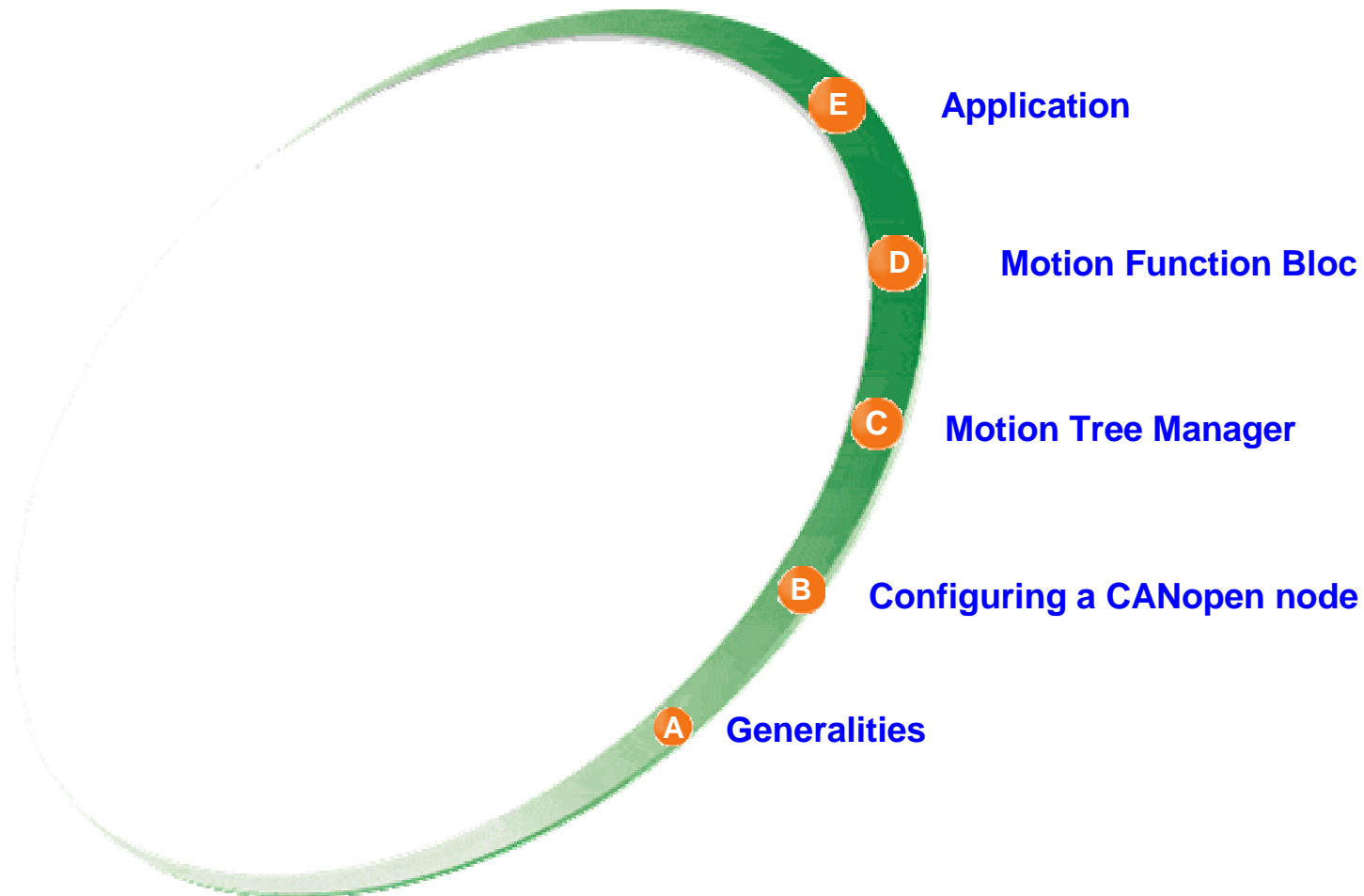


M8 - Modicon M340 : Motion Function Bloc

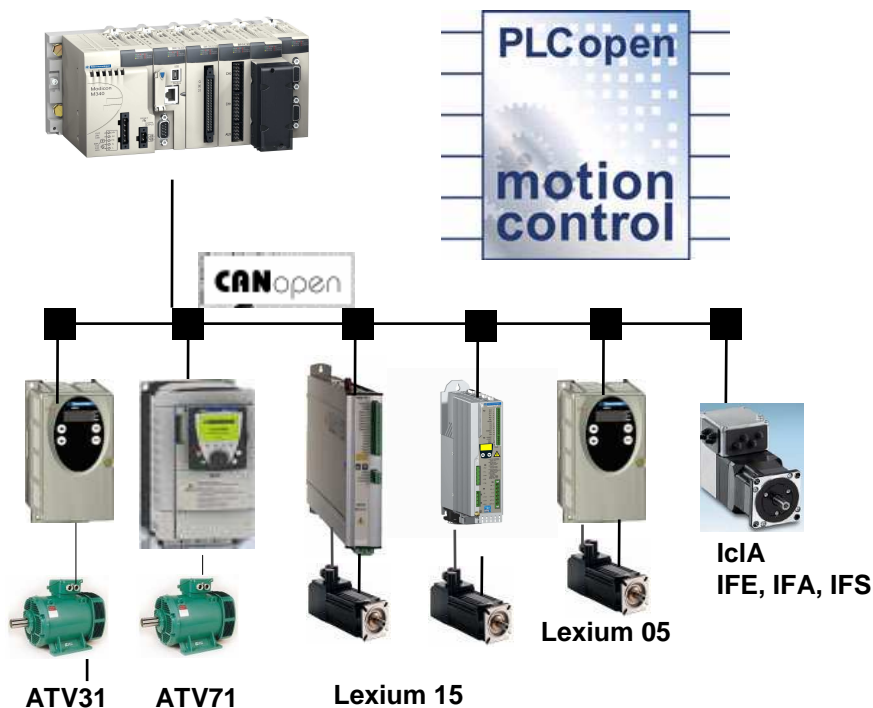


A – Motion control generalities

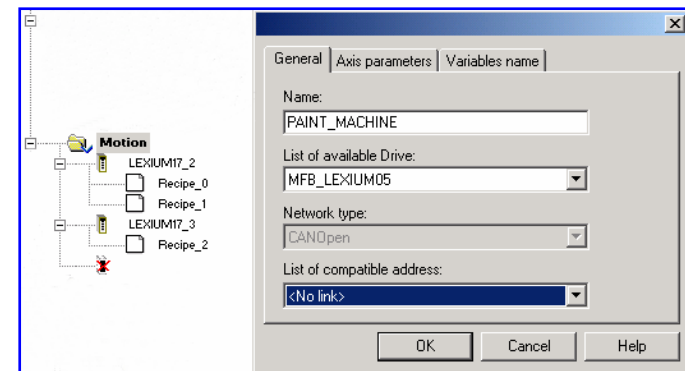
MFB/MTM Generalities

- Unity version 3.0 includes a new functionality allowing simplified access via the CANopen bus to the elementary motion functions of variable speed drives and servodrives. ([examples](#))

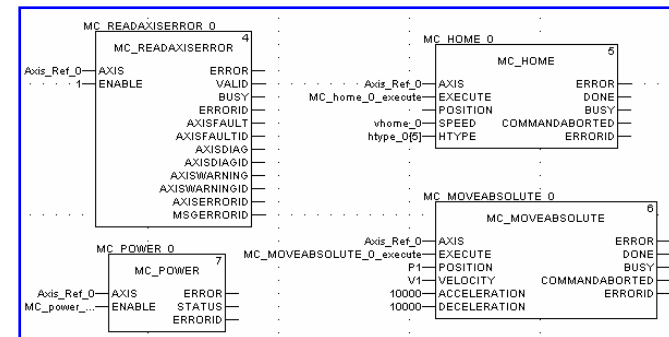
M340



– MOTION TREE MANAGER function



– MOTION FUNCTION BLOCK functions



Minimum versions & tools necessary

- A minimum version is necessary for using MFBs



'3-phase' implementation methodology

CANopen bus configuration:

Step 1: Configuring the CANopen communication port on the processor

Step 2: Configuring slaves using Unity configurator

- Configuring PDO exchanges

Step 3: Checking the configuration using the Unity structural view

unity
Configurator

Configuration: MTM

Allows to create a logical node

- Define the variables and structures of the drives used by the MFBs.

MTM
Motion Tree
Manager

Programming: MFB

Using the MFB library during programming

MFB
Motion Function
Blocks

B – Configure CANOpen nodes

**Configuring the nodes is an essential step
in implementing the MOTION FUNCTION BLOCKS.**

Step 1 : Master configuration

Communicator head CANopen

CANopen comm head
Channel 2

Config

Inputs		Outputs	
Nb. of words (%Mw)	32	Nb. of words (%Mw)	32
Index of 1st %Mw	100	Index of 1st %Mw	200
Nb. of bits (%M)	32	Nb. of bits (%M)	32
Index of 1st %M	0	Index of 1st %M	32

Bus parameters

Transmission speed	500	kBaud
SYNC Message COB-ID	128	
SYNC Message Period	100	ms

Function:
CANopen

Task:
MAST

■ The PDO's Offset to read and write the PDOs in the internals variables, mainly dedicated for the HMI communication.

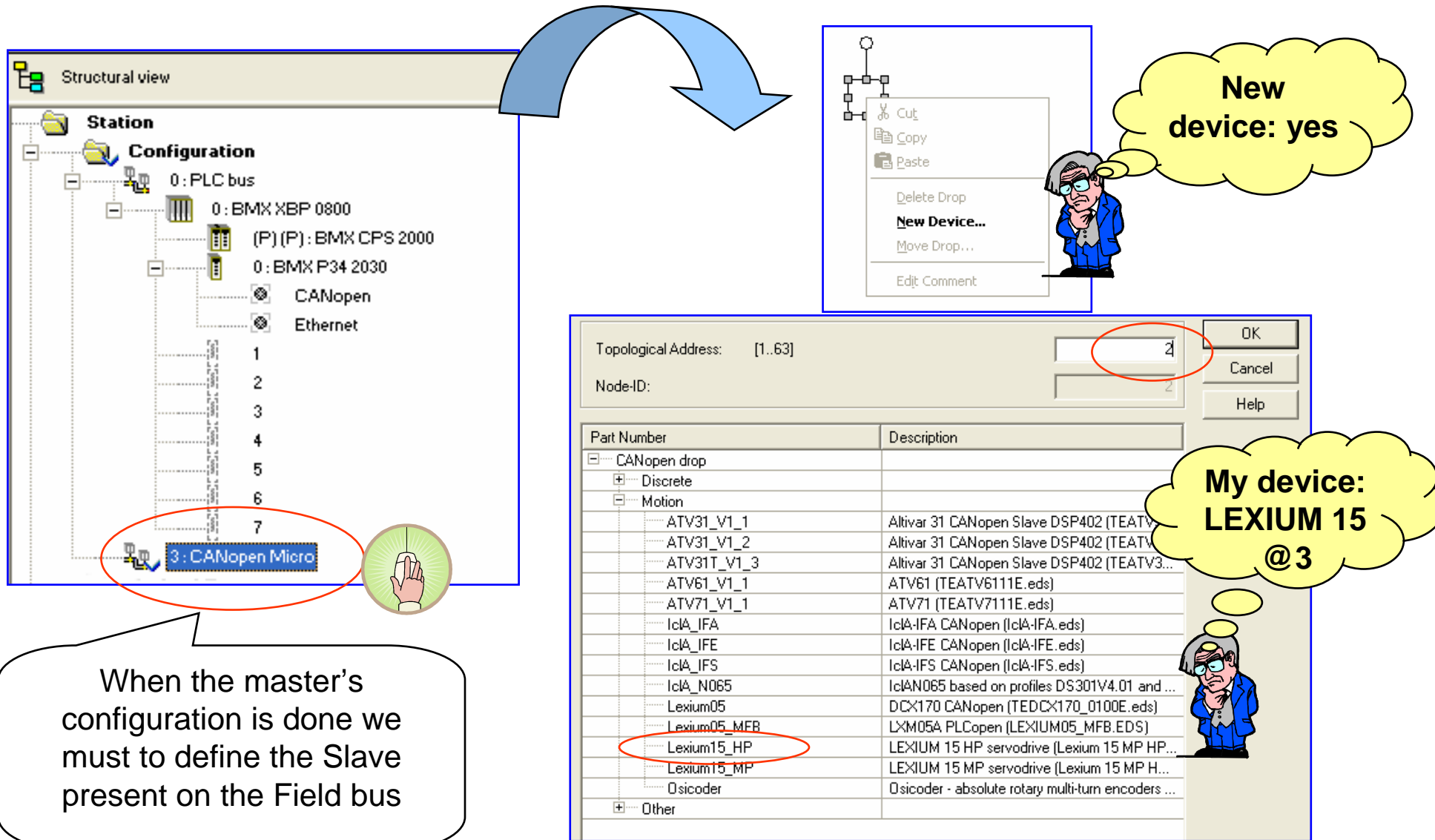
■ Bus Parameters :

1. speed according with the length of the bus.
2. Periodicity for the Sync Message

■ Task assigned to the PDOs

Configure a drive (except Lexium 05)

Step 2 : Lexium 15 HP Configuration



Structural view

Station

Configuration

0: PLC bus

0: BMX XBP 0800

(P) (P): BMX CPS 2000

0: BMX P34 2030

CANopen

Ethernet

1

2

3

4

5

6

7

3: CANopen Micro

When the master's configuration is done we must to define the Slave present on the Field bus

Topological Address: [1..63]

Node-ID: 2

OK

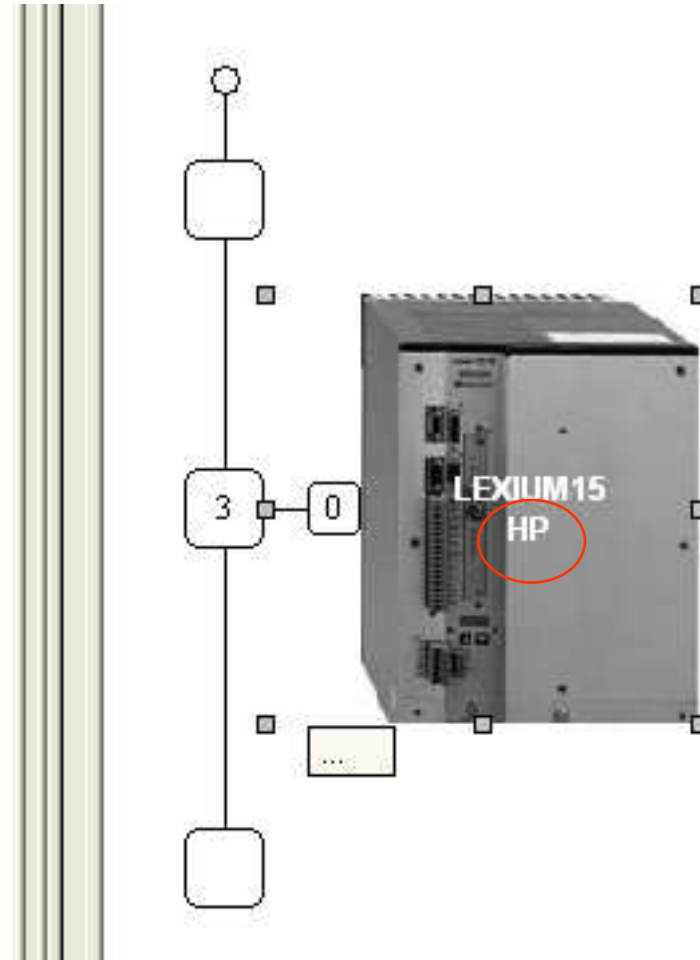
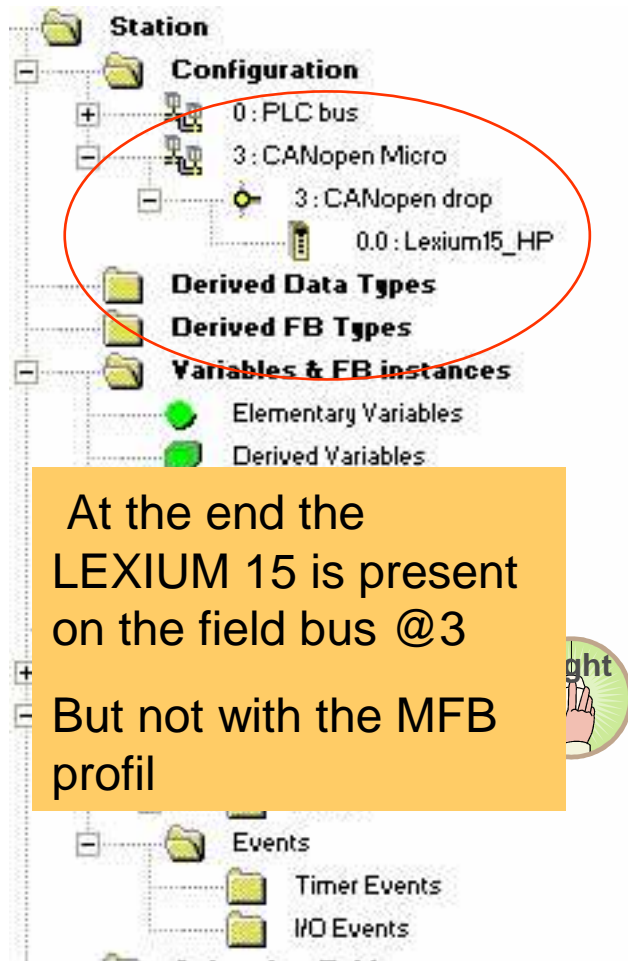
Cancel

Help

Part Number	Description
CANopen drop	
Discrete	
Motion	
ATV31_V1_1	Altivar 31 CANopen Slave DSP402 (TEATV31_V1_1.ed)
ATV31_V1_2	Altivar 31 CANopen Slave DSP402 (TEATV31_V1_2.ed)
ATV31T_V1_3	Altivar 31 CANopen Slave DSP402 (TEATV31T_V1_3.ed)
ATV61_V1_1	ATV61 (TEATV6111E.ed)
ATV71_V1_1	ATV71 (TEATV7111E.ed)
IclA_IFA	IclA-IFA CANopen (IclA-IFA.ed)
IclA_IFE	IclA-IFE CANopen (IclA-IFE.ed)
IclA_IFS	IclA-IFS CANopen (IclA-IFS.ed)
IclA_N065	IclAN065 based on profiles DS301V4.01 and ...
Lexium05	DCX170 CANopen (TEDCX170_0100E.ed)
Lexium05_MFB	LXM05A PLCopen (LEXIUM05_MFB.EDS)
Lexium15_HP	LEXIUM 15 HP servodrive (Lexium 15 MP HP...)
Lexium15_MP	LEXIUM 15 MP servodrive (Lexium 15 MP H...)
Osicoder	Osicoder - absolute rotary multi-turn encoders ...
Other	

My device: LEXIUM 15 @3

Step 2 : lexium 15HP Configuration



Step 2 : lexium 15HP Configuration

- In this screen we must select MFB in order to select Motion function.

Project browser

Structural view

Station

- Configuration
 - 0 : PLC bus
 - 3 : CANopen Micro
 - 2 : CANopen drop
 - 0.0 : Lexium05_MFB
 - 3 : CANopen drop
 - 0.0 : Lexium15_HP
- Derived Data Types
- Derived FB Types
- Variables & FB instances
 - Elementary Variables
 - Derived Variables
 - IO Derived Variables
 - Elementary FB Instances
 - Derived FB Instances
- Motion
- Communication
 - Networks
- Program
 - Tasks
 - MAST
 - Events
 - Timer Events
 - I/O Events
- Animation Tables
- Operator Screens
- Documentation

LEXIUM 15 HP servodrive (Lexium 15 MP HP.ed.s)

Lexium15_HP

Channel 0

PDO Error control Config

	Index	Label	Value
0	2014:01	Maske für Low-Doppelwort des ersten Transmit - PDOs	4294967295
1	2014:02	Maske für High-Doppelwort des ersten Transmit - PDOs	4294967295
2	2015:01	Maske für Low-Doppelwort des zweiten Transmit - PDOs	4294967295
3	2015:02	Maske für High-Doppelwort des zweiten Transmit - PDOs	4294967295
4	2016:01	Maske für Low-Doppelwort des dritten Transmit - PDOs	4294967295
5	2016:02	Maske für High-Doppelwort des dritten Transmit - PDOs	4294967295
6	2020:01	Axis Type	0
7	2020:02	In-Position Window	0
8	2020:03	Contouring Error Window	0
9	2020:04	Position Register 1	0
10	2020:05	Position Register 2	0
11	2020:06	Position Register 3	0
12	2020:07	Position Register 4	0
13	2020:08	Denominator Resolution	0
14	2020:09	Nominator Resolution	0
15	2020:0A	Count Direction	0
16	2022:0C	Copy a Motion Task	0
17	2024:01	Homing Type	0
18	2024:02	Homing Direction	0
19	2024:03	Homing Speed	0
20	2024:04	Acceleration Ramp Jogging and Homing	0
21	2024:05	Acceleration Ramp Jogging and Homing	0
22	2024:06	Homing Offset	0

Function:

Default

Default

MFB

CANopen M... \3.3\0.0 : Le...

Step 2 : lexium 15HP Configuration

- In this screen it is possible to check the PDO communication.

LEXIUM 15 HP servodrive (Lexium 15 MP HP.ed5)

PDO | Error control | Config

Transmit (%I)

PDO	Tr.Type	InhibitTime	Event Ti...	Symbol	Topo.Addr.	%M...	COBID	Index
<input checked="" type="checkbox"/> PDO 1 (Static)	255	10	0				16#183	
Velocity actual v...					%ID\3.3\0.0.0.2	%Mw2		606C:00
Position actual v...					%ID\3.3\0.0.0.0	%Mw0		6064:00
<input checked="" type="checkbox"/> PDO 2 (Static)	255	10	0				16#283	
Statusword					%Iw\3.3\0.0.0.5	%Mw5		6041:00
Trajektorienstat...					%Iw\3.3\0.0.0.4	%Mw4		2080:09
Modes of operat...					%Iw\3.3\0.0.0.6	%Mw6		6061:00
<input checked="" type="checkbox"/> PDO 3 (Static)	255	10	0				-	
<input checked="" type="checkbox"/> PDO 4 (Static)	255	10	0				-	

Receive (%Q)

PDO	Tr.Type	InhibitTime	Event Tim...	Symbol	Topo.Addr.	%M...	COBID	Index
<input checked="" type="checkbox"/> PDO 1 (Static)	255						16#203	
Motion Task Num...					%Qw\3.3\0.0.0.6	%Mw38		2022:05
Target velocity					%QD\3.3\0.0.0.4	%Mw36		60FF:00
<input checked="" type="checkbox"/> PDO 2 (Static)	255						16#303	
target_position					%QD\3.3\0.0.0.0	%Mw32		607A:00
Profile velocity					%QD\3.3\0.0.0.2	%Mw34		6081:00
<input checked="" type="checkbox"/> PDO 3 (Static)	255						16#403	
Controlword					%Qw\3.3\0.0.0.7	%Mw39		6040:00
Modes of operati...					%Qw\3.3\0.0.0.8	%Mw40		6060:00
<input checked="" type="checkbox"/> PDO 4 (Static)	255						-	

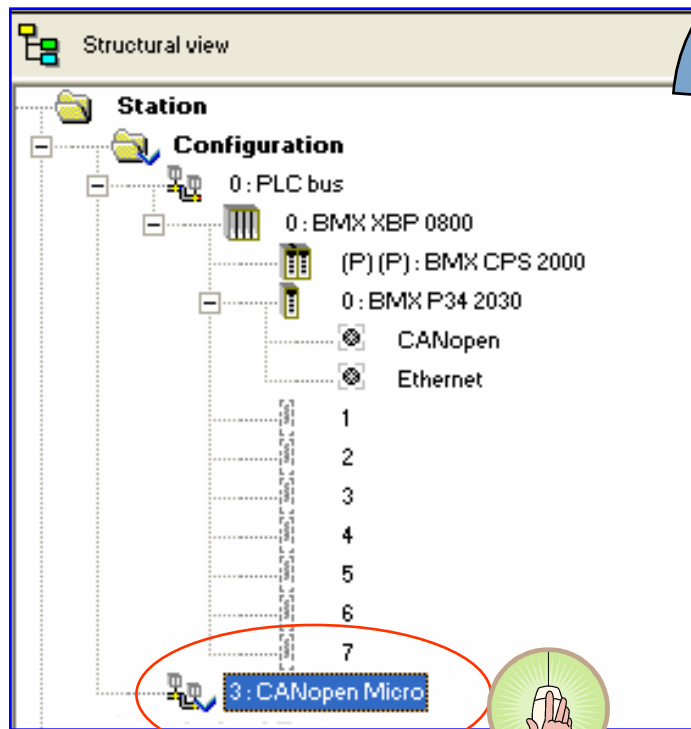
- According with the EDS file some PDOs are already mapped, and locked

- The PDOs used Topologies addresses %ID/QD and internals variables %MW....

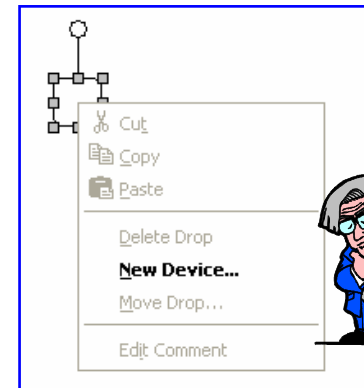
- when we use a MFB profil Nothing is ajustable excepted the INHIBIT TIME

Lexium 05 specific configuration

Step 2 : lexiu05 Configuration



When the master's configuration is done we must to define the Slave present on the Field bus



Topological Address: [1..63]

Node-ID:

Part Number	Description
<input type="checkbox"/> CANopen drop	
<input type="checkbox"/> Discrete	
<input type="checkbox"/> Motion	
ATV31_V1_1	Altivar 31 CANopen Slave DSP402 (TEATV...
ATV31_V1_2	Altivar 31 CANopen Slave DSP402 (TEATV...
ATV31T_V1_3	Altivar 31 CANopen Slave DSP402 (TEATV3...
ATV61_V1_1	ATV61 (TEATV6111E.ed)
ATV71_V1_1	ATV71 (TEATV7111E.ed)
IclA_IFA	IclA-IFA CANopen (IclA-IFA.ed)
IclA_IFE	IclA-IFE CANopen (IclA-IFE.ed)
IclA_IFS	IclA-IFS CANopen (IclA-IFS.ed)
IclA_N065	IclAN065 based on profiles DS301V4.01 and ...
<u>Lexium05</u>	DCX170 CANopen (TEDCX170_0100E.ed)
<u>Lexium05_MFB</u>	LXM05A PLCopen (LEXIUM05_MFB.EDS)
Lexium15_HP	LEXIUM 15 HP servodrive (Lexium 15 MP HP...
Lexium15_MP	LEXIUM 15 MP servodrive (Lexium 15 MP H...
Osicoder	Osicoder - absolute rotary multi-turn encoders ...
<input type="checkbox"/> Other	

OK Cancel Help

My device:
LEXIUM 05
MFB @2

Step 2 : lexium 05 Configuration

The screenshot displays the 'avigateur du projet' (Project Navigator) window on the left and a graphical representation of the motor configuration on the right.

Project Navigator (Left Panel):

- Structure: 0 : BMX XBP 0800 > (P) (P) : BMX CPS 2000 > 0 : BMX P34 2010 > CANopen > SerialPort > 1, 2, 3, 4, 5, 6, 7.
- Selected Item: 2 : Station d'E/S CANopen (highlighted with a red circle).
- Sub-items: 3 : Micro CANopen, 0.0 : Lexium05_MFB.
- Other categories: Types données dérivés, Types FB dérivés, Variables et instances FB, Variables élémentaires, Variables dérivées, Tâches, MAST, Evénements.

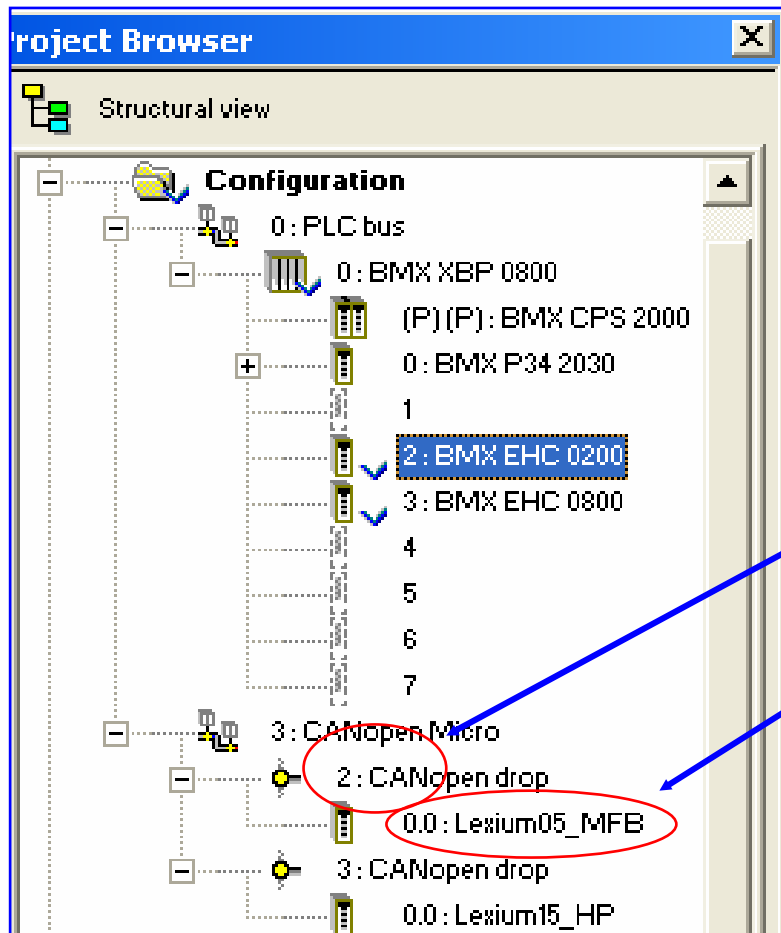
Motor Configuration (Right Panel):

- Bus: 3, CANopen comm head 01.00, Connexions configurées: 1.
- Diagram: A central motor unit labeled 'LEXIUM05 MFB' (circled in red) is connected to a bus structure. The bus structure includes a central node '2' connected to a node '0'.
- Bottom status bar: 0.0 : CANop..., Micro CAN...

Annotation:

At the end the LEXIUM 05 is present on the field bus @2

Step 3: Checking the configuration using the Unity structural view



- The structural view can be used to see quickly which nodes are present on the CANopen bus

— Node address (@2)

— Drive type used

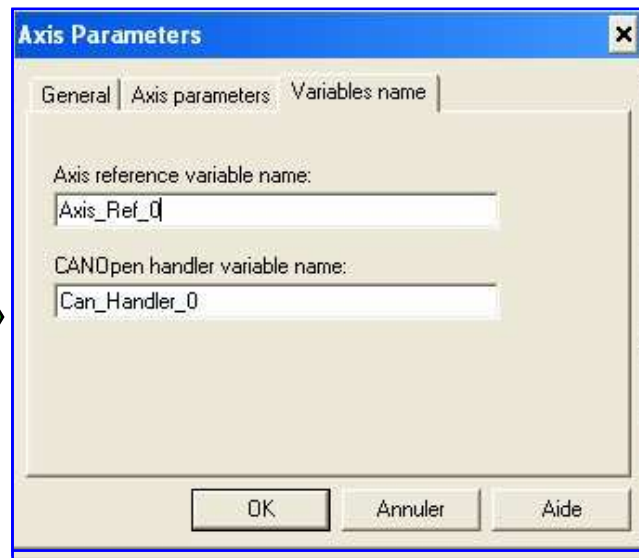
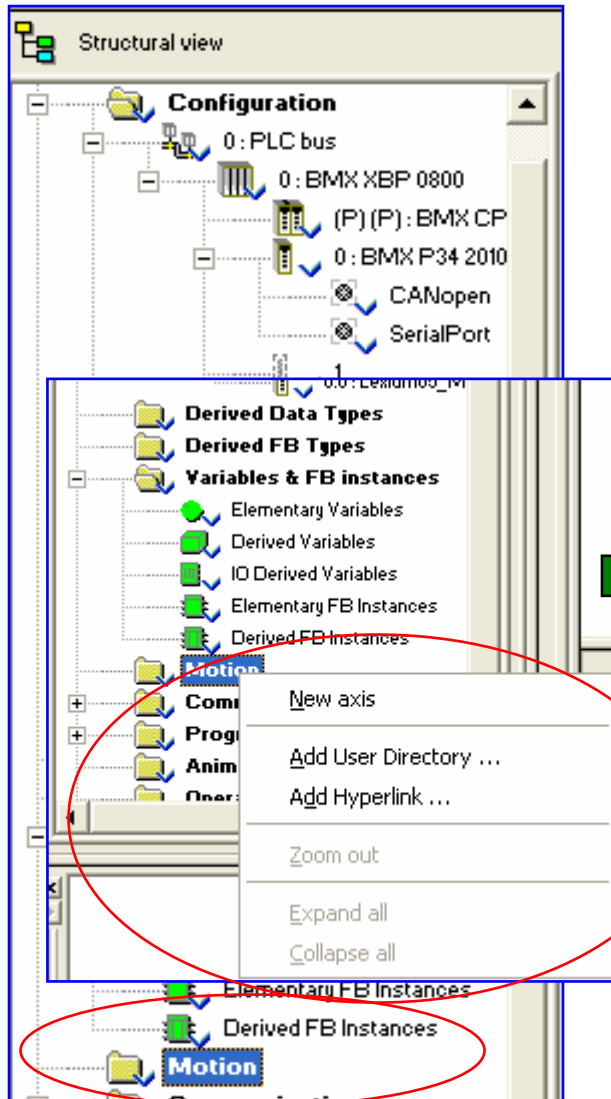
C – Motion tree manager

MOTION TREE MANAGER are used to:

Define the parameters of drives used on the CANopen bus (type, version, etc.)

Configure the variables and structures used by the MFBs

Step 1: Defining the parameters of the drives used on the CANopen bus (type, version, etc.)



Variables name view

- Name the AXIS_Reference structure that will be used in the MFBs
- Name the control structure variable used by the HANDLER block

Step 1: Defining the parameters of the drives used on the CANopen bus (type, version, etc.)

The screenshot shows the 'Data Editor' window with a project tree on the left and a table of parameters on the right. A callout points to the 'AXIS_REF' structure in the project tree, and another callout points to the 'AxisParamDesc_x' and 'Recipe_x' arrays in the table.

AXIS_REF structure

Name	Type	Address	Value	Comment
Axis_Ref_0	AXIS_REF			Variable declared for axis: PAINT
AxisParamDesc_0	ARRAY[0..21...			Type: 306, Ref: 12592, Vers: 1.0
Recipe_0	ARRAY[0..19...			

AxisParamDesc_x array: Parameter list (Index/Subindex) used for 'saving' or restoring' the drive/motor configuration

Recipe_x array: Saved values



Example : LEXIUM05 Configuration



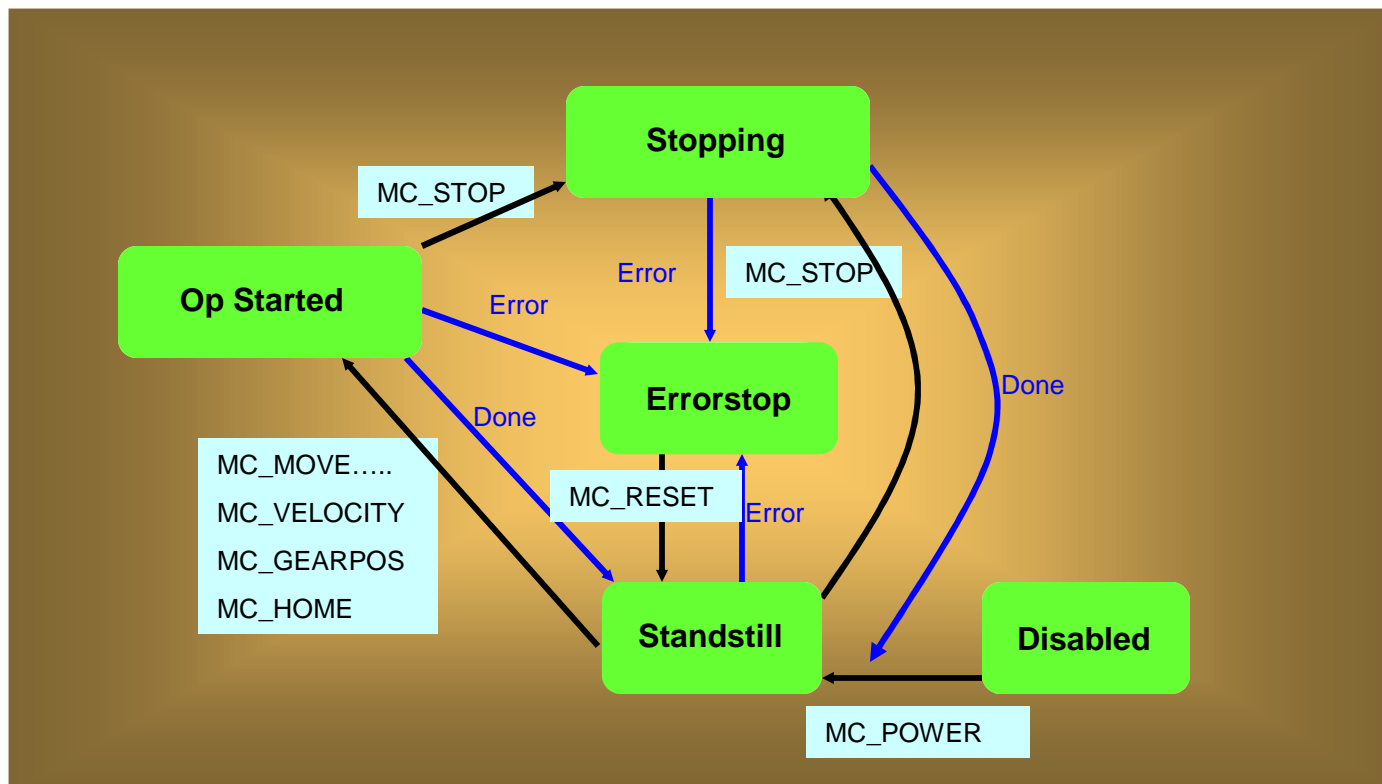
D – Motion Function Blocks

Actions are programmed through dedicated Blocks called 'MFBs'

Motion Function Blocks provide simplified access to the main drive functions.

state diagram

- Each drive complies with its own DRIVECOM profile but the MFBs comply with the PLCopen standard (in accordance with PLCopen v1.1 specification).
 - There are 5 main states:



Description of the basic I/O parameters

■ Each Motion Function Block has so-called basic input and output parameters.

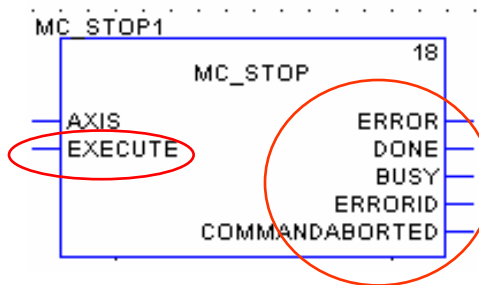
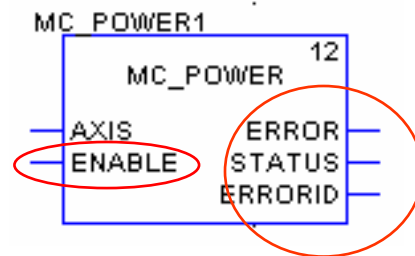
– Input parameters:

– Output parameters:

- **Axis** AXIS_REF
- **Enable** Enable on State

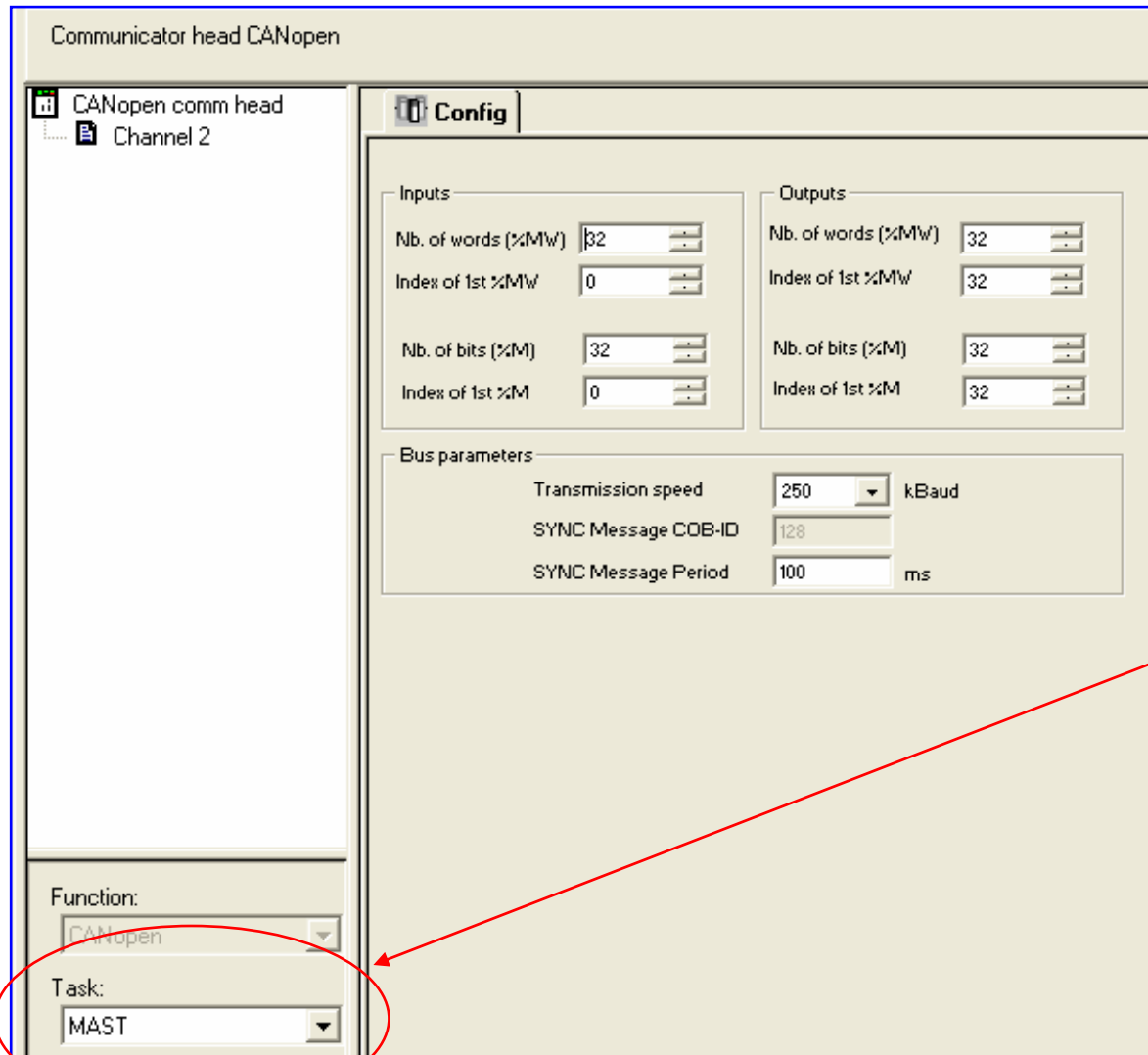
or

- **Execute** Enable on Edge



- **Error** Execution error detected (Error = 1)
- **Done** Signals the end of the action
- **Busy** Reflects the action in progress (Busy = 1)
- **ErrorId** Error identifier
- **CommandAborted** Command interrupted by execution of another Motion Block

Generalities on the MFB



- The MFB function must be use in the task dedicated for the CANopen communication.

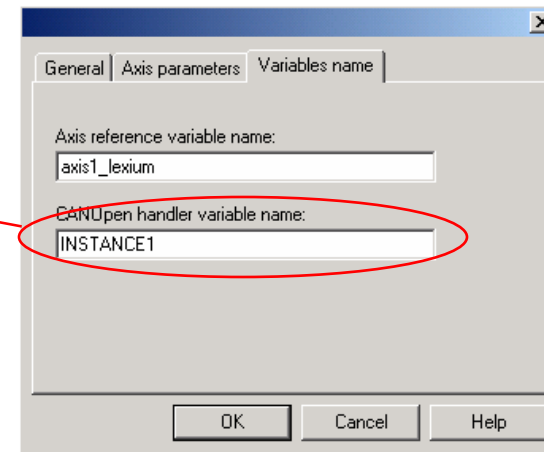
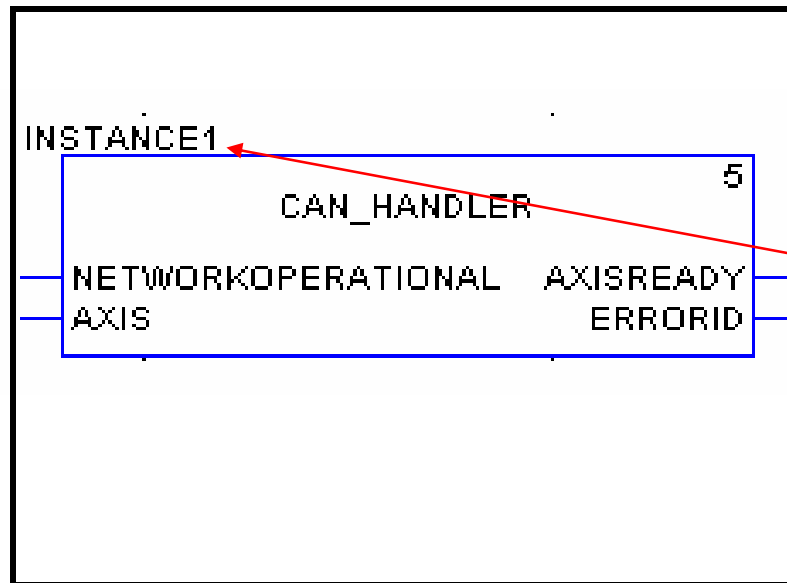
— Example : Here the MAST

TE_CAN_Handler



- **Purpose:** To check the CANopen communication and the consistency between the software and physical configurations

- The **TE_CAN_Handler** function is **MANDATORY** for ensuring operation of the MFBs. It must be scanned each master or fast CPU scan cycle.



It is **MADATORY** for this block to be instantiated with the control structure variable.

TE_CAN_Handler



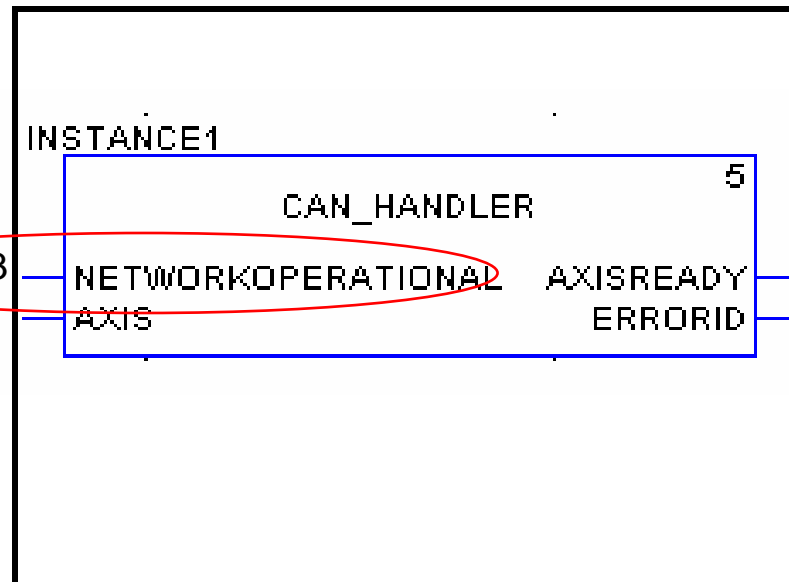
- **Purpose:** To check the CANopen communication and the consistency between the software and physical configurations.

■ Input parameters

– NetworkOperational

- System information that the slave is working correctly on the CANopen bus

– Slave_acti_x => %IW0.m.1.8.1



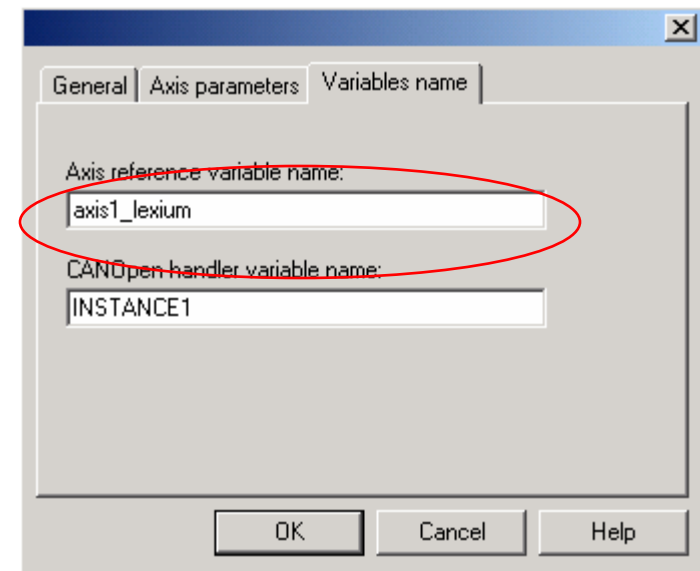
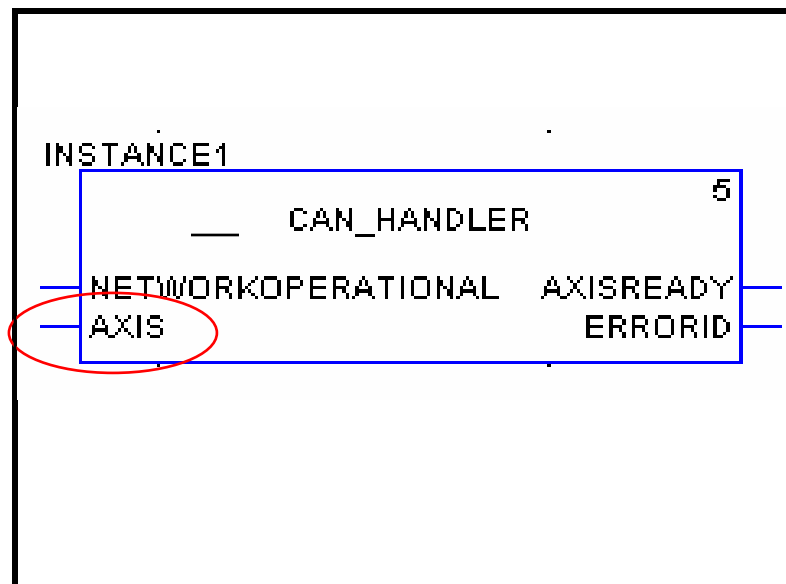
SLAVE_ACTIV_1	BOOL		Slave active on the bus: device 1
SLAVE_ACTIV_2	BOOL		Slave active on the bus: device 2
SLAVE_ACTIV_3	BOOL		Slave active on the bus: device 3
SLAVE_ACTIV_4	BOOL		Slave active on the bus: device 4
SLAVE_ACTIV_5	BOOL		Slave active on the bus: device 5

TE_CAN_Handler



- **Purpose:** To check the CANopen communication and the consistency between the software and physical configurations.

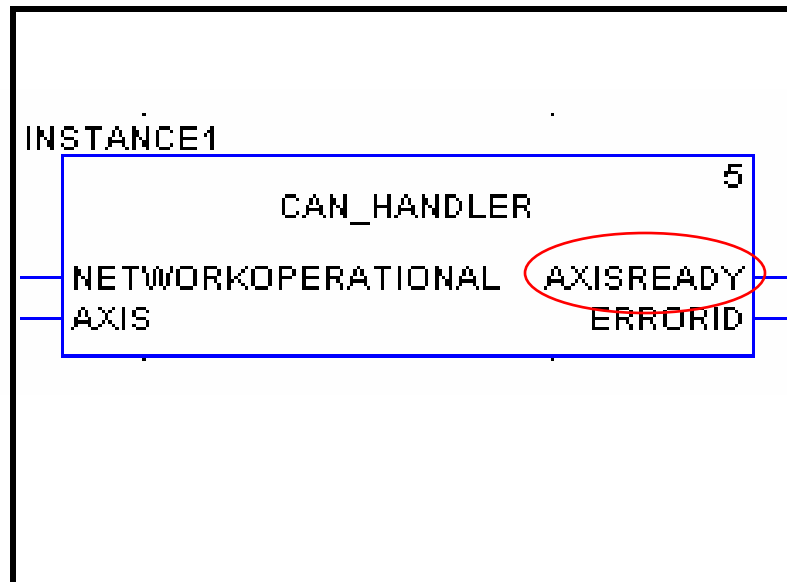
■ Input parameters



TE_CAN_Handler



- **Purpose:** To check the CANopen communication and the consistency between the software and physical configurations.



■ Output parameter

- **AXISREADY** = 1
 - There is no fault on the CANopen bus
 - The software configuration is consistent with the hardware configuration present

Motion Blocks and associated targets



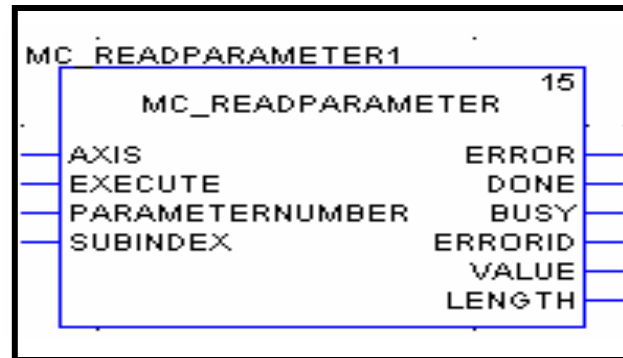
Easy faulty device
replacement

Lexium advanced
functions

	ATV31	ATV71	Lexium 05	Lexium 15	IcIA
MC_ReadParameter	☒	☒	☒	☒	☒
MC_WriteParameter	☒	☒	☒	☒	☒
MC_ReadActualPosition			☒	☒	☒
MC_ReadActualVelocity	☒	☒	☒	☒	☒
MC_Reset	☒	☒	☒	☒	☒
MC_Stop	☒	☒	☒	☒	☒
MC_Power	☒	☒	☒	☒	☒
MC_MoveAbsolute			☒	☒	☒
MC_MoveRelative			☒	☒	
MC_MoveAdditive			☒		☒
MC_Home			☒	☒	☒
MC_MoveVelocity	☒	☒	☒	☒	☒
MC_ReadStatus	☒	☒	☒	☒	☒
MC_ReadAxisError	☒	☒	☒	☒	☒
TE_UploadDriveParam	☒	☒	☒	☒	☒
TE_DownloadDriveParam	☒	☒	☒	☒	☒
Lxm_GearPos				☒	
Lxm_UploadMTask				☒	
Lxm_DownloadMTask				☒	
Lxm_StartMTask				☒	

1- Motion Function Blocks

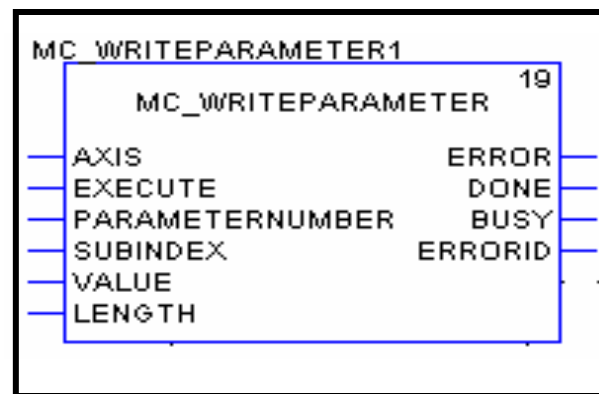
MC_ReadParameter



■ Purpose:

- Reading a variable by SDO messaging

MC_WriteParameter

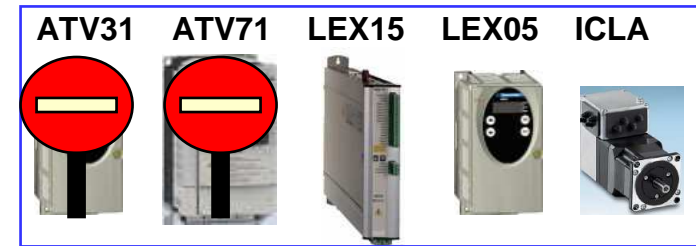


■ Purpose:

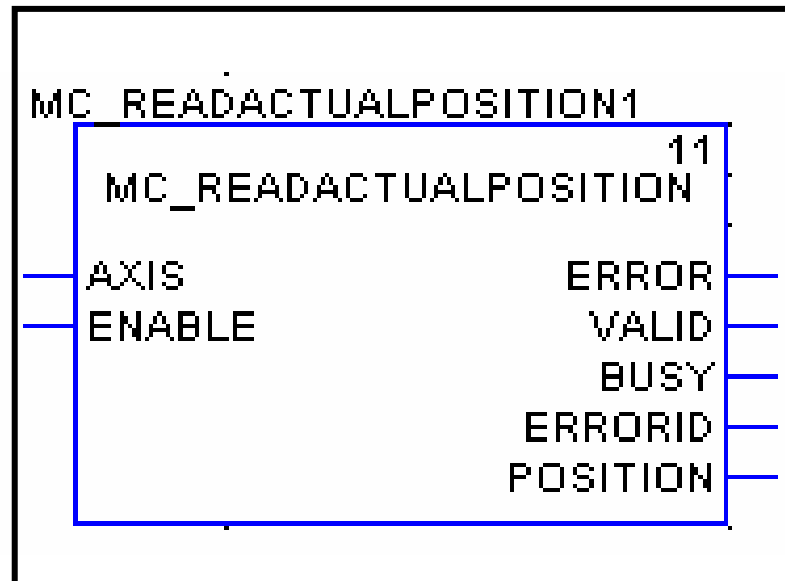
- Writing a variable by SDO messaging



1- Motion Function Blocks



MC_ReadActualPosition



■ Purpose:

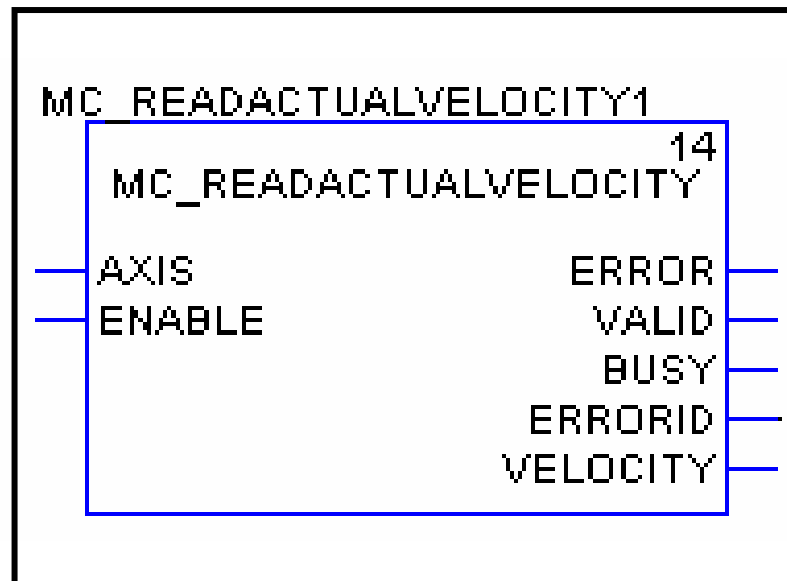
- Reading the actual position

- The unit is linked to the drive used

1- Motion Function Blocks



MC_ReadActualVelocity



■ Purpose:

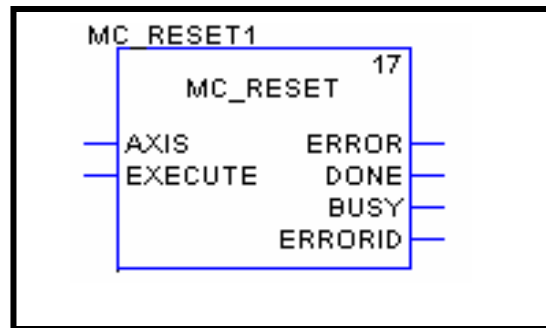
- Reading the actual velocity

- The unit is linked to the drive used

1- Motion Function Blocks



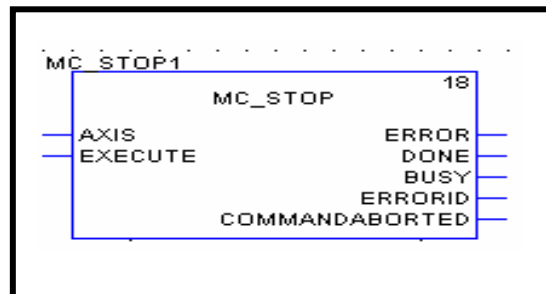
MC_Reset



■ Purpose:

- Acknowledging internal errors and internal warnings

MC_Stop



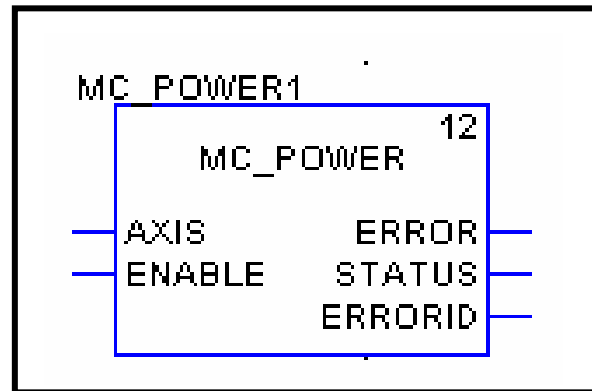
■ Purpose:

- Used to stop any movement in progress and sets the drive to Stopping status

1- Motion Function Blocks



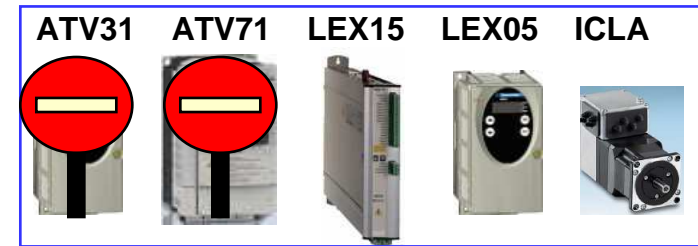
MC_Power



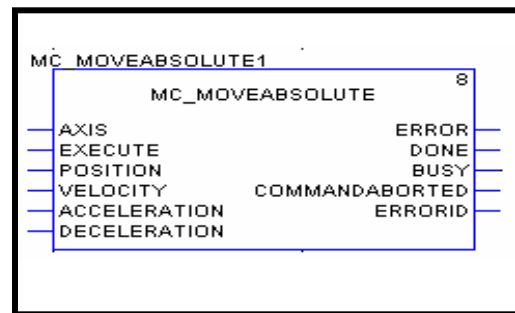
■ Purpose:

- Setting the drive to 'Standstill' status

1- Motion Function Blocks



MC_MoveAbsolute

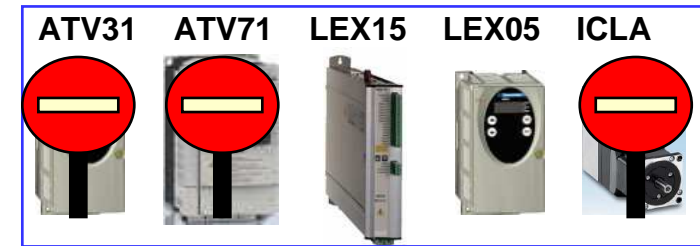


■ Purpose:

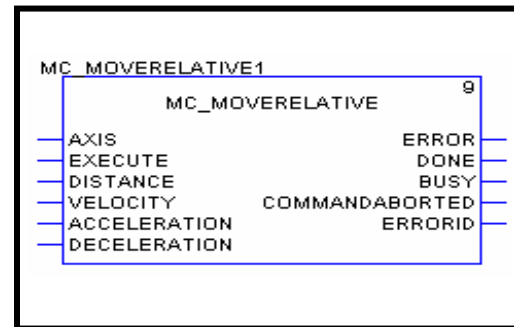
- Used to execute a command to move to an absolute position

- The unit is linked to the drive used

1- Motion Function Blocks



MC_MoveRelative

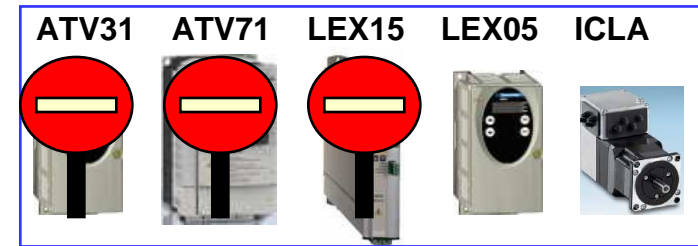


■ Purpose:

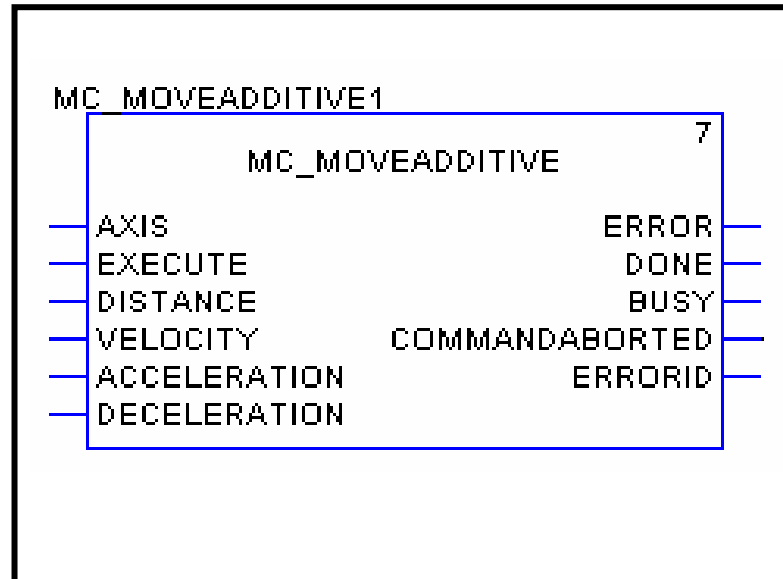
- Used to execute a command to move to a relative position with respect to the current position of the drive

- The unit is linked to the drive used

1- Motion Function Blocks



MC_MoveAdditive



■ Purpose:

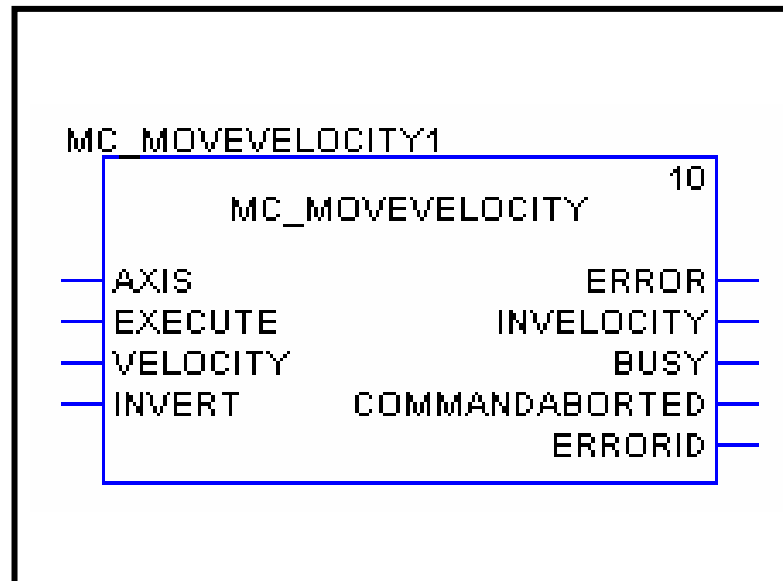
- Used to apply an additional movement command to the drive in motion

- The unit is linked to the drive used

1- Motion Function Blocks



MC_MoveVelocity

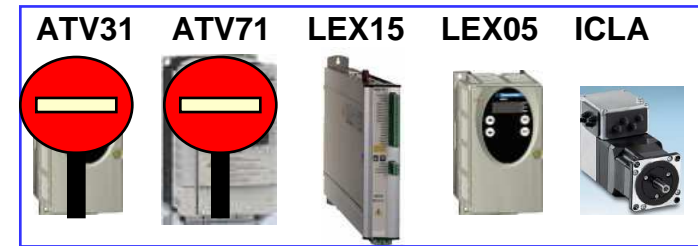


■ Purpose:

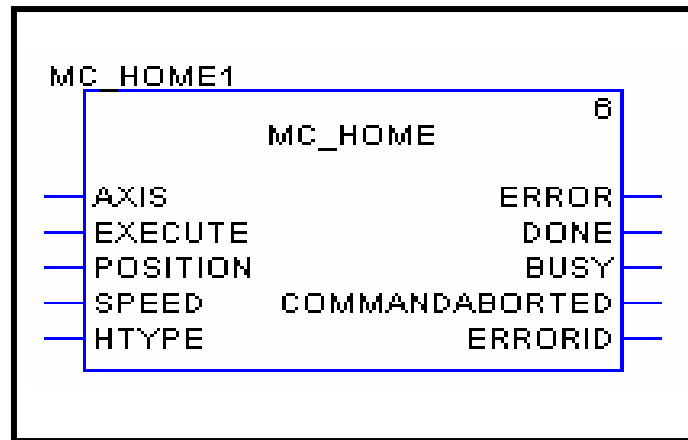
- Used to execute a velocity movement command

- The unit is linked to the drive used

1- Motion Function Blocks



MC_Home



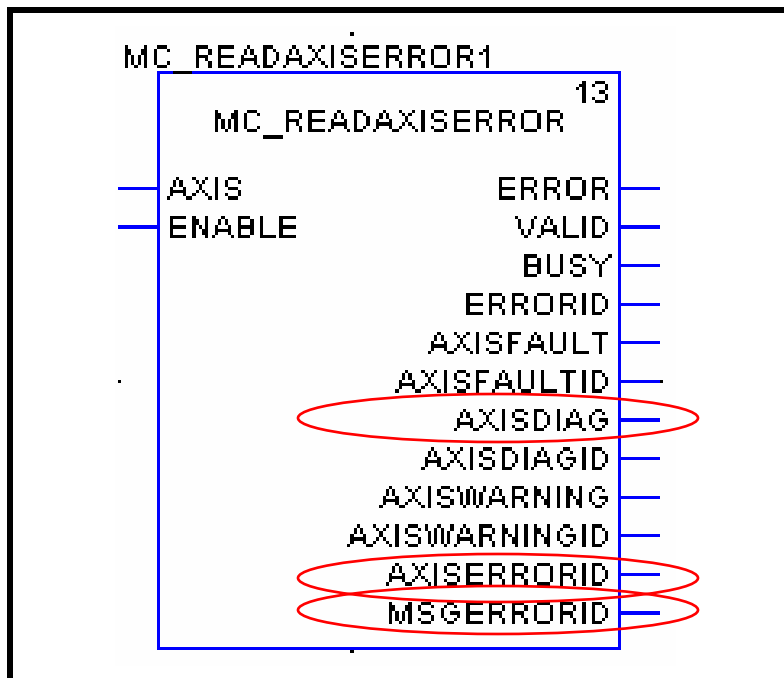
■ Purpose:

- Used to execute a Homing command

1- Motion Function Blocks



MC_ReadAxisError



■ **Purpose:** To retrieve errors from the system

■ **Output parameters**

- **AxisDiag:** TSX CPP110 card diagnostics
- **AxisErrorID:** MFB error No. storage
- **MSGErrorID:** Messaging system error storage

1- Motion Function Blocks



MC_ReadAxisError

■ **Purpose:** To retrieve errors from the

	ATV 31	ATV71	LXM 17	LXM 05	ICLA
Axisfault id	1ft 2029:16	1ft 2029:16	Errcode 2029:16	Signlatched 301C:8	Faultsig_sr 301C:12
Axiswarn id		LRS6 2002:38	1002:0	Warnlatched 301C:0C	Warnsig 301C:A
Axisdiag id	Errd 603F:0	Errd 603F:0	1003:0	Stopfault 603F:0	Stopfault 3020:7

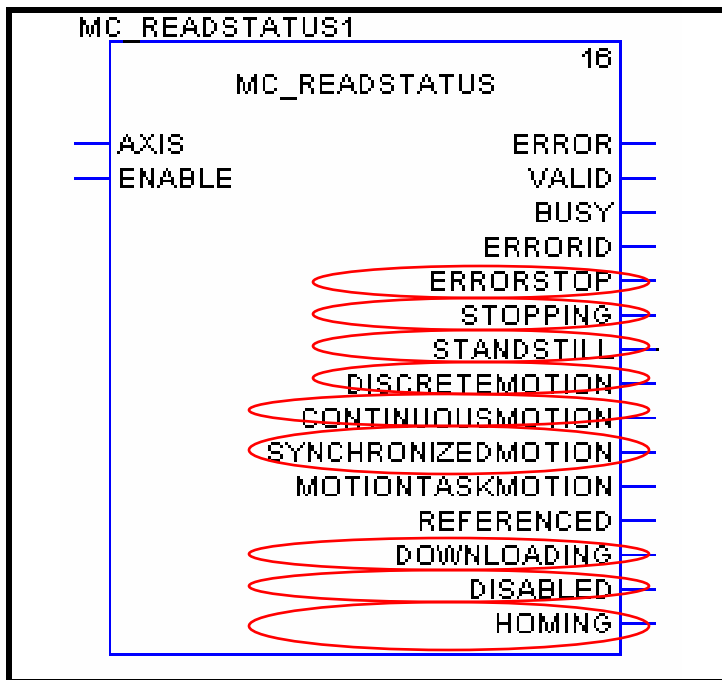
ameters
ive fault
Drive fault value

- The error values are specific to the drives
 - Here is a correspondence table

1- Motion Function Blocks



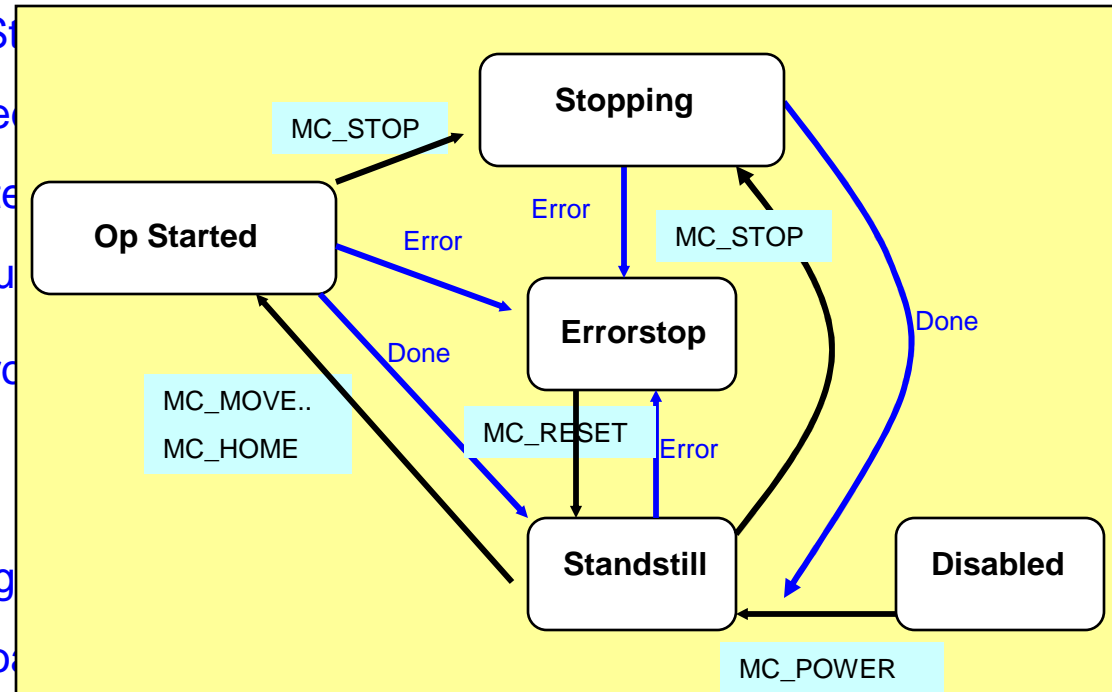
MC_ReadStatus



■ **Purpose:** To ascertain the drive status

■ Output parameters

- Errorstop: Stop with error
- Stopping: Drive stopping
- Standstill
- Disabled
- Discrete
- Continuous
- Synchron
- Homing
- Downlo



1- Motion Function Blocks

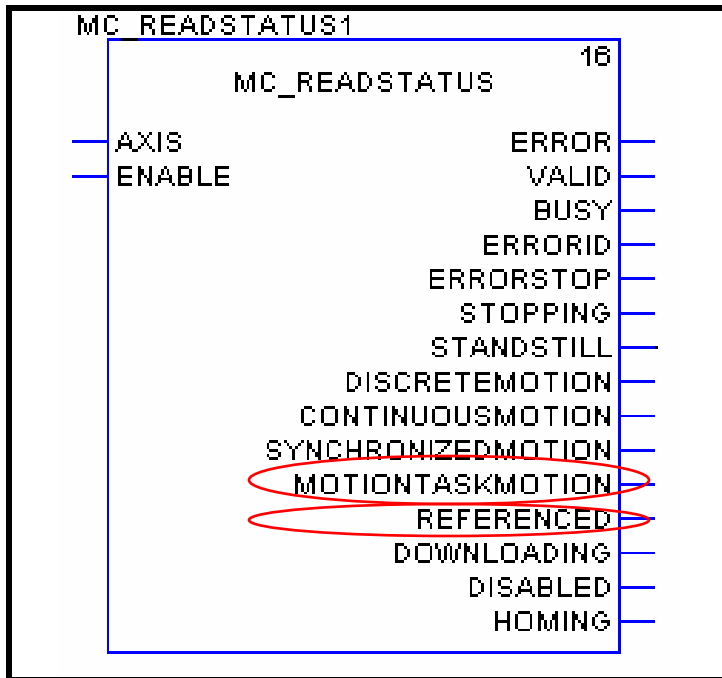


MC_ReadStatus

■ **Purpose:** To ascertain the drive status

■ Output parameters

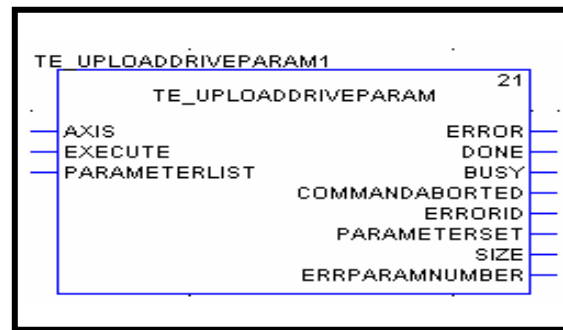
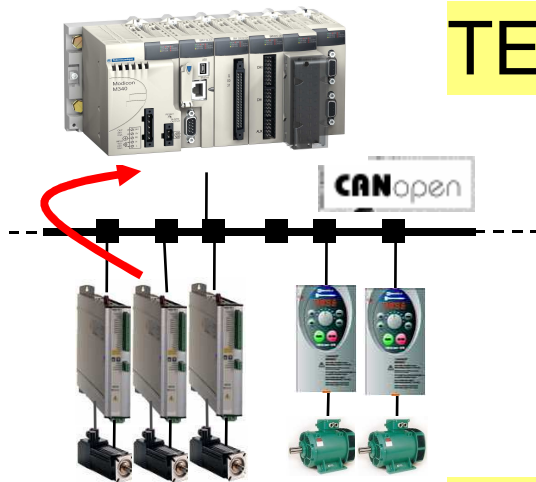
- **MotionTaskMotion:** Current step number
- **Referenced:** State 1 => Drive referenced



1- Motion Function Blocks



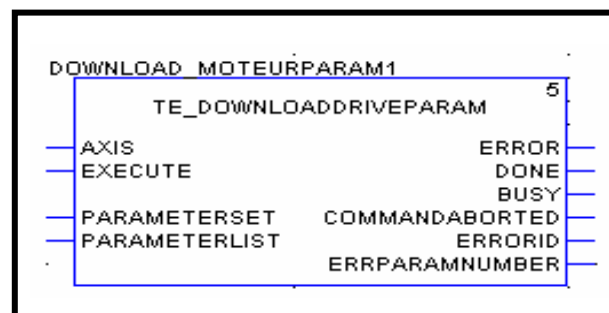
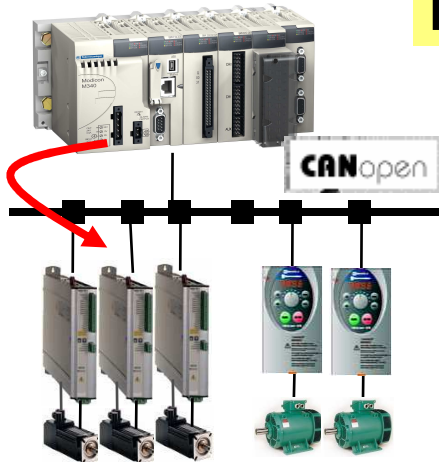
TE_UploadDriveParam



■ Purpose:

- Used to read drive motor parameters and store them in a PLC memory zone

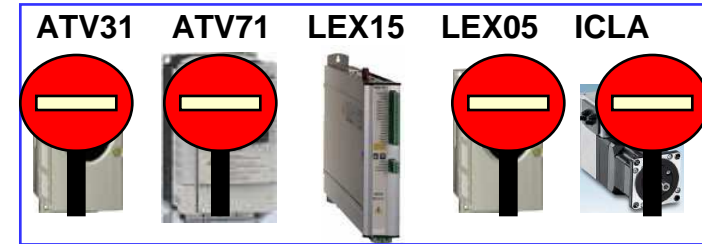
TE_DownloadDriveParam



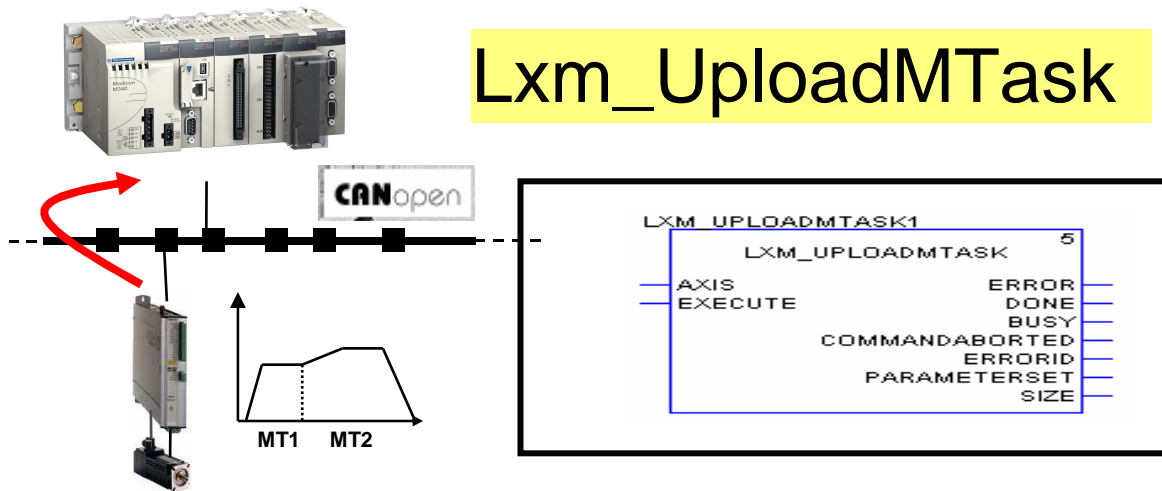
■ Purpose:

- Used to write drive motor parameters previously saved in a PLC memory zone

1- Motion Function Blocks



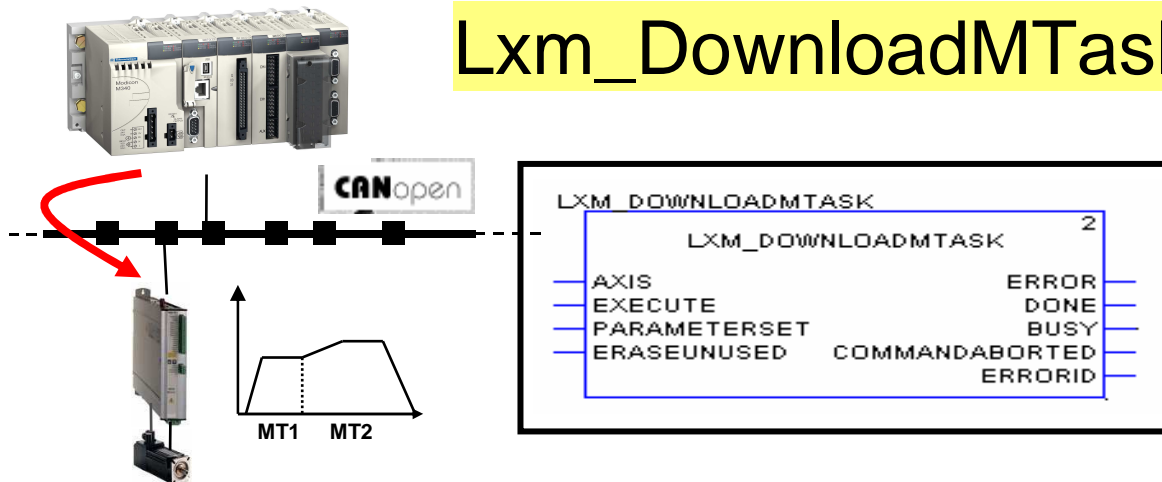
Lxm_UploadMTask



■ Purpose:

- Used to read Motion Tasks and save them in a PLC memory zone

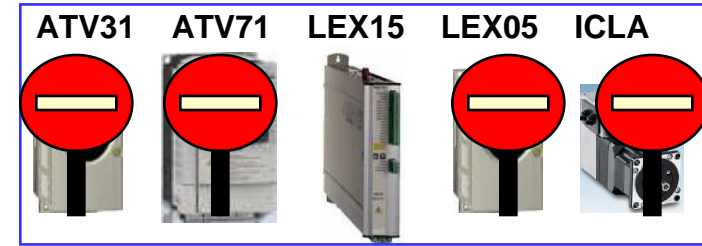
Lxm_DownloadMTask



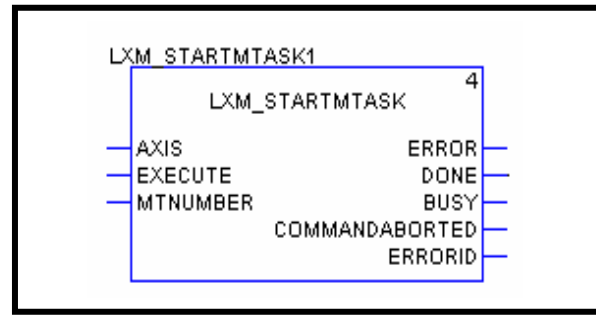
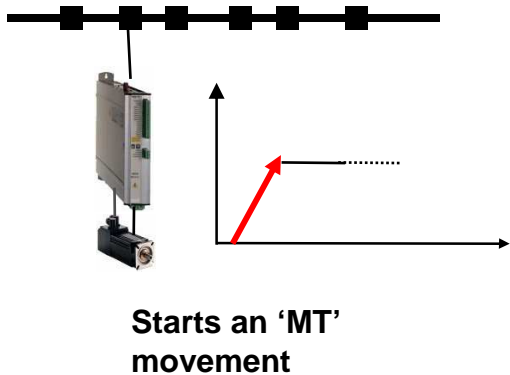
■ Purpose:

- Used to write Motion Tasks previously saved in a PLC memory zone

1- Motion Function Blocks



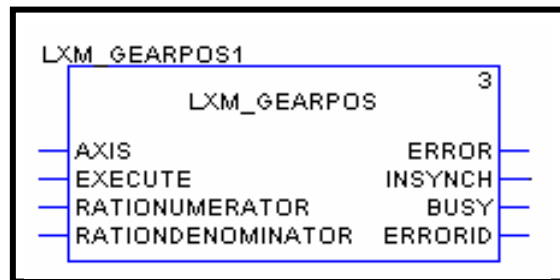
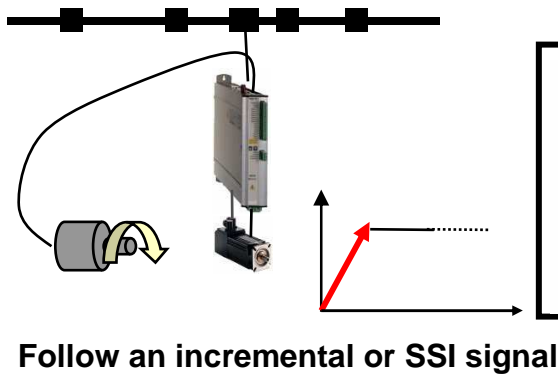
Lxm_StartMTask



■ Purpose:

- Used to start a MOTION TASK step

Lxm_GearPos



■ Purpose:

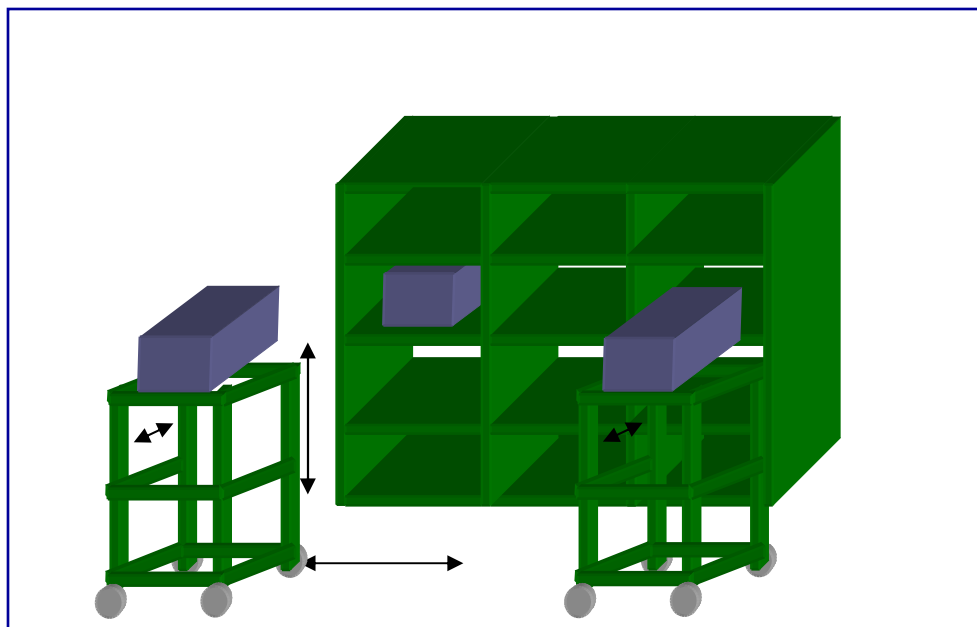
- Used to synchronize the position of a slave axis with respect to a master axis according to a coefficient (ratio)

Example : How to configure a MFB



E – Application examples

Automated storage



Goal of this application :

Automated storage system having three axes mechanism for putting product into the store at the right place.

■ Solution

- The MFB on CANopen provide the coordinated movement required with Lexium05 drives range and BDH motors.
- Unity Pro and MFB allow to get a flexible application.

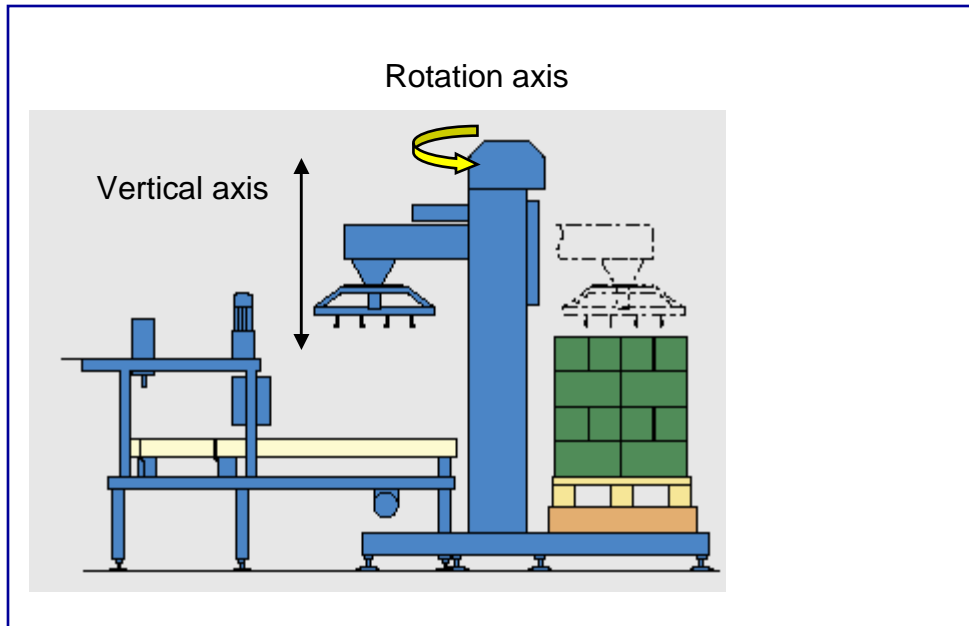
■ Key functions

- `MC_MoveAbsolute` / `MC_MoveAdditive`

■ Key values

- Simple motion sequences in Unity
- Flexible solution => same program for different size of products

Pick and Place



Goal of this application :

Machine assuring products pallet pick and place with one rotate axis and one vertical axis for lifting and lowering movement.

■ Solution

- Two independent axes are needed one rotate and one vertical using servo-drive like Lexium15. MFB is used to control simultaneously these two axes.

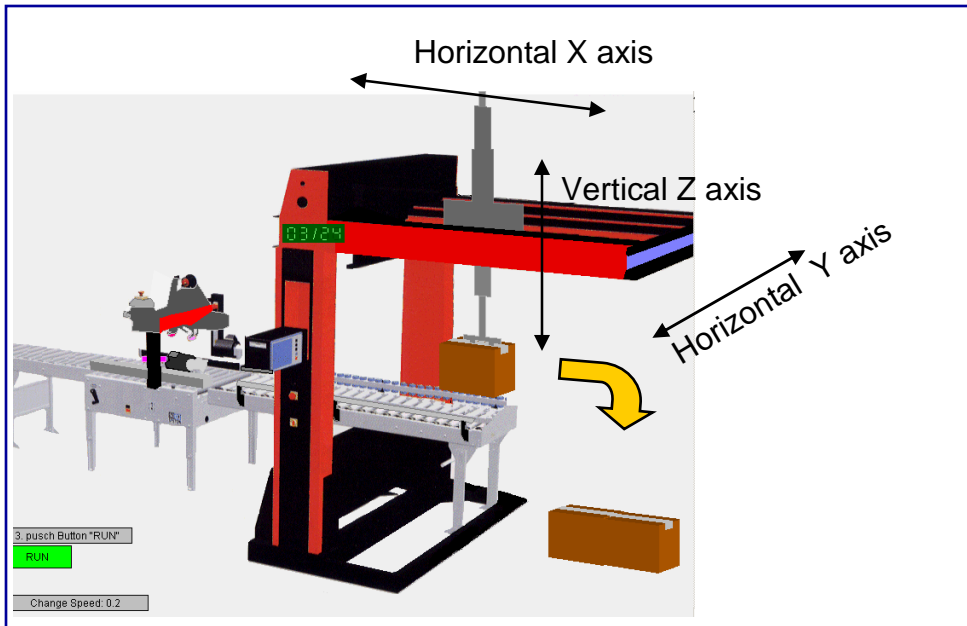
■ Key functions

- [MC_MoveAbsolute](#), to control linear and rotate axes.
- [TE_UploadDriveParam](#) / [TE_DownloadDriveParam](#)

■ Key values

- Flexible solution => same program for different size of products
- High dynamic Lexium15 with BSH motors

Material handling



Goal of this application :

Pick and place Cartesian robot assuring products feed to the pallet products.

The robot has three independent linear axes for products positioning on the pallet layers.

■ Solution

- Classical gantry are widely used in material handling. At least three independent axes are required for translation and lifting movement using servo-drive like Lexium 05. MFB is used to control simultaneously these axes.

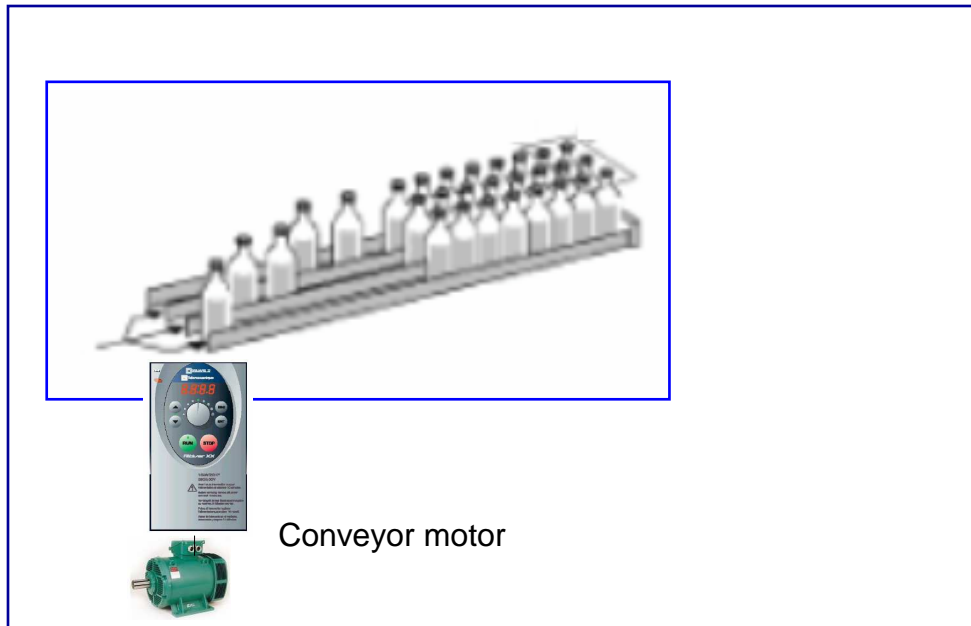
■ Key functions

- `MC_MoveAbsolute` / `MC_MoveAdditive`

■ Key values

- No specialized motion module required
- Real time positioning modification related to the product location on the pallet.

Material conveyor



Goal of this application :

Feeder Belts Assuring products feed to the machine stacking products by a stopper.

Continuous operation and stop in case of jamming. Speed 130-140 m/min for the belt conveyors

■ Solution

- Most of conveyors are control by the inverters. ATV71 and ATV31 are the best products for that, compatible with MFB on CANopen.

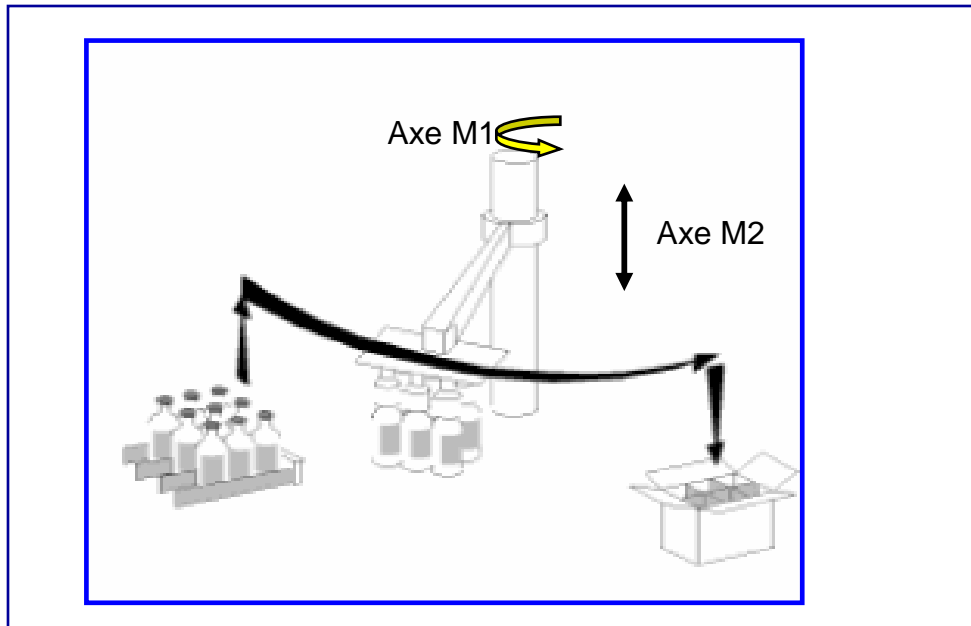
■ Key functions

- MC_MoveVelocity
- Speed modulation by modification of speed parameter

■ Key values

- Simple program adapted
- Real time speed modulation

Boxing of products



Goal of this application :

Boxing of product Assuring transfer and boxing of layers, using a Pick & Place unit (gripping is carried out by suction cups).

■ Solution

- Classical transfer machine are used in secondary packaging for boxing operation. The MFB allows to control simultaneously two coordinated axes for axis rotation and for lifting and Lowering movement.

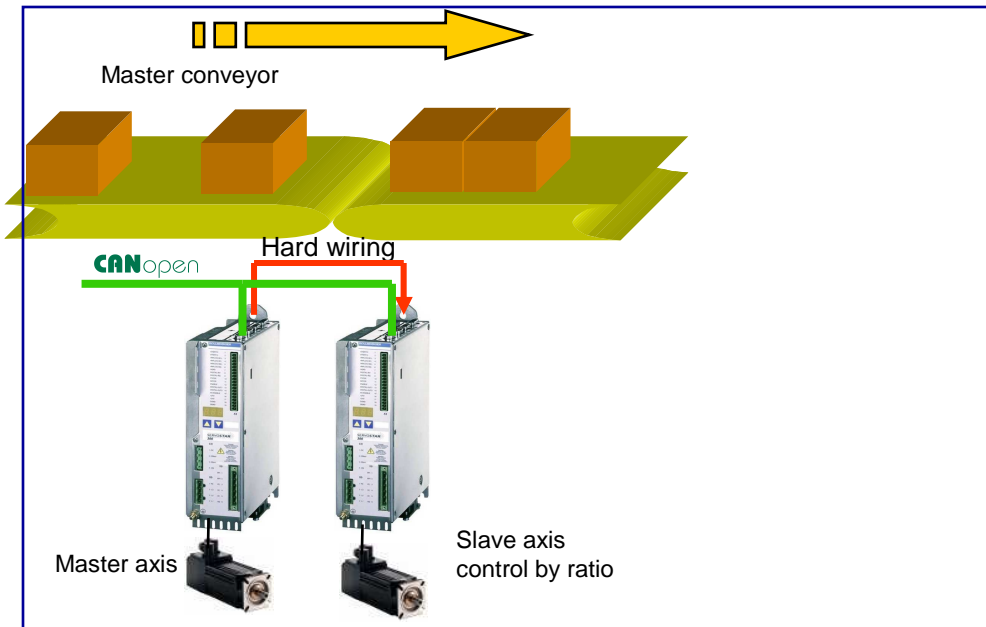
■ Key functions

- MC_MoveAbsolute

■ Key values

- Best performances

Conveyor Grouping / Ungrouping systems



Goal of this application :

Conveyor Assuring grouping and ungrouping transfer of products.

The space between product are already constant. The Master/slave speed ratio determined the new space.

■ Solution

- Using the Master / Slave capability inside the Lexium15 drive, to manage the master and slave speed conveyor. The link between master and slave drives is done by cabling between I/O encoder emulation. The Lexium MFB are used to control de movement.

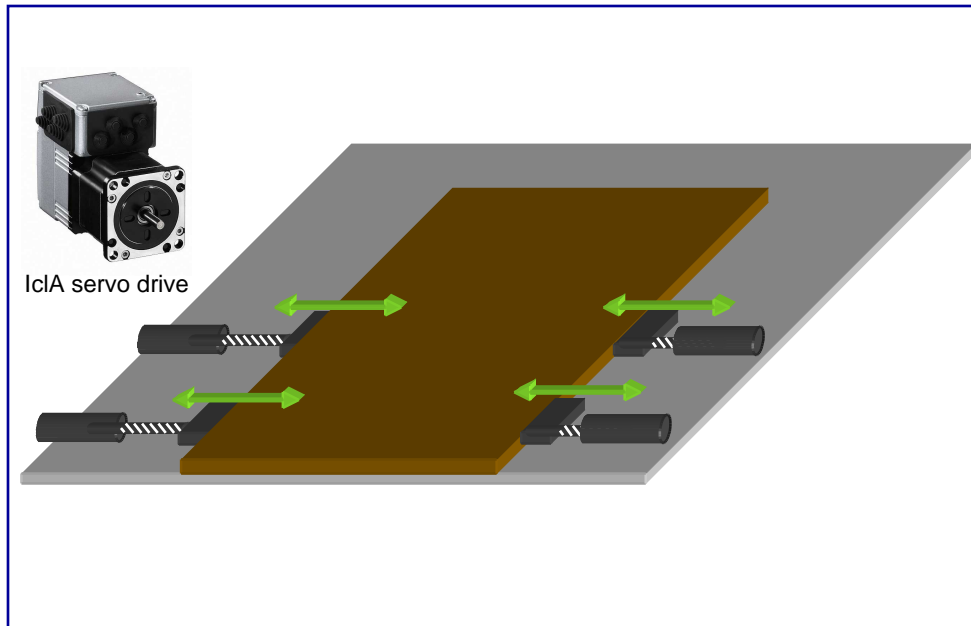
■ Key functions

- Lxm_GearPos to set the ratio values and linking to the master
- MC_MoveVelocity for the master movement command.

■ Key values

- Simple motion program

Format adjustment in wood machines



Goal of this application :

Simple positioning system using servo-motor or stepper systems, assuring the machine setup in order to position guides for varying material sizes.

■ Solution

- Using MFB with IclA stepper or servo-drives for the positioning system. The position targeted could be adjusted by the HMI related to the type of product to do.

■ Key functions

- MC_MoveAbsolute
- MC_MoveRelative

■ Key values

- Simple positioning for auxiliaries axes
- IclA and MFB is the best solution for flexible machine