

SOFT STARTERS SELECTION GUIDE



STEP 1 FIND THE MOTOR FULL LOAD CURRENT (FLC)

- ▶ You can find the kW rating on the name plate of the motor
- ▶ If you only know the kW rating, use the table below to find the current rating, these are typical current rating for a 3-phase motor at 415VAC

Motor kW @ 415V AC	Approx. FLC Amps	
5.5	11	
7.5	14	
11	21	
15	28	
18.5	35	
22	40	
30	55	
37	66	
45	80	
55	100	

Motor kW @ 415V AC	Approx. FLC Amps	
75	135	
90	165	
110	200	
132	240	
160	280	
185	325	
200	340	
220	390	
250	425	
300	525	

Motor kW @ 415V AC	Approx. FLC Amps	
315	535	
375	615	
400	670	
450	750	
500	820	
560	920	
630	1020	
700	1200	
800	1380	
900	1500	

STEP 2 SELECT YOUR APPLICATION

- ▶ Use the guide table below to find out your duty category

Application	Duty		Application	Duty		Application	Duty	
Agitator	Heavy		Debarker	Medium		Palletiser	Severe	
Atomiser	Heavy		Dryer	Severe		Planer	Medium	
Bottle Washer	Light		Dust Collector	Medium		Press	Medium	
Centrifuge	Severe		Edger	Medium		Pump-Bore	Light	
Chipper	Severe		Fan-Axial (Damped)	Medium		Pump-Centrigugal	Medium	
Compressor-Recip (Loaded)	Severe		Fan-Axial (Un-Damped)	Severe		Pump-CPositive displacement	Heavy	
Compressor-Recip (Unloaded)	Heavy		Fan-Centrifugal (Damped)	Medium		Pump-Slurry	Severe	
Compressor-Screw (Loaded)	Severe		Fan- Centrifugal (Un-Damped)	Severe		Re-Pulper	Severe	
Compressor-Screw (Unloaded)	Heavy		Fan-High Pressure	Severe		Rotary Table	Heavy	
Conveyor-Belt	Severe		Grinder	Medium		Sander	Heavy	
Conveyor-Roller	Medium		Hydraulic Power Pack	Medium		Saw-Bandsaw	Severe	
Conveyor-Screw	Heavy		Mill	Severe		Saw-Circular	Medium	
Crusher-Cone	Medium		Mill-Ball	Severe		Separator	Severe	
Crusher-Jaw	Severe		Mill-Hammer	Severe		Shredder	Severe	
Crusher-Rotary	Medium		Mill-Roller	Severe		Slicer	Light	
Crusher-Vertical impact	Medium		Mixer	Severe		Tumbler	Heavy	



STEP 3A SELECT YOUR SOFT STARTER

- ▶ Select your **EMX4i (NEW)** Next Generation Smart Soft Starter
- ▶ Supply Voltage 200-525 VAC



SPECIAL FEATURES

CONTROL

- ▶ XLR8 intelligent adaptive control for start and stop.
- ▶ Easy to configure for water hammer applications.
- ▶ Prevent reverse rotation, Slow starts for tracking and tensioning.

SMART CARD (OPTIONAL)

- ▶ Smart Card provide extensive automation functions.
- ▶ Auto start/stop (Daily setting).
- ▶ Application: Pump & Irrigation.

USER FRIENDLINESS

- ▶ USB for easy parameter upload and download QR code provide connection-free method of obtaining starter information.

EMERGENCY 2 PHASE CONTROL

- ▶ Continue operation using two phase control when one SCR is damaged.
- ▶ Maximise productivity complete critical process.

Current Rating (A)				240VAC Control	24VAC/DC Control
Light	Medium	Heavy	Severe	With internal bypass	With internal bypass
24	20	19	16	EMX4i0024BV5C1H	EMX4i0024BV5C2H
42	34	34	27	EMX4i0042BV5C1H	EMX4i0042BV5C2H
52	42	39	35	EMX4i0052BV5C1H	EMX4i0052BV5C2H
64	63	60	51	EMX4i0064BV5C1H	EMX4i0064BV5C2H
69	69	69	62	EMX4i0069BV5C1H	EMX4i0069BV5C2H
105	86	84	69	EMX4i0105BV5C1H	EMX4i0105BV5C2H
115	108	105	86	EMX4i0115BV5C1H	EMX4i0115BV5C2H
135	129	126	103	EMX4i0135BV5C1H	EMX4i0135BV5C2H
184	144	139	116	EMX4i0184BV5C1H	EMX4i0184BV5C2H
200	171	165	138	EMX4i0200BV5C1H	EMX4i0200BV5C2H
229	194	187	157	EMX4i0229BV5C1H	EMX4i0229BV5C2H
250	244	230	200	EMX4i0250BV5C1H	EMX4i0250BV5C2H
352	287	277	234	EMX4i0352BV5C1H	EMX4i0352BV5C2H
397	323	311	263	EMX4i0397BV5C1H	EMX4i0397BV5C2H
410	410	410	380	EMX4i0410BV5C1H	EMX4i0410BV5C2H
550	527	506	427	EMX4i0550BV5C1H	EMX4i0550BV5C2H
580	579	555	470	EMX4i0580BV5C1H	EMX4i0580BV5C2H

Duty category	Start Condition	0024B-0052B (40°C, < 1000m) 10 starts/hour	0064B-0580B (40°C, <1000m) 6 starts/hour
Light Duty	3 x FLC, 10 second start	AC53b 3.0 - 10:350	AC53b 3.0 - 10:590
Medium/Normal Duty	3.5 x FLC, 15 second start	AC53b 3.5 - 15:345	AC53b 3.5 - 15:585
Heavy Duty	4 x FLC, 20 second start	AC53b 4.0 - 20:340	AC53b 4.0 - 20:580
Severe Duty	5 x FLC, 5 second start	AC53b 5.0 - 5:355	AC53b 5.0 - 5:595

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STEP 3B SELECT YOUR SOFT STARTER

- ▶ Select your **CSXi**
No compromise on motor protection
- ▶ Supply Voltage 200-440 VAC



FEATURES

- ▶ Affordable price
- ▶ Compact size

Current Rating (A)		240VAC Control	24VAC/DC Control
Medium	Heavy	With internal bypass	With internal bypass
18	17	CSXi007V4C1	CSXi007V4C2
34	30	CSXi015V4C1	CSXi015V4C2
42	36	CSXi018V4C1	CSXi018V4C2
48	40	CSXi022V4C1	CSXi022V4C2
60	49	CSXi030V4C1	CSXi030V4C2
75	65	CSXi037V4C1	CSXi037V4C2
85	73	CSXi045V4C1	CSXi045V4C2
100	96	CSXi055V4C1	CSXi055V4C2
140	120	CSXi075V4C1	CSXi075V4C2
170	142	CSXi090V4C1	CSXi090V4C2
200	165	CSXi110V4C1	CSXi110V4C2

Duty category	Start Condition	007-030 (40°C, < 1000m) 10 starts/hour	037-110 (40°C, <1000m) 6 starts/hour
		AC53b 4.0 - 6:354	AC53b 4.0 – 6:594
Medium/Normal Duty	4 x FLC, 6 second start	AC53b 4.0 - 6:354	AC53b 4.0 – 6:594
Heavy Duty	4 x FLC, 20 second start	AC53b 4.0 - 20:340	AC53b 4.0 – 20:580

STEP 3C SELECT YOUR SOFT STARTER

- ▶ Select your **EMX3**
A comprehensive motor management system
- ▶ Supply Voltage 200-440 VAC



SPECIAL FEATURES

- ▶ Removable keypad

CONTROL

- ▶ XLR8 intelligent adaptive control for start and stop.
- ▶ Easy to configure for water hammer applications.
- ▶ Prevent reverse rotation, Slow starts for tracking and tensioning.

USER FRIENDLINESS

- ▶ 4 line, 16 character backlit LCD provides date/time stamped trip & event logs, comprehensive monitoring & diagnostic screens.
- ▶ User configurable screen.

AUTOMATION FUNCTION

- ▶ Abundant programmable I/Os + I/O expansion card.
- ▶ Auto-restart and auto start/stop 9Weekly setting).

EMERGENCY 2 PHASE CONTROL

- ▶ Continue operation using two phase control when one SCR is damaged.
- ▶ Maximise productivity complete critical process.

Current Rating (A)				240VAC Control	24VAC/DC Control
Light	Medium	Heavy	Severe	With internal bypass	With internal bypass
23	20	17	15	EMX30023BV4C1H	EMX30023BV4C2H
43	37	31	26	EMX30043BV4C1H	EMX30043BV4C2H
53	53	46	37	EMX30053BV4C1H	EMX30053BV4C2H
76	64	55	47	EMX30076BV4C1H	EMX30076BV4C2H
97	82	69	58	EMX30097BV4C1H	EMX30097BV4C2H
105	105	95	78	EMX30105BV4C1H	EMX30105BV4C2H
145	123	106	90	EMX30145BV4C1H	EMX30145BV4C2H
170	145	121	97	EMX30170BV4C1H	EMX30170BV4C2H
200	189	160	134	EMX30200BV4C1H	EMX30200BV4C2H
220	210	178	158	EMX30220BV4C1H	EMX30220BV4C2H
255	231	201	176	EMX30255BV4C1H	EMX30255BV4C2H
350	329	284	244	EMX30350BV4C1H	EMX30350BV4C2H
425	411	355	305	EMX30425BV4C1H	EMX30425BV4C2H
500	445	383	326	EMX30500BV4C1H	EMX30500BV4C2H
580	492	425	364	EMX30580BV4C1H	EMX30580BV4C2H
700	592	512	438	EMX30700BV4C1H	EMX30700BV4C2H
820	705	606	516	EMX30820BV4C1H	EMX30820BV4C2H
920	804	684	571	EMX30920BV4C1H	EMX30920BV4C2H
1000	936	796	664	EMX31000BV4C1H	EMX31000BV4C2H

Duty category	Start Condition	0023B-0053B (40°C, < 1000m) 10 starts/hour	0076B-1000B (40°C, <1000m) 6 starts/hour
		AC53b 3.0 - 10:350	AC53b 3.0 - 10:590
Light Duty	3 x FLC, 10 second start	AC53b 3.0 - 10:350	AC53b 3.0 - 10:590
Medium/Normal Duty	3.5 x FLC, 15 second start	AC53b 3.5 - 15:345	AC53b 3.5 - 15:585
Heavy Duty	4 x FLC, 20 second start	AC53b 4.0 - 20:340	AC53b 4.0 - 20:580
Severe Duty	4.5 x FLC, 30 second start	AC53b 4.5 - 30:330	AC53b 4.5 - 30:570