TML_LIB_CJ1 - MOTION CONTROL LIBRARY FOR OMRON SYSMAC CJ

EMBED TECHNOSOFT DRIVES INTELLIGENCE ON OMRON PLC ENVIRONMENT

Technology is moving fast and time-to-market window narrows. To capitalise on the power of embedded intelligence in Technosoft Drives and on the extreme flexibility of Technosoft Motion Language (TML), Technosoft introduces the TML_LIB libraries for its Intelligent Servo Drives and Motors family.

TML_LIB_CJ1 is a collection of functions and function blocks that allow you to implement motion control applications on an Omron PLC, in order to run our MotionChip™ technology-based Intelligent Drives.

The library allows you to focus on the main aspects related to your specific application, and to easily use the drive and execute motion commands, by calling appropiate functions from the library. Its components are built using the guidelines described in the IEC 61131 standards. Beside the functions presented in this standard, the library also contains functions which implement specific features found on our drives.

The powerful motion control features of Technosoft Intelligent Drives/Motors are based on their high-level progammability in Technosoft Motion Language, a common programming platform for all these drives. TML_LIB_CJ1 offers you access to TML functionality, without the need to use the TML commands. To some extent, TML_LIB_CJ1 as compared to TML is similar to programming in high-level languages, as compared to the assembly language.
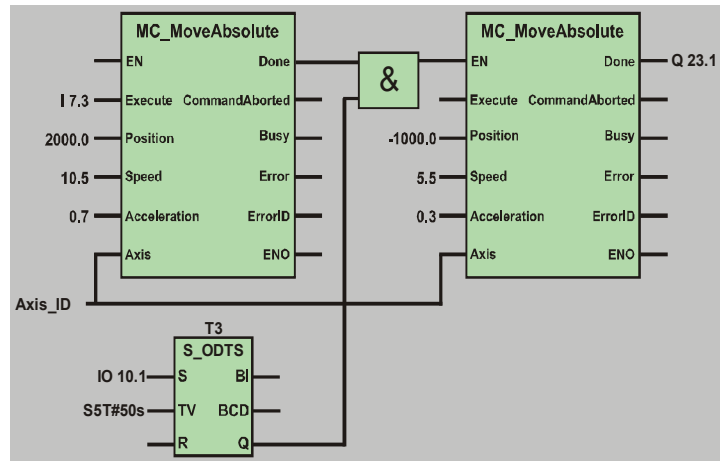
FEATURES
* Function blocks interface and functionality complying to the IEC 61131 standard
* Supports new motion modes and features of Tehnosoft Drives/Motors
* Easy to embed in existing CX-Programmer projects
* Works with Omron CJ1 Series
* Can control all Technosoft Drives/Motors via CAN interface

HARDWARE REQUIREMENTS
In order to use TML_LIB_CJ1 you must have the following minimal hardware configuration:
* One or more Technosoft Intelligent Drives/Motors connected through a CAN-bus
* An OMRON SYSMAC CJ1 PLC with function blocks support
* An User defined CAN unit

SOFTWARE REQUIREMENTS
The software required for implementing an application in the previous configuration consists of:
* TML_LIB_CJ1 library for the control of Technosoft Drives/Motors from Omron PLC
* EasyMotion Studio for configuration and tuning of Intelligent Drives/Motors
* CX-Programmer for PLC hardware configuration and programming
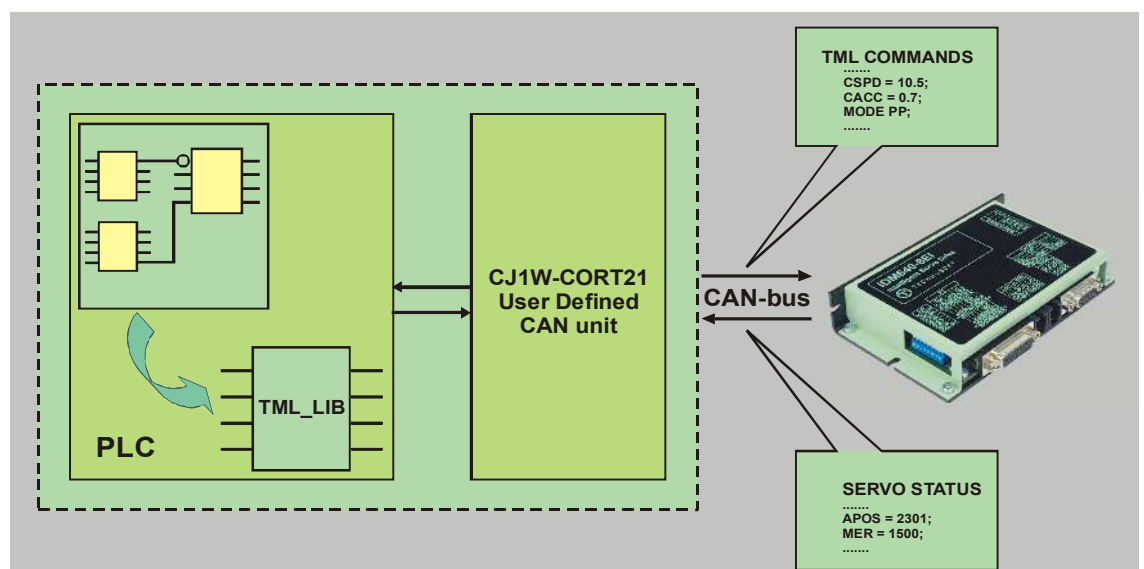
Your
Next
Intelligent
Move

T E C H N O S O F T
MOTION TECHNOLOGY

TML_LIB_CJ1 FUNCTION BLOCKS

	Function block	Description
Motion	MC_MoveAbsolute	Commands an absolute positioning with trapezoidal speed profile to the selected axis
	MC_MoveRelative	Commands a relative positioning with trapezoidal speed profile to the selected axis
	TS_MoveSCurveAbsolute	Commands an absolute positioning with an S-curve profile for speed, and with trapezoidal profile for acceleration
	TS_MoveSCurveRelative	Commands a relative positioning with an S-curve profile for speed, and with trapezoidal profile for acceleration
	TS_MoveVelocity	Commands a trapezoidal speed profile to the selected axis
	TS_MovePVT	Sets the motion mode PVT and sends PVT points to the selected axis
	TS_ExternalAnalogue	Enables the drive on selected axis to use external analogue reference
	TS_ExternalDigital	Enables the drive on selected axis to use external digital reference when position control is performed
	TS_ExternalOnLine	Enables the drive on selected axis to use external reference received via a communication channel
	MC_GearIn	Configures and activates electronic gearing mode between Technosoft drives
	MC_GearOut	Disengages the slave axis from master axis in electronic gearing mode
	TS_CamIn	Configures and activates electronic camming mode between Technosoft drives
	MC_CamOut	Disengages the slave axis from master axis in electronic camming
	MC_STOP	Commands a stop motion to the selected drive
	TS_AxisInit	Initializes drive's parameters for messages sent automatically by the drive
Administrative	MC_POWER	Enables/disables the power stage of the drive on the selected axis
	MC_ReadStatus	Returns the axis state
	MC_ReadActualPosition	Requests the actual position from the selected axis and returns the value of actual position
	TS_WriteLongParameter	Writes a long-type value in the specified location on the selected axis
	TS_WriteFixedParameter	Writes a fixed-type value in the specified location on the selected axis
	TS_WriteIntegerParameter	Writes an integer-type value in the specified location on the selected axis
	TS_ReadLongParameter	Reads the value a long-type variable from the selected axis
	TS_ReadFixedParameter	Reads the value a fixed-type variable from the selected axis
	TS_ReadIntegerParameter	Reads the value an integer-type variable from the selected axis
	MC_CamTableSelect	Selects the active cam table for electronic camming
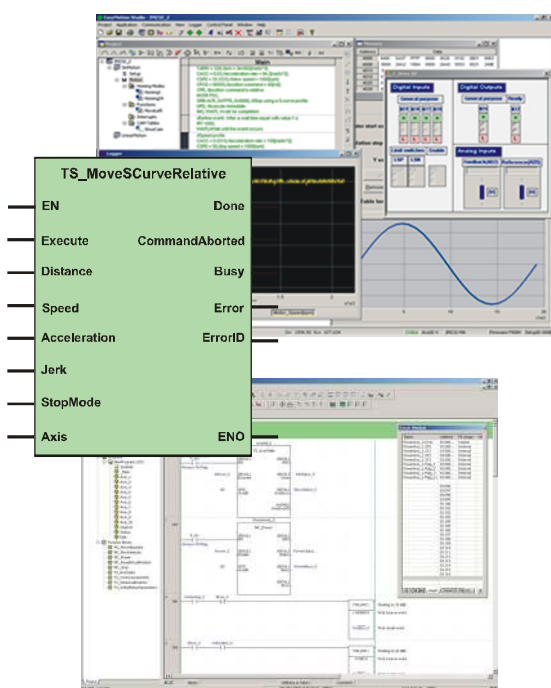
Ordering Information

P034.001.E002	EasyMotion Studio software
P040.001.E311	TML_LIB Motion Library for OMRON CJ1

TECHNOSOFT PRODUCTS

Intelligent Servo Drives / Motors compatible with TML_LIB_CJ1

IPS110	Microstep / DC Drive, 45V, 0.5A, CAN
PIM2401	Plug-in Control Module, 24V, 1A, CAN
PIM2403	Plug-in Control Module, 24V, 3A, CAN
ISCMxx05	Servo Modules, 48/80V, 5A, CAN
IPS210	Microstep / DC Drive, 24V, 0.5A, CAN
ISM4803	Servo Control Module, 48V, 3A, CAN
ISCMxx05	Servo Modules, 48/80V, 5A, DIN, CAN
IBL2401	Servo / Stepper Drive, 24V, 1A, CAN
IBL2403	Servo / Stepper Drive, 24V, 3A, CAN
IBL3605	Servo / Stepper Drive, 36V, 5A, CAN
IDM240	Servo / Stepper Drive, 48V, 5A, CAN
IDM640	Servo / Stepper Drive, 80V, 8A, CAN
IDM680	Servo / Stepper Drive, 80V, 8A, CAN
IDM3000	Servo / Stepper Drive, 325V, 10A, CAN
IM23x	Servo Motors Size 23, 0.1-0.3Nm, CAN
IS23x	Step Motors Size 23, 0.5-1.8Nm, CAN

Headquarters

SWITZERLAND
Tel.: +41 32 732 55 00
Fax: +41 32 732 55 04
sales@technosoftmotion.com

GERMANY (Postcode: 2, 3, 4, 5, 6, 7)
Cell: +49 (0)173 77 200 03
Tel.: +49 (0)7156 3088018
Fax: +41 (0)32 732 55 04
sales.de@technosoftmotion.com

GERMANY (Postcode: 0, 1, 8, 9)

Fax: +1 734 667 52 76
sales.us@technosoftmotion.com
www.technosoftmotion.com