

**Panasonic**  
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## Motion Control Library for FPWin Pro



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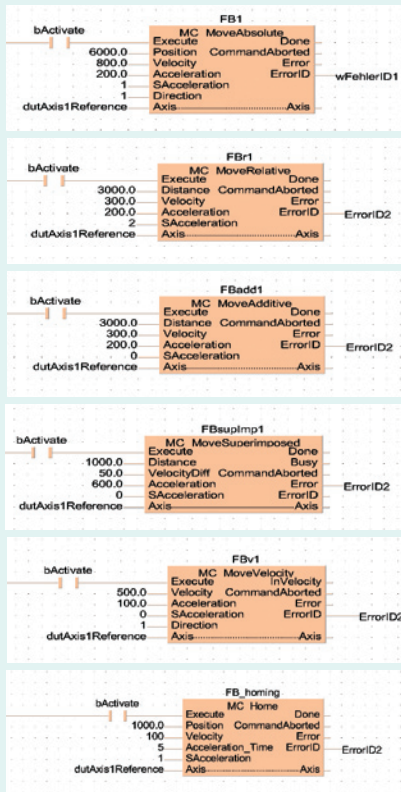
PLCopen



# Motion Control Library for FPWIN Pro

## Panasonic Motion Control Library for the Programming Software FPWIN Pro

Panasonic's Motion Control Library is designed to save programming time with a sophisticated yet user-friendly software solution. Our library includes function blocks programmed according to PLCopen's specification.



### MC\_MoveAbsolute

Single-axis motion to a specified absolute position.

### MC\_MoveRelative

Single-axis motion to a specified distance relative to the actual position.

### MC\_MoveAdditive<sup>1)</sup>

Adds a relative motion to a single axis motion. The distance is added to the target position of the previously executed FB.

### MC\_MoveSuperimposed<sup>1)</sup>

Superimposes a relative motion a running singleaxis motion.

### MC\_MoveVelocity

Single-axis motion at a specified velocity.

### MC\_Home

Single-axis motion to the home position.

1) If executed, the current motion is briefly interrupted due to hardware reasons.

**Standardized** access to drive/motion specifics to harmonize the access for Motion Control across different platforms during development, installation and maintenance based on the IEC 61131-3 environment.

## Advantages of PLC programs using the Motion Control Library compliant with the PLCopen Standard:



- **Simple** – Easy programming and installation, even for complex applications
- **Efficient** – In the number of function blocks and in design and understanding
- **Consistent** – Compliant with the IEC 61131-3 PLC programming standard
- **Universal** – Hardware-independent
- **Flexible** – Add hardware or expand range of application at any time
- **Complete** – Comprehensive product line solves typical positioning applications easily.





PLCopen, an independent international organization, aims to harmonise access across platforms during development, installation and maintenance based on the IEC61131-3 environment.

See also: [http://www.plcopen.org/MC\\_Certification/Panasonic/shortform\\_statement\\_Panasonic.htm](http://www.plcopen.org/MC_Certification/Panasonic/shortform_statement_Panasonic.htm)

### MC\_Stop

Stops a single-axis motion by a specified modus (ramp to stop, emergency stop).

### MC\_ReadStatus

Outputs the motion status of a singleaxis.

### MC\_ReadActualPosition

Outputs the actual position of a singleaxis.

### MC\_Reset

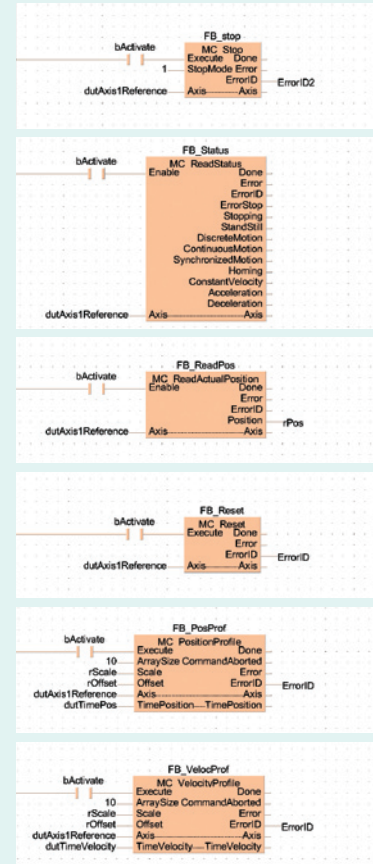
Resets all internal errors of a singleaxis after a stop due to an error.

### MC\_PositionProfile

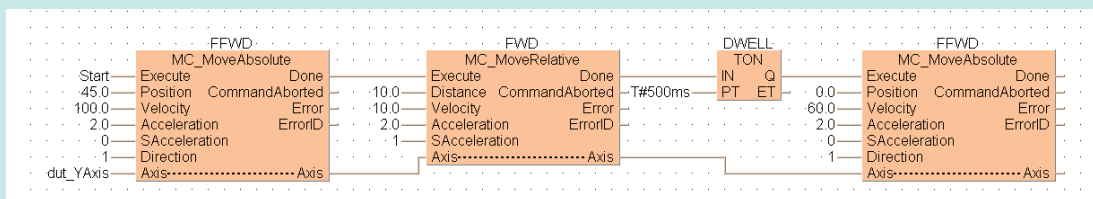
Singleaxis motion according to a time-position motion profile.

### MC\_VelocityProfile

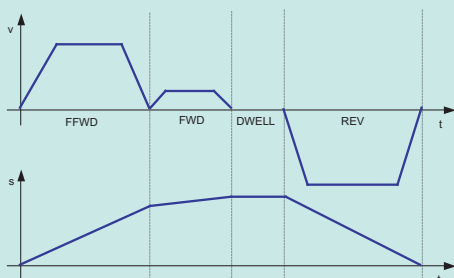
Singleaxis motion profile according to a time-velocity motion profile.



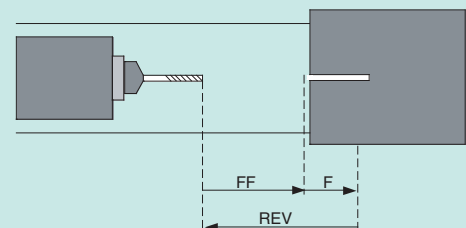
## Program, ladder diagram body



## Example for Consecutive Movement in a Drilling Application



Timing diagram



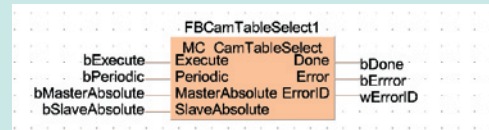
Drilling setup



# Multiple-Axis Function Blocks

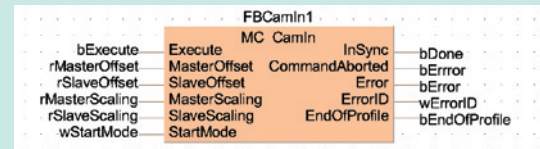
## MC\_CamTableSelect

Selects the CAM table by setting the pointer to the relevant table.



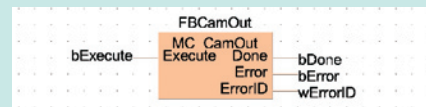
## MC\_CamIn

Engages the CAM.



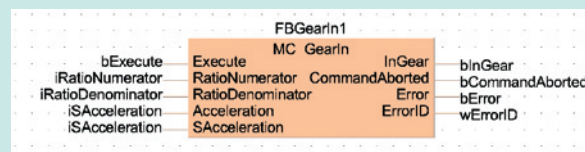
## MC\_CamOut

Disengages the slave from the master axis immediately.



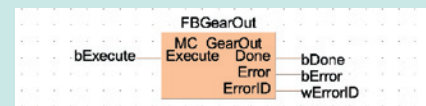
## MC\_GearIn

Specifies a ratio for the velocities of the master to slave axis.



## MC\_GearOut

Disengages the slave from the master axis.



Motion Control Library

NCL-MC-LIB D

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