parameter
　　　　　　　2. To store edited value

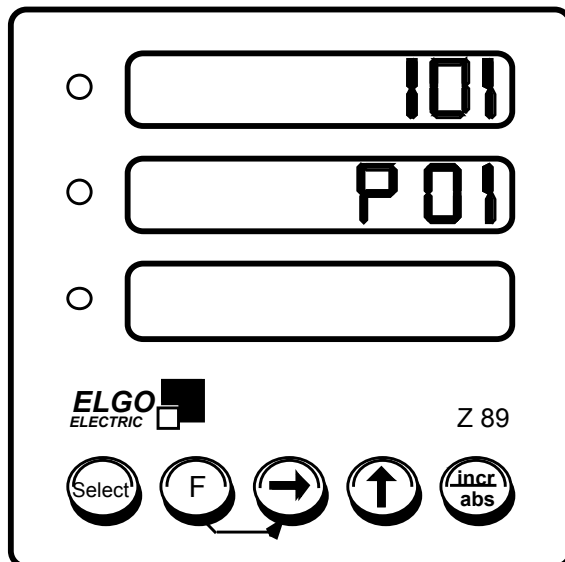$\rightarrow$　　　　　To select the digit to be changed

$\uparrow$　　　　　To increment the digit between 0 and 9

in/abs　　　To change from absolute to incremental measurement.
　　　　　　　Axis must be selected first

F + $\rightarrow$　　　To set Datum position of selected axis

F + $\rightarrow$ **+** $\uparrow$ **+ in/abs**　 Press together for 3 seconds: Mode of selected axis is activated
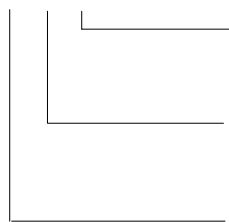
2. Setting of Parameters

1. Select axis X, Y or Z by pressing **Select**

2. Press **F**, →, ↑, **in/abs** together for 3 seconds
   Second display shows **P01** for parameter 01

3. Press **F**. First display shows value of the parameter (i.e. 101)

4. Press → and ↑ to select and to increment the digit

5. By pressing **F** new value will be stored and second display goes to next parameter (P03)
   Repeat steps 3. to 5. for each Parameter.

6. Press **F**, →, ↑ , **in/abs** together for 3 seconds. Parameter mode is relocked and actual
   values appear

7. Press **Select** until no LED's are illuminated

3. Parameters (available for each axis)
Parameters without function will be skipped

No.	Function	Selection/Adjustment	Default
P 01	X X X		101
		0 = Counting direction (up)	
		1 = Counting direction (down)	
		0 = mm Mode	
		1 = Inch Mode	
		0 = Axis not activated	
		1 = Axis activated	
P 03	Decimal point	0 to 3 = 0 / 0.0 / 0.00 / 0.000	1
P 04	Memory	0 = Power down memory **ON**	0
		1 = Power down memory **OFF**	
P 05	Buttons	X X	00
		0 = **F** and → for setting datum is activated	
		1 = **F** and → for setting datum is not activated	
		0 = **incr/abs** activated	
		1 = **incr/abs** not activated	
P 06	Multi edge trigger	0 = One edge multiplier	0
		1 = Two edge multiplier	
		2 = Four edge multiplier	
P 08	Pulse multiplication factor	0.0001…9.9999	1.0000
P 09	Datum value	0.0 to 999999.9	0.0
P 14	Display brightness	0...9 = 0 = dark, 9 = bright	5
P 15	Function of input ST 1 (4,5,6)	0 = Preset datum	0
		1 = Reset	
P 16	Configuration	1 = Loading of default parameters (all three axis will be defaulted again)	0
P 24	Tool offset	activated by input/ST5 (under development)	0.0
P 99	Software Version	Displays the software number and version	

4. Connections

Built on housing
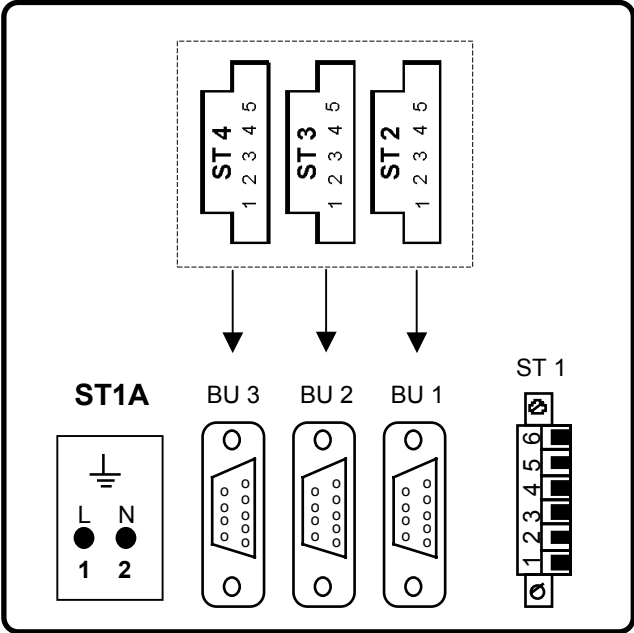
Panel housing
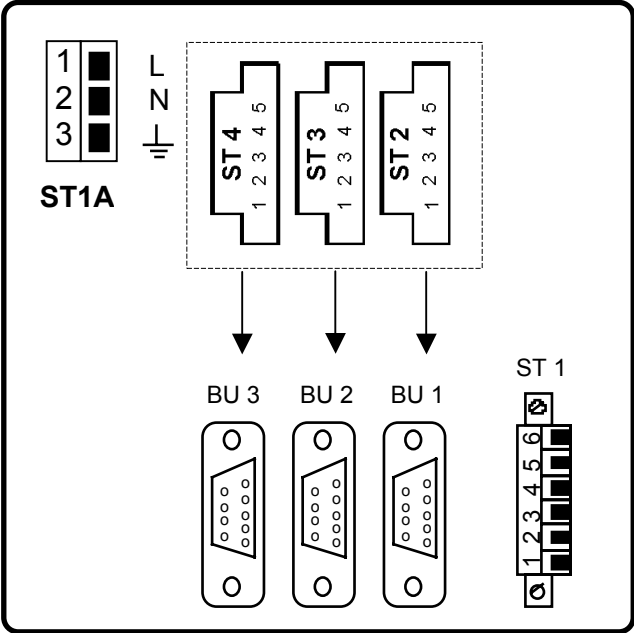
ST 1
DC- POWER SUPPLY
and Inputs (PNP)
Pin 1 = PE
Pin 2 = 0 V GND
Pin 3 = +24 VDC in
Pin 4 = Input X Axis*
Pin 5 = Input Y Axis*
Pin 6 = Input Z Axis*
* Functions are adjustable
in Register P15

ST 1A
AC- POWER SUPPLY
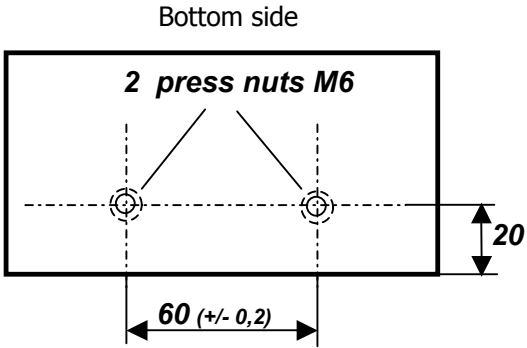**(115/230 VAC)**
Pin 1 = L1
Pin 2 = N
Pin 3 = PE

BU 1... 3 (resp. ST2 ... 4)
Encoder system

Pin 1 = 0 V GND
Pin 2 = 24 VDC out
Pin 3 = A
Pin 4 = B
Pin 5 = PE
Pin 6 = A' Option
Pin 7 = B' Option
Pin 8 = Z Option
Pin 9 = Z' Option

The measuring system
connectors are depend-
ing upon assembly 9 pin
D-SUB' s or 5 pin screw
terminals

Assembly - Built on housing:

Bottom side

2 press nuts M6

20

60 (+/- 0,2)

5. Technical Specifications

Display	:	7 digits red, 14 mm high
Power supply	:	24 VDC, +/- 10% or 115/230 VAC (+/- 10 %)
Consumption without measuring systems	:	max. 150 mA
Ambient Temperature	:	0° ...+ 50° C
Encoder supply	:	24 VDC
Counting frequency/Encoder	:	20 KHz
Input Signals (Connector ST1)	:	PNP active high
Encoder Inputs (Connectors ST2,3,4)	:	PNP active high
Enclosure	:	Black metal panel housing
Dimensions	:	w x h = 144 x 144 mm
Installation depth	:	85 mm with Encoder Connector
Cut out	:	w x h = 138 x 138 mm
Protection class	:	IP 43

6. Type designation Z-89

Z 89 – 000- 024 – XYZ –XXXXXX

Z = Indicator/Counter

2 or 3 axis indicator, 7 digit 14mm display

Version
000 = standard
001 = first special version
etc.

Power supply
024 = 24 VDC
115 = 115 VAC
230 = 230 VAC

Encoder input
0 = A/B 24V/24V 20KHz PNP (Phoenix connectors)
1 = A/B/0 24V/24V 20KHz PNP (D-SUB Connectors)
2 = A /A B /B 24V/TTL 100KHz PNP (D-SUB Connectors)
3 = A /A B /B 0 /0 24V/TTL 100KHz PNP (D-SUB Connectors)
4 = A /A B /B 0 /0 5V/TTL 100KHz PNP (D-SUB Connectors)
5 = A, B 5V/5V 100KHz PNP (Phoenix connectors)
6 = A/B 24V/24V 100KHz PNP (D-SUB Connectors)
X = Axis not active (only 2 axes version)

Special Features
A = Free standing housing
S = Serial link RS 232*
E = External input
C= Can BUS Interface*

*under construction

7. Liability exclusion / Guarantee

We have checked the contents of this instruction manual carefully, to the best of our knowledge and belief for conformity with the described hardware and software. Nevertheless errors, mistakes or deviations can not be excluded, therefore we do not guarantee complete conformity. Necessary corrections will be included in the subsequent editions. We appreciate your ideas and improvement suggestions very much. Reprint, duplication and translation, even in extracts, are only allowed with a written authorization by the company ELGO Electric GmbH. We constantly strive for improving our products, therefore we keep all rights reserved for any technical modifications without any notice.

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