

# Parameter List: EMX4i

## 1. Overview

This application note lists soft starter programmable parameters, to simplify management over network communications.

This parameter list is correct for parameter list version 2.x.

For parameter details, refer to the soft starter user manual.



### NOTE

To check the parameter list version, use Menu > Setup Tools > Software Versions.

## 2. Parameter list

	Parameter Number	Parameter Name	Default
1	1A	<i>Command Source</i>	Digital Input
2	1B	<i>Motor Full Load Current</i>	Model dependent
3	1C	<i>Motor kW</i>	0 kW
4	1D	<i>Locked Rotor Time</i>	00:10 (mm:ss)
5	1E	<i>Locked Rotor Current</i>	600%
6	1F	<i>Motor Service Factor</i>	105%
7	1G	<i>Reserved</i>	
8	2A	<i>Start Mode</i>	Constant Current
9	2B	<i>Start Ramp Time</i>	00:10 (mm:ss)
10	2C	<i>Initial Current</i>	200%
11	2D	<i>Current Limit</i>	350%
12	2E	<i>Adaptive Start Profile</i>	Constant Acceleration
13	2F	<i>Kickstart Time</i>	000 ms
14	2G	<i>Kickstart Level</i>	500%
15	2H	<i>Jog Torque</i>	50%
16	2I	<i>Stop Mode</i>	TVR Soft Stop
17	2J	<i>Stop Time</i>	00:00 (mm:ss)
18	2K	<i>Adaptive Stop Profile</i>	Constant Deceleration
19	2L	<i>Adaptive Control Gain</i>	75%
20	2M	<i>Multi Pump</i>	Single Pump
21	2N	<i>Start Delay</i>	00:00 (mm:ss)
22	2O	<i>DC Brake Torque</i>	20%
23	2P	<i>DC Brake Time</i>	00:01 (mm:ss)
24	2Q	<i>Brake Current Limit</i>	250%
25	2R	<i>Soft Brake Delay</i>	400 ms
26	3A	<i>Motor Full Load Current-2</i>	Model dependent
27	3B	<i>Motor kW-2</i>	0 kW
28	3C	<i>Start Mode-2</i>	Constant Current
29	3D	<i>Start Ramp Time-2</i>	00:10 (mm:ss)
30	3E	<i>Initial Current-2</i>	200%
31	3F	<i>Current Limit-2</i>	350%
32	3G	<i>Adaptive Start Profile-2</i>	Constant Acceleration
33	3H	<i>Kickstart Time-2</i>	000 ms
34	3I	<i>Kickstart Level-2</i>	500%
35	3J	<i>Jog Torque-2</i>	50%
36	3K	<i>Stop Mode-2</i>	TVR Soft Stop

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	Parameter Number	Parameter Name	Default
37	3L	<i>Stop Time-2</i>	00:00 (mm:ss)
38	3M	<i>Adaptive Stop Profile-2</i>	Constant Deceleration
39	3N	<i>Adaptive Control Gain-2</i>	75%
40	3O	<i>Multi Pump-2</i>	Single Pump
41	3P	<i>Start Delay-2</i>	00:00 (mm:ss)
42	3Q	<i>DC Brake Torque-2</i>	20%
43	3R	<i>DC Brake Time-2</i>	00:01 (mm:ss)
44	3S	<i>Brake Current Limit-2</i>	250%
45	3T	<i>Soft Brake Delay-2</i>	400 ms
46	4A	<i>Auto-Start/Stop Mode</i>	Disable
47	4B	<i>Run Time</i>	00:00 (hh:mm)
48	4C	<i>Stopped Time</i>	00:00 (hh:mm)
49	4D	<i>Sunday Mode</i>	Start/Stop Disable
50	4E	<i>Sunday Start Time</i>	00:00 (hh:mm)
51	4F	<i>Sunday Stop Time</i>	00:00 (hh:mm)
52	4G	<i>Monday Mode</i>	Start/Stop Disable
53	4H	<i>Monday Start Time</i>	00:00 (hh:mm)
54	4I	<i>Monday Stop Time</i>	00:00 (hh:mm)
55	4J	<i>Tuesday Mode</i>	Start/Stop Disable
56	4K	<i>Tuesday Start Time</i>	00:00 (hh:mm)
57	4L	<i>Tuesday Stop Time</i>	00:00 (hh:mm)
58	4M	<i>Wednesday Mode</i>	Start/Stop Disable
59	4N	<i>Wednesday Start Time</i>	00:00 (hh:mm)
60	4O	<i>Wednesday Stop Time</i>	00:00 (hh:mm)
61	4P	<i>Thursday Mode</i>	Start/Stop Disable
62	4Q	<i>Thursday Start Time</i>	00:00 (hh:mm)
63	4R	<i>Thursday Stop Time</i>	00:00 (hh:mm)
64	4S	<i>Friday Mode</i>	Start/Stop Disable
65	4T	<i>Friday Start Time</i>	00:00 (hh:mm)
66	4U	<i>Friday Stop Time</i>	00:00 (hh:mm)
67	4V	<i>Saturday Mode</i>	Start/Stop Disable
68	4W	<i>Saturday Start Time</i>	00:00 (hh:mm)
69	4X	<i>Saturday Stop Time</i>	00:00 (hh:mm)
70	5A	<i>Current Imbalance</i>	30%
71	5B	<i>Current Imbalance Delay</i>	00:03 (mm:ss)
72	5C	<i>Undercurrent</i>	20%
73	5D	<i>Undercurrent Delay</i>	00:05 (mm:ss)
74	5E	<i>Overcurrent</i>	400%
75	5F	<i>Overcurrent Delay</i>	00:00 (mm:ss)
76	5G	<i>Undervoltage</i>	350 V
77	5H	<i>Undervoltage Delay</i>	00:01 (mm:ss)
78	5I	<i>Overvoltage</i>	500 V
79	5J	<i>Overvoltage Delay</i>	00:01 (mm:ss)
80	5K	<i>Underpower</i>	10%
81	5L	<i>Underpower Delay</i>	00:01 (mm:ss)
82	5M	<i>Overpower</i>	150%
83	5N	<i>Overpower Delay</i>	00:01 (mm:ss)
84	5O	<i>Excess Start Time</i>	00:20 (mm:ss)
85	5P	<i>Restart Delay</i>	00:10 (mm:ss)

	Parameter Number	Parameter Name	Default
86	5Q	<i>Starts per Hour</i>	0
87	5R	<i>Phase Sequence</i>	Any Sequence
88	6A	<i>Auto-Reset Count</i>	0
89	6B	<i>Auto-Reset Delay</i>	00:05 (mm:ss)
90	6C	<i>Current Imbalance</i>	Soft Trip and Log
91	6D	<i>Undercurrent</i>	Soft Trip and Log
92	6E	<i>Overcurrent</i>	Soft Trip and Log
93	6F	<i>Undervoltage</i>	Soft Trip and Log
94	6G	<i>Overvoltage</i>	Soft Trip and Log
95	6H	<i>Underpower</i>	Log Only
96	6I	<i>Overpower</i>	Log Only
97	6J	<i>Excess Start Time</i>	Soft Trip and Log
98	6K	<i>Input A Trip</i>	Soft Trip and Log
99	6L	<i>Input B Trip</i>	Soft Trip and Log
100	6M	<i>Network Communications</i>	Soft Trip and Log
101	6N	<i>Remote Keypad Fault</i>	Soft Trip and Log
102	6O	<i>Frequency</i>	Soft Trip and Log
103	6P	<i>Phase Sequence</i>	Soft Trip and Log
104	6Q	<i>Motor Overtemperature</i>	Soft Trip and Log
105	6R	<i>Motor Thermistor Circuit</i>	Soft Trip and Log
106	6S	<i>Shorted SCR Action</i>	3-Phase Control Only
107	6T	<i>Battery/Clock</i>	Soft Trip and Log
108	7A	<i>Input A Function</i>	Input Trip (N/O)
109	7B	<i>Input A Trip</i>	Operating Only
110	7C	<i>Input A Trip Delay</i>	00:00 (mm:ss)
111	7D	<i>Input A Initial Delay</i>	00:00 (mm:ss)
112	7E	<i>Input B Function</i>	Input Trip (N/O)
113	7F	<i>Input B Trip</i>	Operating Only
114	7G	<i>Input B Trip Delay</i>	00:00 (mm:ss)
115	7H	<i>Input B Initial Delay</i>	00:00 (mm:ss)
116	7I	<i>Reset/Enable Logic</i>	Normally Closed (N/C)
117	7J	<i>Input A Name</i>	Input A Trip
118	7K	<i>Input B Name</i>	Input B Trip
119	8A	<i>Relay A Function</i>	Run
120	8B	<i>Relay A On Delay</i>	00:00 (mm:ss)
121	8C	<i>Relay A Off Delay</i>	00:00 (mm:ss)
122	8D	<i>Relay B Function</i>	Run
123	8E	<i>Relay B On Delay</i>	00:00 (mm:ss)
124	8F	<i>Relay B Off Delay</i>	00:00 (mm:ss)
125	8G	<i>Low Current Flag</i>	50%
126	8H	<i>High Current Flag</i>	100%
127	8I	<i>Motor Temperature Flag</i>	80%
128	8J	<i>Main Contactor Time</i>	400 ms
129	9A	<i>Analog Output A</i>	Current (% FLC)
130	9B	<i>Analog A Scale</i>	4-20 mA
131	9C	<i>Analog A Maximum Adjustment</i>	100%
132	9D	<i>Analog A Minimum Adjustment</i>	000%
133	10A	<i>Language</i>	English
134	10B	<i>Temperature Scale</i>	Celsius

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	Parameter Number	Parameter Name	Default
135	10C	<i>Graph Timebase</i>	30 seconds
136	10D	<i>Graph Maximum Adjustment</i>	400%
137	10E	<i>Graph Minimum Adjustment</i>	0%
138	10F	<i>Current Calibration</i>	100%
139	10G	<i>Adjustment Lock</i>	Read & Write
140	10H	<i>User Parameter 1</i>	Current
141	10I	<i>User Parameter 2</i>	Motor Voltage
142	10J	<i>User Parameter 3</i>	Mains Frequency
143	10K	<i>User Parameter 4</i>	Motor pf
144	10L	<i>User Parameter 5</i>	Motor Power
145	10M	<i>User Parameter 6</i>	Motor Temp (%)
146	11A	<i>Reverse Torque</i>	20%
147	11B	<i>Reverse Time</i>	00:10 (mm:ss)
148	11C	<i>Forward Current Limit</i>	100%
149	11D	<i>Forward Time</i>	00:10 (mm:ss)
150	11E	<i>Pump Stop Mode</i>	Coast To Stop
151	11F	<i>Pump Stop Time</i>	00:10 (mm:ss)
152	11G	<i>Pump Clean Cycles</i>	1
153	12A	<i>Modbus Address</i>	1
154	12B	<i>Modbus Baud Rate</i>	9600
155	12C	<i>Modbus Parity</i>	None
156	12D	<i>Modbus Timeout</i>	Off
157	12E	<i>Devicenet Address</i>	0
158	12F	<i>Devicenet Baud Rate</i>	125kB
159	12G	<i>Profibus Address</i>	1
160	12H	<i>Gateway Address</i>	192
161	12I	<i>Gateway Address 2</i>	168
162	12J	<i>Gateway Address 3</i>	0
163	12K	<i>Gateway Address 4</i>	100
164	12L	<i>IP Address</i>	192
165	12M	<i>IP Address 2</i>	168
166	12N	<i>IP Address 3</i>	0
167	12O	<i>IP Address 4</i>	2
168	12P	<i>Subnet Mask</i>	255
169	12Q	<i>Subnet Mask 2</i>	255
170	12R	<i>Subnet Mask 3</i>	255
171	12S	<i>Subnet Mask 4</i>	0
172	12T	<i>DHCP</i>	Disable
173	12U	<i>Location ID</i>	0
174	20A	<i>Tracking Gain</i>	50%
175	20B	<i>Pedestal Detect</i>	80%
176	20C	<i>Bypass Contactor Delay</i>	150 ms
177	20D	<i>Model Rating</i>	Model dependent
178	20E	<i>Screen Timeout</i>	1 minute
179	20F	<i>Motor Connection</i>	Auto-detect
180	30A	<i>Pressure Sensor Type</i>	None
181	30B	<i>Pressure Units</i>	kPa
182	30C	<i>Pressure at 4 mA</i>	0
183	30D	<i>Pressure at 20 mA</i>	0

	Parameter Number	Parameter Name	Default
184	30E	<i>Flow Sensor Type</i>	None
185	30F	<i>Flow Units</i>	litres/second
186	30G	<i>Flow at 4 mA</i>	0
187	30H	<i>Flow at 20 mA</i>	0
188	30I	<i>Units per Minute at Max Flow</i>	0
189	30J	<i>Pulses per Minute at Max Flow</i>	0
190	30K	<i>Units per Pulse</i>	0
191	30L	<i>Depth Sensor Type</i>	None
192	30M	<i>Depth Units</i>	metres
193	30N	<i>Depth at 4 mA</i>	0
194	30O	<i>Depth at 20 mA</i>	0
195	31A	<i>High Flow Trip Level</i>	10
196	31B	<i>Low Flow Trip Level</i>	5
197	31C	<i>Flow Start Delay</i>	00:00:50 (mm:ss:ms)
198	31D	<i>Flow Response Delay</i>	00:00:50 (mm:ss:ms)
199	32A	<i>High Pressure Trip Level</i>	10
200	32B	<i>High Pressure Start Delay</i>	00:00:50 (mm:ss:ms)
201	32C	<i>High Pressure Response Delay</i>	00:00:50 (mm:ss:ms)
202	32D	<i>Low Pressure Trip Level</i>	5
203	32E	<i>Low Pressure Start Delay</i>	00:00:50 (mm:ss:ms)
204	32F	<i>Low Pressure Response Delay</i>	00:00:50 (mm:ss:ms)
205	33A	<i>Pressure Control Mode</i>	Off
206	33B	<i>Start Pressure Level</i>	5
207	33C	<i>Start Response Delay</i>	00:00:50 (mm:ss:ms)
208	33D	<i>Stop Pressure Level</i>	10
209	33E	<i>Stop Response Delay</i>	00:00:50 (mm:ss:ms)
210	34A	<i>Depth Trip Level</i>	5
211	34B	<i>Depth Reset Level</i>	10
212	34C	<i>Depth Start Delay</i>	00:00:50 (mm:ss:ms)
213	34D	<i>Depth Response Delay</i>	00:00:50 (mm:ss:ms)
214	35A	<i>Temperature Sensor Type</i>	None
215	35B	<i>Temperature Trip Level</i>	40
216	36A	<i>Pressure Sensor</i>	Soft Trip and Log
217	36B	<i>Flow Sensor</i>	Soft Trip and Log
218	36C	<i>Depth Sensor</i>	Soft Trip and Log
219	36D	<i>High Pressure</i>	Soft Trip and Log
220	36E	<i>Low Pressure</i>	Soft Trip and Log
221	36F	<i>High Flow</i>	Soft Trip and Log
222	36G	<i>Low Flow</i>	Soft Trip and Log
223	36H	<i>Flow Switch</i>	Soft Trip and Log
224	36I	<i>Well Depth</i>	Soft Trip and Log
225	36J	<i>RTD/PT100 B</i>	Soft Trip and Log