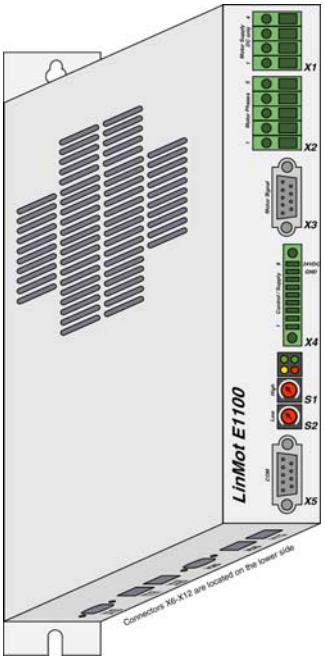
LinMot®



EC Motors with E1100 Series Controllers

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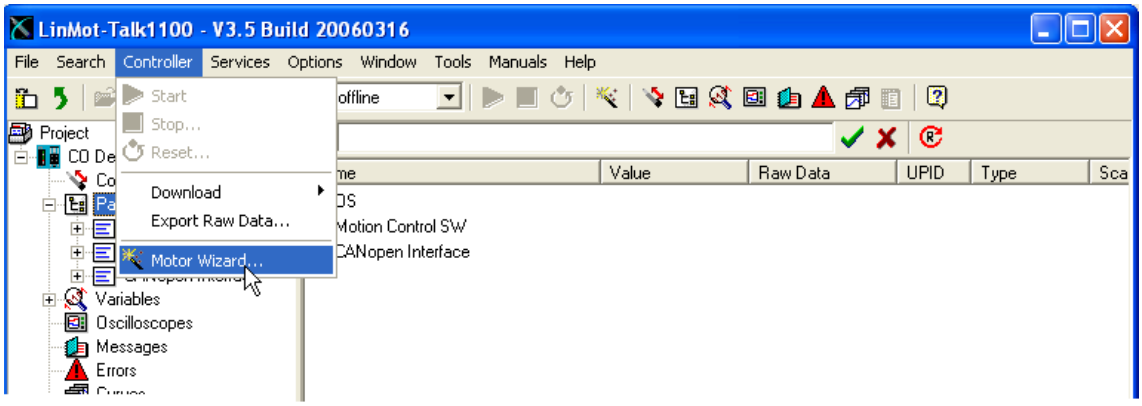
1 Introduction

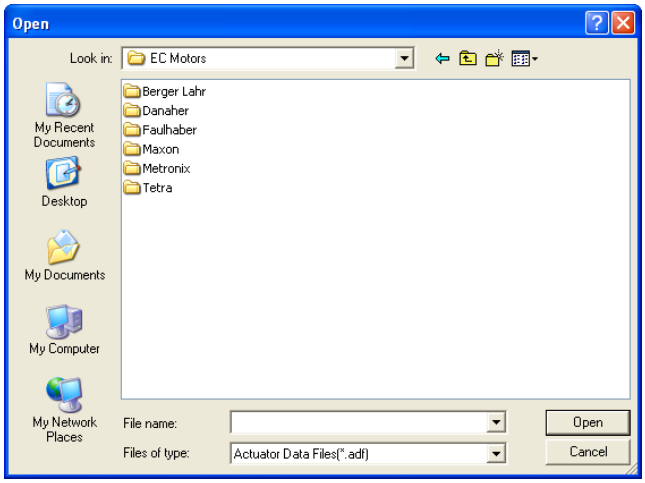
Since LinMot-Talk1100 software release 3.4 it is possible to run 3 phase rotary EC motors on E1100 series servo controllers.

2 Configuration

The rotary EC motors are configured by using the LinMot-Talk1100 configuration software. For a couple of motor types LinMot provides Actuator Definition Files (*.adf). With such an ADF-file the motor configuration can be done by using the *Motor Wizard* tool of the LinMot-Talk1100 software.



You will find the EC motor ADF-files in the subdirectory \Motors\Other Motors\EC Motors of your LinMot-Talk1100 installation.



After you have selected an EC motor ADF-file, the *Motor Wizard* will guide you step by step through the configuration.

3 Motors with ADF-File

3.1 Berger Lahr RECM

Supported Types:	RECM 372/4 DC048 xI RECM 374/4 DC048 xI RECM 375/4 DC060 xI RECM 377/4 DC060 xI
Feedback	Hall Switches & ABZ Encoder
Wiring:	- Motor Phases U,V,W and PE Earth to X2 (X3 alternatively) - Hall Switches U, V, W to X10 (U->A, V->B, W->Z) - RS422 ABZ Encoder Signals to X12 - Sensor supply (5V) from X12
Commutation	- Based on Hall Switches until first Z pulse from Encoder - Based on Encoder signals afterwards (Sine Commutation)
Position Control	- Based on feedback from ABZ encoder

3.2 Faulhaber EC Motors

Supported Types:	1628 T 024 B K1155 2036 U 024 B K1155 2036 U 036 B K1155 2444 S 024 B K1155 2444 S 048 B K1155 3056 K 024 B K1155 3056 K 036 B K1155 3564 K 024 B K1155 3564 K 036 B K1155 4490 H 024 B K1155 4490 H 048 B K1155
Feedback	Analog Hall Sensors & Optional Encoder
Wiring:	- Motor Phases A,B,C to X3 (X2 alternatively) (A-> U, B->V, C->W) - Hall Sensors A,B,C to X3 (A->X4.4, B->X4.9, C->X4.5) - Optional Encoder to X12
Commutation:	- Based on hall sensor signals
Position Control:	- Based on hall sensor signals or optional encoder

3.3 Maxon EC Motors

Supported Types:	EC 22 167129 EC 32 118889 EC 32 118890 EC 40 167181 EC 45 136209 EC 45 flat 251601 EC 60 167131
Feedback	Hall Switches & ABZ Encoder
Wiring:	- Motor Phases 1,2,3 to X2 (X3 alternatively) (1 -> U, 2->V, 3->W) - Hall Switches 1, 2, 3 to X3 (1 -> X4.4, 2->X4.9, 3->X4.5) - RS422 ABZ Encoder Signals to X12 - Sensor supply (5V) from X12
Commutation:	- Based on Hall Switches until first rising edge on Hall Switch 1 - Based on Encoder signals afterwards (Sine Commutation)
Position Control:	- Based on feedback from ABZ encoder

3.4 Metronix APM Servo Motors (e.g. from Elmo Motion Control)

Supported Types:	APM SA01ACN-9 APM SB03ADK-9
Feedback	Hall Switches & ABZ Encoder
Wiring:	- Motor Phases U,V,W and Ground to X2 (X3 alternatively) - Hall Switches U, V, W to X10 (U->A, V->B, W->Z) - RS422 ABZ Encoder Signals to X12 - Sensor supply (5V) from X12
Commutation	- Based on Hall Switches until first Z pulse from Encoder - Based on Encoder signals afterwards (Sine Commutation)
Position Control	- Based on feedback from ABZ encoder

3.5 Tetra Brushless Servo Motors

Supported Types:	T56SR1.35.E.L.08 T85SR2.2.E.L.12
Feedback	Hall Switches & ABZ Encoder
Wiring:	- Motor Phases U,V,W and Earth to X2 (X3 alternatively) - Hall Switches U, V, W to X10 (U->A, V->B, W->Z) - RS422 ABZ Encoder Signals to X12 - Sensor supply (5V) from X12
Commutation	- Based on Hall Switches until first Z pulse from Encoder - Based on Encoder signals afterwards (Sine Commutation)
Position Control	- Based on feedback from ABZ encoder