








# Softstarters

## Quick Selection Table

			
Bulletin No.	150	150	150
Type	<b>SMC-3 Controller</b>	<b>SMC-Delta Controller</b>	<b>SMC Flex Controller</b>
Current Range	200...600V 1...85 A	200...600V 1...147 A	200...600V 54...480 A
Soft Start	✓	—	✓
Kickstart	✓	—	✓
Current Limit	✓	✓	✓
Dual Ramp Start	—	—	✓ ❶
Full Voltage	—	—	✓
Soft Stop	✓	—	✓
Pump Control	—	—	✓ ❶
Preset Slow Speed	—	—	✓ ❶
Linear Speed	—	—	✓ ❶
SMB™ Smart Motor Braking	—	—	✓ ❶
Accu-Stop™	—	—	✓ ❶
Slow Speed with Braking	—	—	✓ ❶
Integrated Bypass Contacts	✓	✓	✓
Integrated Motor Protection	✓	✓	✓
Communication	—	—	✓
Metering	—	—	✓
Keypad Programming/ LCD Display	—	—	✓
Standards Compliance			
CE Marked per Low Voltage Directive 73/23/EEC, 93/68/EEC	✓	✓	✓
CSA Certified (File No. LR 1234),	✓	✓	✓
UL Listed (File No. E96956)	✓	✓	✓
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❶ Depending on selected option

**Bulletin 150, 154**  
**Softstarters**  
**Quick Selection Table**

					
Bulletin No.	154		150	150	150
Type	STC Controller		SMC-2 Controller	SMC Plus Controller	SMC Dialog Plus Controller
Current Range	100...240V 1 phase, 1...22 A	200...600V 3 phases, 1...22 A	200...600V 1...97 A	200...600V 1...1000 A	200...600V 1...1000 A
Soft Start	✓	✓	✓	✓	✓
Kickstart	—	—	—	✓	✓
Current Limit	—	—	✓	✓	✓
Dual Ramp Start	—	—	—	—	✓
Full Voltage	—	—	✓	✓	✓
Energy Saver	—	—	✓	✓	✓
Soft Stop	—	—	Option	Option	Option
Pump Control	—	—	—	Option	Option
Preset Slow Speed	—	—	—	Option	Option
Linear Speed	—	—	—	—	—
SMB™ Smart Motor Braking	—	—	—	Option	Option
Accu-Stop™	—	—	—	Option	Option
Slow Speed with Braking	—	—	—	Option	Option
Single-phase Operation	✓	—	—	—	—
Motor Protection	—	—	—	—	✓
Communication	—	—	—	—	✓
Metering	—	—	—	—	✓
Keypad Programming/ LCD Display	—	—	—	✓	✓
Standards Compliance					
CE Marked per Low Voltage Directive 73/23/EEC, 93/68/EEC	✓	✓	✓	✓	✓
CSA Certified (File No. LR 1234), UL Listed (File No. E96956)	✓	✓	✓	✓	✓
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**Softstarters**

**Product Selection: SMC-3**



- 1...85 A Range
- Soft Start
- Current Limit Start
- Selectable Kick Start
- Selectable Soft Stop
- Built-In Overload Protection
- Built-In SCR Bypass

**Open Type Controller  
Up to 480V AC**

Rated Current [A] ①	[kW]				Control Voltage 100...240V AC 50/60 Hz	Control Voltage 24V AC/DC	
	230V AC 50 Hz		380/400/415V AC 50 Hz			Cat. No.	PQ
Starting Duty					Cat. No.		
	350 %	450 %	350 %	450 %			
1...3	0.55	0.37	1.1	0.75	150-C3NBD	150-C3NBR	
3...9	2.2	1.5	4	3	150-C9NBD	150-C9NBR	
5.3...16	4	3	7.5	5.5	150-C16NBD	150-C16NBR	
6.3...19	4	4	7.5	5.5	150-C19NBD	150-C19NBR	
8.3...25	5.5	4	11	9.5	150-C25NBD	150-C25NBR	
10...30	7.5	5.5	15	11	150-C30NBD	150-C30NBR	
12...37	7.5	7.5	18.5	15	150-C37NBD	150-C37NBR	
14.3...43	11	7.5	22	15	150-C43NBD	150-C43NBR	
20...60	15	11	30	22	150-C60NBD	150-C60NBR	
28.3...85	22	18.5	45	37	150-C85NBD	150-C85NBR	

① Motor FLA must fall within the current range of the device.

Technical data and prices for voltage range 480...600V on request

Accessories for Softstarters SMC-3, see Page 72

See Publication 150-SG006C-EN-P for complete product information  
PQ = Package Quantity



- 1...147 A Range
- Current Limit Start
- Built-In Overload Protection
- Built-In SCR Bypass

**Open Type Controllers**  
**Up to 480V AC**

Rated Current [A] ❶	[kW]		Control Voltages 100...240V AC 50/60 Hz		Control Voltages 24V AC/DC	
	230V AC 50 Hz	380/400/415V AC 50 Hz	Cat. No.	PQ	Cat. No.	PQ
1...3	0.55	1.1	150-D3NBD	1	150-D3NBR	1
3...9	2.2	4	150-D9NBD		150-D9NBR	
5.3...16	4	7.5	150-D16NBD		150-D16NBR	
6.7...20	5.5	7.5	150-D20NBD		150-D20NBR	
9.2...25	5.5	11	150-D25NBD		150-D25NBR	
10.6...32	7.5	15	150-D32NBD		150-D32NBR	
17...51	15	22	150-D51NBD		150-D51NBR	
21.3...64	18.5	30	150-D64NBD		150-D64NBR	
24.7...74	22	37	150-D74NBD		150-D74NBR	
34.7...104	30	55	150-D104NBD		150-D104NBR	
49...147	45	75	150-D147NBD	150-D147NBR		

❶ Motor FLA must fall within the current range of the device.

Technical data and prices for voltage range 480...600V on request.

Accessories for Softstarters SMC-Delta, see Page 72


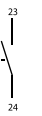



See Publication 150-SG006C-EN-P for complete product information  
PQ = Package Quantity

# Softstarters


## Accessories: SMC-3, SMC-Delta

### Accessories for Softstarters SMC-3 and SMC-Delta



#### Auxiliary Contact Blocks for Side Mounting without Sequence Terminal Designations

	Description	N.O.	N.C.	Connection Diagram	Cat. No.	PQ
 <ul style="list-style-type: none"> <li>1- and 2-pole</li> <li>Quick and easy mounting without tools</li> </ul>	1	0		150-CA10	1	
	2	0		150-CA20		
	0	1		150-CA01		
	1	1		150-CA11		


#### Fan

	For Use with	Cat. No.	PQ
	150-C3...37/150-D3...64	150-CF64	1

#### Connecting Modules

	Description	For Use with	Cat. No.	PQ
 <ul style="list-style-type: none"> <li><b>Connecting Modules to 140M</b></li> <li>Electrical interconnection between SMC-Delta / SMC-3 and 140M.</li> <li>Motor protector and SMC must be mounted separately.</li> </ul>		Connects 140M-C to 150-C3...25 /150-D3...25	150-CC25	1
		Connects 140M-D to 150-C3...25 /150-D3...25	150-CD25	
		Connects 140M-F to 150-C3...37 /150-D3...32	150-CF45	
 <ul style="list-style-type: none"> <li><b>Connecting Modules to 100C</b></li> <li>Electrical interconnection between SMC-Delta / SMC-3 and 100C.</li> <li>Contactors and SMC must be mounted separately.</li> </ul>		Connects 100-C09...23 to 150-C3...19/150-D3...20	150-CI23	1
		Connects 100-C30...37 to 150-C3...37/150-D3...32	150-CI37	

#### Protective Module

	Description	For Use with	Cat. No.	PQ
 <ul style="list-style-type: none"> <li>480V Protective Module</li> <li>600V Protective Module</li> </ul>		150-C3...37NB_ or 150-D3...64NB_	150-C84	1
		150-C43...85NB_ or 150-D74...147NB_	150-C84P	
		150-C3...37NC_ or 150-D3...64NC_	150-C86	
		150-C43...85NC_ or 150-D74...147NC_	150-C86P	

See Publication 150-SG006C-EN-P for complete product information  
 PQ = Package Quantity



- 54...480 A Range
- Soft Start
- Current Limit Start
- Dual Ramp
- Full Voltage
- Linear Speed Acceleration
- Preset Slow Speed
- Soft Stop

**Options**

- Pump Control
- Braking Control

**Open Type Line-Connected Controllers**

Rated Voltage [V AC] ⑥	Current Rating ① ② ③	[kW]	Standard Version		Pump Control Option	
			100...240V AC 50/60 Hz Control		100...240V AC 50/60 Hz Control	
			Cat. No.	PQ	Cat. No.	PQ
480	54...108	30...55	150-F108NBD	1	150-F108NBD	B
	68...135	45...75	150-F135NBD		150-F135NBD	B
	100...201	75...110	150-F201NBD		150-F201NBD	B
	125...251	75...132	150-F251NBD		150-F251NBD	B
	158...317	90...160	150-F317NBD		150-F317NBD	B
	180...361	110...200	150-F361NBD		150-F361NBD	B
	240...480	160...250	150-F480NBD		150-F480NBD	B

④

**Open Type Delta-Connected Controllers**

Rated Voltage [V AC] ⑥	Current Rating ① ② ③	[kW]	Standard Version		Pump Control Option	
			100...240V AC 50/60 Hz Control		100...240V AC 50/60 Hz Control	
			Cat. No.	PQ	Cat. No.	PQ
480	94...187	55...90	150-F108NBD	1	150-F108NBD	B
	117...234	75...132	150-F135NBD		150-F135NBD	B
	174...348	110...160	150-F201NBD		150-F201NBD	B
	218...435	132...250	150-F251NBD		150-F251NBD	B
	275...549	160...315	150-F317NBD		150-F317NBD	B
	313...625	200...355	150-F361NBD		150-F361NBD	B
	415...831	250...450	150-F480NBD		150-F480NBD	B

④

- ① Controllers rated 108 A and greater are not equipped with line and load terminal lugs.
- ② Motor FLA rating must fall within specified current range for unit to operate properly.
- ③ Utilization category: AC-53b: 3-50: 1750.

**④ Options**

Options	Description	Cat. No. Modification
Pump Control	Provides smooth motor acceleration and deceleration, reducing surges caused by the starting and stopping of centrifugal pumps. Starting time is adjustable from 0...30 seconds, and stopping time is adjustable from 0...120 seconds.	B
Braking Control	Provides Smart Motor Braking (SMB), Accu-Stop, and Slow Speed with Braking. Prices on request.	D

⑥ Technical data and prices for voltages up to 600V on request.


See Publication 150-SG008B-EN-P for complete product information  
PQ = Package Quantity

## Bulletin 150, 154

### Softstarters


#### Accessories: SMC Flex

#### Protective Modules ①

	Current Rating (A)	Description	Cat. No.	PQ
	108...480	480V Protective Module	150-F84L	1
		600V Protective Module	150-F86L	


- ① The same protective module mounts on the line or load side of the SMC-Flex. For applications requiring both line and load side protection, two protective modules must be ordered.

#### IEC Terminal Covers ②

	Description	Cat. No.	PQ
	IEC line or load terminal covers for 108...251 A devices. <ul style="list-style-type: none"><li>• Dead front protection</li></ul>	150-TC2	1
	IEC line and load terminal covers for 317...480 A devices. <ul style="list-style-type: none"><li>• Dead front protection</li></ul>	150-TC3	


- ② One terminal cover is shipped as standard with the SMC-Flex controllers.

#### Human Interface Modules

	Description	Cat. No.	PQ
	Programmer Only LCD ③	20-HIM-A5	1
	Full Numeric LCD ③	20-HIM-A3	
	Full Numeric Panel Mount LCD (includes cable)	20-HIM-C3	
	1 m Cable	20-HIM-H10	

- ③ Requires a 20-HIM-H cable to connect to the SMC-Flex.

#### Communication Modules

	Description (IP30 / Type 1)	For Use with	Cat. No.	PQ
	Remote I/O	Bulletin 150 SMC-Flex	20-COMM-R	1
	RS-485/DF1		20-COMM-S	
	ProfIBUS		20-COMM-P	
	ControlNet		20-COMM-C	
	DeviceNet		20-COMM-D	
	Ethernet/IP		20-COMM-E	

See Publication 150-SG008B-EN-P for complete product information  
PQ = Package Quantity



- 11...22 A Ratings
- Reduces Starting Torque Surge

**STC Starting Torque Controller**

1-phase Motor 200...240V		3-phase Motor 200...240V		Dimensions in mm			Cat. No.	PQ
[kW]	[A]	[kW]	[A]	Width	Height	Depth		
1.5	12	3	11	75	111	77	154-A11NA	1
2.2	16	4.5	16	122	127	101	154-A16NA	
3	23	6	22	154	180	127	154-A22NA	
		380...400V		Width	Height	Depth	Cat. No.	PQ
		5.5	11	75	111	77	154-A11NB	1
		7.5	16	122	127	101	154-A16NB	
		10	22	154	180	127	154-A22NB	



- 5...97 A Ratings
- 3 Starting Modes
- Optional Soft Stop Feature

**SMC-2 Smart Motor Controller with Optional Soft Stop and Auxiliary Output Contact**

3-phase Motor 380...400V		Dimensions in mm			Without Option		With Soft Stop Module 240V AC	
[kW]	[A]	Width	Height	Depth	Cat. No.	PQ	Cat. No.	PQ
2.2	5	122	127	134	150-A05NB	1	150-A05NB-	NA
4	9	122	180	134	150-A09NB		150-A09NB-	NA
7.5	16	154	180	160	150-A16NB		150-A16NB-	NA
11	24	214	250	160	150-A24NB		150-A24NB-	NA
18.5	35	214	250	160	150-A35NB		150-A35NB-	NA
22	54	244	290	190	150-A54NB		150-A54NB-	NA
37	68	244	290	190	150-A68NB		150-A68NB-	NA
45	97	348	336	230	150-A97NB		150-A97NB-	NA

① Prices for Soft Stop Option -ND (120V AC) on request

	Type	Cat. No.	PQ
<b>Interfaces</b>	5-16 A, 110V 50 Hz Control	150-ND	1
	5-16 A, 230V 50 Hz Control	150-NA	

See Publication A114-CA001A-EN-P for complete product information  
PQ = Package Quantity



**Softstarters**

**Product Selection: SMC Plus**



- 24...1000 A Ratings
- 3 Starting Modes
- 6 Optional Features

**Smart Motor Controller SMC Plus**

Service Type				Without Option		With Soft Stop Option		With Pump Control Option	
Heavy Duty 220V		Heavy Duty @ 380...400V							
[kW]	[A]	[kW]	[A]	Cat. No.	PQ	Cat. No.	PQ	Cat. No.	PQ
6.5	23	11	23	150-A24NBD		150-A24NBD	A	150-A24NBD	B
11	37	18.5	37	150-A35NBD		150-A35NBD	A	150-A35NBD	B
16	54	27	54	150-A54NBD		150-A54NBD	A	150-A54NBD	B
28	97	50	97	150-A97NBD		150-A97NBD	A	150-A97NBD	B
42	140	75	140	150-A135NBD		150-A135NBD	A	150-A135NBD	B
55	180	94	180	150-A180NBD		150-A180NBD	A	150-A180NBD	B
750	250	132	250	150-A240NBD	1	150-A240NBD	A	150-A240NBD	B
110	360	200	360	150-A360NBD		150-A360NBD	A	150-A360NBD	B
155	500	275	500	150-A500NBD		150-A500NBD	A	150-A500NBD	B
200	650	335	650	150-A650NBD		150-A650NBD	A	150-A650NBD	B
225	720	390	720	150-A720NBD		150-A720NBD	A	150-A720NBD	B
270	850	475	850	150-A850NBD		150-A850NBD	A	150-A850NBD	B
320	1 000	560	1 000	150-A1000NBD		150-A1000NBD	A	150-A1000NBD	B

**Options**

Type	Option	
Soft-Stop	A	Contact your local sales office for price and availability
Pump Control	B	
Preset Slow Speed	C	
SMB, Smart Motor Braking	D	
Accu Stop	E	
Slow Speed with Braking	F	

Ask your local sales office for specific ratings according to your application requirements (motor current, nb of starts per hour, starting time, operating temperature)

Technical data and prices for voltage range 480...600V on request.  
 Technical data and prices for medium voltage devices (2400, 3300, 4200, 6600V) on request.  
 Ask list of fast acting fuses for SCR short circuit protection.

See Publication A114-CA001A-EN-P for complete product information  
 PQ = Package Quantity



- 24...1000 A Ratings
- 4 Starting Modes
- 6 Optional Features
- Electronic Motor Protection
- Communication
- Plain Language LCD Display

Smart Motor Controller SMC Dialog Plus with Soft Stop

Service Type				Without Option		With Soft Stop Option		With Pump Control Option	
Heavy Duty 220V		Heavy Duty ② 380...400V							
[kW]	[A]	[kW]	[A]	Cat. No.	PQ	Cat. No.	PQ	Cat. No.	PQ
6.5	23	11	23	150-B24NBD		150-B24NBD	A	150-B24NBD	B
11	37	18.5	37	150-B35NBD		150-B35NBD	A	150-B35NBD	B
16	54	27	54	150-B54NBD		150-B54NBD	A	150-B54NBD	B
28	97	50	97	150-B97NBD		150-B97NBD	A	150-B97NBD	B
42	140	75	140	150-B135NBD		150-B135NBD	A	150-B135NBD	B
55	180	94	180	150-B180NBD		150-B180NBD	A	150-B180NBD	B
750	250	132	250	150-B240NBD	1	150-B240NBD	A	150-B240NBD	B 1
110	360	200	360	150-B360NBD		150-B360NBD	A	150-B360NBD	B
155	500	275	500	150-B500NBD		150-B500NBD	A	150-B500NBD	B
200	650	335	650	150-B650NBD		150-B650NBD	A	150-B650NBD	B
225	720	390	720	150-B720NBD		150-B720NBD	A	150-B720NBD	B
270	850	475	850	150-B850NBD		150-B850NBD	A	150-B850NBD	B
320	1 000	560	1 000	150-B1000NBD		150-B1000NBD	A	150-B1000NBD	B

① Options

Type	Option	
Soft-Stop	A	Contact your local sales office for price and availability
Pump Control	B	
Preset Slow Speed	C	
SMB, Smart Motor Braking	D	
Accu Stop	E	
Slow Speed with Braking	F	

	Current Range	Cat. No	PQ
Converter Modules	1...12.5 A	825-MCM20	1
	9...100 A	825-MCM180	
	64...360 A	825-MCM630	
Fanning Strip	64...360 A	150-NFS	1

② Ask your local sales office for specific ratings according to your application requirements (motor current, nb of starts per hour, starting time, operating temperature)

Technical data and prices for voltage range 480...600V on request.  
 Technical data and prices for medium voltage devices (2400, 3300, 4200, 6600V) on request.  
 Ask list of fast acting fuses for SCR short circuit protection.

See Publication A114-CA001A-EN-P for complete product information  
 PQ = Package Quantity