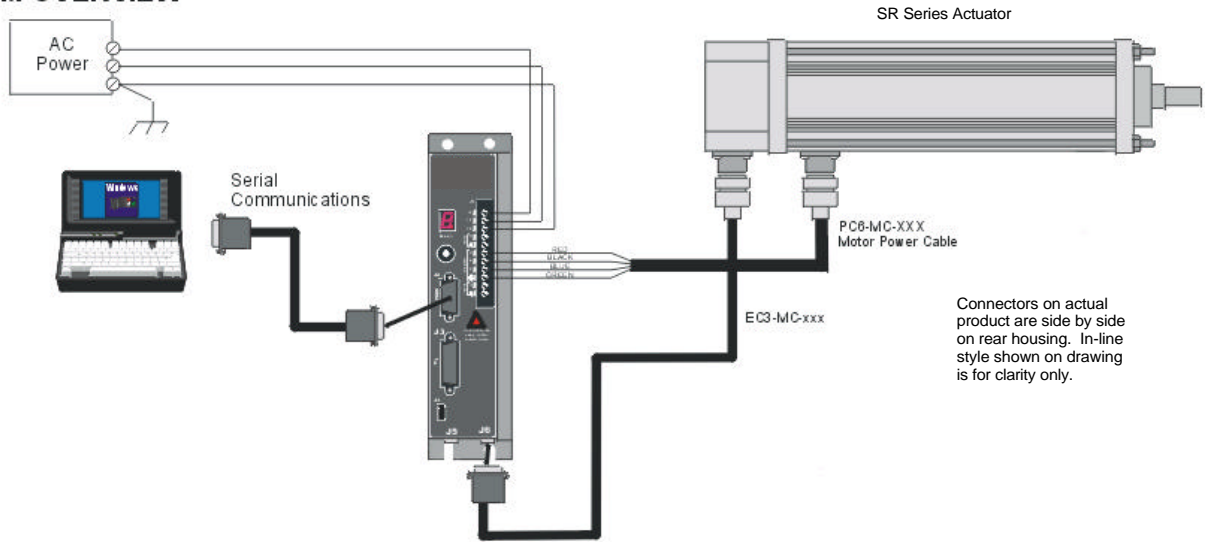


## 7.1 Emerson Epsilon Series Drive with SR Series Actuator (M Connector Option)

### SYSTEM OVERVIEW



**Note:** Dangerous voltages exist. Use extreme caution when operating this equipment. Sufficient energy remains in the Epsilon Series drive to cause motion even with the power removed. Wait for the 7-segment display to dim to off when powering down the drive. At start-up, be sure to have the proper motor file selected and limit the maximum acceleration until proper operation is verified.

### SETTING UP THE EPSILON SERIES DRIVE TO RUN SR SERIES ACTUATORS

The quick touch setup cannot be used to select the Exlar actuator. The motor file containing the Exlar actuators is supplied by Exlar and must be saved as the motor.ddf file in the Power Tools main directory of the personal computer. When running PTOOLS, the actuator can be selected from the motor list and downloaded to the Epsilon Series drive by following these steps:

1. Click on the PowerTools Icon.
2. From the menu bar, select File-New.
3. Select Predefined Setup Selection appropriate for the application.
4. Enter the appropriate ID name, drive address, line voltage, and operating mode.
5. Enter the Epsilon drive type.
6. At this point if it asks you to enter a motor, then from the pull down menu, select the appropriate SR actuator.
7. Click on the Inputs, then Outputs tabs and configure the I/O, as required.
8. Click on the Position, Velocity, and Torque tabs and configure the I/O, as required.
9. Click on the Motor tab, then the drop-down Motor Type. The Exlar SR Series actuators should be included in the list. If they are not, the motor.ddf file from Exlar must be loaded into the Power Tools directory.
10. Download to the Epsilon Series drive by clicking on Device – Download from the menu items.

Basic SR Series Parameter Settings for Epsilon Series Drives*			
		SR21	SR31, 41
Number of Poles		8	8
Maximum Speed	RPM	5000	3000
J <sub>m</sub>	Lb-in-s <sup>2</sup>	**	**
Encoder Size	Lines	2048	2048
Index Offset	Degrees	330	330
Hall Offset	Degrees	330	330

\*Appropriate motor files may be obtained from Exlar or www.exlar.com and downloaded to Epsilon-XXX drives.

\*\* See Inertia Table in Section 7.0

### CABLES FOR EMERSON EPSILON DRIVE WITH SR SERIES ACTUATOR (M CONNECTOR OPTION)

SR21, SR31 - EM2-M			
Exlar Connector Pin Number	Drive Connection	Mating Cable PC6 No Brake	Alternate PC1 With Brake
A	R	Brown	Red
B	S	Black	Black
C	T	Blue	Blue
D	GND	Green/Yellow	Green
E			-
F	Brake -		Blue/White
G	Brake +		Blue
H			
J			

SR41 - EM2-M			
Exlar Connector Pin Number	Drive Connection	Mating Cable PC7-MC No Brake	Alternate PC7-AC With Brake
A	R	Brown	Red
B	S	Black	Black
C	T	Blue	Blue
D	GND	Green/Yellow	Green
E			
F	Brake -		Blue/White
G	Brake +		Blue
H			
J			

Encoder Cable EC3/4-MC-XXX			
Exlar Connector	Wire Color	Function	J5, DB-26 Connection
A	Red/Green	Motor Overtemp	9
B	Blue	A+	1
C	Orange	A-	10
D		Overtemp Gnd	17
E	White/Brown	U+	4
F	White/Gray	V+	5
G	Red/Orange	W+	6
H	Orange/Red	W-	15
J			16
K	Red/Blue	+ 5 VDC	7
L		+ 5 VDC	N/C
M	Black	Z+	3
N	Green	B+	2
P	Brown	B-	11
R	Brown/White	U-	13
S	Gray/White	V-	14
T	Blue/Red	GND	17
U	Yellow	Z-	12
V			N/C
W			N/C
X			N/C
Y			N/C
Z	Shield		

EC4 is flying leads. EC3-MC cable is connectorized on both ends.