

SIMOTICS linear and torque motors

SIMOTICS L linear motors for SINAMICS S120

SIMOTICS L-1FN3 linear motors

Version for peak load – Water cooling

Selection and ordering data

Feedrate force		Maximum velocity ³⁾		SIMOTICS L-1FN3 linear motors Version for peak load		Weight, approx.	
				Primary section	Secondary section	Primary section without/with precision cooling	Secondary section without/with heatsink profiles
F_{rated} ¹⁾²⁾	F_{max}	v_{max} at F_{max}	v_{max} at F_{rated}				
N (lb _f)	N (lb _f)	m/min (ft/min)	m/min (ft/min)	Order No.	Order No.	kg (lb)	kg (lb)
Water cooling							
200 (45)	550 (124)	146 (479)	373 (1224)	1FN3050-2WC00-0EA1	1FN3050-4SA00-0AA0	2.4/2.9 (5.3/6.4)	0.4/0.5 (0.9/1.1)
		146 (479)	373 (1224)	1FN3050-2WC00-0FA1			
200 (45)	490 (110)	138 (453)	322 (1056)	1FN3100-1WC00-0BA1	1FN3100-4SA00-0AA0	2.2/– (4.9/–) ⁴⁾	0.7/0.8 (1.5/1.8)
450 (101)	1100 (247)	131 (430)	297 (974)	1FN3100-2WC00-0BA1		3.8/4.4 (8.4/9.7)	
		237 (778)	497 (1631)	1FN3100-2WE00-0BA1			
675 (152)	1650 (371)	120 (394)	277 (909)	1FN3100-3WC00-0BA1		5.4/6.2 (11.9/13.7)	
		237 (778)	497 (1631)	1FN3100-3WE00-0BA1			
900 (202)	2200 (495)	131 (430)	297 (974)	1FN3100-4WC00-0BA1		7.4/8.5 (16.3/18.7)	
		237 (778)	497 (1631)	1FN3100-4WE00-0BA1			
1125 (253)	2750 (618)	109 (358)	255 (837)	1FN3100-5WC00-0BA1		9.1/10.4 (20.1/22.9)	
340 (76)	820 (184)	126 (413)	282 (925)	1FN3150-1WC00-0BA1	1FN3150-4SA00-0AA0	3.0/– (6.6/–) ⁴⁾	1.2/1.3 (2.7/2.9)
675 (152)	1650 (371)	126 (413)	282 (925)	1FN3150-2WC00-0BA1		5.3/6 (11.7/13.2)	
1010 (227)	2470 (555)	126 (413)	282 (925)	1FN3150-3WC00-0BA1		7.8/8.7 (17.2/19.2)	
1350 (304)	3300 (742)	126 (413)	282 (925)	1FN3150-4WC00-0BA1		10.2/11.4 (22.5/25.1)	
1690 (380)	4120 (926)	126 (413)	282 (925)	1FN3150-5WC00-0BA1		12.8/14.2 (28.2/31.3)	
610 (137)	1720 (387)	128 (420)	309 (1014)	1FN3300-1WC00-0BA1	1FN3300-4SA00-0AA0	6.2/– (13.7/–) ⁴⁾	2.4/2.6 (5.3/5.7)
1225 (275)	3450 (776)	63 (207)	176 (577)	1FN3300-2WB00-0BA1		11.4/12.4 (25.1/27.3)	
		125 (410)	297 (974)	1FN3300-2WC00-0BA1			
		369 (1211)	805 (2641)	1FN3300-2WG00-0BA1			
1840 (414)	5170 (1162)	125 (410)	297 (974)	1FN3300-3WC00-0BA1		17.0/18.4 (37.5/40.6)	
		383 (1257)	836 (2743)	1FN3300-3WG00-0BA1			
2450 (551)	6900 (1551)	63 (207)	176 (577)	1FN3300-4WB00-0BA1		22.2/24 (48.9/52.9)	
		125 (410)	297 (974)	1FN3300-4WC00-0BA1			

Type of connection:

1FN3100 to 1FN3900 motors

Connection cover prepared for separate power and signal cables

B

1FN3050 motor

Permanently connected power and signal cables with exposed core ends
Length: 2 m (6.56 ft)

E

1FN3050 motor

Permanently connected power and signal cables pre-assembled, with connectors
Length: 0.5 m (1.64 ft)

F

Description	Order No.
Signal cable, pre-assembled with M17 connector⁸⁾	
For SIMOTICS L linear motors	
• 1FN3100/1FN3150	6FX7002-2SL01-....
• 1FN3300 ... 1FN3900	6FX7002-2SL02-....

SIMOTICS linear and torque motors

SIMOTICS L linear motors for SINAMICS S120

SIMOTICS L-1FN3 linear motors
Version for peak load – Water cooling

Motor type Primary section (repeated)	Rated current	Maxi- mum current	Calcu- lated power	SINAMICS S120 Motor Module Booksize format		Power cable with complete shield Motor connection via adapter cable with power connector for increased velocity/acceleration			
				Required rated current	For additional versions and components see SINAMICS S120 drive system				
	$I_{rated}^{1)}$	I_{max}	$P_{el. max.}$	I_{rated}/I_{max}	Order No.	Pre-assembled adapter cable for motor	Power con- nector	Cable cross- section ⁵⁾	Pre-assembled basic cable to the drive system
	A	A	kW (HP)	A		Order No.	Size	mm ²	Order No.
1FN3050-2WC00-...	2.7	8.2	4.1 (5.5)	5/10	6SL312-1-TE15-0AA3	6)	1	4 × 2.5	6FX8002-5CS11-
1FN3050-2WC00-...	2.7	8.2	4.1 (5.5)	5/10	6SL312-1-TE15-0AA3	7)	1	4 × 2.5	6FX8002-5CS11-
1FN3100-1WC00-...	2.4	6.5	3.1 (4.2)	5/10	6SL312-1-TE15-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-2WC00-...	5.1	13.5	6.3 (8.5)	9/18	6SL312-1-TE21-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-2WE00-...	8.1	21.5	8.3 (11.1)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-3WC00-...	7.2	19.1	9.2 (12.3)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-3WE00-...	12.1	32.2	12.4 (16.6)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-4WC00-...	10.1	27.0	12.6 (16.9)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-4WE00-...	16.1	43.0	16.6 (22.3)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-5WC00-...	11.0	29.5	14.4 (19.3)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-1WC00-...	3.6	9.5	4.3 (5.8)	5/10	6SL312-1-TE15-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-2WC00-...	7.2	19.1	8.7 (11.7)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-3WC00-...	10.7	28.6	13.0 (17.4)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-4WC00-...	14.3	38.2	17.4 (23.3)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-5WC00-...	17.9	47.7	21.7 (29.1)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-1WC00-...	6.5	20.0	8.7 (11.7)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-2WB00-...	8.0	24.7	13.2 (17.7)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-2WC00-...	12.6	39.2	16.7 (22.4)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-2WG00-...	32.2	99.7	30.1 (40.4)	60/113	6SL312-1-TE26-0AA3	6FX7002-5LM82-	1.5	4 × 6	6FX8002-5CS54-
1FN3300-3WC00-...	19.0	58.7	25.1 (33.7)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-3WG00-...	50.0	154.9	46.2 (61.9)	132/210	6SL312-1-TE31-3AA3	6FX7002-5LM02-	1.5	4 × 16	6FX8002-5CS24-
1FN3300-4WB00-...	16.0	49.4	26.3 (35.3)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-4WC00-...	25.3	78.3	33.5 (44.9)	45/85	6SL312-1-TE24-5AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS54-
Cooling:					 Length code				
Internal air cooling					0				
External air cooling					1				
Motor Module:					For information on the cables refer to MOTION-CONNECT connection systems				
Single Motor Module					1				
Double Motor Module					2				

1) For water cooling with inlet temperature 35 °C (95 °F).

2) A reduction of up to 30 % must be expected in case of motor standstill, at very low velocities, or with very short traverse paths.

3) Velocity values refer to a DC link voltage of the drive system of 600 V DC.

4) No precision cooler available.

5) The current carrying capacity of the power cables complies with EN 60204-1 for installation type C, for continuous duty at an ambient air temperature of 40 °C (104 °F).

6) Permanently connected power and signal cables, length 2 m (6.56 ft), with exposed core ends.

7) Permanently connected power and signal cables, length 0.5 m (1.64 ft), with power connector size 1 and M17 signal connector.

8) For length code, see MOTION-CONNECT connection systems.

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SIMOTICS L-1FN3 linear motors

Version for peak load – Water cooling

Selection and ordering data

Feedrate force		Maximum velocity ³⁾		SIMOTICS L-1FN3 linear motors Version for peak load		Weight, approx.	
				Primary section	Secondary section	Primary section without/with precision cooling	Secondary section without/with heatsink profiles
F_{rated} ¹⁾²⁾	F_{max}	v_{max} at F_{max}	v_{max} at F_{rated}				
N (lb _f)	N (lb _f)	m/min (ft/min)	m/min (ft/min)	Order No.	Order No.	kg (lb)	kg (lb)
Water cooling							
1930 (434)	5180 (1165)	30 (98)	112 (368)	1FN3450-2WA50-0BA1	1FN3450-4SA00-0AA0	15.9/17.1 (35.1/37.7)	3.8/4 (8.4/8.8)
		120 (394)	275 (902)	1FN3450-2WC00-0BA1			
		240 (787)	519 (1703)	1FN3450-2WE00-0BA1			
2895 (651)	7760 (1745)	62 (203)	164 (538)	1FN3450-3WB00-0BA1		22.6/24.3 (49.8/53.6)	
		90 (295)	217 (712)	1FN3450-3WB50-0BA1			
		120 (394)	275 (902)	1FN3450-3WC00-0BA1			
		240 (787)	519 (1703)	1FN3450-3WE00-0BA1			
3860 (868)	10350 (2327)	62 (203)	164 (538)	1FN3450-4WB00-0BA1		30.9/33.1 (68.1/73)	
		90 (295)	217 (712)	1FN3450-4WB50-0BA1			
		120 (394)	275 (902)	1FN3450-4WC00-0BA1			
		240 (787)	519 (1703)	1FN3450-4WE00-0BA1			
2610 (587)	6900 (1551)	36 (118)	120 (394)	1FN3600-2WA50-0BA1	1FN3600-4SA00-0AA0	22.2/24.7 (49/54.5)	4.6/5 (10.1/11)
3915 (880)	10350 (2327)	58 (190)	155 (509)	1FN3600-3WB00-0BA1		31.5/33.4 (69.5/73.7)	
		127 (417)	279 (915)	1FN3600-3WC00-0BA1			
5220 (1174)	13800 (3102)	26 (85)	105 (345)	1FN3600-4WA30-0BA1		40.8/43.3 (90/95.5)	
		58 (190)	155 (509)	1FN3600-4WB00-0BA1			
		91 (299)	215 (705)	1FN3600-4WB50-0BA1			
		112 (367)	254 (833)	1FN3600-4WC00-0BA1			
4050 (910)	10350 (2327)	65 (213)	160 (525)	1FN3900-2WB00-0BA1	1FN3900-4SA00-0AA0	28.2/29.7 (62.2/65.4)	7.5/7.9 (16.5/17.4)
		115 (377)	253 (830)	1FN3900-2WC00-0BA1			
6075 (1366)	15530 (3491)	75 (246)	181 (594)	1FN3900-3WB00-0BA1		42.2/44.3 (93.1/97.6)	
8100 (1821)	20700 (4653)	65 (213)	160 (525)	1FN3900-4WB00-0BA1		56.2/58.9 (124/130)	
		88 (290)	203 (666)	1FN3900-4WB50-0BA1			
		115 (377)	253 (830)	1FN3900-4WC00-0BA1			

Type of connection:

1FN3100 to 1FN3900 motors

Connection cover prepared for separate power and signal cables

B

Description	Order No.
Signal cable, pre-assembled with M17 connector⁷⁾	
For SIMOTICS L linear motors	
• 1FN3100/1FN3150	6FX7002-2SL01-....
• 1FN3300 ... 1FN3900	6FX7002-2SL02-....

SIMOTICS linear and torque motors

SIMOTICS L linear motors for SINAMICS S120

SIMOTICS L-1FN3 linear motors
Version for peak load – Water cooling

Motor type Primary section (repeated)	Rated current	Maxi- mum cur- rent	Calculated power	SINAMICS S120 Motor Module Booksize format		Power cable with complete shield Motor connection via adapter cable with power connector for increased velocity/acceleration				
				Required rated current	For additional versions and components see SINAMICS S120 drive system					
	$I_{rated}^{1)}$	I_{max}	$P_{el, max.}$	I_{rated}/I_{max}		Pre-assembled adapter cable for motor	Power con- nector	Cable cross- section ⁴⁾	Pre-assembled basic cable to the drive system	
	A	A	kW (HP)	A	Order No.	Order No.	Size	mm ²	Order No.	
1FN3450-2WA50-...	8.6	25.3	15.9 (21.3)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-	
1FN3450-2WC00-...	18.8	55.3	23.1 (31)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-	
1FN3450-2WE00-...	33.8	99.7	32.6 (43.7)	60/113	6SL312-1-TE26-0AA3	6FX7002-5LM82-	1.5	4 × 6	6FX8002-5CS54-	
1FN3450-3WB00-...	17.9	52.7	27.5 (36.9)	30/56	6SL312-1-TE23-0AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-	
1FN3450-3WB50-...	22.8	67.3	31.1 (41.7)	45/85	6SL312-1-TE24-5AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS54-	
1FN3450-3WC00-...	28.1	83.0	34.6 (46.4)	45/85	6SL312-1-TE24-5AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS54-	
1FN3450-3WE00-...	50.7	149.6	49.0 (65.7)	132/210	6SL312-1-TE31-3AA3	6FX7002-5LM02-	1.5	4 × 16	6FX8002-5CS24-	
1FN3450-4WB00-...	23.8	70.3	36.7 (49.2)	45/85	6SL312-1-TE24-5AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS54-	
1FN3450-4WB50-...	30.4	89.8	41.4 (55.5)	60/113	6SL312-1-TE26-0AA3	6FX7002-5LM82-	1.5	4 × 6	6FX8002-5CS54-	
1FN3450-4WC00-...	37.5	110.6	46.2 (61.9)	60/113	6SL312-1-TE26-0AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-	
1FN3450-4WE00-...	67.6	199.5	65.3 (87.5)	132/210	6SL312-1-TE31-3AA3	6FX7008-1BB61- ⁵⁾	–	4 × 25	6FX7008-1BB25- ⁶⁾	
1FN3600-2WA50-...	12.4	36.0	21.9 (29.4)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-	
1FN3600-3WB00-...	23.2	67.3	35.4 (47.5)	45/85	6SL312-1-TE24-5AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS54-	
1FN3600-3WC00-...	35.7	105.9	44.6 (59.8)	60/113	6SL312-1-TE26-0AA3	6FX7002-5LM82-	1.5	4 × 6	6FX8002-5CS54-	
1FN3600-4WA30-...	22.3	64.9	41.9 (56.2)	45/85	6SL312-1-TE24-5AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS54-	
1FN3600-4WB00-...	30.9	89.8	47.2 (63.3)	60/113	6SL312-1-TE26-0AA3	6FX7002-5LM82-	1.5	4 × 6	6FX8002-5CS54-	
1FN3600-4WB50-...	40.8	118.5	53.2 (71.3)	85/141	6SL312-1-TE28-5AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-	
1FN3600-4WC00-...	46.9	136.5	55.5 (74.4)	85/141	6SL312-1-TE28-5AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-	
1FN3900-2WB00-...	24.7	69.5	34.5 (46.3)	45/85	6SL312-1-TE24-5AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS54-	
1FN3900-2WC00-...	36.7	103.3	40.9 (54.8)	60/113	6SL312-1-TE26-0AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-	
1FN3900-3WB00-...	40.6	114.0	54.5 (73.1)	85/141	6SL312-1-TE28-5AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-	
1FN3900-4WB00-...	49.4	138.9	68.9 (92.4)	132/210	6SL312-1-TE31-3AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-	
1FN3900-4WB50-...	60.6	170.3	76.3 (102.3)	132/210	6SL312-1-TE31-3AA3	6FX7002-5LM02-	1.5	4 × 16	6FX8002-5CS24-	
1FN3900-4WC00-...	73.5	206.5	81.9 (109.8)	132/210	6SL312-1-TE31-3AA3	6FX7008-1BB61- ⁵⁾	–	4 × 25	6FX7008-1BB25- ⁶⁾	
Cooling: Internal air cooling External air cooling				0 1			Length code			
Motor Module: Single Motor Module Double Motor Module				1 2		For information on the cables refer to MOTION-CONNECT connection systems				

¹⁾ For water cooling with inlet temperature 35 °C (95 °F).

²⁾ A reduction of up to 30 % must be expected in case of motor standstill, at very low velocities, or with very short traverse paths.

³⁾ Velocity values refer to a DC link voltage of the drive system of 600 V DC.

⁴⁾ The current carrying capacity of the power cables complies with EN 60204-1 for installation type C, for continuous duty at an ambient air temperature of 40 °C (104 °F).

⁵⁾ Sold by the meter only (4 × 16 mm²). Connected to primary section with 16 mm² (< 1.5 m (4.92 ft)) then routed onwards through terminal box with 25 mm².

⁶⁾ Sold by the meter only (4 × 25 mm²).

⁷⁾ For length code, see [MOTION-CONNECT](#) connection systems.

SIMOTICS linear and torque motors

SIMOTICS L linear motors for SINAMICS S120

SIMOTICS L-1FN3 linear motors

Version for continuous load – Water cooling

Selection and ordering data

Feedrate force		Maximum velocity ³⁾		SIMOTICS L-1FN3 linear motors Version for continuous load		Weight, approx.	
				Primary section	Secondary section	Primary section without/with precision cooling	Secondary section without/with heatsink profiles
F_{rated} ¹⁾²⁾	F_{max}	v_{max} at F_{max}	v_{max} at F_{rated}				
N (lb _f)	N (lb _f)	m/min (ft/min)	m/min (ft/min)	Order No.	Order No.	kg (lb)	kg (lb)
Water cooling							
150 (34)	260 (58)	242 (794)	435 (1427)	1FN3050-1ND00-0EA1	1FN3050-4SA00-0AA0	1.9/2.4 (4.2/5.3)	0.4/0.5 (0.9/1.1)
		242 (794)	435 (1427)	1FN3050-1ND00-0FA1			
300 (67)	510 (115)	106 (348)	202 (663)	1FN3050-2NB80-0EA1		3.2/4.0 (7.1/8.8)	
		106 (348)	202 (663)	1FN3050-2NB80-0FA1			
300 (67)	510 (115)	117 (384)	214 (702)	1FN3100-1NC00-0BA1	1FN3100-4SA00-0AA0	3/3.5 (6.6/7.7)	0.7/0.8 (1.5/1.8)
605 (136)	1020 (229)	170 (558)	307 (1007)	1FN3100-2NC80-0BA1		5.1/5.9 (11.3/13.1)	
905 (203)	1530 (344)	115 (337)	211 (692)	1FN3100-3NC00-0BA1		7.3/8.3 (16.1/18.03)	
1205 (271)	2040 (459)	169 (555)	305 (1001)	1FN3100-4NC80-0BA1		10/11.3 (22.1/24.9)	
455 (102)	770 (173)	129 (423)	234 (768)	1FN3150-1NC20-0BA1	1FN3150-4SA00-0AA0	4.1/4.6 (9.0/10.1)	1.2/1.3 (2.7/2.9)
905 (203)	1530 (344)	110 (361)	201 (660)	1FN3150-2NB80-0BA1		7.2/8.1 (15.9/17.9)	
1360 (306)	2300 (517)	163 (535)	292 (958)	1FN3150-3NC70-0BA1		10.5/11.7 (23.2/25.8)	
1810 (407)	3060 (688)	109 (358)	200 (656)	1FN3150-4NB80-0BA1		13.8/15.2 (30.4/33.5)	
865 (195)	1470 (331)	129 (423)	230 (755)	1FN3300-1NC10-0BA1	1FN3300-4SA00-0AA0	8.8/9.5 (19.4/20.9)	2.4/2.6 (5.3/5.7)
1730 (389)	2940 (661)	127 (417)	228 (748)	1FN3300-2NC10-0BA1		16.1/17.2 (35.5/37.9)	
2595 (583)	4400 (989)	144 (473)	257 (843)	1FN3300-3NC40-0BA1		22.8/24.3 (50.3/53.6)	
3460 (778)	5870 (1320)	109 (358)	196 (643)	1FN3300-4NB80-0BA1		30.4/32.3 (67.0/71.2)	
2595 (583)	4400 (989)	153 (502)	271 (889)	1FN3450-2NC50-0BA1	1FN3450-4SA00-0AA0	22/23.2 (48.5/51.2)	3.8/4 (8.4/8.8)
3890 (875)	6600 (1484)	152 (499)	270 (886)	1FN3450-3NC50-0BA1		32/33.6 (70.6/74.1)	
5185 (1166)	8810 (1981)	106 (348)	190 (623)	1FN3450-4NB80-0BA1		42.3/44.3 (93.3/97.9)	
3460 (778)	5870 (1320)	112 (368)	200 (656)	1FN3600-2NB80-0BA1	1FN3600-4SA00-0AA0	28.9/30.4 (63.7/67.0)	4.6/5 (10.1/11)
5185 (1166)	8810 (1981)	111 (364)	199 (653)	1FN3600-3NB80-0BA1		42.9/45.0 (94.6/99.2)	
6915 (1555)	11740 (2639)	111 (364)	199 (653)	1FN3600-4NB80-0BA1		56.6/59.2 (124.8/130.54)	
5185 (1166)	8810 (1981)	71 (233)	130 (427)	1FN3900-2NB20-0BA1	1FN3900-4SA00-0AA0	42.4/44.2 (93.5/97.5)	7.5/7.9 (16.5/17.4)
7780 (1749)	13210 (2970)	71 (233)	129 (423)	1FN3900-3NB20-0BA1		62/64.5 (136.7/142.2)	
10375 (2332)	17610 (3959)	70 (230)	129 (423)	1FN3900-4NB20-0BA1		82.2/85.3 (181.3/188.1)	

Type of connection:

1FN3100 to 1FN3900 motors

Connection cover prepared for separate power and signal cables

B

1FN3050 motor

Permanently connected power and signal cables with exposed core ends
Length: 2 m (6.56 ft)

E

1FN3050 motor

Permanently connected power and signal cables pre-assembled,
with connectors
Length: 0.5 m (1.64 ft)

F

Description	Order No.
Signal cable, pre-assembled with M17 connector⁷⁾	
For SIMOTICS L linear motors	
• 1FN3100/1FN3150	6FX7002-2SL01-....
• 1FN3300 ... 1FN3900	6FX7002-2SL02-....

SIMOTICS linear and torque motors

SIMOTICS L linear motors for SINAMICS S120

SIMOTICS L-1FN3 linear motors
Version for continuous load – Water cooling

Motor type Primary section (repeated)	Rated current	Maxi- mum current	Calculated power	SINAMICS S120 Motor Module Booksize format		Power cable with complete shield Motor connection via adapter cable with power connector for increased velocity/acceleration			
				Required rated current	For additional versions and components see SINAMICS S120 drive system				
$I_{\text{rated}}^{1)}$	I_{max}	$P_{\text{el, max.}}$		$I_{\text{rated}}/I_{\text{max}}$		Pre-assembled adapter cable for motor	Power con- nector	Cable cross- section ⁵⁾	Pre-assembled basic cable to the drive system
A	A	kW (HP)		A	Order No.	Order No.	Size	mm ²	Order No.
1FN3050-1ND...	2.8	5.9	1.7 (2.28)	3/6	6SL312-1-TE13-0AA3	⁶⁾	1	4 × 2.5	6FX8002-5CS11-
1FN3050-1ND...	2.8	5.9	1.7 (2.28)	3/6	6SL312-1-TE13-0AA3	⁶⁾	1	4 × 2.5	6FX8002-5CS11-
1FN3050-2NB...	2.8	5.9	2.3 (3.08)	3/6	6SL312-1-TE13-0AA3	⁶⁾	1	4 × 2.5	6FX8002-5CS11-
1FN3050-2NB...	2.8	5.9	2.3 (3.08)	3/6	6SL312-1-TE13-0AA3	⁶⁾	1	4 × 2.5	6FX8002-5CS11-
1FN3100-1NC...	2.8	5.9	2.1 (2.8)	3/6	6SL312-1-TE13-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-2NC...	8	16.5	5.1 (6.84)	9/18	6SL312-1-TE21-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-3NC...	8.5	17.6	6.3 (8.5)	9/18	6SL312-1-TE21-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3100-4NC...	15.9	33.1	10.2 (13.9)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-1NC...	4.5	9.4	3.2 (4.3)	5/10	6SL312-1-TE15-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-2NB...	8	16.5	5.8 (7.78)	9/18	6SL312-1-TE21-0AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-3NC...	16.9	35.2	10.8 (14.5)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3150-4NB...	15.9	33.1	11.6 (15.6)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM42-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-1NC...	8.1	17.1	5.4 (7.2)	9/18	6SL312-1-TE21-0AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-2NC...	16.2	34.1	10.7 (14.3)	18/36	6SL312-1-TE21-8AA3	6FX7002-5LM62-	1	4 × 2.5	6FX8002-5CS11-
1FN3300-3NC...	27.3	57.4	17.3 (23.2)	30/56 ⁴⁾	6SL312-1-TE23-0AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS41-
1FN3300-4NB...	28.4	59.6	19.6 (26.3)	30/56 ⁴⁾	6SL312-1-TE23-0AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS41-
1FN3450-2NC...	28.4	59.6	17.4 (23.3)	30/56 ⁴⁾	6SL312-1-TE23-0AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS41-
1FN3450-3NC...	42.5	89.5	26.1 (35.0)	45/85 ⁴⁾	6SL312-1-TE24-5AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-
1FN3450-4NB...	40.8	85.8	27.9 (37.4)	45/85 ⁴⁾	6SL312-1-TE24-5AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-
1FN3600-2NB...	28.4	59.6	19.3 (25.9)	30/56 ⁴⁾	6SL312-1-TE23-0AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS41-
1FN3600-3NB...	42.5	89.5	28.9 (38.8)	45/85 ⁴⁾	6SL312-1-TE24-5AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-
1FN3600-4NB...	56.7	119.3	38.5 (51.6)	60/113 ⁴⁾	6SL312-1-TE26-0AA3	6FX7002-5LM02-	1.5	4 × 16	6FX8002-5CS24-
1FN3900-2NB...	28.4	59.6	22.3 (29.9)	30/56 ⁴⁾	6SL312-1-TE23-0AA3	6FX7002-5LM72-	1.5	4 × 4	6FX8002-5CS41-
1FN3900-3NB...	42.5	89.5	33.4 (44.8)	45/85 ⁴⁾	6SL312-1-TE24-5AA3	6FX7002-5LM32-	1.5	4 × 10	6FX8002-5CS64-
1FN3900-4NB...	56.7	119.3	44.5 (59.7)	60/113 ⁴⁾	6SL312-1-TE26-0AA3	6FX7002-5LM02-	1.5	4 × 16	6FX8002-5CS24-

Cooling:		
Internal air cooling	0	
External air cooling	1	
Motor Module:		
Single Motor Module	1	
Double Motor Module	2	

....	Length code	
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For information on the cables refer to
[MOTION-CONNECT connection systems](#)

¹⁾ For water cooling with inlet temperature 35 °C (95 °F).

²⁾ A reduction of up to 30 % must be expected in case of motor standstill, at very low velocities, or with very short traverse paths.

³⁾ Velocity values refer to a DC link voltage of the drive system of 600 V DC.

⁴⁾ Power modules are designed for fee rate force F_{rated} . If feedrate force F_{max} is utilized, the next largest power module must be used. If a power module with a higher rating is used, you must check whether the specified power cable can be connected to it.

⁵⁾ The current carrying capacity of the power cables complies with EN 60204-1 for installation type C, for continuous duty at an ambient air temperature of 40 °C (104 °F).

⁶⁾ Permanently connected power and signal cables.

⁷⁾ For length code, see [MOTION-CONNECT connection systems](#).

SIMOTICS linear and torque motors

SIMOTICS L linear motors for SINAMICS S120

SIMOTICS L-1FN3 linear motors

Optional components

Selection and ordering data

SIMOTICS L-1FN3 linear motors	Optional components		
	Secondary section cover		Cover end pieces for secondary section cover ²⁾ Retaining of the integrated cover without heatsink profiles Order No.
	Continuous ¹⁾	Segmented	
	Order No.	Order No.	
1FN3050-...	1FN3050-0TB00-1   0	1FN3050-4TP00-1A  	1FN3050-0TC00-0AA0
1FN3100-...	1FN3100-0TB00-1   0	1FN3100-4TP00-1A  	1FN3100-0TC00-0AA0
1FN3150-...	1FN3150-0TB00-1   0	1FN3150-4TP00-1A  	1FN3150-0TC00-0AA0
1FN3300-...	1FN3300-0TB00-1   0	1FN3300-4TP00-1A  	1FN3300-0TC00-0AA0
1FN3450-...	1FN3450-0TB00-1   0	1FN3450-4TP00-1A  	1FN3450-0TC00-0AA0
1FN3600-...	1FN3600-0TB00-1   0	1FN3600-4TP00-1A  	—
1FN3900-...	1FN3900-0TB00-1   0	1FN3900-4TP00-1A  	—

Number of secondary sections

0	A
10	B
20	C
30	D
40	E
50	F
0	A
1	B
2	C
3	D
4	E
5	F
6	G
7	H
8	J
9	K

Number of secondary sections for all motors	2.5	C	5
	3	D	0
	3.5	D	5
	4	E	0
	5	F	0
Number of secondary sections for 1FN3600/1FN3900 motors	5.5	F	5
	6.5	G	5

SIMOTICS L-1FN3 linear motors Version for peak load	Optional components Precision cooler
Type	Order No.
1FN3050-2W...	1FN3050-2PK00-0AA0
1FN3100-2W...	1FN3100-2PK00-0AA0
1FN3100-3W...	1FN3100-3PK00-0AA0
1FN3100-4W...	1FN3100-4PK00-0AA0
1FN3100-5W...	1FN3100-5PK00-0AA0
1FN3150-2W...	1FN3150-2PK00-0AA0
1FN3150-3W...	1FN3150-3PK00-0AA0
1FN3150-4W...	1FN3150-4PK00-0AA0
1FN3150-5W...	1FN3150-5PK00-0AA0
1FN3300-2W...	1FN3300-2PK00-0AA0
1FN3300-3W...	1FN3300-3PK00-0AA0
1FN3300-4W...	1FN3300-4PK00-0AA0
1FN3450-2W...	1FN3450-2PK00-0AA0
1FN3450-3W...	1FN3450-3PK00-0AA0
1FN3450-4W...	1FN3450-4PK00-0AA0
1FN3600-2W...	1FN3600-2PK00-0AA0
1FN3600-3W...	1FN3600-3PK00-0AA0
1FN3600-4W...	1FN3600-4PK00-0AA0
1FN3900-2W...	1FN3900-2PK00-0AA0
1FN3900-3W...	1FN3900-3PK00-0AA0
1FN3900-4W...	1FN3900-4PK00-0AA0

SIMOTICS L-1FN3 linear motors Version for continuous load	Optional components Precision cooler
Type	Order No.
1FN3050-1N...	1FN3050-1PK10-0AA0
1FN3050-2N...	1FN3050-2PK10-0AA0
1FN3100-1N...	1FN3100-1PK10-0AA0
1FN3100-2N...	1FN3100-2PK10-0AA0
1FN3100-3N...	1FN3100-3PK10-0AA0
1FN3100-4N...	1FN3100-4PK10-0AA0
1FN3150-1N...	1FN3150-1PK10-0AA0
1FN3150-2N...	1FN3150-2PK10-0AA0
1FN3150-3N...	1FN3150-3PK10-0AA0
1FN3150-4N...	1FN3150-4PK10-0AA0
1FN3300-1N...	1FN3300-1PK10-0AA0
1FN3300-2N...	1FN3300-2PK10-0AA0
1FN3300-3N...	1FN3300-3PK10-0AA0
1FN3300-4N...	1FN3300-4PK10-0AA0
1FN3450-2N...	1FN3450-2PK10-0AA0
1FN3450-3N...	1FN3450-3PK10-0AA0
1FN3450-4N...	1FN3450-4PK10-0AA0
1FN3600-2N...	1FN3600-2PK10-0AA0
1FN3600-3N...	1FN3600-3PK10-0AA0
1FN3600-4N...	1FN3600-4PK10-0AA0
1FN3900-2N...	1FN3900-2PK10-0AA0
1FN3900-3N...	1FN3900-3PK10-0AA0
1FN3900-4N...	1FN3900-4PK10-0AA0

¹⁾ Integrated cover for several secondary sections. The maximum length of the secondary section cover is 6 m (19.7 ft). For the following motors, this corresponds to: 1FN3050 to 1FN3150, a maximum number of 50 secondary sections (AB to FA). 1FN3300 to 1FN3900, a maximum number of 32 secondary sections (AB to DC).

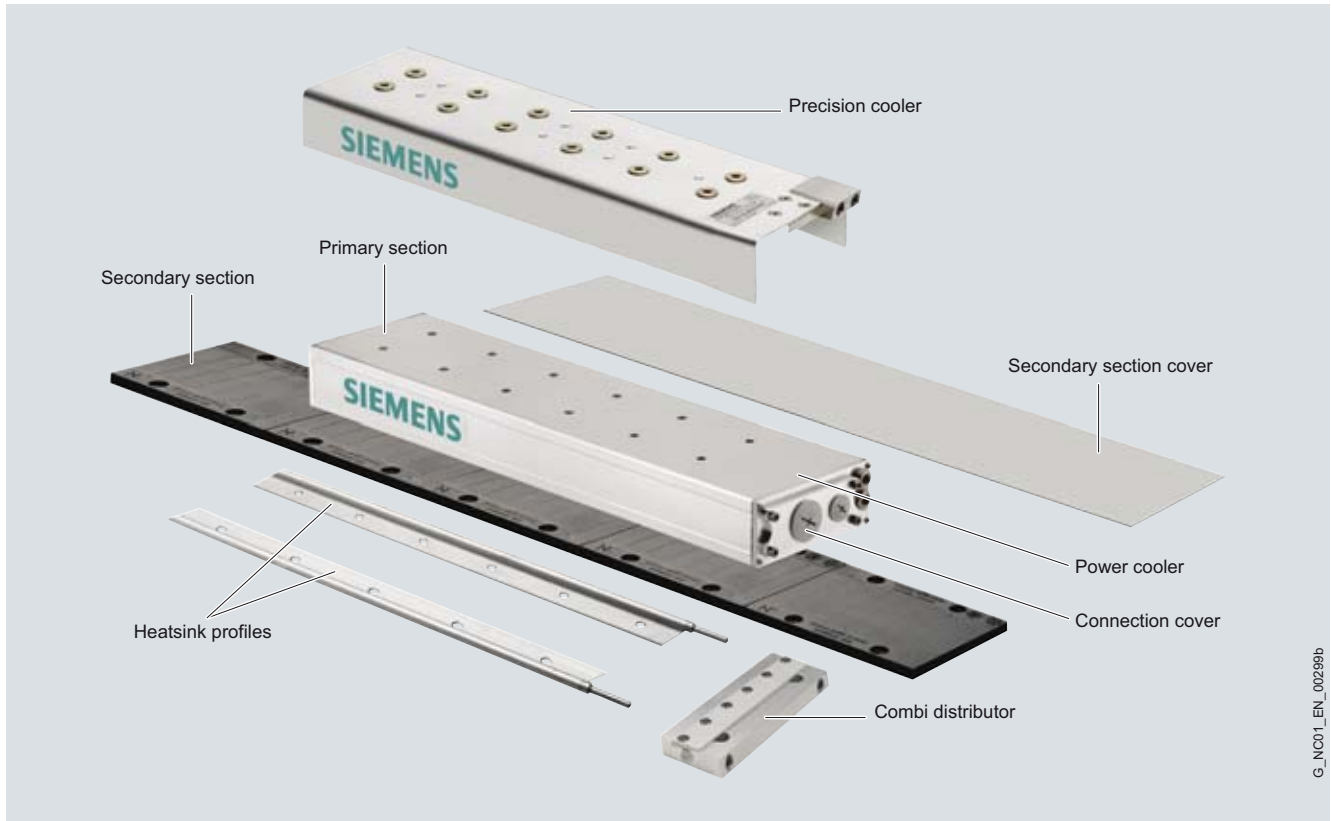
²⁾ The secondary section end pieces are designed to allow clamping of the integrated secondary section cover.

SIMOTICS linear and torque motors

SIMOTICS L linear motors for SINAMICS S120

SIMOTICS L-1FN3 linear motors
Optional components

Selection and ordering data (continued)



G_NC01_EN_00299b

6

SIMOTICS L-1FN3 linear motors Type	Optional components			
	Heatsink profile ³⁾	Secondary section end pieces ²⁾		
		Combi distributor	Combi adapter	Combi end piece
		Parallel water connection for all heatsink profiles	Combi adapter and end piece can only be implemented together. Single-sided water connection	Water diversion
	Order No.	Order No.	Order No.	Order No.
1FN3050-...	1FN3002-0TK0 ■ -1 ■ ■ 0	1FN3050-0TJ01-0AA0	1FN3050-0TG01-0AA0	1FN3050-0TF01-0AA0
1FN3100-...	1FN3002-0TK0 ■ -1 ■ ■ 0	1FN3100-0TJ01-0AA0	1FN3100-0TG01-0AA0	1FN3100-0TF01-0AA0
1FN3150-...	1FN3002-0TK0 ■ -1 ■ ■ 0	1FN3150-0TJ01-0AA0	1FN3150-0TG01-0AA0	1FN3150-0TF01-0AA0
1FN3300-...	1FN3003-0TK0 ■ -1 ■ ■ 0	1FN3300-0TJ01-0AA0	1FN3300-0TG01-0AA0	1FN3300-0TF01-0AA0
1FN3450-...	1FN3003-0TK0 ■ -1 ■ ■ 0	1FN3450-0TJ01-0AA0	1FN3450-0TG01-0AA0	1FN3450-0TF01-0AA0
1FN3600-...	1FN3004-0TK0 ■ -1 ■ ■ 0	1FN3600-0TJ01-0AA0	—	—
1FN3900-...	1FN3005-0TK0 ■ -1 ■ ■ 0	1FN3900-0TJ01-0AA0	—	—

With plug-in coupling prepared for connection to combi distributor with plug-in coupling, combi adapter with plug-in coupling, combi end piece with plug-in coupling or as intermediate unit for heatsink profile with cable grommet nipple
1FN3050 to 1FN3450 motors⁴⁾:
Grommet nipple only on right end of secondary section track
1FN3600/1FN3900 motors:
Grommet nipple on both ends of secondary section track
1FN3050 to 1FN3450 motors⁴⁾:
Grommet nipple only on left end of secondary section track

Number of secondary sections	
0	A
10	B
20	C
0	A
1	B
2	C
3	D
4	E
5	F
6	G
7	H
8	J
9	K

³⁾ 1FN3050 to 1FN3450 motors:
2 units required per secondary section track.
1FN3600 to 1FN3900:
3 units per secondary section track.
The maximal available length of a single-part heatsink profile is 3 m (9.84 ft).
For the following motors, this corresponds to:
1FN3050 to 1FN3150, a maximum of 24 secondary sections (AB to CE)
1FN3300 to 1FN3900, a maximum of 16 secondary sections (AB to BG).

⁴⁾ Available only in length AC (equals 2 secondary sections). The difference in the secondary section track length must be compensated through assembly with the heatsink profile 1FN300.-0TK04-1..0.