



THE SCF SERIES Sub-micro AC drive

This truly flexible sub-micro drive gives you the compact size you need for your panel layout while delivering on the functions and features your process demands.

While the SCF can be applied for demanding variable speed applications its size and price make it a viable alternative to DC drives, Two Speed Starters, Reversing Starters and Soft Starts.

The User Manual and Quick Reference Guide for the SCF Series Drive are available in the

General Specifications

Horsepower: 0.25 to 30 HP (0.18 to 22kW)

Supply Power:

Single Phase: 208 or 240VAC
 Three Phase: 208, 240, 400, 480 or 590VAC
 50 or 60 Hz (+10/-15%)

Motors: The SCF is designed to operate standard polyphase induction motors rated for 200, 230, 400, 460 or 575VAC from 0 to 240Hz. Operation to 1000Hz is optional.

Enclosure: Rugged IP20 with finger safe terminals.

Standard Features

Easy Set-up and Operation:

The SCF is easy to use right out of the box or can be customized to meet your specific requirements any one of four convenient ways:

- From the front of the drive
- From the remote keypad option
- A PC (and AC Tech's free [TechLink Software](#))
- The innovative EPM Programmer.

Motor Thermal Overload:

The SCF is an approved motor protection device for single motor applications by UL and cUL.

Control I/O: 18 isolated terminals provide 5 logic inputs, 2 logic outputs, 2 analog inputs and 2 analog outputs plus RS485 Modbus Serial Communication.

Quiet Operation: Adjustable carrier frequency to 10kHz.

SCF Options

NEMA 4X Remote Keypad:

Connects to SCF over RS485. Allows operation and programming of the drive.

[\(instruction sheet available in Library\)](#)

High Frequency Output Option:

Contact AC Tech for SCF Models for high speed applications up to 1000Hz.

Set-point Control:

All models of the SCF are available in an optional configuration that allows for set-point control using an internal PI (proportional & integral) control algorithm. This is ideal for process control applications where constant flow, pressure, density, etc are desired.

DIN Rail Mounting Kit:

Allows easy mounting of the SCF Drive onto standard DIN Rail.

Dynamic Braking Kit:

Prepackaged resistor modules with control electronics provide easy mounting within the control cabinet.

AC Line Filters:

AC input line filters are available for all sub-micro drives to meet European requirements for susceptibility and emissions of electrical and radiated noise (EN

1800-3 and EN 5501). The filter is designed to mount to the electrical panel and has provisions for mounting the drive directly to the face of the filter.

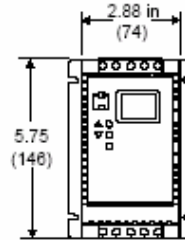
EPM Programmer:

This compact battery operated option allows programming the EPM (on the front of each drive) directly and without power to the drive! Copy drive parameters easily or write new ones using the backlit LCD display that uses real language programming.



SCF Series Dimensions and Ratings

Input Line Voltage: 208 / 240 Volt 1Ø or 3Ø		Output Voltage: 0 - 200 / 230 Volt 3Ø				
HP (kW)	Input Amps		Output Amps	IP 20 Dimensions		
	1Ø	3Ø		Model	Size	Weight ¹
0.25 (0.18)	3.6 / 3.2	1.9 / 1.7	1.6 / 1.4	SF203Y	A1	1.9 (0.9)
0.5 (0.37)	5.4 / 4.7	3.1 / 2.7	2.5 / 2.2	SF205Y	A1	1.9 (0.9)
1 (0.75)	10.6 / 9.2	5.8 / 5.1	4.8 / 4.2	SF210Y	A2	2.5 (1.1)
1.5 (1.1)	13.9 / 12.0	8.0 / 6.9	6.9 / 6.0	SF215Y	B1	3.5 (1.6)
2 (1.5)	14.8 / 12.9	9.1 / 7.9	7.8 / 6.8	SF220Y	B2	4.5 (2.0)
3 (2.2)	19.7 / 17.1	12.4 / 10.8	11.0 / 9.6	SF230Y	B2	4.8 (2.2)
5 (3.7)	29 / 26	19.6 / 17.1	17.5 / 15.2	SF250Y	C1	7.6 (3.4)

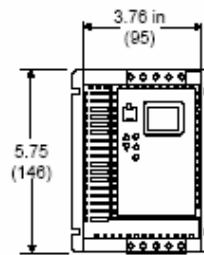


A

Depth

- A1: 3.94 in (100)
- A2: 4.74 in (120)
- A3: 5.74 in (146)
- A5: 3.26 in (83)
- A6: 3.63 in (92)
- A7: 5.58 in (141)

Input Line Voltage: 208 / 240 Volt 3Ø		Output Voltage: 0 - 200 / 230 Volt 3Ø				
HP (kW)	Input Amps		Output Amps	IP 20 Dimensions		
	1Ø	3Ø		Model	Size	Weight ¹
1 (0.75)	5.8 / 5.1	4.8 / 4.2	4.8 / 4.2	SF210	A2	2.5 (1.1)
1.5 (1.1)	8.0 / 6.9	6.9 / 6.0	6.9 / 6.0	SF215	A3	3.0 (1.4)
2 (1.5)	9.1 / 7.9	7.8 / 6.8	7.8 / 6.8	SF220	A3	3.1 (1.4)
3 (2.2)	12.4 / 10.8	11.0 / 9.6	11.0 / 9.6	SF230	A3	3.2 (1.5)
5 (3.7)	19.6 / 17.1	17.5 / 15.2	17.5 / 15.2	SF250	B2	4.6 (2.1)
7.5 (5.5)	28 / 25	25 / 22	25 / 22	SF275	C1	7.3 (3.3)
10 (7.5)	34 / 32	30 / 28	30 / 28	SF2100	C1	7.5 (3.4)
15 (11)	54 / 48	48 / 42	48 / 42	SF2150	D1	13.0 (5.9)
20 (15)	65 / 61	58 / 54	58 / 54	SF2200	D1	13.5 (6.1)

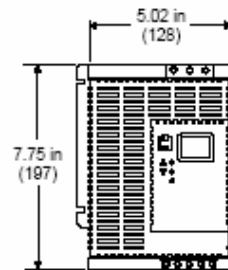


B

Depth

- B2: 6.74 in (171)
- B5: 4.88 in (124)
- B6: 5.53 in (140)

Input Line Voltage: 400 / 480 Volt 3Ø		Output Voltage: 0 - 400 / 460 Volt 3Ø				
HP (kW)	Input Amps		Output Amps	IP 20 Dimensions		
	1Ø	3Ø		Model	Size	Weight ¹
0.5 (0.37)	1.6 / 1.4	1.3 / 1.1	1.3 / 1.1	SF405	A1	1.9 (0.9)
1 (0.75)	2.9 / 2.5	2.4 / 2.1	2.4 / 2.1	SF410	A2	2.4 (1.1)
1.5 (1.1)	4.0 / 3.6	3.4 / 3.0	3.4 / 3.0	SF415	A3	2.9 (1.3)
2 (1.5)	4.6 / 4.0	3.9 / 3.4	3.9 / 3.4	SF420	A3	3.1 (1.4)
3 (2.2)	6.2 / 5.4	5.5 / 4.8	5.5 / 4.8	SF430	A3	3.2 (1.5)
5 (3.7)	9.8 / 8.6	8.7 / 7.6	8.7 / 7.6	SF450	B2	4.6 (2.1)
7.5 (5.5)	14.2 / 12.4	12.6 / 11.0	12.6 / 11.0	SF475	C1	7.2 (3.3)
10 (7.5)	18.1 / 15.8	16.1 / 14.0	16.1 / 14.0	SF4100	C1	7.5 (3.4)
15 (11)	27 / 24	24 / 21	24 / 21	SF4150	D1	13.3 (6.0)
20 (15)	35 / 31	31 / 27	31 / 27	SF4200	D1	13.5 (6.1)
25 (18.5)	44 / 38	39 / 34	39 / 34	SF4250	D1	13.8 (6.3)
30 (22)	53 / 45	46 / 40	46 / 40	SF4300	D1	14.5 (6.6)

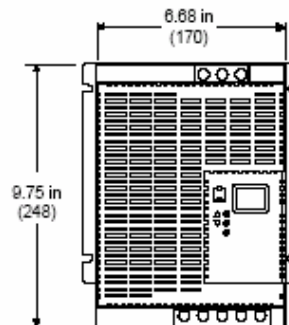


C

Depth

- C1: 7.18 in (182)

Input Line Voltage: 480 / 590 Volt 3Ø		Output Voltage: 0 - 460 / 575 Volt 3Ø				
HP (kW)	Input Amps		Output Amps	IP 20 Dimensions		
	1Ø	3Ø		Model	Size	Weight ¹
1 (0.75)	2.2 / 2.0	1.9 / 1.7	1.9 / 1.7	SF510	A2	2.4 (1.1)
2 (1.5)	4.0 / 3.5	3.4 / 3.0	3.4 / 3.0	SF520	A3	3.1 (1.4)
3 (2.2)	4.7	4.2	4.2	SF530	B2	4.1 (1.9)
5 (3.7)	7.4	6.6	6.6	SF550	B2	4.7 (2.1)
7.5 (5.5)	11.2	9.9	9.9	SF575	C1	7.1 (3.2)
10 (7.5)	13.7	12.2	12.2	SF5100	C1	7.4 (3.4)
15 (11)	22	19	19	SF5150	D1	7.7 (6.0)
20 (15)	27	24	24	SF5200	D1	13.5 (6.1)
25 (18.5)	31	27	27	SF5250	D1	14.0 (6.3)



D

Depth

- D1: 8.00 in (203)

SELECTING AND SPECIFYING THE SCF SERIES DRIVE

The SCF model number gives a full description of the basic drive unit as defined below using this example.

SF 2 10 Y



Series:

SF=SCF Series Variable Speed AC Motor Drive

Input Voltage:

- 02 = 208/240VAC, 1Ø or 3Ø, 50/60Hz
- 04 = 400/480VAC, 3Ø, 50/60Hz
- 05 = 480/590VAC, 3Ø, 50/60Hz

Horsepower:

- 03 = 0.25 HP 20 = 2 HP 100 = 10 HP 300 = 30 HP
- 05 = 0.5 HP 30 = 3 HP 150 = 15 HP
- 10 = 1 HP 50 = 5 HP 200 = 20 HP
- 15 = 1.5 HP 75 = 7.5 HP 250 = 25 HP

Input Phase:

Y = Single or three phase input
 No character indicates three phase input

Use the chart below to select an SCF Model number.
 Click on a model number for a full description including photo and dimensions.

Line Voltage:		208-240V 1Øor3Ø	208-240V 3Ø	400-480V 3Ø	480-590 3Ø
HP	(kW)	Model Number	Model Number	Model Number	Model Number
0.25	(0.18)	SF203Y			
0.5	(0.37)	SF205Y		SF405	
1	(0.75)	SF210Y	SF210	SF410	SF510
1.5	(1.1)	SF215Y	SF215	SF415	
2	(1.5)	SF220Y	SF220	SF420	SF520
3	(2.2)	SF230Y	SF230	SF430	SF530
5	(3.7)	SF250Y	SF250	SF450	SF550
7.5	(5.5)		SF275	SF475	SF575
10	(7.5)		SF2100	SF4100	SF5100
15	(11)		SF2150	SF4150	SF5150
20	(15)		SF2200	SF4200	SF5200
25	(18.5)			SF4250	SF5250
30	(22)			SF4300	