

## Up to 3 axis Motion Controller PMC3

- **1 to 3 Axis Servo Control**
- **Stand-alone Motion Controller & PLC**
- **Onboard Digital & Analog I/O**
- **Built In HMI**
- **Stepper Control**
- **RS232, RS485**
- **MAP or 'C' Programmable**



### PMC3C technical features

- ⊙ Motorola 68332, (68K compatible) processor.
- ⊙ 25MHz clock speed.
- ⊙ 3 axis motion control.
- ⊙ 1M bytes of 5 Volt Flash EPROM.
- ⊙ 512K bytes of non-volatile static RAM.
- ⊙ Onboard Real Time Clock (Y2K compatible).
- ⊙ 16 Digital inputs and 8 outputs.
- ⊙ Optional 12 bit analogue to digital converter.
- ⊙ Multi-tasking option.
- ⊙ Controls Inverter, Servo, or Stepper drives.
- ⊙ RS232C compatible serial port interface (4 wire).
- ⊙ RS485 Full Duplex interface.
- ⊙ Low voltage operation (7.5 to 36 volts DC.).
- ⊙ Low power consumption: 7 Watts maximum.
- ⊙ Colour LCD with 320 x 240 pixels, 256 colours.
- ⊙ 30 Key, keypad with 8 indicator lights.
- ⊙ Front panel contrast controls.
- ⊙ Customizable I/O and keypad facia.
- ⊙ Distributed external I/O expansion capability.
- ⊙ Full PLC capabilities.
- ⊙ Easy to program.
- ⊙ Rugged design giving high reliability.
- ⊙ Three 16-bit +/- 10 Volt control outputs.
- ⊙ Three Encoder inputs.

### Typical PMC3C applications

#### Motion Control

- ⊙ Pick and Place multi-axis machines
- ⊙ Robot control.
- ⊙ Laser cutting machine control.
- ⊙ General motion control.
- ⊙ Multi-axis machine tool control.
- ⊙ High performance networked machine nodes.

#### Data Acquisition

- ⊙ Tensioning systems.
- ⊙ Furnace control.
- ⊙ Power distribution control.
- ⊙ Multi-zone temperature control.
- ⊙ Data acquisition and processing.
- ⊙ Remote monitoring equipment.

#### General

- ⊙ Pulse counting and control.
- ⊙ General logic control..
- ⊙ Data display.
- ⊙ Industrial terminal.
- ⊙ Man Machine interface.

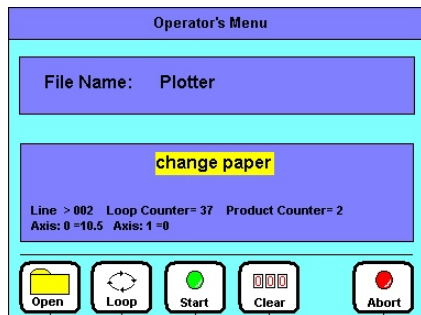
processes. MAP is written in 'C' and it has been installed in a vast variety of machines and applications giving the user a greater control of costs, saving money and time on software development.

| No. | Command  | Axis 0 | Axis 1     |
|-----|----------|--------|------------|
| 00  | SPEED    |        | END        |
| 01  | MOVE     |        | MOVE       |
| 02  | LOAD VAR |        | INDEX      |
| 03  | INDEX    |        | SPEED      |
| 04  | DEC JUMP |        | WAIT       |
| 05  | MOVE     |        | KEYPRESS   |
| 06  | OUTPUT   |        | INPUT      |
| 07  | INPUT    |        | OUTPUT     |
| 08  | WAIT     |        | MESSAGE    |
| 09  | END      |        | JUMP       |
|     |          |        | DEC JUMP   |
|     |          |        | LOAD VAR   |
|     |          |        | ADD to VAR |

Menus edit= commands= F1

MAP is a user friendly language adaptable for the majority of applications.

Using MAP the programmer has to use the MAP interface already created by TRM. MAP has been used in different applications from tube bending machines, XYZ tables, pallet manufacturing robots, rotary axes and milling machines to pharmaceutical mixers among other applications.



Different menus are drawn for easy use and programming

## MOTION

### Point to point move:

Moves a single axis from point to point with no acceleration, or velocity parameters. This command is mainly used by the profile generator or for holding position.

### Trapezoidal move:

Moves a single axis from point to point, using programmed acceleration and velocity parameters. If the velocity can not be reached the function will generate a triangular profile.

### Linear Interpolation:

This function allows up to 4 axis to be linked together to produce a linear profile. Full use is made of the acceleration and velocity parameters.

### Circular Interpolation

This function allows two axis to be linked together to produce a circular profile. Full use is made of the acceleration and velocity parameters.

## CAM

### Gear moves

### Absolute and relative moves

## TYPICAL APPLICATIONS

- XY Positioning Tables
- Conveyors
- Dosing
- Mixers
- General Motion Control
- Cutting Machines
- Automatic Drills
- Positioners
- Robotics
- Bending Machines
- Woodworking Machines

## INDUSTRIES

- Chemical
- Paper
- Food
- Metalworking Industry
- Plastics
- Woodworking Industry
- Stone Cutting & Shaping

and many many more...

## ACCESORIES AND OTHER PRODUCTS

### I/O expansion Module

Various types are available and can include for example: 32 digital inputs, 16 digital outputs, 4 analogue inputs, 2 analogue outputs.

### Interface Board

The TRM Interface Board is intended to simplify wiring and to improve the reliability of TRM controllers. The Interconnection Board provides:

- 24 Volts for the motion controller and the power supply for the DC servo amplifiers to run the motors using an external transformer.
- Screw connectors are used for connecting the Inputs/Outputs for a fast connection
- On-board filtering of power supplies and signals.



### DC Servo-Amplifier

Compact current mode amplifier is capable of driving brushed DC Servo motors continuously at 100 volts and up to 10 or 20 amps depending on the model.



### Guillotine controller unit "PROCUT"

PROCUT is a software program that runs on the PMC2C Motion controller and was created to control Industrial Paper Guillotines. It can be installed in any paper guillotine improving quality and efficiency.



### Temperature Controllers

Custom Designed Temperature Controllers for Ovens and Furnaces in many different industries.