

SX1- USER MANUAL

Single/Double Axis General Plc

[Download area for software](#)

<http://www.pmtechnologies.net/downloads.html>

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PM Technologies (Mumbai)

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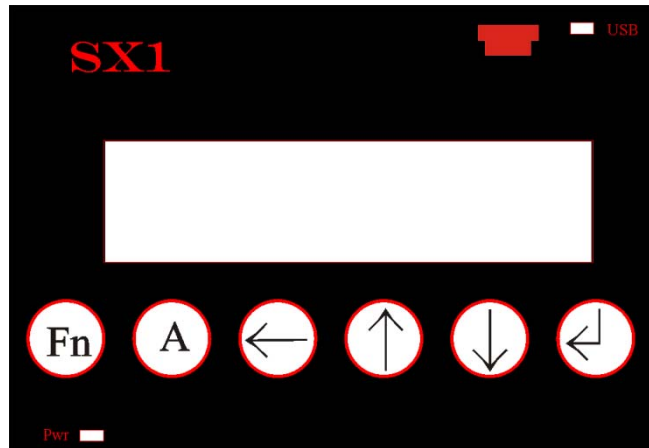


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SINGLE /DOUBLE AXIS CONTROLLER



1) Fn :- Function Key

The Function key is used to View/Edit Programs or Machine Parameters

2) A :- Abort Key

To abort out from a given window

3) <- :- Shift Key

Used to shift the cursor position while editing

4) Up arrow:-

Used to increase decrease values

5) Down arrow:-

Used to decrease values

6) Enter Key:-

To update edited values



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On Power On the controller will display

Waitingcmd
X000.00 Y000.00

FUNCTION KEY (Fn Key)

The function key is used to edit Machine parameters and program parameters.

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Software:

PM1 SingleAxis Ver 1.3

Tools

Open File Save File New File 2 Password Keyboard Static

1

3

5

7

8

6

9

4

10

11

M/c Error -1

No. Items=14

Static

Transfer Start Stop STEP

UPGRADE Upgrade Firmware

Input Sensors/Switch Level

Input 1 Level NO ?

Input 2 X Home

Input 3 Y Home

Input 4 Level NO ?

Input 5 Level NO ?

Acceleration

Use as X Home

Use as Y Home

Use as Start Switch

Use as Stop Switch

X Axis Parameters

Enable X Axis

Power on Home ?

Rotary Axis?

Pitch 5.00

MGear 1.00

EGear 400.00

Stroke 350.00

Default Speed 25.00

Home Speed 20.00

Sl. Jog Speed 5.00

R Jog Speed 25.00

Y Axis Parameters

Enable Y Axis

Power on Home ?

Rotary Axis?

Pitch 5.00

MGear 40.00

EGear 400.00

Stroke 350.00

Default Speed 25.00

Home Speed 20.00

Sl. Jog Speed 5.00

R Jog Speed 25.00

Files in Mem.

Delete

At Power On

Execute Program at power on

Prg. No. 1

Line1

Line2



1)Tools Menu:-



Move

User Editable Parameters

Units is mm for linear Axis and Deg. For Rotary Axis

Add move Block adds a motion command in the program. User can select between X or Y axis here. Motion commands can be in Absolute(w.r.t. Home) or Relative(Current location). If the user checks the user edit button and gives it a name e.g.(XREF) this parameters appears in the SX1 module as a editable Value with name (XREF). This Variable can then be edited by the operator in stand alone mode.

e.g 1) MOVE_ABSOLUTE X-AXIS 5.0000 (U) REF_X
(U) shows that this parameter is a user editable parameter.

2) MOVE_RELATIVE X-AXIS 12.0000 ()

This motion block will not be visible to the end user in stand alone mode.



Speed

User Editable Parameters

Use this function to change speeds of the axis.

e.g 1) SPEED Y-AXIS 25.0000 (U) RSPD

(U) denotes that this parameter is a user editable parameter and will be user editble.



Delay

User Editable Parameters

Use this function to add a delay before next function execution.



Output



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User Editable Parameters



User Editable Parameters

2) File save open





3) Program Block Window

HOME X-AXIS 0.0000
HOME Y-AXIS 0.0000
OUTPUT 5 ON
DELAY 2.00 ()
SPEED Y-AXIS 25.0000 ()
LABEL LOCN
SPEED X-AXIS 25.0000 ()
MOVE_ABSOLUTE X-AXIS 10.0000 (U) XREF
SPEED X-AXIS 10.0000 (U) CTSPD
MOVE_RELATIVE X-AXIS 5.0000 (U) XCUTL
SPEED X-AXIS 25.0000 ()
MOVE_ABSOLUTE X-AXIS 0.0000 ()
DIVIDE Y-AXIS 6 LOCN (U) TEETH
OUTPUT 5 OFF

Static No. Items=14

Transfer Start Stop STEP 4



Inputs

5

Opts

- X Pulse +5
- X Dirn +5v
- Y Pulse +5
- Y Dirn +5v
- Opt5
- Opt6
- Opt7
- Opt8

Files in Mem.

6

Delete

Input Sensors/Switch Level	Acceleration
Input 1 Level NO ? <input checked="" type="checkbox"/>	
Input 2 X Home <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Use as X Home
Input 3 Y Home <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Use as Y Home
Input 4 Level NO ? <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Use as Start Switch
Input 5 Level NO ? <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Use as Stop Switch


7



X Axis Parameters		Y Axis Parameters	
Enable X Axis	<input checked="" type="checkbox"/>	Enable Y Axis	<input checked="" type="checkbox"/>
Power on Home ?	<input type="checkbox"/>	Power on Home ?	<input type="checkbox"/>
Rotary Axis?	<input type="checkbox"/>	Rotary Axis?	<input checked="" type="checkbox"/>
Pitch	<input type="text" value="5.00"/>	Pitch	<input type="text" value="5.00"/>
MGear	<input type="text" value="1.00"/>	MGear	<input type="text" value="40.00"/>
EGear	<input type="text" value="400.00"/>	EGear	<input type="text" value="400.00"/>
Stroke	<input type="text" value="350.00"/>	Stroke	<input type="text" value="350.00"/>
Default Speed	<input type="text" value="25.00"/>	Default Speed	<input type="text" value="25.00"/>
Home Speed	<input type="text" value="20.00"/>	Home Speed	<input type="text" value="20.00"/>
Sl. Jog Speed	<input type="text" value="5.00"/>	Sl. Jog Speed	<input type="text" value="5.00"/>
R Jog Speed	<input type="text" value="25.00"/>	R Jog Speed	<input type="text" value="25.00"/>

At Power On	
<input type="checkbox"/>	Execute Program at power on
9 Prg. No.	<input type="text" value="1"/>
Line1	<input type="text"/>
Line2	<input type="text"/>



 Upgrade
Firmware **10**

M/c Error -1 **11**

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Logies



- 1) Fully programmable Single/Dual Axes Motion Control card.
- 2) Works with stepper motors, Servo motors BLDC motors in position control mode.
- 3) 4 additional outputs for solenoids, coils buzzers, etc (24v)
- 4) 5 Opto-isolated inputs.
- 5) 16x2 Line Display with 6 Keys.
- 6) USB 2.0 Port for programming.
- 7) Very easy to use GUI based programming.
- 8) Timers, counters, motion blocks, as inbuilt features.
- 9) Optional Encoder feedback and (0-10v) Analog out and Analog in Ports.
- 10) Ready Firmware's for Drilling, Tapping, Cut to length applications
- 11) Small Compact Size 90x63mm
- 12) Removable connectors on back panel.

SYSTEM REQUIREMENTS:-

- 1) Windows XP Sp2 or higher
- 2) USB 2.0 compliant port.