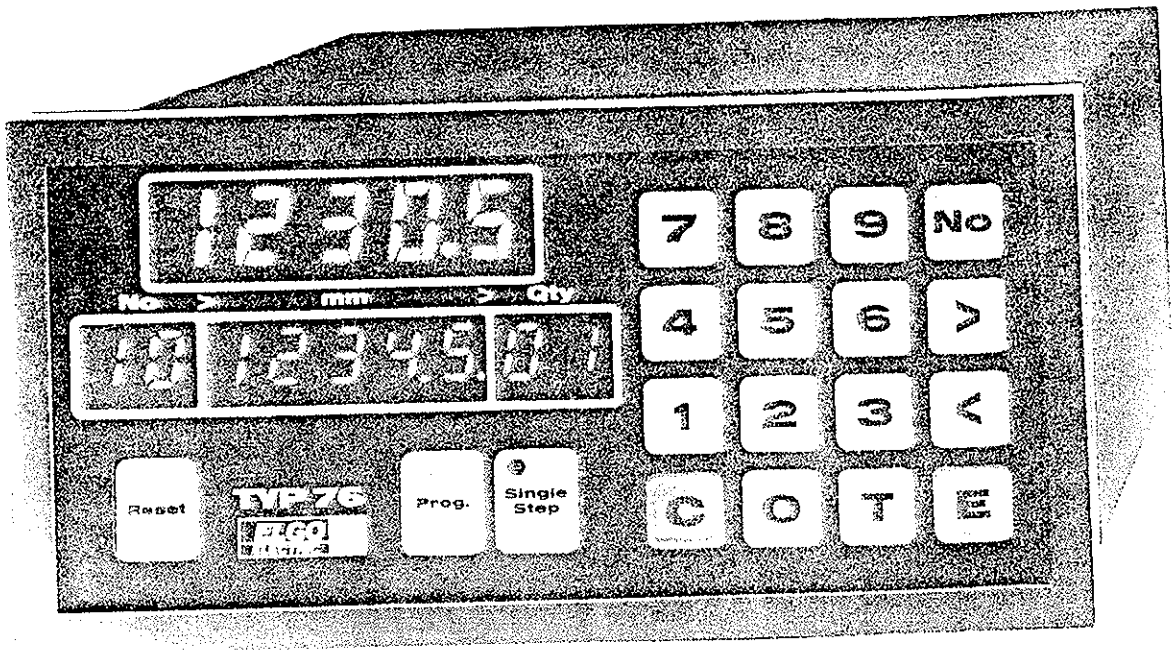
SERIE 76 P/K

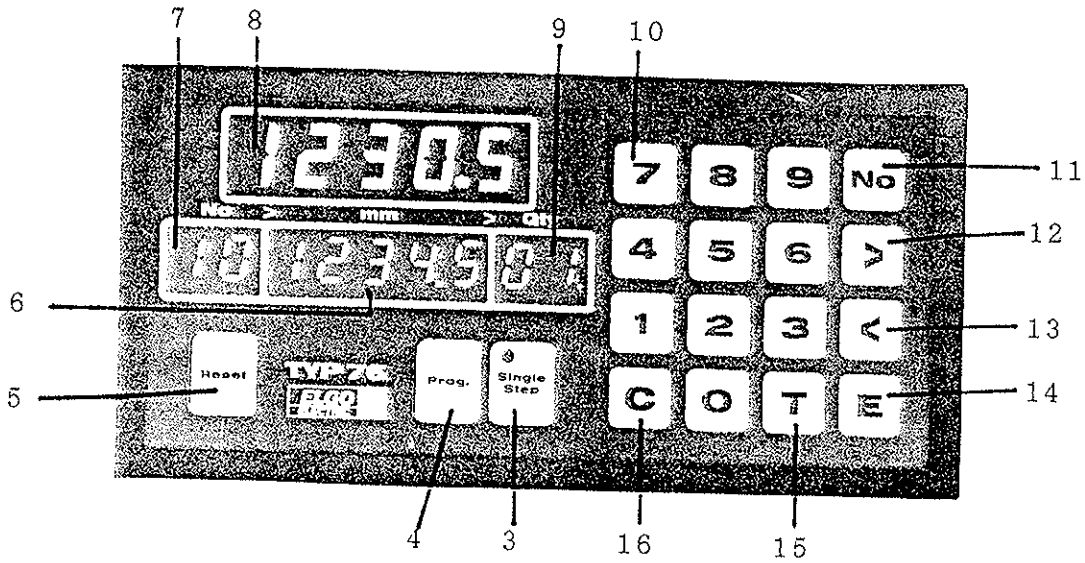
Single axis, programmable position controller



ELGO - ELECTRIC Gerätebau und Steuerungstechnik GmbH
D - 78239 Rielasingen, Carl - Benz - Straße 1
Telefon 07731 / 9339-0, Telefax 07731 / 28803

ELGO ELECTRIC

OPERATING AND DATA ENTRY CONTROLS



3 - SINGLE STEP KEY

4 - OPENNING A PROGRAM KEY

5 - RESET KEY

6 - LED DISPLAY OF DEMAND POSITION

7 - PROGRAMM NUMBER DISPLAY

8 - LED DISPLAY OF ACTUAL POSITION

9 - LED DISPLAY OF QUANTITY COUNTER

10 - NUMERIC KEYBOARD

11 - PROGRAMM KEY

12 - CURSORE KEY

13 - CURSORE KEY

14 - ENTER KEY

15 - FUNCTION KEY

16 - CLEAR KEY

CAP.1 - PROGRAMMING MODE

- Depress (4) "PROG" key
- Depress (11) "NO" key , and the led display window (7) shows the first step of our selected program .
- Input through the keyboard (10) , the demand value , and and then we will see this value on the led display window (6).
- Depress (12) " > " key , the cursor moves to the led display window (9) " QTY " .
- Input through the keyboard (10) , the number of cuts to do, with the bakstop at the same position , and we will see this number on the led display window (9) " QTY " .
- If, we want to make programs with several steps, depress (12) ">" key, and input the demand values, for each step.
- Depress (14) "E" key, to finish the program.

CAP.2 - VERIFY ONE PROGRAM

- Depress (4) "PROG" key .
- Depress (11) "NO" key , to see all steps of the program we want to verify .
- To finish the verification , depress (15) "T" key .

ELGO ELECTRIC

CAP.3 - SELECTION WAY OF A PROGRAM AND START THE PROCESS

- Depress (14) " E " key .
- The LED display window (6) "mm" show us the number of the program selected (blink), and the message "bloc nr".
- Input through the keyboard (10) , the number of program selected (from 0 to 39) .
- Depress (14) " E " key .
- If we want to start immediately the process , depress (4) " PROG " key , and then depress " START " key .

CAP.4/5- SINGLE STEP

- If we want to make a single operation (without program), do as follows :
- Depress (3) " SINGLE STEP " key .
- Input through the keyboard (10) , the demand value , and we will see this value on the led display window (6) " mm " .
- Depress " START " key , and the backstop moves to the demand value .

CAP.6 - TO CHANGE MEASUREMENT SYSTEM (mm <==> in)

The ELGO 76 P controller has the possibility of reading the backstop position in milimeters or in inches . To change the measurement system from milimeters to inches, do as follows :

Openning parameters security code

- Depress (4) " PROG " key .
- Depress (13) " < " key .
- Depress (16) "C" key .
- Input through the keyboard the value "98" , by depressing "9" and "8" keys .
- Depress (12) " > " key .
- Depress (16) "C" key .
- Input through the keyboard (10) , the value "50565", by depressing "5" , "0" , "5" , "6" , "5" keys .
- Depress (14) "E" key .

Programation of new parameters

- Depress (13) " < " key .
- Depress (16) "C" key .
- Input through the keyboard (10) , the value "13" , by depressing "1" and "3" keys .
- Depress (12) " > " key .
- Input through the keyboard (10) the value "0" ,by depressing " 0 " key, if we want a milimeters measurement system . Input the value "1" , if we want a inches measurement .
- Depress (14) "E" key .

ELGO ELECTRIC

Closing parameters security code

- Depress (13) " < " key .
- Depress (16) "C" key .
- Input through the keyboard (10) the value "98",by depressing "9" and "8" keys .
- Depress (12) " > " key .
- Depress (16) "C" key .
- Depress (14) "E" key .
- To close , also , it's enough to turn-off the machine on the general electric switch .

CAP.7 - ADJUST OF SWITCHING POINT

The position of the backstop positioning can be vary throughtout the time due to the alterations of clearance and the time of control's reply . If the value saw at the led digital window (6) " mm " doesn't coincide with the value saw at the led display window (8) , do as follows :

- Input the OPENNIG PARAMETERS SECURITY CODE as we saw on the CAP. 6 .

Programation of new parameters

- Depress (13) " < " key .
- Depress (16) "C" key .
- Input through the keyboard (10) the value "3", by depressing "3" key .
- Depress (12) " > " key .
- Input a value between " 1.2 " and " 2 " .
- Depress (14) "E" key .

The value "1.2" to "2" is changeable depending of the stopping time , being the correct value found by successive experiences according to the precedent process .

- Input the CLOSING PARAMETERS SECURITY CODE as we saw on the CAP. 6 .

CAP.8 - TO RESET THE BACKSTOP POSITION

If it's found that the width of cutted strips does not correspond to the readings of led digital window , the backstop position controller ELGO 76 P , must be adjusted by reseting .

Proceed as follows :

- Depress (3) "SINGLE STEP" key .
- Input through the keyboard (10), the value "50", by depressing "5" and "0" keys .
- Depress "START" key .
- Cut a strip and accurately measure it's width.
- The real value was 51,5, for example.
- Depress (16) "C" key.
- Input through the keyboard (10) , the value 51,5.
- Depress, with a pen for example, "RESET" push-button .
- Verify, cutting a new strip, if the real value it's the same from the demand value .

CAP.9 - BACKSTOP RETRACT DURING CUTTING ACTION

When cutting narrow strips , to avoid blades damage , the backstop position controller allows the backstop bar to retract during cutting action : the backstop bar retract about 10 milimeters , returning automatically to the pre--selected position as soon as the top blade holder reaches it's top limit position.
If this action is required , actuate on the mini lever switch accordingly .

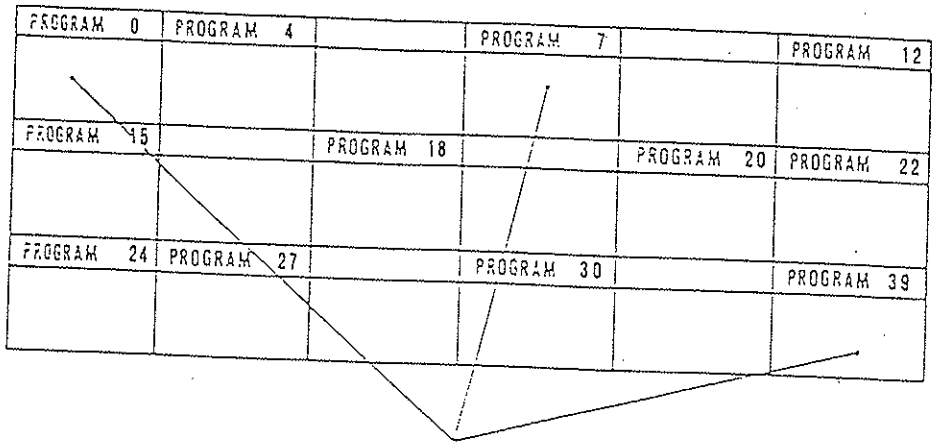
WARNING :

Unless your motorized backstop is equipped with ball type leadscrews, avoid to use the backstop bar retration effect; it is advised to use the backstop bar retraction only when cutting narrow strips .

ELGO ELECTRIC

MEMORY ORGANIZATION FROM ELGO 76P CONTROLLER

MEMORY



PARTIAL MEMORIES

The memory of the ELGO 76P CONTROLLER is divided into 40 partial memories , in which , each of them can have a program with 10 steps, in the maximum . Then , we can get 40 different programs, selecting through a number (0 to 39) (that identifies a fixed program) we pretend .

One can manage the way of a program to another as follows :

- Depress [Reset] key .
- Depress [Prog.] key .
- Depress [E] key.
- The LED display window [No 10] show us the number of the the program selected (blink), the LED display window [mm 12 34.5] the message "bloc", and "nr" on the LED display [Qty 01]
- Depress [C] key.

- Input the program number , for example 14 , by depressing [1] and [4] keys .

- Depress [E] key.

- Depress [No] key , we will see automatically, the first step from program 14 .

- To see the several steps of 14 program , depress several times [No] key until the last step .

- Repeat this process to change another program .

INTRODUTION MODE OF A PROGRAM

Example :

1 - Definition number of a program

- Depress [Reset] key .

- Depress [Prog.] key .

- Depress [E] key .

- The LED display window [No 10] show us the number of the the program selected (blink), the LED display window [mm 12 34.5] the message "bloc", and "nr" on the LED display. [Qtv 01]

- Depress [C] key .

- Input the number of the program that we want to give to this program , for example 1 , by depressing [1] key .

- Depress [E] key .

2 - Introdution of program 1

Step number 1 :

- Demand value = 250.00 mm
- Number of cuts = 2

Step number 2 :

- Demand value = 170.00 mm
- Number of cuts = 3

- Depress [No] key , we will see , on the led display window [No 1] , the number 1 ; first step from program number 1 .

- Depress [C] key .

- Input the demand value , from the first step of program by depressing [2] [5] [0] [0] [0] keys .

- After this operation , depress [>] key , the cursor moves to the led display window [Qtv 01]

- Depress [C] key .

- Input through the keyboard the number of cuts to do , with with the backstop at the position 250.00 mm, by depressing [2] key .

- Depress [>] key , and we will see automatically on LED display window [No 2] , the number 2 ; second step from program number 1 .

- Depress [C] key .

- Input the demand value , from the second step of program, by depressing [1] [7] [0] [0] [0] keys .

- Depress [>] key , and the cursor moves to the led display window Qty [01]

- Depress [C] key .

- Input through the keyboard the number of cuts to do, with the backstop at the position 170.00 mm , by depressing [3] key .

- Finally , depress [E] key , that close our program .

- If we want to start the process , depress [Prog.] key , and then depress the push-button [START]

SINGLE STEP

Example :

- Demand value = 125.70 mm

- Depress [Reset] key .

- Depress [Single Step] key .

- Input through the keyboard (10) , the demand value , by depressing [1] [2] [5] [7] [0] keys , and we will see this value on the led display window mm [1234.5]

- Depress [START] push-button , the backstop moves to the position 125.70 mm .

P A R A M E T E R L I S T

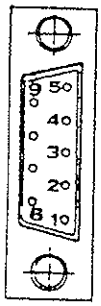
ELGO ELECTRIC

Reg.-Nr.	Function	Resolution	Value
1	Slowdown	0,1 mm	
2	Creepspeed	0,1 mm	
3	Stop offset	0,1 mm	
4	Backlash compensation	0,1mm	
5	Auto retract	0,1 mm	
6	Saw blade	0,1 mm	
8	System parameter see table	0,1-0,7	
9	Time of "in position" pulse	0,1 sec.	
10	Standstill time	0,1 sec.	
11	Time of "quantity reached" pulse	0,1 sec.	
12	Tolerance window	0,1 mm	
13	Inch/mm selection 0=mm 1=Inch	0/1	
14	Incremental mode selection 0 = external input 1 = internal selection		
20	Decimal point 5 = no decimal point 4 = 1 digit after dp 3 = 2 digits after dp	3 - 5	
40	Programm block selection	0 - 39	
98	Security code	5 0 5 6 5	

Reg. 8 Systemparameter * = Function activated

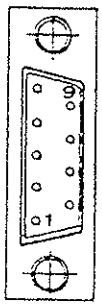
Function	0	1	2	3	4	5	6	7
Backlash copensation	*		*		*		*	
Incremental error comp.	*	*			*	*		
automatic quantity count.	*	*	*	*				

INPUT/OUTPUT CONNECTIONS



ST 1 ENCODERINPUT

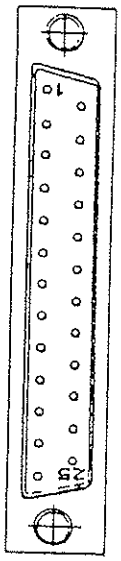
PIN 1	0 VOLTS
PIN 2	POWER SUPPLY + 24 VOLT DC 150 mA
PIN 3	CHANNEL A
PIN 4	CHANNEL B
PIN 5	CABLE SCREEN



ST 2 POWER SUPPLY

PIN 5	0 VOLT FOR 10 VOLT
PIN 4	POWER + 10 VOLT DC
PIN 3	LENGTH SCREEN
PIN 2	0 VOLT OF 24 VOLT
PIN 1	POWER +24 VOLT DC

ST 3 INPUT/OUTPUT SIGNALS

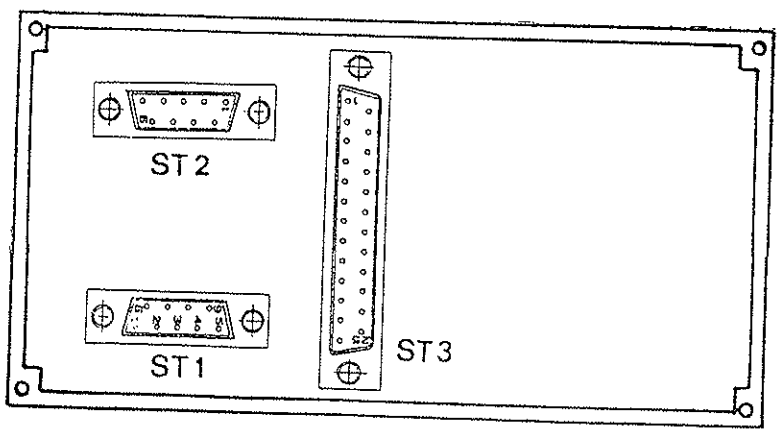


INPUTS

PIN 1	DATUM
PIN 2	AUTO RETRACT
PIN 3	QUANTITY DECREMENT
PIN 4	START POSITIONING
PIN 5	STOP POSITIONING
PIN 6	INCREMENTAL OPERATION IN SINGLE MODE
PIN 7	INCREMENTAL POSITIVE IN SINGLE MODE (PIN 5 MUST ALSO BE SELECTED

OUTPUTS

PIN 9/10	SCREEN
PIN 11	+ 24 VOLT POWER-OUTPUT
PIN 14	CREEP SPEED
PIN 15	SLOW SPEED
PIN 16	FAST SPEED
PIN 17	REVERSE (DIRECTION ZERO)
PIN 18	POSITION REACHED
PIN 19	QUANTITY REACHED
PIN 23	0 VOLT OUTPUT



ELGO ELECTRIC

T E C H N I C A L D A T A

Power supply requirement: +24V/600 mA +10V/900 mA galvanically isolated. Standart ELGO NG 13.0

Encoder power supply....: +24V DC 130 mA

Input signals.....: Negativ logic: connect to zero volts. (Option: positiv logic: connect to +24 volts Input 0.75 Sec min. 10 mA/pin max.

Output signals.....: Open collector PNP (NPN on request). Output current 30 mA output. Freewhell diodes integrated.

Memory.....: Battery backed for about 5 years.

Indcators.....: Red LED 8 mm.

Connectors.....: D type

Hardware.....: Elgo counter chip plus 8 bit CMOS micro-processor with 32 kbyte E-Prom an 16 kbyte RAM.

System accuracy.....: + / - 1 bit.

Position speed.....: 10 KHZ (60 m/min with 0,1 mm resolution).

Enclosure.....: Back polycarbonate, for fitting into control panel. Can be mounted in any attidude.

Dimensions.....: 72 mm high, 144 mm wide cut out 67 X 139.