

# SINAMICS S120

## Load-side power components

### Motor reactors for blocksize format

#### Overview



Motor reactors for blocksize format, frame sizes FSA and FSB

Motor reactors reduce the voltage loading on the motor windings. At the same time, the capacitive charge/discharge currents that place an additional load on the power unit when long motor cables are used are reduced. The maximum permissible output frequency when a motor reactor is used is 150 Hz.

The motor reactors are designed for a pulse frequency of 4 kHz. Higher pulse frequencies are not permissible.

The motor reactor must be installed as close as possible to the Power Module.

Motor reactors are approved for use only in conjunction with "Vector" and "V/f control" modes.

#### Technical data

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for a 4 kHz pulse frequency)				
		6SE6400-3TC00-4AD2				
Rated current	A	4.5	4.5	4.5	4.5	4.5
Power loss	kW	0.005	0.005	0.005	0.005	0.005
Connection to the Power Module		Cable 4 x AWG16 (1.5 mm <sup>2</sup> ) length approx. 0.3 m (0.98 ft)	Cable 4 x AWG16 (1.5 mm <sup>2</sup> ) length approx. 0.3 m (0.98 ft)	Cable 4 x AWG16 (1.5 mm <sup>2</sup> ) length approx. 0.3 m (0.98 ft)	Cable 4 x AWG16 (1.5 mm <sup>2</sup> ) length approx. 0.3 m (0.98 ft)	Cable 4 x AWG16 (1.5 mm <sup>2</sup> ) length approx. 0.3 m (0.98 ft)
Motor connection		Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>
PE connection		M5 bolt	M5 bolt	M5 bolt	M5 bolt	M5 bolt
Max. permissible cable length between motor reactor and motor	m (ft)	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded
Width	mm (inch)	75.5 (2.97)	75.5 (2.97)	75.5 (2.97)	75.5 (2.97)	75.5 (2.97)
Height	mm (inch)	201 (7.91)	201 (7.91)	201 (7.91)	201 (7.91)	201 (7.91)
Depth	mm (inch)	110 (4.33)	110 (4.33)	110 (4.33)	110 (4.33)	110 (4.33)
Degree of protection <sup>1)</sup>		IP20	IP20	IP20	IP20	IP20
Weight, approx.	kg (lb)	2 (4)	2 (4)	2 (4)	2 (4)	2 (4)
Suitable for Power Module, blocksize format	Type	6SL3210-1SE11-3UA0	6SL3210-1SE11-7UA0	6SL3210-1SE12-2UA0	6SL3210-1SE13-1UA0	6SL3210-1SE14-1UA0
Rated current of the Power Module	A	1.3	1.7	2.2	3.1	4.1
Size		FSA	FSA	FSA	FSA	FSA

<sup>1)</sup> With correctly connected connection cable to the Power Module.

#### Technical data (continued)

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for a 4 kHz pulse frequency)					
		6SL3202-0AE21-0CA0			6SL3202-0AJ23-2CA0		
Rated current	A	10	10	10	32	32	32
Power loss	kW	0.02	0.02	0.02	0.06	0.06	0.06
Connection to the Power Module		Cable 4 x AWG14 (1.5 mm <sup>2</sup> ) length approx. 0.4 m (1.31 ft)	Cable 4 x AWG14 (1.5 mm <sup>2</sup> ) length approx. 0.4 m (1.31 ft)	Cable 4 x AWG14 (1.5 mm <sup>2</sup> ) length approx. 0.4 m (1.31 ft)	Cable 4 x 6 mm <sup>2</sup> length approx. 0.35 m (1.15 ft)	Cable 4 x 6 mm <sup>2</sup> length approx. 0.35 m (1.15 ft)	Cable 4 x 6 mm <sup>2</sup> length approx. 0.35 m (1.15 ft)
Motor connection		Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>	Screw-type terminals for conductor cross section 6 mm <sup>2</sup>
PE connection		M5 bolt	M5 bolt	M5 bolt	M5 bolt	M5 bolt	M5 bolt
Max. permissible cable length between motor reactor and motor	m (ft)	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded
Width	mm (inch)	153 (6.02)	153 (6.02)	153 (6.02)	189 (7.44)	189 (7.44)	189 (7.44)
Height	mm (inch)	285 (11.22)	285 (11.22)	285 (11.22)	351 (13.82)	351 (13.82)	351 (13.82)
Depth	mm (inch)	70 (2.76)	70 (2.76)	70 (2.76)	80 (3.15)	80 (3.15)	80 (3.15)
Degree of protection <sup>1)</sup>		IP20	IP20	IP20	IP20	IP20	IP20
Weight, approx.	kg (lb)	4.5 (10)	4.5 (10)	4.5 (10)	9 (20)	9 (20)	9 (20)
Suitable for Power Module, blocksize format	Type	6SL3210-1SE16-0 . A0	6SL3210-1SE17-7 . A0	6SL3210-1SE21-0 . A0	6SL3210-1SE21-8 . A0	6SL3210-1SE22-5 . A0	6SL3210-1SE23-2 . A0
Rated current of the Power Module	A	5.9	7.7	10	18	25	32
Size		FSB	FSB	FSB	FSC	FSC	FSC

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for a 4 kHz pulse frequency)				
		6SE6400-3TC05-4DD0	6SE6400-3TC03-8DD0	6SE6400-3TC05-4DD0	6SE6400-3TC08-0ED0	6SE6400-3TC07-5ED0
Rated current	A	68	45	68	104	90
Power loss	kW	0.2	0.2	0.2	0.17	0.27
Connection to the Power Module		Flat terminator for M6 cable lug	Flat terminator for M6 cable lug	Flat terminator for M6 cable lug	Flat terminator for M6 cable lug	Flat terminator for M6 cable lug
Motor connection		Flat terminator for M6 cable lug	Flat terminator for M6 cable lug	Flat terminator for M6 cable lug	Flat terminator for M6 cable lug	Flat terminator for M6 cable lug
PE connection		M6 screw	M6 screw	M6 screw	M6 screw	M6 screw
Max. permissible cable length between motor reactor and motor	m (ft)	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded
Width	mm (inch)	225 (8.86)	225 (8.86)	225 (8.86)	225 (8.86)	270 (10.63)
Height	mm (inch)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	248 (9.76)
Depth	mm (inch)	140 (5.51)	140 (5.51)	140 (5.51)	140 (5.51)	189 (7.44)
Degree of protection		IP00	IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	11.5 (25)	19 (42)	11.5 (25)	12 (26)	27 (59)
Suitable for Power Module, blocksize format	Type	6SL3210-1SE23-8 . A0	6SL3210-1SE24-5 . A0	6SL3210-1SE26-0 . A0	6SL3210-1SE27-5 . A0	6SL3210-1SE31-0 . A0
Rated current of the Power Module	A	38	45	60	75	90
Size		FSD	FSD	FSD	FSE	FSE

<sup>1)</sup> With correctly connected connection cable to the Power Module.

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## Load-side power components

### Motor reactors for blocksize format

#### Technical data (continued)

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for a 4 kHz pulse frequency)		
		6SE6400-3TC14-5FD0	6SE6400-3TC14-5FD0	6SE6400-3TC14-5FD0
Rated current	A	178	178	178
Power loss	kW	0.47	0.25	0.47
Connection to the Power Module		Flat terminator for M8 cable lug	Flat terminator for M8 cable lug	Flat terminator for M8 cable lug
Motor connection		Flat terminator for M8 cable lug	Flat terminator for M8 cable lug	Flat terminator for M8 cable lug
PE connection		M8 screw	M8 screw	M8 screw
Max. permissible cable length between motor reactor and motor	m (ft)	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded
Width	mm (inch)	357 (14.05)	270 (10.63)	357 (14.05)
Height	mm (inch)	321 (12.64)	248 (9.76)	321 (12.64)
Depth	mm (inch)	221 (8.7)	189 (7.44)	221 (8.7)
Degree of protection		IP00	IP00	IP00
Weight, approx.	kg (lb)	57 (126)	24 (53)	57 (126)
Suitable for Power Module, blocksize format	Type	6SL3210-1SE31-1 . A0	6SL3210-1SE31-5 . A0	6SL3210-1SE31-8 . A0
Rated current of the Power Module	A	110	145	178
Size		FSF	FSF	FSF

#### Selection and ordering data

Rated output current A	Rated power kW (HP)	Suitable for PM340 Power Module		Motor reactor
		Type	Size	Order No.
<b>Line voltage 380 V to 480 V 3 AC</b>				
1.3	0.37 (0.5)	6SL3210-1SE11-3UA0	FSA	6SE6400-3TC00-4AD2
1.7	0.55 (1)	6SL3210-1SE11-7UA0	FSA	6SE6400-3TC00-4AD2
2.2	0.75 (1)	6SL3210-1SE12-2UA0	FSA	6SE6400-3TC00-4AD2
3.1	1.1 (1.5)	6SL3210-1SE13-1UA0	FSA	6SE6400-3TC00-4AD2
4.1	1.5 (2)	6SL3210-1SE14-1UA0	FSA	6SE6400-3TC00-4AD2
5.9	2.2 (3)	6SL3210-1SE16-0...	FSB	6SL3202-0AE21-0CA0
7.7	3 (4)	6SL3210-1SE17-7...	FSB	6SL3202-0AE21-0CA0
10	4 (5)	6SL3210-1SE21-0...	FSB	6SL3202-0AE21-0CA0
18	7.5 (10)	6SL3210-1SE21-8...	FSC	6SL3202-0AJ23-2CA0
25	11 (15)	6SL3210-1SE22-5...	FSC	6SL3202-0AJ23-2CA0
32	15 (20)	6SL3210-1SE23-2...	FSC	6SL3202-0AJ23-2CA0
38	18.5 (25)	6SL3210-1SE23-8...	FCD	6SE6400-3TC05-4DD0
45	22 (30)	6SL3210-1SE24-5...	FCD	6SE6400-3TC03-8DD0
60	30 (40)	6SL3210-1SE26-0...	FCD	6SE6400-3TC05-4DD0
75	37 (50)	6SL3210-1SE27-5...	FSE	6SE6400-3TC08-0ED0
90	45 (60)	6SL3210-1SE31-0...	FSE	6SE6400-3TC07-5ED0
110	55 (70)	6SL3210-1SE31-1...	FSF	6SE6400-3TC14-5FD0
145	75 (100)	6SL3210-1SE31-5...	FSF	6SE6400-3TC15-4FD0
178	90 (120)	6SL3210-1SE31-8...	FSF	6SE6400-3TC14-5FD0

#### Overview



Motor reactors reduce the voltage loading on the motor windings. At the same time, the capacitive charge/discharge currents that place an additional load on the power unit when long motor cables are used are reduced. The maximum permissible output frequency when a motor reactor is used is 120 Hz.

The motor reactors are designed for a pulse frequency of 4 kHz. Higher pulse frequencies are not permissible.

The motor reactor must be installed as close as possible to the Motor Module.

Motor reactors are approved for use only in conjunction with "Vector" and "V/f control" modes.

#### Selection and ordering data

Rated output current of Motor Module	Suitable for Motor Module	Motor reactor
		Order No.
3 A and 2 × 3 A	6SL3120-1TE13-0AA0	<b>6SE7021-0ES87-1FE0</b>
	6SL3120-1TE13-0AB0	
	6SL3121-1TE13-0AA0	
	6SL3120-2TE13-0AA0	
	6SL3120-2TE13-0AB0	
	6SL3121-2TE13-0AA0	
5 A and 2 × 5 A	6SL3120-1TE15-0AA0	<b>6SE7021-0ES87-1FE0</b>
	6SL3120-1TE15-0AB0	
	6SL3121-1TE15-0AA0	
	6SL3120-2TE15-0AA0	
	6SL3120-2TE15-0AB0	
	6SL3121-2TE15-0AA0	
9 A and 2 × 9 A	6SL3120-1TE21-0AA1	<b>6SL3000-2BE21-0AA0</b>
	6SL3120-1TE21-0AB0	
	6SL3121-1TE21-0AA0	
	6SL3120-2TE21-0AA0	
	6SL3120-2TE21-0AB0	
	6SL3121-2TE21-0AA0	
18 A and 2 × 18 A	6SL3120-1TE21-8AA1	<b>6SE7022-6ES87-1FE0</b>
	6SL3120-1TE21-8AB0	
	6SL3121-1TE21-8AA0	
	6SL3120-2TE21-8AA0	
	6SL3120-2TE21-8AB0	
	6SL3121-2TE21-8AA0	
30 A	6SL3120-1TE23-0AA1	<b>6SE7024-7ES87-1FE0</b>
	6SL3120-1TE23-0AB0	
	6SL3121-1TE23-0AA0	
45 A	6SL3120-1TE24-5AA1	<b>6SE7027-2ES87-1FE0</b>
	6SL3120-1TE24-5AB0	
	6SL3121-1TE24-5AA0	
60 A	6SL3120-1TE26-0AA1	<b>6SL3000-2BE26-0AA0</b>
	6SL3120-1TE26-0AB0	
	6SL3121-1TE26-0AA0	
85 A	6SL3120-1TE28-5AA1	<b>6SE7031-5ES87-1FE0</b>
	6SL3120-1TE28-5AB0	
	6SL3121-1TE28-5AA0	
132 A	6SL3120-1TE31-3AA0	<b>6SE7031-8ES87-1FE0</b>
	6SL3120-1TE31-3AB0	
	6SL3121-1TE31-3AA0	
200 A	6SL3120-1TE32-0AA0	<b>6SE7032-6ES87-1FE0</b>
	6SL3120-1TE32-0AB0	
	6SL3121-1TE32-0AA0	

# SINAMICS S120

## Load-side power components

### Motor reactors for booksize format

#### Technical data

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for a 4 kHz pulse frequency)				
		6SE7021-0ES87-1FE0	6SL3000-2BE21-0AA0	6SE7022-6ES87-1FE0	6SE7024-7ES87-1FE0	
Rated current	A	9.2	9.2	9	23	42
Power loss	kW	0.08	0.08	0.07	0.11	0.19
Connection Motor Module/Motor		4 mm <sup>2</sup> screw-type terminals	4 mm <sup>2</sup> screw-type terminals	4 mm <sup>2</sup> screw-type terminals	10 mm <sup>2</sup> screw-type terminals	Flat terminator for M8 cable lug
PE connection		M6 bolt	M6 bolt	M6 bolt	M6 bolt	M6 grounding stud
Max. permissible cable length between motor reactor and motor	m (ft)	100 (328) shielded 150 (492) unshielded	100 (328) shielded 150 (492) unshielded	135 (443) shielded 200 (656) unshielded	160 (525) shielded 240 (787) unshielded	190 (623) shielded 280 (917) unshielded
Width	mm (inch)	178 (7)	178 (7)	178 (7)	219 (8.62)	197 (7.76)
Height	mm (inch)	153 (6.02)	153 (6.02)	159 (6.26)	180 (7.09)	220 (8.66)
Depth	mm (inch)	97 (3.82)	97 (3.82)	111 (4.37)	132 (5.2)	121 (4.76)
Degree of protection		IP00	IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	6 (13)	6 (13)	5 (11)	9.5 (21)	20 (44)
Suitable for Motor Module in booksize format	Type	6SL3120-1TE13-0AA0 6SL3120-1TE13-0AB0 6SL3121-1TE13-0AA0 6SL3120-2TE13-0AA0 6SL3120-2TE13-0AB0 6SL3121-2TE13-0AA0	6SL3120-1TE15-0AA0 6SL3120-1TE15-0AB0 6SL3121-1TE15-0AA0 6SL3120-2TE15-0AA0 6SL3120-2TE15-0AB0 6SL3121-2TE15-0AA0	6SL3120-1TE21-0AA1 6SL3120-1TE21-0AB0 6SL3121-1TE21-0AA0 6SL3120-2TE21-0AA0 6SL3120-2TE21-0AB0 6SL3121-2TE21-0AA0	6SL3120-1TE21-8AA1 6SL3120-1TE21-8AB0 6SL3121-1TE21-8AA0 6SL3120-2TE21-8AA0 6SL3120-2TE21-8AB0 6SL3121-2TE21-8AA0	6SL3120-1TE23-0AA1 6SL3120-1TE23-0AB0 6SL3121-1TE23-0AA0
Rated current of the Motor Module	A	3	5	9	18	30

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for a 4 kHz pulse frequency)				
		6SE7027-2ES87-1FE0	6SL3000-2BE26-0AA0	6SE7031-5ES87-1FE0	6SE7031-8ES87-1FE0	6SE7032-6ES87-1FE0
Rated current	A	65	60	131	167	234
Power loss	kW	0.2	0.1	0.22	0.29	0.29
Connection Motor Module/Motor		Flat terminator for M8 cable lug	Flat terminator for M8 cable lug	Flat terminator for M8 cable lug	Flat terminator for M8 cable lug	Flat terminator for M8 cable lug
PE connection		M6 bolt	M6 bolt	M6 grounding stud	M6 grounding stud	M6 grounding stud
Max. permissible cable length between motor reactor and motor	m (ft)	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded
Width	mm (inch)	267 (10.51)	267 (10.51)	219 (8.62)	281 (11.06)	281 (11.06)
Height	mm (inch)	221 (8.7)	220 (8.66)	220 (8.66)	250 (9.84)	250 (9.84)
Depth	mm (inch)	131 (5.16)	126 (4.96)	145 (5.7)	171 (6.73)	184 (7.24)
Degree of protection		IP00	IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	11 (24)	10.5 (23)	25 (55)	30 (66)	30 (66)
Suitable for Motor Module in booksize format	Type	6SL3120-1TE24-5AA1 6SL3120-1TE24-5AB0 6SL3121-1TE24-5AA0	6SL3120-1TE26-0AA1 6SL3120-1TE26-0AB0 6SL3121-1TE26-0AA0	6SL3120-1TE28-5AA1 6SL3120-1TE28-5AB0 6SL3121-1TE28-5AA0	6SL3120-1TE31-3AA0 6SL3120-1TE31-3AB0 6SL3121-1TE31-3AA0	6SL3120-1TE32-0AA0 6SL3120-1TE32-0AB0 6SL3121-1TE32-0AA0
Rated current of the Motor Module	A	45	60	85	132	200

#### Overview



Motor reactors reduce the voltage loading on the motor windings. At the same time, the capacitive charge/discharge currents that place an additional load on the power unit when long motor cables are used are reduced. The maximum permissible output frequency when a motor reactor is used is 150 Hz.

The motor reactor must be installed as close as possible to the Motor Module or Power Module.

Motor reactors are approved for use only in conjunction with "Vector" and "V/f control" modes.

#### Technical data

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for pulse frequencies of 2 kHz to 4 kHz)				
		6SL3000- 2BE32-1AA0	6SL3000- 2BE32-6AA0	6SL3000- 2BE33-2AA0	6SL3000- 2BE33-8AA0	6SL3000- 2BE35-0AA0
Rated current	A	210	260	310	380	490
Power loss	kW	0.486	0.5	0.47	0.5	0.5
Line/load connection		M10	M10	M10	M10	M12
PE connection		M8	M8	M8	M8	M8
Max. permissible cable length between motor reactor and motor	m (ft)	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded
Width	mm (inch)	300 (11.81)	300 (11.81)	300 (11.81)	300 (11.81)	300 (11.81)
Height	mm (inch)	285 (11.22)	315 (12.4)	285 (11.22)	285 (11.22)	365 (14.37)
Depth	mm (inch)	257 (10.12)	277 (10.9)	257 (10.12)	277 (10.9)	277 (10.9)
Degree of protection		IP00	IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	66 (146)	66 (146)	66 (146)	73 (161)	100 (221)
Suitable for Single Motor Module in chassis format	Type	6SL3320-1TE32-1AA0	6SL3320-1TE32-6AA0	6SL3320-1TE33-1AA0	6SL3320-1TE33-8AA0	6SL3320-1TE35-0AA0
Suitable for Power Module in chassis format	Type	6SL3310-1TE32-1AA0	6SL3310-1TE32-6AA0	6SL3310-1TE33-1AA0	6SL3310-1TE33-8AA0	6SL3310-1TE35-0AA0
Rated current of Motor Module or Power Module	A	210	260	310	380	490
Rated output of the Motor Module or Power Module	kW (HP)	110 (150)	132 (200)	160 (250)	200 (300)	250 (400)

# SINAMICS S120

## Load-side power components

### Motor reactors for chassis format

#### Technical data

DC link voltage 510 V to 720 V DC or line voltage 380 V to 480 V 3 AC		Motor reactor (for pulse frequencies of 1.25 kHz to 2.5 kHz)					
		6SL3000- 2AE36-1AA0	6SL3000- 2AE38-4AA0	6SL3000- 2AE38-4AA0	6SL3000- 2AE41-0AA0	6SL3000-2AE41-4AA0	
Rated current	A	605	840	840	985	1405	1405
Power loss	kW	0.9	0.83	0.943	1.062	0.962	1.054
Line/load connection		M12	M12	M12	M12	2 x M12	2 x M12
PE connection		M8	M10	M10	M10	M10	M10
Max. permissible cable length between motor reactor and motor	m (ft)	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded
Width	mm (inch)	410 (16.14)	410 (16.14)	410 (16.14)	410 (16.14)	460 (18.11)	460 (18.11)
Height	mm (inch)	392 (15.43)	392 (15.43)	392 (15.43)	392 (15.43)	392 (15.43)	392 (15.43)
Depth	mm (inch)	292 (11.5)	292 (11.5)	292 (11.5)	302 (11.89)	326 (12.83)	326 (12.83)
Degree of protection		IP00	IP00	IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	130 (287)	140 (309)	140 (309)	146 (322)	179 (395)	179 (395)
Suitable for Single Motor Module in chassis format	Type	6SL3320- 1TE36-1AA0	6SL3320- 1TE37-5AA0	6SL3320- 1TE38-4AA0	6SL3320- 1TE41-0AA0	6SL3320- 1TE41-2AA0	6SL3320- 1TE41-4AA0
Rated current of the Motor Module	A	605	745	840	985	1260	1405
Rated output of the Motor Module	kW (HP)	315 (500)	400 (600)	450 (700)	560 (800)	710 (1000)	800 (1150)

DC link voltage 890 V to 1035 V DC or line voltage 660 V to 690 V 3 AC		Motor reactor (for pulse frequencies of 1.25 kHz to 2.5 kHz)					
		6SL3000-2AH31-0AA0		6SL3000-2AH31-5AA0		6SL3000- 2AH31-8AA0	6SL3000- 2AH32-4AA0
Rated current	A	100	100	150	150	175	240
Power loss	kW	0.257	0.3	0.318	0.335	0.4	0.425
Line/load connection		M10	M10	M10	M10	M10	M10
PE connection		M6	M6	M6	M6	M6	M6
Max. permissible cable length between motor reactor and motor	m (ft)	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded
Width	mm (inch)	270 (10.63)	270 (10.63)	270 (10.63)	270 (10.63)	300 (11.81)	300 (11.81)
Height	mm (inch)	248 (9.76)	248 (9.76)	248 (9.76)	248 (9.76)	285 (11.22)	285 (11.22)
Depth	mm (inch)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	212 (8.35)	212 (8.35)
Degree of protection		IP00	IP00	IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	25 (55)	25 (55)	25.8 (57)	25.8 (57)	34 (75)	34 (75)
Suitable for Single Motor Module in chassis format	Type	6SL3320- 1TH28-5AA0	6SL3320- 1TH31-0AA0	6SL3320- 1TH31-2AA0	6SL3320- 1TH31-5AA0	6SL3320- 1TH31-8AA0	6SL3320- 1TH32-2AA0
Rated current of the Motor Module	A	85	100	120	150	175	215
Rated output of the Motor Module	kW	75	90	110	132	160	200

#### Technical data

DC link voltage 890 V to 1035 V DC or line voltage 660 V to 690 V 3 AC		Motor reactor (for pulse frequencies of 1.25 kHz to 2.5 kHz)					
		6SL3000- 2AH32-6AA0	6SL3000- 2AH33-6AA0	6SL3000- 2AH34-5AA0	6SL3000- 2AH34-7AA0	6SL3000- 2AH35-8AA0	6SL3000- 2AH38-1AA0
Rated current	A	260	360	450	465	575	810
Power loss	kW	0.44	0.45	0.545	0.72	0.8	0.96
Line/load connection		M10	M10	M12	M12	M12	M12
PE connection		M6	M6	M8	M8	M8	M8
Max. permissible cable length between motor reactor and motor	m (ft)	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded
Width	mm (inch)	300 (11.81)	300 (11.81)	350 (13.78)	410 (16.14)	410 (16.14)	410 (16.14)
Height	mm (inch)	285 (11.22)	285 (11.22)	330 (12.99)	392 (15.43)	392 (15.43)	392 (15.43)
Depth	mm (inch)	212 (8.35)	212 (8.35)	215 (8.46)	292 (11.5)	292 (11.5)	279 (10.98)
Degree of protection		IP00	IP00	IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	40 (88)	46 (101)	68 (150)	80 (176)	80 (176)	146 (322)
Suitable for Single Motor Module in chassis format	Type	6SL3320- 1TH32-6AA0	6SL3320- 1TH33-3AA0	6SL3320- 1TH34-1AA0	6SL3320- 1TH34-7AA0	6SL3320- 1TH35-8AA0	6SL3320- 1TH37-4AA0
Rated current of the Motor Module	A	260	330	410	465	575	735
Rated output of the Motor Module	kW	250	315	400	450	560	710

DC link voltage 890 V to 1035 V DC or line voltage 660 V to 690 V 3 AC		Motor reactor (for pulse frequencies of 1.25 kHz to 2.5 kHz)			
		6SL3000-2AH38-1AA0	6SL3000-2AH41-0AA0	6SL3000-2AH41-1AA0	6SL3000-2AH41-3AA0
Rated current	A	810	910	1025	1270
Power loss	kW	1.0	0.97	1.05	0.95
Line/load connection		M12	M12	M12	M12
PE connection		M8	M8	M8	M8
Max. permissible cable length between motor reactor and motor	m (ft)	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded	200 (656) shielded 300 (984) unshielded
Width	mm (inch)	410 (16.14)	410 (16.14)	410 (16.14)	460 (18.11)
Height	mm (inch)	392 (15.43)	392 (15.43)	392 (15.43)	392 (15.43)
Depth	mm (inch)	279 (10.98)	279 (10.98)	317 (12.48)	296 (11.65)
Degree of protection		IP00	IP00	IP00	IP00
Weight, approx.	kg (lb)	146 (322)	150 (331)	163 (360)	153 (337)
Suitable for Single Motor Module in chassis format	Type	6SL3320-1TH38-1AA0	6SL3320-1TH38-8AA0	6SL3320-1TH41-0AA0	6SL3320-1TH41-3AA0
Rated current of the Motor Module	A	810	910	1025	1270
Rated output of the Motor Module	kW	800	900	1000	1200



# SINAMICS S120

## Load-side power components

### Motor reactors for chassis format

#### Selection and ordering data

Rated current of the Motor Module or Power Module	Rated output of the Motor Module or Power Module	Suitable for Motor Module/Power Module	Motor reactor
A	kW (HP)	Type	Order No.
<b>DC link voltage 510 V to 720 V DC (line voltage 380 V to 480 V 3 AC)</b>			
210	110 (150)	6SL33 . 0-1TE32-1AA0	<b>6SL3000-2BE32-1AA0</b>
260	132 (200)	6SL33 . 0-1TE32-6AA0	<b>6SL3000-2BE32-6AA0</b>
310	160 (250)	6SL33 . 0-1TE33-1AA0	<b>6SL3000-2BE33-2AA0</b>
380	200 (300)	6SL33 . 0-1TE33-8AA0	<b>6SL3000-2BE33-8AA0</b>
490	250 (400)	6SL33 . 0-1TE35-0AA0	<b>6SL3000-2BE35-0AA0</b>
605	315 (500)	6SL3320-1TE36-1AA0	<b>6SL3000-2AE36-1AA0</b>
745	400 (600)	6SL3320-1TE37-5AA0	<b>6SL3000-2AE38-4AA0</b>
840	450 (700)	6SL3320-1TE38-4AA0	<b>6SL3000-2AE38-4AA0</b>
985	560 (800)	6SL3320-1TE41-0AA0	<b>6SL3000-2AE41-0AA0</b>
1260	710 (1000)	6SL3320-1TE41-2AA0	<b>6SL3000-2AE41-4AA0</b>
1405	800 (1150)	6SL3320-1TE41-4AA0	<b>6SL3000-2AE41-4AA0</b>
<b>DC link voltage 890 V to 1035 V DC (line voltage 660 V to 690 V 3 AC)</b>			
85	75	6SL3320-1TH28-5AA0	<b>6SL3000-2AH31-0AA0</b>
100	90	6SL3320-1TH31-0AA0	<b>6SL3000-2AH31-0AA0</b>
120	110	6SL3320-1TH31-2AA0	<b>6SL3000-2AH31-5AA0</b>
150	132	6SL3320-1TH31-5AA0	<b>6SL3000-2AH31-5AA0</b>
175	160	6SL3320-1TH31-8AA0	<b>6SL3000-2AH31-8AA0</b>
215	200	6SL3320-1TH32-2AA0	<b>6SL3000-2AH32-4AA0</b>
260	250	6SL3320-1TH32-6AA0	<b>6SL3000-2AH32-6AA0</b>
330	315	6SL3320-1TH33-3AA0	<b>6SL3000-2AH33-6AA0</b>
410	400	6SL3320-1TH34-1AA0	<b>6SL3000-2AH34-5AA0</b>
465	450	6SL3320-1TH34-7AA0	<b>6SL3000-2AH34-7AA0</b>
575	560	6SL3320-1TH35-8AA0	<b>6SL3000-2AH35-8AA0</b>
735	710	6SL3320-1TH37-4AA0	<b>6SL3000-2AH38-1AA0</b>
810	800	6SL3320-1TH38-1AA0	<b>6SL3000-2AH38-1AA0</b>
910	900	6SL3320-1TH38-8AA0	<b>6SL3000-2AH41-0AA0</b>
1025	1000	6SL3320-1TH41-0AA0	<b>6SL3000-2AH41-1AA0</b>
1270	1200	6SL3320-1TH41-3AA0	<b>6SL3000-2AH41-3AA0</b>

#### Overview



If a sinusoidal filter is connected at the Motor Module output, the voltage between the motor terminals is virtually sinusoidal. This reduces the voltage load on the motor windings and prevents motor noise induced by the pulse frequency.

The pulse frequency of the Motor Modules must be set to 4 kHz for the sinusoidal filters.

With chassis format units, this reduces the maximum possible output current and the maximum achievable output voltage (see characteristics for Single Motor Modules in chassis format and System Description). The voltage drops across the sinusoidal filter, a factor which must also be taken into account in the drive design (see System Description)

The sinusoidal filter must be installed as close as possible to the Motor Module.

#### Technical data

DC link voltage 510 V to 720 V DC		Sinusoidal filter for chassis format 6SL3000-2CE32-3AA0				
		6SL3000-2CE32-8AA0	6SL3000-2CE33-3AA0	6SL3000-2CE34-1AA0		
Rated current	A	225	225	276	333	408
Power loss 50 Hz/60 Hz	kW	0.35/0.6	0.35/0.6	0.4/0.69	0.245/0.53	0.38/0.7
Line/load connection		M10 connecting lugs	M10 connecting lugs	M10 connecting lugs	M10 connecting lugs	M10 connecting lugs
PE connection		M10 connecting lugs	M10 connecting lugs	M10 connecting lugs	M10 connecting lugs	M10 connecting lugs
Max. permissible cable length between sinusoidal filter and motor	m (ft)	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded	300 (984) shielded 450 (1477) unshielded
Degree of protection		IP00	IP00	IP00	IP00	IP00
Width	mm (inch)	620 (24.4)	620 (24.4)	620 (24.4)	620 (24.4)	620 (24.4)
Height	mm (inch)	300 (11.81)	300 (11.81)	300 (11.81)	370 (14.57)	370 (14.57)
Depth	mm (inch)	320 (12.6)	320 (12.6)	320 (12.6)	360 (14.17)	360 (14.17)
Weight, approx.	kg (lb)	124 (273)	124 (273)	127 (280)	136 (300)	198 (437)
Suitable for Single Motor Module in chassis format	Type	6SL3320-1TE32-1AA0	6SL3320-1TE32-6AA0	6SL3320-1TE33-1AA0	6SL3320-1TE33-8AA0	6SL3320-1TE35-0AA0
Suitable for Power Module in chassis format	Type	6SL3310-1TE32-1AA0	6SL3310-1TE32-6AA0	6SL3310-1TE33-1AA0	6SL3310-1TE33-8AA0	6SL3310-1TE35-0AA0
Rated current of the Motor Module or Power Module at pulse frequency of 4 kHz	A	170	215	270	330	380
Rated output of the Motor Module or Power Module at pulse frequency of 4 kHz	kW (HP)	90 (120)	110 (150)	132 (200)	160 (250)	200 (400)

# SINAMICS S120

## Load-side power components

### Sinusoidal filter for chassis format

#### Selection and ordering data

Rated output current of the Motor Module or Power Module	Rated output of the Motor Module or Power Module	Suitable for Motor Module/Power Module	Sinusoidal filter
A	kW (HP)	Type	Order No.
<b>DC link voltage 510 V to 720 V DC (line voltage 380 V to 480 V 3 AC)</b>			
210	110 (150)	6SL33 . 0-1TE32-1AA0	<b>6SL3000-2CE32-3AA0</b>
260	132 (200)	6SL33 . 0-1TE32-6AA0	<b>6SL3000-2CE32-3AA0</b>
310	160 (250)	6SL33 . 0-1TE33-1AA0	<b>6SL3000-2CE32-8AA0</b>
380	200 (300)	6SL33 . 0-1TE33-8AA0	<b>6SL3000-2CE33-3AA0</b>
490	250 (400)	6SL33 . 0-1TE35-0AA0	<b>6SL3000-2CE34-1AA0</b>