

EC Motors with E1100 Series Controllers

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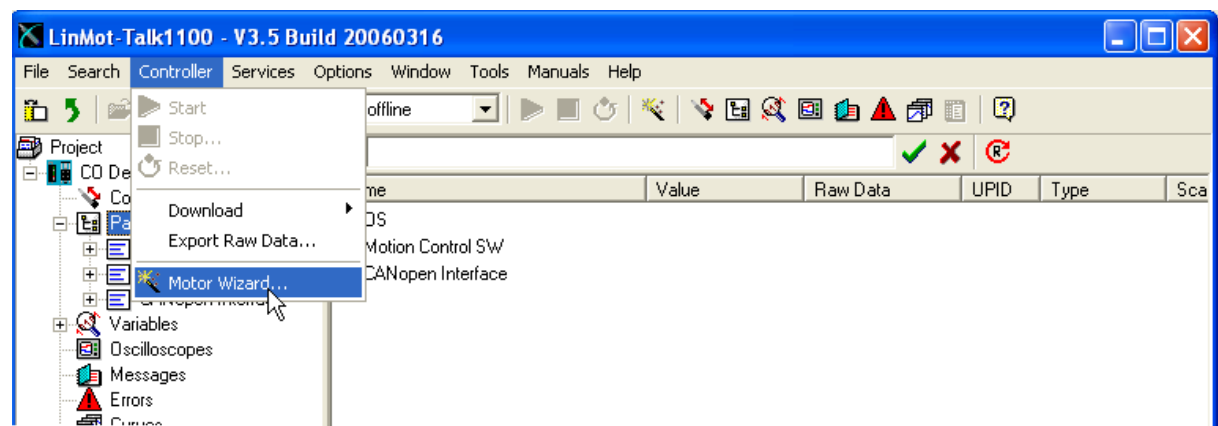
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1 Introduction

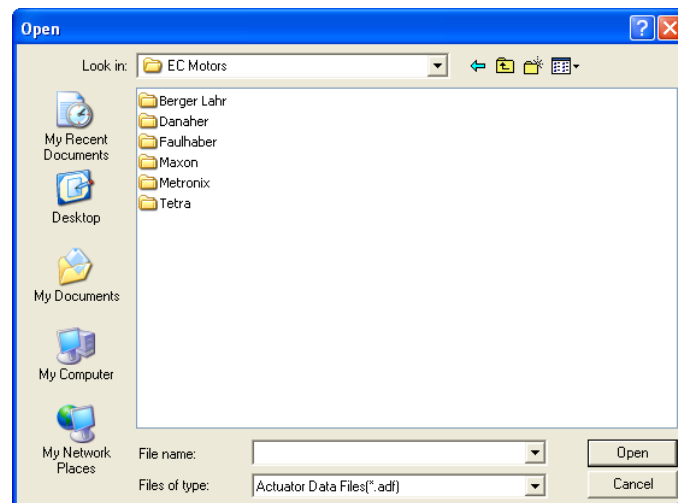
Since LinMot-Talk1100 software release 3.4 it is possible to run 3 phase rotary EC motors on E1100 series servo controllers.

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:	<ul style="list-style-type: none">- 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	<ul style="list-style-type: none">- Based on Hall Switches until first Z pulse from Encoder- Based on Encoder signals afterwards (Sine Commutation)
Position Control	<ul style="list-style-type: none">- 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:	<ul style="list-style-type: none">- 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:	<ul style="list-style-type: none">- Based on hall sensor signals
Position Control:	<ul style="list-style-type: none">- 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 -> X3.4, 2->X3.9, 3->X3.5)
- 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:	<ul style="list-style-type: none">- 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	<ul style="list-style-type: none">- Based on Hall Switches until first Z pulse from Encoder- Based on Encoder signals afterwards (Sine Commutation)
Position Control	<ul style="list-style-type: none">- Based on feedback from ABZ encoder