

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}	
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	Order No.
Line voltage 400 V 3 AC Smart Line Module/Basic Line Module									
140	200	4.4 (5.90)	300 (221)	13	351	32.7	380	1000	1FW3201-1 ■ E ■ 2- ■ AA0 1FW3201-1 ■ E ■ 2- ■ AS0 1FW3201-1 ■ E ■ 2- ■ AM0
		7.3 (9.79)	500 (369)	21	329	32.7	380	1000	1FW3202-1 ■ E ■ 2- ■ AA0 1FW3202-1 ■ E ■ 2- ■ AS0 1FW3202-1 ■ E ■ 2- ■ AM0
		11.0 (14.8)	750 (553)	31	335	32.7	370	1000	1FW3203-1 ■ E ■ 2- ■ AA0 1FW3203-1 ■ E ■ 2- ■ AS0 1FW3203-1 ■ E ■ 2- ■ AM0
		14.7 (19.7)	1000 (738)	40	330	32.7	360	1000	1FW3204-1 ■ E ■ 2- ■ AA0 1FW3204-1 ■ E ■ 2- ■ AS0 1FW3204-1 ■ E ■ 2- ■ AM0
		22.0 (29.5)	1500 (1106)	65	311	32.7	390	1000	1FW3206-1 ■ E ■ 2- ■ AA0 1FW3206-1 ■ E ■ 2- ■ AS0 1FW3206-1 ■ E ■ 2- ■ AM0
		29.3 (1475)	2000 (1475)	84	316	32.7	380	1000	1FW3208-1 ■ E ■ 2- ■ AA0 1FW3208-1 ■ E ■ 2- ■ AS0 1FW3208-1 ■ E ■ 2- ■ AM0
	280	36.7 (49.2)	2500 (1844)	82	367	23.3	290	1000	1FW3281-2 ■ E ■ 3- ■ AA0
		51.3 (68.8)	3500 (2582)	115	365	23.3	290	1000	1FW3283-2 ■ E ■ 3- ■ AA0
		73.3 (98.3)	5000 (3688)	160	368	23.3	290	1000	1FW3285-2 ■ E ■ 3- ■ AA0
		102.6 (138)	7000 (5163)	230	359	23.3	290	1000	1FW3287-2 ■ E ■ 3- ■ AA0
		160.1 (215)	6950 (5126)	355	350	36.7	460	1000	1FW3287-2 ■ G ■ 3- ■ AA0
	220	56.0 (75.1)	2450 (1807)	126	352	36.7	460	1000	1FW3281-2 ■ G ■ 3- ■ AA0
		79.5 (107)	3450 (2545)	176	352	36.7	460	1000	1FW3283-2 ■ G ■ 3- ■ AA0
		114.0 (153)	4950 (3651)	244	362	36.7	440	1000	1FW3285-2 ■ G ■ 3- ■ AA0
		160.1 (215)	6950 (5126)	355	350	36.7	460	1000	1FW3287-2 ■ G ■ 3- ■ AA0

Shaft design:

Hollow shaft
Plug-on shaft
Solid shaft

A
S
M

For versions, see
Order No. supplements on
pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-1.E.2-....	315 (232)	13	0.91	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	18	6SL312-1TE21-8AA3
1FW3202-1.E.2-....	525 (387)	22	0.93	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk230	30	6SL312-1TE23-0AA3
1FW3203-1.E.2-....	790 (583)	32	0.94	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk230	45	6SL312-1TE24-5AA3
1FW3204-1.E.2-....	1050 (774)	42	0.94	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	223 (492) 275 (606) 285 (628)	gk230	45	6SL312-1TE24-5AA3
1FW3206-1.E.2-....	1575 (1162)	68	0.94	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	279 (615) 330 (728) 345 (761)	gk420	85	6SL312-1TE28-5AA3
1FW3208-1.E.2-....	2100 (1549)	88	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	348 (767) 400 (882) 415 (915)	gk420	85	6SL312-1TE28-5AA3
1FW3281-2.E.3-....	2550 (1881)	84	0.94	3.78 (33.5)	600 (1323)	1XB7700	85	6SL312-1TE28-5AA3
1FW3283-2.E.3-....	3550 (2618)	116	0.95	4.64 (41.1)	690 (1521)	1XB7700	132	6SL312-1TE31-3AA3
1FW3285-2.E.3-....	5100 (3782)	163	0.95	5.98 (52.9)	860 (1896)	1XB7700	200	6SL312-1TE32-0AA3
1FW3287-2.E.3-....	7150 (5274)	234	0.96	7.81 (69.1)	1030 (2271)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3281-2.G.3-....	2550 (1881)	131	0.95	3.78 (33.5)	600 (1323)	1XB7700	132	6SL312-1TE31-3AA3
1FW3283-2.G.3-....	3550 (2618)	181	0.96	4.64 (41.1)	690 (1521)	1XB7700	200	6SL312-1TE32-0AA3
1FW3285-2.G.3-....	5100 (3782)	251	0.96	5.98 (52.9)	860 (1896)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3287-2.G.3-....	7150 (5274)	365	0.96	7.81 (69.1)	1030 (2271)	1XB7700	380	6SL3320-1TE33-8AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see Order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling		
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}			
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	Order No.		
Line voltage 400 V 3 AC Smart Line Module/Basic Line Module											
270	150	2.8 (3.75)	100 (73.8)	8	369	31.5	630	1700	1FW3150-1 H 2- AA0 1FW3150-1 H 2- AS0 1FW3150-1 H 2- AM0		
		5.7 (7.64)	200 (148)	14	368	31.5	630	1700	1FW3152-1 H 2- AA0 1FW3152-1 H 2- AS0 1FW3152-1 H 2- AM0		
		8.5 (11.4)	300 (221)	20.5	368	31.5	610	1700	1FW3154-1 H 2- AA0 1FW3154-1 H 2- AS0 1FW3154-1 H 2- AM0		
		11.3 (15.2)	400 (295)	28	358	31.5	630	1700	1FW3155-1 H 2- AA0 1FW3155-1 H 2- AS0 1FW3155-1 H 2- AM0		
		14.1 (18.9)	500 (369)	34	366	31.5	610	1700	1FW3156-1 H 2- AA0 1FW3156-1 H 2- AS0 1FW3156-1 H 2- AM0		
		200	8.5 (11.4)	300 (221)	23	341	63.0	680	1000	1FW3201-1 H 2- AA0 1FW3201-1 H 2- AS0 1FW3201-1 H 2- AM0	
	200	14.1 (18.9)	500 (369)	37	330	63.0	670	1000	1FW3202-1 H 2- AA0 1FW3202-1 H 2- AS0 1FW3202-1 H 2- AM0		
		21.2 (28.4)	750 (553)	59	311	63.0	710	1000	1FW3203-1 H 2- AA0 1FW3203-1 H 2- AS0 1FW3203-1 H 2- AM0		
		28.3 (38.0)	1000 (738)	74	321	63.0	670	1000	1FW3204-1 H 2- AA0 1FW3204-1 H 2- AS0 1FW3204-1 H 2- AM0		
		42.4 (56.9)	1500 (1106)	118	317	63.0	700	1000	1FW3206-1 H 2- AA0 1FW3206-1 H 2- AS0 1FW3206-1 H 2- AM0		
		56.5 (75.8)	2000 (1475)	153	313	63.0	690	1000	1FW3208-1 H 2- AA0 1FW3208-1 H 2- AS0 1FW3208-1 H 2- AM0		
		350	280	88.0 (118)	2400 (1770)	192	345	58.3	720	1000	1FW3281-3 J 3- AA0
	122.8 (165)			3350 (2471)	279	330	58.3	750	1000	1FW3283-3 J 3- AA0	
	174.1 (233)			4750 (3504)	380	341	58.3	720	1000	1FW3285-3 J 3- AA0	
	243.7 (327)			6650 (4905)	508	357	58.3	690	1000	1FW3287-3 J 3- AA0	
									Shaft design: Hollow shaft Plug-on shaft Solid shaft		A S M

Shaft design:

Hollow shaft **A**
 Plug-on shaft **S**
 Solid shaft **M**

For versions, see
 Order No. supplements
 on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _r -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _r -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3150-1.H.2-....	105 (77.4)	7.3	0.89	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	9	6SL312-1TE21-0AA3
1FW3152-1.H.2-....	210 (155)	15	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	18	6SL312-1TE21-8AA3
1FW3154-1.H.2-....	315 (232)	21.5	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	30	6SL312-1TE23-0AA3
1FW3155-1.H.2-....	420 (310)	29	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	30	6SL312-1TE23-0AA3
1FW3156-1.H.2-....	525 (387)	35	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk230	45	6SL312-1TE24-5AA3
1FW3201-1.H.2-....	315 (232)	24	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	30	6SL312-1TE23-0AA3
1FW3202-1.H.2-....	525 (387)	39	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk230	45	6SL312-1TE24-5AA3
1FW3203-1.H.2-....	790 (583)	62	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	60	6SL312-1TE26-0AA3
1FW3204-1.H.2-....	1050 (774)	77	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	223 (492) 275 (606) 285 (628)	gk420	85	6SL312-1TE28-5AA3
1FW3206-1.H.2-....	1575 (1162)	121	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	279 (615) 330 (728) 345 (761)	gk630	132	6SL312-1TE31-3AA3
1FW3208-1.H.2-....	2100 (1549)	160	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	348 (767) 400 (882) 415 (915)	gk630	200	6SL312-1TE32-0AA3
1FW3281-3.J.3-....	2500 (1844)	200	0.96	3.78 (33.5)	600 (1323)	1XB7700	200	6SL312-1TE32-0AA3
1FW3283-3.J.3-....	3500 (2582)	292	0.96	4.64 (41.1)	690 (1521)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3285-3.J.3-....	5000 (3688)	400	0.96	5.98 (52.9)	860 (1896)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3287-3.J.3-....	7000 (5163)	534	0.97	7.81 (69.1)	1030 (2271)	1XB7712	618 ⁵⁾	6SL3320-1TE37-5AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

⁵⁾ The rated output current of the Motor Module is lower than the rated motor current at 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.	
Line voltage 400 V 3 AC Smart Line Module/Basic Line Module										
450	150	4.7 (6.30)	100 (73.8)	12	370	52.5	960	1700	1FW3150-1 ■ L ■ 2- ■ AA0 1FW3150-1 ■ L ■ 2- ■ AS0 1FW3150-1 ■ L ■ 2- ■ AM0	
		9.4 (12.6)	200 (148)	22	370	52.5	960	1700	1FW3152-1 ■ L ■ 2- ■ AA0 1FW3152-1 ■ L ■ 2- ■ AS0 1FW3152-1 ■ L ■ 2- ■ AM0	
		14.1 (18.9)	300 (221)	32	370	52.5	950	1700	1FW3154-1 ■ L ■ 2- ■ AA0 1FW3154-1 ■ L ■ 2- ■ AS0 1FW3154-1 ■ L ■ 2- ■ AM0	
		18.8 (25.2)	400 (295)	43	370	52.5	960	1700	1FW3155-1 ■ L ■ 2- ■ AA0 1FW3155-1 ■ L ■ 2- ■ AS0 1FW3155-1 ■ L ■ 2- ■ AM0	
		23.6 (31.6)	500 (369)	53	370	52.5	950	1700	1FW3156-1 ■ L ■ 2- ■ AA0 1FW3156-1 ■ L ■ 2- ■ AS0 1FW3156-1 ■ L ■ 2- ■ AM0	
	200	14.1 (18.9)	300 (221)	37	349	105	1110	1000	1FW3201-1 ■ L ■ 2- ■ AA0 1FW3201-1 ■ L ■ 2- ■ AS0 1FW3201-1 ■ L ■ 2- ■ AM0	
		23.6 (31.6)	500 (369)	59	340	105	1070	1000	1FW3202-1 ■ L ■ 2- ■ AA0 1FW3202-1 ■ L ■ 2- ■ AS0 1FW3202-1 ■ L ■ 2- ■ AM0	
		35.3 (47.3)	750 (553)	92	330	105	1110	1000	1FW3203-1 ■ L ■ 2- ■ AA0 1FW3203-1 ■ L ■ 2- ■ AS0 1FW3203-1 ■ L ■ 2- ■ AM0	
		47.1 (63.2)	1000 (738)	118	335	105	1060	1000	1FW3204-1 ■ L ■ 2- ■ AA0 1FW3204-1 ■ L ■ 2- ■ AS0 1FW3204-1 ■ L ■ 2- ■ AM0	
		66.0 (88.5)	1400 (1033)	169	318	105	1090	1000	1FW3206-1 ■ L ■ 2- ■ AA0 1FW3206-1 ■ L ■ 2- ■ AS0 1FW3206-1 ■ L ■ 2- ■ AM0	
		87.2 (117)	1850 (1365)	226	332	105	1100	1000	1FW3208-1 ■ L ■ 2- ■ AA0 1FW3208-1 ■ L ■ 2- ■ AS0 1FW3208-1 ■ L ■ 2- ■ AM0	
520	280	122.5 (164)	2250 (1660)	262	339	86.7	1050	1000	1FW3281-3 ■ M ■ 3- ■ AA0	
		171.5 (230)	3150 (2323)	362	345	86.7	1030	1000	1FW3283-3 ■ M ■ 3- ■ AA0	
		247.8 (332)	4550 (3356)	484	369	86.7	960	1000	1FW3285-3 ■ M ■ 3- ■ AA0	
		337.6 (453)	6200 (4573)	713	341	86.7	1030	1000	1FW3287-3 ■ M ■ 3- ■ AA0	
Shaft design: Hollow shaft Plug-on shaft Solid shaft									A S M	

Shaft design:

Hollow shaft
Plug-on shaft
Solid shaft

A
S
M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3150-1.L.2-....	105 (77.4)	11.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	18	6SL312-1TE21-8AA3
1FW3152-1.L.2-....	210 (155)	22.5	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	30	6SL312-1TE23-0AA3
1FW3154-1.L.2-....	315 (232)	33	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	45	6SL312-1TE24-5AA3
1FW3155-1.L.2-....	420 (310)	45	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	45	6SL312-1TE24-5AA3
1FW3156-1.L.2-....	525 (387)	55	0.94	0.28 (2.48) 0.34 (3.01) 0.28 (2.48)	171 (377) 184 (406) 187 (412)	gk420	60	6SL312-1TE26-0AA3
1FW3201-1.L.2-....	315 (232)	38	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	18	6SL312-1TE21-8AA3
1FW3202-1.L.2-....	525 (387)	62	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk420	30	6SL312-1TE23-0AA3
1FW3203-1.L.2-....	790 (583)	100	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	45	6SL312-1TE24-5AA3
1FW3204-1.L.2-....	1050 (774)	129	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk630	45	6SL312-1TE24-5AA3
1FW3206-1.L.2-....	1575 (1162)	189	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk630	85	6SL312-1TE28-5AA3
1FW3208-1.L.2-....	2100 (1549)	255	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk630	85	6SL312-1TE28-5AA3
1FW3281-3.M.3-....	2500 (1844)	291	0.96	3.78 (33.5)	600 (1323)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3283-3.M.3-....	3500 (2582)	402	0.96	4.64 (41.1)	690 (1521)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3285-3.M.3-....	5000 (3688)	532	0.97	5.98 (52.9)	860 (1896)	1XB7712	490	6SL3320-1TE35-0AA3
1FW3287-3.M.3-....	6850 (5053)	787	0.97	7.81 (69.1)	1030 (2271)	1XB7712	734 ⁵⁾	6SL3320-1TE38-4AA3

Format:	
Booksized	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

1) Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

2) Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

3) Optimum efficiency in continuous duty.

4) The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

5) The rated output current of the Motor Module is lower than the rated motor current at 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}	
rpm		kW (HP)	Nm (lb _r -ft)	A	V	Hz	rpm	rpm	
Line voltage 400 V 3 AC Smart Line Module/Basic Line Module									
670	150	7.0 (9.39)	100 (73.8)	18	369	78.2	1470	1700	1FW3150-1 ■ P ■ 2- ■ AA0 1FW3150-1 ■ P ■ 2- ■ AS0 1FW3150-1 ■ P ■ 2- ■ AM0
		14.0 (18.8)	200 (148)	32.5	370	78.2	1450	1700	1FW3152-1 ■ P ■ 2- ■ AA0 1FW3152-1 ■ P ■ 2- ■ AS0 1FW3152-1 ■ P ■ 2- ■ AM0
		21.0 (28.2)	300 (221)	47.5	370	78.2	1420	1700	1FW3154-1 ■ P ■ 2- ■ AA0 1FW3154-1 ■ P ■ 2- ■ AS0 1FW3154-1 ■ P ■ 2- ■ AM0
		28.1 (37.7)	400 (295)	64	360	78.2	1450	1700	1FW3155-1 ■ P ■ 2- ■ AA0 1FW3155-1 ■ P ■ 2- ■ AS0 1FW3155-1 ■ P ■ 2- ■ AM0
		35.1 (47.1)	500 (369)	76	370	78.2	1380	1700	1FW3156-1 ■ P ■ 2- ■ AA0 1FW3156-1 ■ P ■ 2- ■ AS0 1FW3156-1 ■ P ■ 2- ■ AM0
Shaft design: Hollow shaft Plug-on shaft Solid shaft									A S M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T = 100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T = 100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3150-1.P.2-....	105 (77.4)	17.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	18	6SL312-1TE21-8AA3
1FW3152-1.P.2-....	210 (155)	33.5	0.93	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	45	6SL312-1TE24-5AA3
1FW3154-1.P.2-....	315 (232)	49	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	60	6SL312-1TE26-0AA3
1FW3155-1.P.2-....	420 (310)	67	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk420	85	6SL312-1TE28-5AA3
1FW3156-1.P.2-....	525 (387)	80	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk420	85	6SL312-1TE28-5AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	Order No.	
Line voltage 400 V 3 AC Smart Line Module/Basic Line Module										
710	200	18.2 (24.4)	245 (181)	37	311	106.7	1320	1800	1FW3201-3■P■2-■AS0 1FW3201-3■P■2-■AM0	
		35.5 (47.6)	475 (350)	69	318	106.7	1290	1800	1FW3202-3■P■2-■AS0 1FW3202-3■P■2-■AM0	
		51 (68.4)	690 (509)	97	327	106.7	1250	1800	1FW3203-3■P■2-■AS0 1FW3203-3■P■2-■AM0	
		70 (93.9)	940 (693)	138	313	106.7	1310	1800	1FW3204-3■P■2-■AS0 1FW3204-3■P■2-■AM0	
		103 (138)	1380 (1018)	194	327	106.7	1260	1800	1FW3206-3■P■2-■AS0 1FW3206-3■P■2-■AM0	
		143 (192)	1930 (1424)	275	324	106.7	1270	1800	1FW3208-3■P■2-■AS0 1FW3208-3■P■2-■AM0	
1050	200	26 (34.9)	235 (173)	51	321	160	1890	1800	1FW3201-3■S■2-■AS0 1FW3201-3■S■2-■AM0	
		50 (67.1)	455 (336)	95	329	160	1850	1800	1FW3202-3■S■2-■AS0 1FW3202-3■S■2-■AM0	
		71 (95.2)	650 (479)	135	330	160	1840	1800	1FW3203-3■S■2-■AS0 1FW3203-3■S■2-■AM0	
		98 (131)	890 (656)	197	309	160	1970	1800	1FW3204-3■S■2-■AS0 1FW3204-3■S■2-■AM0	
		140 (188)	1270 (937)	280	307	160	1980	1800	1FW3206-3■S■2-■AS0 1FW3206-3■S■2-■AM0	
		196 (263)	1780 (1313)	405	299	160	2050	1800	1FW3208-3■S■2-■AS0 1FW3208-3■S■2-■AM0	
Shaft design: Plug-on shaft Solid shaft									S M	

For versions, see
Order No. supplements
on pages 6/81 and 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-3.P.. 1FW3201-3.P..	260 (192)	38	88.7	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	45	6SL312-1TE24-5AA3
1FW3202-3.P.. 1FW3202-3.P..	500 (369)	72	91	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	85	6SL312-1TE28-5AA3
1FW3203-3.P.. 1FW3203-3.P..	730 (538)	102	92.2	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk420	132	6SL312-1TE31-3AA3
1FW3204-3.P.. 1FW3204-3.P..	1000 (738)	145	92.8	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.P.. 1FW3206-3.P..	1500 (1106)	210	93.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	200	6SL312-1TE32-0AA4
1FW3208-3.P.. 1FW3208-3.P..	2100 (1549)	295	93.7	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3201-3.S.. 1FW3201-3.S..	260 (192)	54	90.1	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	60	6SL312-1TE26-0AA3
1FW3202-3.S.. 1FW3202-3.S..	500 (369)	102	92.2	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	132	6SL312-1TE31-3AA3
1FW3203-3.S.. 1FW3203-3.S..	730 (538)	149	93.5	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk630	132	6SL312-1TE31-3AA3
1FW3204-3.S.. 1FW3204-3.S..	1000 (738)	220	94	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.S.. 1FW3206-3.S..	1500 (1106)	330	94.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3208-3.S.. 1FW3208-3.S..	2100 (1549)	470	94.6	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	490	6SL3320-1TE35-0AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling		
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}			
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.		
Line voltage 400 V 3 AC Active Line Module											
150	200	4.7 (6.30)	300 (221)	13	373	35	380	1000	1FW3201-1 ■ E ■ 2- ■ AA0 1FW3201-1 ■ E ■ 2- ■ AS0 1FW3201-1 ■ E ■ 2- ■ AM0		
		7.9 (10.6)	500 (369)	21	350	35	380	1000	1FW3202-1 ■ E ■ 2- ■ AA0 1FW3202-1 ■ E ■ 2- ■ AS0 1FW3202-1 ■ E ■ 2- ■ AM0		
		11.8 (15.8)	750 (553)	31	357	35	370	1000	1FW3203-1 ■ E ■ 2- ■ AA0 1FW3203-1 ■ E ■ 2- ■ AS0 1FW3203-1 ■ E ■ 2- ■ AM0		
		15.7 (21.1)	1000 (738)	40	351	35	360	1000	1FW3204-1 ■ E ■ 2- ■ AA0 1FW3204-1 ■ E ■ 2- ■ AS0 1FW3204-1 ■ E ■ 2- ■ AM0		
		23.6 (31.7)	1500 (1106)	65	331	35	390	1000	1FW3206-1 ■ E ■ 2- ■ AA0 1FW3206-1 ■ E ■ 2- ■ AS0 1FW3206-1 ■ E ■ 2- ■ AM0		
		31.4 (42.1)	2000 (1475)	84	337	35	380	1000	1FW3208-1 ■ E ■ 2- ■ AA0 1FW3208-1 ■ E ■ 2- ■ AS0 1FW3208-1 ■ E ■ 2- ■ AM0		
	280	39.3 (52.7)	2500 (1844)	82	390	25	290	1000	1FW3281-2 ■ E ■ 3- ■ AA0		
		55.0 (73.8)	3500 (2582)	115	388	25	290	1000	1FW3283-2 ■ E ■ 3- ■ AA0		
		78.5 (105)	5000 (3688)	160	391	25	290	1000	1FW3285-2 ■ E ■ 3- ■ AA0		
		110.0 (148)	7000 (5163)	230	382	25	290	1000	1FW3287-2 ■ E ■ 3- ■ AA0		
250	280	64.1 (86.0)	2450 (1807)	126	396	41.7	460	1000	1FW3281-2 ■ G ■ 3- ■ AA0		
		90.3 (121)	3450 (2545)	176	397	41.7	460	1000	1FW3283-2 ■ G ■ 3- ■ AA0		
		129.6 (174)	4950 (3651)	244	408	41.7	440	1000	1FW3285-2 ■ G ■ 3- ■ AA0		
		180.6 (242)	6900 (5089)	352	393	41.7	460	1000	1FW3287-2 ■ G ■ 3- ■ AA0		
									Shaft design: Hollow shaft Plug-on shaft Solid shaft		A S M

Shaft design:

Hollow shaft
Plug-on shaft
Solid shaft

A
S
M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-1.E.2-....	315 (232)	13	0.91	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	18	6SL312-1TE21-8AA3
1FW3202-1.E.2-....	525 (387)	22	0.93	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk230	30	6SL312-1TE23-0AA3
1FW3203-1.E.2-....	790 (583)	32	0.94	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk230	45	6SL312-1TE24-5AA3
1FW3204-1.E.2-....	1050 (774)	42	0.94	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk230	45	6SL312-1TE24-5AA3
1FW3206-1.E.2-....	1575 (1162)	68	0.94	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk420	85	6SL312-1TE28-5AA3
1FW3208-1.E.2-....	2100 (1549)	88	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk420	85	6SL312-1TE28-5AA3
1FW3281-2.E.3-....	2550 (1881)	84	0.94	3.78 (33.5)	600 (1323)	1XB7700	85	6SL312-1TE28-5AA3
1FW3283-2.E.3-....	3550 (2618)	116	0.95	4.64 (41.1)	690 (1521)	1XB7700	132	6SL312-1TE31-3AA3
1FW3285-2.E.3-....	5100 (3782)	163	0.95	5.98 (52.9)	860 (1896)	1XB7700	200	6SL312-1TE32-0AA3
1FW3287-2.E.3-....	7150 (5274)	234	0.96	7.81 (69.1)	1030 (2271)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3281-2.G.3-....	2550 (1881)	131	0.95	3.78 (33.5)	600 (1323)	1XB7700	132	6SL312-1TE31-3AA3
1FW3283-2.G.3-....	3550 (2618)	181	0.96	4.64 (41.1)	690 (1521)	1XB7700	200	6SL312-1TE32-0AA3
1FW3285-2.G.3-....	5100 (3782)	251	0.96	5.98 (52.9)	860 (1896)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3287-2.G.3-....	7150 (5274)	365	0.96	7.81 (69.1)	1030 (2271)	1XB7700	380	6SL3320-1TE33-8AA3

Format:

Booksize

1

Chassis

3

Cooling:

Internal air cooling

0

External air cooling

1

Cold-plate cooling

6

Motor Module:

Single Motor Module

1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3150-1.H.2-....	105 (77.4)	7.3	0.89	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	9	6SL312-1TE21-0AA3
1FW3152-1.H.2-....	210 (155)	15	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	18	6SL312-1TE21-8AA3
1FW3154-1.H.2-....	315 (232)	21.5	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	30	6SL312-1TE23-0AA3
1FW3155-1.H.2-....	420 (310)	29	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	30	6SL312-1TE23-0AA3
1FW3156-1.H.2-....	525 (387)	35	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk230	45	6SL312-1TE24-5AA3
1FW3201-1.H.2-....	315 (232)	24	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	30	6SL312-1TE23-0AA3
1FW3202-1.H.2-....	525 (387)	39	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk230	45	6SL312-1TE24-5AA3
1FW3203-1.H.2-....	790 (583)	62	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	60	6SL312-1TE26-0AA3
1FW3204-1.H.2-....	1050 (774)	77	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk420	85	6SL312-1TE28-5AA3
1FW3206-1.H.2-....	1575 (1162)	121	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk630	132	6SL312-1TE31-3AA3
1FW3208-1.H.2-....	2100 (1549)	160	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk630	200	6SL312-1TE32-0AA3
1FW3281-3.J.3-....	2500 (1844)	200	0.96	3.78 (33.5)	600 (1323)	1XB7700	200	6SL312-1TE32-0AA3
1FW3283-3.J.3-....	3500 (2582)	292	0.96	4.64 (41.1)	690 (1521)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3285-3.J.3-....	5000 (3688)	400	0.96	5.98 (52.9)	860 (1896)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3287-3.J.3-....	7000 (5163)	534	0.97	7.81 (69.1)	1030 (2271)	1XB7712	618 ⁵⁾	6SL3320-1TE37-5AA3

Format:	
Booksized	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

1) Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

2) Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

3) Optimum efficiency in continuous duty.

4) The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

5) The rated output current of the Motor Module is lower than the rated motor current at 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}	
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	
Line voltage 400 V 3 AC Active Line Module									
500	150	5.2 (6.97)	100 (73.8)	12	413	58.3	960	1700	1FW3150-1 ■ L ■ 2- ■ AA0 1FW3150-1 ■ L ■ 2- ■ AS0 1FW3150-1 ■ L ■ 2- ■ AM0
		10.5 (14.1)	200 (148)	22	415	58.3	960	1700	1FW3152-1 ■ L ■ 2- ■ AA0 1FW3152-1 ■ L ■ 2- ■ AS0 1FW3152-1 ■ L ■ 2- ■ AM0
		15.7 (21.1)	300 (221)	32	415	58.3	950	1700	1FW3154-1 ■ L ■ 2- ■ AA0 1FW3154-1 ■ L ■ 2- ■ AS0 1FW3154-1 ■ L ■ 2- ■ AM0
		20.9 (28.0)	400 (295)	43	412	58.3	960	1700	1FW3155-1 ■ L ■ 2- ■ AA0 1FW3155-1 ■ L ■ 2- ■ AS0 1FW3155-1 ■ L ■ 2- ■ AM0
		26.2 (35.1)	500 (369)	53	415	58.3	950	1700	1FW3156-1 ■ L ■ 2- ■ AA0 1FW3156-1 ■ L ■ 2- ■ AS0 1FW3156-1 ■ L ■ 2- ■ AM0
		200	15.7 (21.1)	300 (221)	37	386	116.7	1110	1000
	200	26.2 (35.1)	500 (369)	59	376	116.7	1070	1000	1FW3202-1 ■ L ■ 2- ■ AA0 1FW3202-1 ■ L ■ 2- ■ AS0 1FW3202-1 ■ L ■ 2- ■ AM0
		39.3 (52.7)	750 (553)	92	366	116.7	1110	1000	1FW3203-1 ■ L ■ 2- ■ AA0 1FW3203-1 ■ L ■ 2- ■ AS0 1FW3203-1 ■ L ■ 2- ■ AM0
		52.4 (70.3)	1000 (738)	118	371	116.7	1060	1000	1FW3204-1 ■ L ■ 2- ■ AA0 1FW3204-1 ■ L ■ 2- ■ AS0 1FW3204-1 ■ L ■ 2- ■ AM0
		73.3 (98.3)	1400 (1033)	169	353	116.7	1090	1000	1FW3206-1 ■ L ■ 2- ■ AA0 1FW3206-1 ■ L ■ 2- ■ AS0 1FW3206-1 ■ L ■ 2- ■ AM0
		96.9 (130)	1850 (1365)	226	368	116.7	1100	1000	1FW3208-1 ■ L ■ 2- ■ AA0 1FW3208-1 ■ L ■ 2- ■ AS0 1FW3208-1 ■ L ■ 2- ■ AM0
		600	280	138.2 (185)	2200 (1623)	256	387	100.0	1050
600	280	194.5 (261)	3100 (2287)	357	394	100.0	1030	1000	1FW3283-3 ■ M ■ 3- ■ AA0
		276.5 (371)	4400 (3245)	469	415	100.0	960	1000	1FW3285-3 ■ M ■ 3- ■ AA0
		380.1 (510)	6050 (4462)	696	389	100.0	1030	1000	1FW3287-3 ■ M ■ 3- ■ AA0

Shaft design:

Hollow shaft
Plug-on shaft
Solid shaft

A
S
M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3150-1.L.2-....	105 (77.4)	11.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	18	6SL312-1TE21-8AA3
1FW3152-1.L.2-....	210 (155)	22.5	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	30	6SL312-1TE23-0AA3
1FW3154-1.L.2-....	315 (232)	33	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	45	6SL312-1TE24-5AA3
1FW3155-1.L.2-....	420 (310)	45	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	45	6SL312-1TE24-5AA3
1FW3156-1.L.2-....	525 (387)	55	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk420	60	6SL312-1TE26-0AA3
1FW3201-1.L.2-....	315 (232)	38	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	18	6SL312-1TE21-8AA3
1FW3202-1.L.2-....	525 (387)	62	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk420	30	6SL312-1TE23-0AA3
1FW3203-1.L.2-....	790 (583)	100	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	45	6SL312-1TE24-5AA3
1FW3204-1.L.2-....	1050 (774)	129	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk630	45	6SL312-1TE24-5AA3
1FW3206-1.L.2-....	1575 (1162)	189	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk630	85	6SL312-1TE28-5AA3
1FW3208-1.L.2-....	2100 (1549)	255	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk630	85	6SL312-1TE28-5AA3
1FW3281-3.M.3-....	2500 (1844)	291	0.96	3.78 (33.5)	600 (1323)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3283-3.M.3-....	3500 (2582)	402	0.96	4.64 (41.1)	690 (1521)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3285-3.M.3-....	5000 (3688)	532	0.97	5.98 (52.9)	860 (1896)	1XB7712	490	6SL3320-1TE35-0AA3
1FW3287-3.M.3-....	6850 (5053)	787	0.97	7.81 (69.1)	1030 (2271)	1XB7712	734 ⁵⁾	6SL3320-1TE38-4AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

1) Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

2) Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

3) Optimum efficiency in continuous duty.

4) The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

5) The rated output current of the Motor Module is lower than the rated motor current at 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.	
Line voltage 400 V 3 AC Active Line Module										
750	150	7.9 (10.6)	100 (73.8)	18	410	87.5	1470	1700	1FW3150-1 ■ P ■ 2- ■ AA0 1FW3150-1 ■ P ■ 2- ■ AS0 1FW3150-1 ■ P ■ 2- ■ AM0	
		15.7 (31.1)	200 (148)	32.5	415	87.5	1450	1700	1FW3152-1 ■ P ■ 2- ■ AA0 1FW3152-1 ■ P ■ 2- ■ AS0 1FW3152-1 ■ P ■ 2- ■ AM0	
		23.6 (31.6)	300 (221)	47.5	412	87.5	1420	1700	1FW3154-1 ■ P ■ 2- ■ AA0 1FW3154-1 ■ P ■ 2- ■ AS0 1FW3154-1 ■ P ■ 2- ■ AM0	
		31.4 (42.1)	400 (295)	64	401	87.5	1450	1700	1FW3155-1 ■ P ■ 2- ■ AA0 1FW3155-1 ■ P ■ 2- ■ AS0 1FW3155-1 ■ P ■ 2- ■ AM0	
		39.3 (52.7)	500 (369)	76	415	87.5	1380	1700	1FW3156-1 ■ P ■ 2- ■ AA0 1FW3156-1 ■ P ■ 2- ■ AS0 1FW3156-1 ■ P ■ 2- ■ AM0	
										Shaft design: Hollow shaft Plug-on shaft Solid shaft
								A		
								S		
								M		

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3150-1.P.2-....	105 (77.4)	17.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	30	6SL312-1TE23-0AA3
1FW3152-1.P.2-....	210 (155)	33.5	0.93	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	45	6SL312-1TE24-5AA3
1FW3154-1.P.2-....	315 (232)	49	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	60	6SL312-1TE26-0AA3
1FW3155-1.P.2-....	420 (310)	67	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk420	85	6SL312-1TE28-5AA3
1FW3156-1.P.2-....	525 (387)	80	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk420	85	6SL312-1TE28-5AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}	
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	
Line voltage 400 V 3 AC Active Line Module									
800	200	20.5 (27.5)	245 (181)	37	350	106.7	1320	1800	1FW3201-3■P■3-■AS0 1FW3201-3■P■3-■AM0
		39.5 (53.0)	470 (347)	69	358	106.7	1290	1800	1FW3202-3■P■3-■AS0 1FW3202-3■P■3-■AM0
		57 (76.4)	680 (502)	96	368	106.7	1250	1800	1FW3203-3■P■3-■AS0 1FW3203-3■P■3-■AM0
		78 (105)	930 (686)	137	353	106.7	1310	1800	1FW3204-3■P■3-■AS0 1FW3204-3■P■3-■AM0
		114 (153)	1360 (1003)	192	368	106.7	1260	1800	1FW3206-3■P■3-■AS0 1FW3206-3■P■3-■AM0
		159 (213)	1900 (1401)	270	365	106.7	1270	1800	1FW3208-3■P■3-■AS0 1FW3208-3■P■3-■AM0
1200	200	29 (38.9)	230 (170)	50	367	160	1890	1800	1FW3201-3■S■3-■AS0 1FW3201-3■S■3-■AM0
		55 (73.8)	440 (325)	92	376	160	1850	1800	1FW3202-3■S■3-■AS0 1FW3202-3■S■3-■AM0
		79 (106)	630 (465)	131	377	160	1840	1800	1FW3203-3■S■3-■AS0 1FW3203-3■S■3-■AM0
		108 (145)	860 (634)	191	353	160	1970	1800	1FW3204-3■S■3-■AS0 1FW3204-3■S■3-■AM0
		152 (204)	1210 (892)	270	351	160	1980	1800	1FW3206-3■S■3-■AS0 1FW3206-3■S■3-■AM0
		215 (288)	1700 (1254)	385	342	160	2050	1800	1FW3208-3■S■3-■AS0 1FW3208-3■S■3-■AM0
Shaft design: Plug-on shaft Solid shaft									S M

For versions, see
Order No. supplements
on pages 6/81 and 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-3.P.. 1FW3201-3.P..	260 (192)	38	88.7	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	45	6SL312-1TE24-5AA3
1FW3202-3.P.. 1FW3202-3.P..	500 (369)	72	91	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	85	6SL312-1TE28-5AA3
1FW3203-3.P.. 1FW3203-3.P..	730 (538)	102	92.2	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk420	132	6SL312-1TE31-3AA3
1FW3204-3.P.. 1FW3204-3.P..	1000 (738)	145	92.8	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.P.. 1FW3206-3.P..	1500 (1106)	210	93.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	200	6SL312-1TE32-0AA4
1FW3208-3.P.. 1FW3208-3.P..	2100 (1549)	295	93.7	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3201-3.S.. 1FW3201-3.S..	260 (192)	54	90.1	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	60	6SL312-1TE26-0AA3
1FW3202-3.S.. 1FW3202-3.S..	500 (369)	102	92.2	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	132	6SL312-1TE31-3AA3
1FW3203-3.S.. 1FW3203-3.S..	730 (538)	149	93.5	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk630	132	6SL312-1TE31-3AA3
1FW3204-3.S.. 1FW3204-3.S..	1000 (738)	220	94	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.S.. 1FW3206-3.S..	1500 (1106)	330	94.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3208-3.S.. 1FW3208-3.S..	2100 (1549)	470	94.6	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	490	6SL3320-1TE35-0AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

6

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling		
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}			
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.		
Line voltage 480 V 3 AC Smart Line Module/Basic Line Module											
160	200	5.0 (6.71)	300 (221)	13	395	37.3	380	1000	1FW3201-1 ■■■ 2- ■ AA0 1FW3201-1 ■■■ 2- ■ AS0 1FW3201-1 ■■■ 2- ■ AM0		
		8.4 (11.3)	500 (369)	21	371	37.3	380	1000	1FW3202-1 ■■■ 2- ■ AA0 1FW3202-1 ■■■ 2- ■ AS0 1FW3202-1 ■■■ 2- ■ AM0		
		12.6 (16.9)	750 (553)	31	378	37.3	370	1000	1FW3203-1 ■■■ 2- ■ AA0 1FW3203-1 ■■■ 2- ■ AS0 1FW3203-1 ■■■ 2- ■ AM0		
		16.8 (22.5)	1000 (738)	40	372	37.3	360	1000	1FW3204-1 ■■■ 2- ■ AA0 1FW3204-1 ■■■ 2- ■ AS0 1FW3204-1 ■■■ 2- ■ AM0		
		25.1 (33.7)	1500 (1106)	65	351	37.3	390	1000	1FW3206-1 ■■■ 2- ■ AA0 1FW3206-1 ■■■ 2- ■ AS0 1FW3206-1 ■■■ 2- ■ AM0		
		33.5 (44.9)	2000 (1475)	84	357	37.3	380	1000	1FW3208-1 ■■■ 2- ■ AA0 1FW3208-1 ■■■ 2- ■ AS0 1FW3208-1 ■■■ 2- ■ AM0		
	280	41.9 (56.2)	2500 (1844)	82	413	26.7	290	1000	1FW3281-2 ■■■ 3- ■ AA0		
		58.6 (78.6)	3500 (2582)	115	411	26.7	290	1000	1FW3283-2 ■■■ 3- ■ AA0		
		83.8 (112)	5000 (3688)	160	415	26.7	290	1000	1FW3285-2 ■■■ 3- ■ AA0		
		117.3 (157)	7000 (5163)	230	405	26.7	290	1000	1FW3287-2 ■■■ 3- ■ AA0		
270	280	69.3 (92.9)	2450 (1807)	126	426	45.0	460	1000	1FW3281-2 ■■■ 3- ■ AA0		
		96.1 (129)	3400 (2508)	173	424	45.0	460	1000	1FW3283-2 ■■■ 3- ■ AA0		
		138.5 (186)	4900 (3614)	241	437	45.0	440	1000	1FW3285-2 ■■■ 3- ■ AA0		
		195.1 (262)	6900 (5089)	352	423	45.0	460	1000	1FW3287-2 ■■■ 3- ■ AA0		
									Shaft design: Hollow shaft Plug-on shaft Solid shaft		A S M

Shaft design:

Hollow shaft
Plug-on shaft
Solid shaft

A
S
M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-1.E.2-....	315 (232)	13	0.91	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	30	6SL312-1TE23-0AA3
1FW3202-1.E.2-....	525 (387)	22	0.93	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk230	30	6SL312-1TE23-0AA3
1FW3203-1.E.2-....	790 (583)	32	0.94	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk230	45	6SL312-1TE24-5AA3
1FW3204-1.E.2-....	1050 (774)	42	0.94	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk230	45	6SL312-1TE24-5AA3
1FW3206-1.E.2-....	1575 (1162)	68	0.94	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk420	85	6SL312-1TE28-5AA3
1FW3208-1.E.2-....	2100 (1549)	88	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk420	85	6SL312-1TE28-5AA3
1FW3281-2.E.3-....	2550 (1881)	84	0.94	3.78 (33.5)	600 (1323)	1XB7700	85	6SL312-1TE28-5AA3
1FW3283-2.E.3-....	3550 (2618)	116	0.95	4.64 (41.1)	690 (1521)	1XB7700	132	6SL312-1TE31-3AA3
1FW3285-2.E.3-....	5100 (3782)	163	0.95	5.98 (52.9)	860 (1896)	1XB7700	200	6SL312-1TE32-0AA3
1FW3287-2.E.3-....	7150 (5274)	234	0.96	7.81 (69.1)	1030 (2271)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3281-2.G.3-....	2550 (1881)	131	0.95	3.78 (33.5)	600 (1323)	1XB7700	132	6SL312-1TE31-3AA3
1FW3283-2.G.3-....	3550 (2618)	181	0.96	4.64 (41.1)	690 (1521)	1XB7700	200	6SL312-1TE32-0AA3
1FW3285-2.G.3-....	5100 (3782)	251	0.96	5.98 (52.9)	860 (1896)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3287-2.G.3-....	7150 (5274)	365	0.96	7.81 (69.1)	1030 (2271)	1XB7700	380	6SL3320-1TE33-8AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	Order No.	
Line voltage 480 V 3 AC Smart Line Module/Basic Line Module										
330	150	3.5 (4.69)	100 (73.8)	8	437	38.5	630	1700	1FW3150-1 ■■■ 2- ■ AA0 1FW3150-1 ■■■ 2- ■ AS0 1FW3150-1 ■■■ 2- ■ AM0	
		6.9 (9.25)	200 (148)	14	441	38.5	630	1700	1FW3152-1 ■■■ 2- ■ AA0 1FW3152-1 ■■■ 2- ■ AS0 1FW3152-1 ■■■ 2- ■ AM0	
		10.4 (13.9)	300 (221)	20.5	442	38.5	610	1700	1FW3154-1 ■■■ 2- ■ AA0 1FW3154-1 ■■■ 2- ■ AS0 1FW3154-1 ■■■ 2- ■ AM0	
		13.8 (18.5)	400 (295)	28	431	38.5	630	1700	1FW3155-1 ■■■ 2- ■ AA0 1FW3155-1 ■■■ 2- ■ AS0 1FW3155-1 ■■■ 2- ■ AM0	
		17.3 (23.2)	500 (369)	34	440	38.5	610	1700	1FW3156-1 ■■■ 2- ■ AA0 1FW3156-1 ■■■ 2- ■ AS0 1FW3156-1 ■■■ 2- ■ AM0	
	200	10.4 (13.9)	300 (221)	23	412	77.0	680	1000	1FW3201-1 ■■■ 2- ■ AA0 1FW3201-1 ■■■ 2- ■ AS0 1FW3201-1 ■■■ 2- ■ AM0	
		17.3 (23.2)	500 (369)	37	399	77.0	670	1000	1FW3202-1 ■■■ 2- ■ AA0 1FW3202-1 ■■■ 2- ■ AS0 1FW3202-1 ■■■ 2- ■ AM0	
		25.9 (34.7)	750 (553)	59	376	77.0	710	1000	1FW3203-1 ■■■ 2- ■ AA0 1FW3203-1 ■■■ 2- ■ AS0 1FW3203-1 ■■■ 2- ■ AM0	
		34.6 (46.4)	1000 (738)	74	388	77.0	670	1000	1FW3204-1 ■■■ 2- ■ AA0 1FW3204-1 ■■■ 2- ■ AS0 1FW3204-1 ■■■ 2- ■ AM0	
		51.8 (69.5)	1500 (1106)	118	384	77.0	700	1000	1FW3206-1 ■■■ 2- ■ AA0 1FW3206-1 ■■■ 2- ■ AS0 1FW3206-1 ■■■ 2- ■ AM0	
		69.1 (92.7)	2000 (1475)	153	379	77.0	690	1000	1FW3208-1 ■■■ 2- ■ AA0 1FW3208-1 ■■■ 2- ■ AS0 1FW3208-1 ■■■ 2- ■ AM0	
									Shaft design: Hollow shaft Plug-on shaft Solid shaft	A S M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _r -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _r -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3150-1.H.2-....	105 (77.4)	7.3	0.89	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	9	6SL312-1TE21-0AA3
1FW3152-1.H.2-....	210 (155)	15	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	18	6SL312-1TE21-8AA3
1FW3154-1.H.2-....	315 (232)	21.5	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	30	6SL312-1TE23-0AA3
1FW3155-1.H.2-....	420 (310)	29	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	30	6SL312-1TE23-0AA3
1FW3156-1.H.2-....	525 (387)	35	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk230	45	6SL312-1TE24-5AA3
1FW3201-1.H.2-....	315 (232)	24	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	30	6SL312-1TE23-0AA3
1FW3202-1.H.2-....	525 (387)	39	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk230	45	6SL312-1TE24-5AA3
1FW3203-1.H.2-....	790 (583)	62	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	60	6SL312-1TE26-0AA3
1FW3204-1.H.2-....	1050 (774)	77	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk420	85	6SL312-1TE28-5AA3
1FW32061.H.2-....	1575 (1162)	121	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk630	132	6SL312-1TE31-3AA3
1FW3208-1.H.2-....	2100 (1549)	160	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk630	200	6SL312-1TE32-0AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}	
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	Order No.
Line voltage 480 V 3 AC Smart Line Module/Basic Line Module									
430	280	105.8 (142)	2350 (1733)	188	417	71.7	720	1000	1FW3281-3 J 3-AA0
		146.3 (196)	3250 (2397)	271	398	71.7	750	1000	1FW3283-3 J 3-AA0
		209.4 (281)	4650 (3430)	372	412	71.7	720	1000	1FW3285-3 J 3-AA0
		294.9 (395)	6550 (4831)	500	433	71.7	690	1000	1FW3287-3 J 3-AA0
550	150	5.8 (7.78)	100 (73.8)	12	448	64.2	960	1700	1FW3150-1 L 2-AA0 1FW3150-1 L 2-AS0 1FW3150-1 L 2-AM0
		11.5 (15.4)	200 (148)	22	448	64.2	960	1700	1FW3152-1 L 2-AA0 1FW3152-1 L 2-AS0 1FW3152-1 L 2-AM0
		17.3 (23.2)	300 (221)	32	448	64.2	950	1700	1FW3154-1 L 2-AA0 1FW3154-1 L 2-AS0 1FW3154-1 L 2-AM0
		23.0 (30.8)	400 (295)	43	448	64.2	960	1700	1FW3155-1 L 2-AA0 1FW3155-1 L 2-AS0 1FW3155-1 L 2-AM0
		28.8 (38.6)	500 (369)	53	448	64.2	950	1700	1FW3156-1 L 2-AA0 1FW3156-1 L 2-AS0 1FW3156-1 L 2-AM0
		17.3 (23.2)	300 (221)	37	424	128.3	1110	1000	1FW3201-1 L 2-AA0 1FW3201-1 L 2-AS0 1FW3201-1 L 2-AM0
	200	28.8 (38.6)	500 (369)	59	412	128.3	1070	1000	1FW3202-1 L 2-AA0 1FW3202-1 L 2-AS0 1FW3202-1 L 2-AM0
		43.2 (57.9)	750 (553)	92	401	128.3	1110	1000	1FW3203-1 L 2-AA0 1FW3203-1 L 2-AS0 1FW3203-1 L 2-AM0
		57.6 (77.2)	1000 (738)	118	407	128.3	1060	1000	1FW3204-1 L 2-AA0 1FW3204-1 L 2-AS0 1FW3204-1 L 2-AM0
		74.9 (100)	1300 (959)	157	374	128.3	1090	1000	1FW3206-1 L 2-AA0 1FW3206-1 L 2-AS0 1FW3206-1 L 2-AM0
		100.8 (135)	1750 (1291)	213	392	128.3	1100	1000	1FW3208-1 L 2-AA0 1FW3208-1 L 2-AS0 1FW3208-1 L 2-AM0
	250								
	300								

Shaft design:

Hollow shaft
Plug-on shaft
Solid shaft

A
S
M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3281-3.J.3-....	2500 (1844)	200	0.96	3.78 (33.5)	600 (1323)	1XB7700	200	6SL312-1TE32-0AA3
1FW3283-3.J.3-....	3500 (2582)	292	0.96	4.64 (41.1)	690 (1521)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3285-3.J.3-....	5000 (3688)	400	0.96	5.98 (52.9)	860 (1896)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3287-3.J.3-....	7000 (5163)	534	0.97	7.81 (69.1)	1030 (2271)	1XB7712	502 ⁵⁾	6SL3320-1TE36-1AA3
1FW3150-1.L.2-....	105 (77.4)	11.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	18	6SL312-1TE21-8AA3
1FW3152-1.L.2-....	210 (155)	22.5	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	30	6SL312-1TE23-0AA3
1FW3154-1.L.2-....	315 (232)	33	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	45	6SL312-1TE24-5AA3
1FW3155-1.L.2-....	420 (310)	45	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	45	6SL312-1TE24-5AA3
1FW3156-1.L.2-....	525 (387)	55	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk420	60	6SL312-1TE26-0AA3
1FW3201-1.L.2-....	315 (232)	38	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	18	6SL312-1TE21-8AA3
1FW3202-1.L.2-....	525 (387)	62	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk420	30	6SL312-1TE23-0AA3
1FW3203-1.L.2-....	790 (583)	100	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	45	6SL312-1TE24-5AA3
1FW3204-1.L.2-....	1050 (774)	129	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk630	45	6SL312-1TE24-5AA3
1FW3206-1.L.2-....	1575 (1162)	189	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk630	85	6SL312-1TE28-5AA3
1FW3208-1.L.2-....	2100 (1549)	255	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk630	85	6SL312-1TE28-5AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

⁵⁾ The rated output current of the Motor Module is lower than the rated motor current at 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	Order No.	
Line voltage 480 V 3 AC Smart Line Module/Basic Line Module										
650	280	146.3 (196)	2150 (1586)	250	415	108.3	1050	1000	1FW3281-3■M■3-■AA0	
		204.2 (274)	3000 (2213)	345	421	108.3	1030	1000	1FW3283-3■M■3-■AA0	
		292.7 (393)	4300 (3172)	457	448	108.3	960	1000	1FW3285-3■M■3-■AA0	
		401.6 (539)	5900 (4352)	678	418	108.3	1030	1000	1FW3287-3■M■3-■AA0	
810	150	8.5 (11.4)	100 (73.8)	18	441	94.5	1470	1700	1FW3150-1■P■2-■AA0 1FW3150-1■P■2-■AS0 1FW3150-1■P■2-■AM0	
		17 (22.8)	200 (148)	32.5	448	94.5	1450	1700	1FW3152-1■P■2-■AA0 1FW3152-1■P■2-■AS0 1FW3152-1■P■2-■AM0	
		25.4 (34.1)	300 (221)	47.5	444	94.5	1420	1700	1FW3154-1■P■2-■AA0 1FW3154-1■P■2-■AS0 1FW3154-1■P■2-■AM0	
		33.9 (45.5)	400 (295)	64	432	94.5	1450	1700	1FW3155-1■P■2-■AA0 1FW3155-1■P■2-■AS0 1FW3155-1■P■2-■AM0	
		42.4 (56.9)	500 (369)	76	448	94.5	1380	1700	1FW3156-1■P■2-■AA0 1FW3156-1■P■2-■AS0 1FW3156-1■P■2-■AM0	
		Shaft design:								
		Hollow shaft		A						
		Plug-on shaft		S						
		Solid shaft		M						

For versions, see
Order No. supplements
on pages 6/80 to 6/82

Further rated speeds on request.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3281-3.M.3-....	2500 (1844)	291	0.96	3.78 (33.5)	600 (1323)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3283-3.M.3-....	3500 (2582)	402	0.96	4.64 (41.1)	690 (1521)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3285-3.M.3-....	5000 (3688)	532	0.97	5.98 (52.9)	860 (1896)	1XB7712	490	6SL3320-1TE35-0AA3
1FW3287-3.M.3-....	6850 (5053)	787	0.97	7.81 (69.1)	1030 (2271)	1XB7712	734 ⁵⁾	6SL3320-1TE38-4AA3
1FW3150-1.P.2-....	105 (77.4)	17.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	30	6SL312-1TE23-0AA3
1FW3152-1.P.2-....	210 (155)	33.5	0.93	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	45	6SL312-1TE24-5AA3
1FW3154-1.P.2-....	315 (232)	49	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	60	6SL312-1TE26-0AA3
1FW3155-1.P.2-....	420 (310)	67	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk420	85	6SL312-1TE28-5AA3
1FW3156-1.P.2-....	525 (387)	80	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk420	85	6SL312-1TE28-5AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded. Certain constraints may apply, see order number supplements.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

⁵⁾ The rated output current of the Motor Module is lower than the rated motor current at 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm		
Line voltage 480 V 3 AC Smart Line Module/Basic Line Module										
860	200	22 (29.5)	245 (181)	37	376	106.7	1320	1800	1FW3201-3  P  3-  AS0 1FW3201-3  P  3-  AM0	
		42 (56.3)	465 (343)	68	385	106.7	1290	1800	1FW3202-3  P  3-  AS0 1FW3202-3  P  3-  AM0	
		60 (80.5)	670 (494)	95	396	106.7	1250	1800	1FW3203-3  P  3-  AS0 1FW3203-3  P  3-  AM0	
		83 (111)	920 (679)	135	380	106.7	1310	1800	1FW3204-3  P  3-  AS0 1FW3204-3  P  3-  AM0	
		121 (162)	1340 (988)	189	396	106.7	1260	1800	1FW3206-3  P  3-  AS0 1FW3206-3  P  3-  AM0	
		168 (225)	1870 (1379)	265	392	106.7	1270	1800	1FW3208-3  P  3-  AS0 1FW3208-3  P  3-  AM0	
1300	200	30.5 (40.9)	225 (166)	49	398	160	1890	1800	1FW3201-3  S  3-  AS0 1FW3201-3  S  3-  AM0	
		59 (79.1)	435 (321)	91	407	160	1850	1800	1FW3202-3  S  3-  AS0 1FW3202-3  S  3-  AM0	
		83 (111)	610 (450)	127	408	160	1840	1800	1FW3203-3  S  3-  AS0 1FW3203-3  S  3-  AM0	
		113 (152)	830 (612)	184	382	160	1970	1800	1FW3204-3  S  3-  AS0 1FW3204-3  S  3-  AM0	
		159 (213)	1170 (863)	260	380	160	1980	1800	1FW3206-3  S  3-  AS0 1FW3206-3  S  3-  AM0	
		225 (302)	1640 (1210)	375	371	160	2050	1800	1FW3208-3  S  3-  AS0 1FW3208-3  S  3-  AM0	
									Shaft design: Plug-on shaft Solid shaft	S M

For versions, see
Order No. supplements
on pages 6/81 and 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _r -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _r -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-3.P.. 1FW3201-3.P..	260 (192)	38	88.7	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	45	6SL312-1TE24-5AA3
1FW3202-3.P.. 1FW3202-3.P..	500 (369)	72	91	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	85	6SL312-1TE28-5AA3
1FW3203-3.P.. 1FW3203-3.P..	730 (538)	102	92.2	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk420	132	6SL312-1TE31-3AA3
1FW3204-3.P.. 1FW3204-3.P..	1000 (738)	145	92.8	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.P.. 1FW3206-3.P..	1500 (1106)	210	93.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	200	6SL312-1TE32-0AA4
1FW3208-3.P.. 1FW3208-3.P..	2100 (1549)	295	93.7	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3201-3.S.. 1FW3201-3.S..	260 (192)	54	90.1	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	60	6SL312-1TE26-0AA3
1FW3202-3.S.. 1FW3202-3.S..	500 (369)	102	92.2	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	132	6SL312-1TE31-3AA3
1FW3203-3.S.. 1FW3203-3.S..	730 (538)	149	93.5	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk630	132	6SL312-1TE31-3AA3
1FW3204-3.S.. 1FW3204-3.S..	1000 (738)	220	94	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.S.. 1FW3206-3.S..	1500 (1106)	330	94.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3208-3.S.. 1FW3208-3.S..	2100 (1549)	470	94.6	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	490	6SL3320-1TE35-0AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling		
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}			
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.		
Line voltage 480 V 3 AC Active Line Module											
170	200	5.3 (7.11)	300 (221)	13	416	39.7	380	1000	1FW3201-1 ■ E ■ 2- ■ AA0 1FW3201-1 ■ E ■ 2- ■ AS0 1FW3201-1 ■ E ■ 2- ■ AM0		
		8.9 (11.9)	500 (369)	21	392	39.7	380	1000	1FW3202-1 ■ E ■ 2- ■ AA0 1FW3202-1 ■ E ■ 2- ■ AS0 1FW3202-1 ■ E ■ 2- ■ AM0		
		13.4 (18.0)	750 (553)	31	399	39.7	370	1000	1FW3203-1 ■ E ■ 2- ■ AA0 1FW3203-1 ■ E ■ 2- ■ AS0 1FW3203-1 ■ E ■ 2- ■ AM0		
		17.8 (23.9)	1000 (738)	40	393	39.7	360	1000	1FW3204-1 ■ E ■ 2- ■ AA0 1FW3204-1 ■ E ■ 2- ■ AS0 1FW3204-1 ■ E ■ 2- ■ AM0		
		26.7 (35.8)	1500 (1106)	65	371	39.7	390	1000	1FW3206-1 ■ E ■ 2- ■ AA0 1FW3206-1 ■ E ■ 2- ■ AS0 1FW3206-1 ■ E ■ 2- ■ AM0		
		35.6 (47.7)	2000 (1475)	84	377	39.7	380	1000	1FW3208-1 ■ E ■ 2- ■ AA0 1FW3208-1 ■ E ■ 2- ■ AS0 1FW3208-1 ■ E ■ 2- ■ AM0		
	280	44.5 (59.7)	2500 (1844)	83	438	28.3	290	1000	1FW3281-2 ■ E ■ 3- ■ AA0		
		61 (81.8)	3450 (2545)	114	433	28.3	290	1000	1FW3283-2 ■ E ■ 3- ■ AA0		
		89 (119)	5000 (3688)	161	440	28.3	290	1000	1FW3285-2 ■ E ■ 3- ■ AA0		
		125 (168)	7000 (5163)	230	429	28.3	290	1000	1FW3287-2 ■ E ■ 3- ■ AA0		
300	280	77 (103)	2450 (1807)	127	472	50	460	1000	1FW3281-2 ■ G ■ 3- ■ AA0		
		107 (143)	3400 (2508)	175	471	50	460	1000	1FW3283-2 ■ G ■ 3- ■ AA0		
		154 (207)	4900 (3614)	245	486	50	440	1000	1FW3285-2 ■ G ■ 3- ■ AA0		
		215 (288)	6900 (5089)	355	470	50	460	1000	1FW3287-2 ■ G ■ 3- ■ AA0		
									Shaft design: Hollow shaft Plug-on shaft Solid shaft		A S M

Shaft design:

Hollow shaft
Plug-on shaft
Solid shaft

A
S
M

For versions, see
Order No. supplements
on pages 6/80 to 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-1.E..	315 (232)	13	0.91	0.22 (1.95)	127 (280)	gk230	18	6SL312-1TE21-8AA3
1FW3201-1.E..				0.27 (2.39)	171 (377)			
1FW3201-1.E..				0.23 (2.04)	179 (395)			
1FW3202-1.E..	525 (387)	22	0.93	0.36 (3.19)	156 (344)	gk230	30	6SL312-1TE23-0AA3
1FW3202-1.E..				0.39 (3.45)	200 (441)			
1FW3202-1.E..				0.35 (3.10)	215 (474)			
1FW3203-1.E..	790 (583)	32	0.94	0.49 (4.34)	182 (401)	gk230	45	6SL312-1TE24-5AA3
1FW3203-1.E..				0.52 (4.60)	225 (496)			
1FW3203-1.E..				0.46 (4.07)	240 (529)			
1FW3204-1.E..	1050 (774)	42	0.94	0.70 (6.20)	225 (496)	gk230	45	6SL312-1TE24-5AA3
1FW3204-1.E..				0.70 (6.20)	275 (606)			
1FW3204-1.E..				0.61 (5.40)	285 (628)			
1FW3206-1.E..	1575 (1162)	68	0.94	0.97 (8.59)	280 (617)	gk420	85	6SL312-1TE28-5AA3
1FW3206-1.E..				0.94 (8.32)	330 (728)			
1FW3206-1.E..				0.84 (7.43)	345 (761)			
1FW3208-1.E..	2100 (1549)	88	0.94	1.31 (11.6)	350 (772)	gk420	85	6SL312-1TE28-5AA3
1FW3208-1.E..				1.24 (11.0)	400 (882)			
1FW3208-1.E..				1.11 (9.82)	415 (915)			
1FW3281-2.E..	2550 (1881)	84	0.94	3.78 (33.5)	600 (1323)	1XB7700	85	6SL312-1TE28-5AA3
1FW3283-2.E..	3550 (2618)	116	0.95	4.64 (41.1)	690 (1521)	1XB7700	132	6SL312-1TE31-3AA3
1FW3285-2.E..	5100 (3782)	163	0.95	5.98 (52.9)	860 (1896)	1XB7700	200	6SL312-1TE32-0AA4
1FW3287-2.E..	7150 (5274)	234	0.96	7.81 (69.1)	1030 (2271)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3281-2.G..	2550 (1881)	131	0.95	3.78 (33.5)	600 (1323)	1XB7700	132	6SL312-1TE31-3AA3
1FW3283-2.G..	3550 (2618)	181	0.96	4.64 (41.1)	690 (1521)	1XB7700	200	6SL312-1TE32-0AA4
1FW3285-2.G..	5100 (3782)	251	0.96	5.98 (52.9)	860 (1896)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3287-2.G..	7150 (5274)	365	0.96	7.81 (69.1)	1030 (2271)	1XB7700	380	6SL3320-1TE33-8AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling		
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}			
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.		
Line voltage 480 V 3 AC Active Line Module											
360	150	3.8 (5.10)	100 (73.8)	8	472	42	630	1700	1FW3150-1 ■ H ■ 2- ■ AA0 1FW3150-1 ■ H ■ 2- ■ AS0 1FW3150-1 ■ H ■ 2- ■ AM0		
		7.5 (10.1)	200 (148)	14	478	42	630	1700	1FW3152-1 ■ H ■ 2- ■ AA0 1FW3152-1 ■ H ■ 2- ■ AS0 1FW3152-1 ■ H ■ 2- ■ AM0		
		11.3 (15.2)	300 (221)	20.5	479	42	610	1700	1FW3154-1 ■ H ■ 2- ■ AA0 1FW3154-1 ■ H ■ 2- ■ AS0 1FW3154-1 ■ H ■ 2- ■ AM0		
		15.1 (20.2)	400 (295)	28	467	42	630	1700	1FW3155-1 ■ H ■ 2- ■ AA0 1FW3155-1 ■ H ■ 2- ■ AS0 1FW3155-1 ■ H ■ 2- ■ AM0		
		18.8 (25.2)	500 (369)	34	477	42	610	1700	1FW3156-1 ■ H ■ 2- ■ AA0 1FW3156-1 ■ H ■ 2- ■ AS0 1FW3156-1 ■ H ■ 2- ■ AM0		
	200	11.3 (15.2)	300 (221)	23	448	84	680	1000	1FW3201-1 ■ H ■ 2- ■ AA0 1FW3201-1 ■ H ■ 2- ■ AS0 1FW3201-1 ■ H ■ 2- ■ AM0		
		18.8 (25.2)	500 (369)	37	434	84	670	1000	1FW3202-1 ■ H ■ 2- ■ AA0 1FW3202-1 ■ H ■ 2- ■ AS0 1FW3202-1 ■ H ■ 2- ■ AM0		
		28.3 (38.0)	750 (553)	59	409	84	710	1000	1FW3203-1 ■ H ■ 2- ■ AA0 1FW3203-1 ■ H ■ 2- ■ AS0 1FW3203-1 ■ H ■ 2- ■ AM0		
		37.7 (50.6)	1000 (738)	74	422	84	670	1000	1FW3204-1 ■ H ■ 2- ■ AA0 1FW3204-1 ■ H ■ 2- ■ AS0 1FW3204-1 ■ H ■ 2- ■ AM0		
		56.5 (75.8)	1500 (1106)	118	418	84	700	1000	1FW3206-1 ■ H ■ 2- ■ AA0 1FW3206-1 ■ H ■ 2- ■ AS0 1FW3206-1 ■ H ■ 2- ■ AM0		
		75.4 (101)	2000 (1475)	153	412	84	690	1000	1FW3208-1 ■ H ■ 2- ■ AA0 1FW3208-1 ■ H ■ 2- ■ AS0 1FW3208-1 ■ H ■ 2- ■ AM0		
										Shaft design: Hollow shaft Plug-on shaft Solid shaft	

For versions, see
Order No. supplements
on pages 6/80 to 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$	I_0 at $\Delta T=100\text{ K}$	η	J	m		Rated output current ⁴⁾	For additional versions and components see SINAMICS S120 drive system
	Nm (lb _f -ft)	A		kgm ² (lb _f -in-s ²)	kg (lb)	Type	A	Order No.
1FW3150-1.H.. 1FW3150-1.H.. 1FW3150-1.H..	105 (77.4)	7.3	0.89	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	9	6SL312-1TE21-0AA3
1FW3152-1.H.. 1FW3152-1.H.. 1FW3152-1.H..	210 (155)	15	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	18	6SL312-1TE21-8AA3
1FW3154-1.H.. 1FW3154-1.H.. 1FW3154-1.H..	315 (232)	21.5	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	30	6SL312-1TE23-0AA3
1FW3155-1.H.. 1FW3155-1.H.. 1FW3155-1.H..	420 (310)	29	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	30	6SL312-1TE23-0AA3
1FW3156-1.H.. 1FW3156-1.H.. 1FW3156-1.H..	525 (387)	35	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk230	45	6SL312-1TE24-5AA3
1FW3201-1.H.. 1FW3201-1.H.. 1FW3201-1.H..	315 (232)	24	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	30	6SL312-1TE23-0AA3
1FW3202-1.H.. 1FW3202-1.H.. 1FW3202-1.H..	525 (387)	39	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk230	45	6SL312-1TE24-5AA3
1FW3203-1.H.. 1FW3203-1.H.. 1FW3203-1.H..	790 (583)	62	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	60	6SL312-1TE26-0AA3
1FW3204-1.H.. 1FW3204-1.H.. 1FW3204-1.H..	1050 (774)	77	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk420	85	6SL312-1TE28-5AA3
1FW3206-1.H.. 1FW3206-1.H.. 1FW3206-1.H..	1575 (1162)	121	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk630	132	6SL312-1TE31-3AA3
1FW3208-1.H.. 1FW3208-1.H.. 1FW3208-1.H..	2100 (1549)	160	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk630	200	6SL312-1TE32-0AA4

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

6

- ¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).
²⁾ Maximum speed that must not be exceeded.
³⁾ Optimum efficiency in continuous duty.
⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.	
Line voltage 480 V 3 AC Active Line Module										
480	280	116 (156)	2300 (1696)	186	462	80	720	1000	1FW3281-3■J■3-■AA0	
		161 (216)	3200 (2360)	270	442	80	750	1000	1FW3283-3■J■3-■AA0	
		230 (308)	4600 (3393)	370	458	80	720	1000	1FW3285-3■J■3-■AA0	
		320 (429)	6400 (4721)	495	480	80	690	1000	1FW3287-3■J■3-■AA0	
600	150	6.3 (8.45)	100 (73.8)	12	488	70	960	1700	1FW3150-1■L■2-■AA0 1FW3150-1■L■2-■AS0 1FW3150-1■L■2-■AM0	
		12.6 (16.9)	200 (148)	22	497	70	960	1700	1FW3152-1■L■2-■AA0 1FW3152-1■L■2-■AS0 1FW3152-1■L■2-■AM0	
		18.8 (25.2)	300 (221)	32	497	70	950	1700	1FW3154-1■L■2-■AA0 1FW3154-1■L■2-■AS0 1FW3154-1■L■2-■AM0	
		25.1 (33.7)	400 (295)	43	490	70	960	1700	1FW3155-1■L■2-■AA0 1FW3155-1■L■2-■AS0 1FW3155-1■L■2-■AM0	
		31.4 (42.1)	500 (369)	53	497	70	950	1700	1FW3156-1■L■2-■AA0 1FW3156-1■L■2-■AS0 1FW3156-1■L■2-■AM0	
	200	17 (22.8)	270 (199)	33	433	140	1110	1000	1FW3201-1■L■2-■AA0 1FW3201-1■L■2-■AS0 1FW3201-1■L■2-■AM0	
		28.3 (38.0)	450 (332)	53	426	140	1070	1000	1FW3202-1■L■2-■AA0 1FW3202-1■L■2-■AS0 1FW3202-1■L■2-■AM0	
		42.7 (57.3)	680 (502)	83	415	140	1110	1000	1FW3203-1■L■2-■AA0 1FW3203-1■L■2-■AS0 1FW3203-1■L■2-■AM0	
		56.5 (75.8)	900 (664)	106	421	140	1060	1000	1FW3204-1■L■2-■AA0 1FW3204-1■L■2-■AS0 1FW3204-1■L■2-■AM0	
		79.2 (106)	1260 (929)	152	402	140	1090	1000	1FW3206-1■L■2-■AA0 1FW3206-1■L■2-■AS0 1FW3206-1■L■2-■AM0	
		105.6 (142)	1680 (1239)	205	419	140	1100	1000	1FW3208-1■L■2-■AA0 1FW3208-1■L■2-■AS0 1FW3208-1■L■2-■AM0	
				</						

For versions, see
Order No. supplements
on pages 6/80 to 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _f -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _f -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3281-3.J..	2500 (1844)	200	0.96	3.78 (33.5)	600 (1323)	1XB7700	200	6SL312-1TE32-0AA4
1FW3283-3.J..	3500 (2582)	292	0.96	4.64 (41.1)	690 (1521)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3285-3.J..	5000 (3688)	400	0.96	5.98 (52.9)	860 (1896)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3287-3.J..	7000 (5163)	534	0.97	7.81 (69.1)	1030 (2271)	1XB7712	605	6SL3320-1TE36-1AA3
1FW3150-1.L.. 1FW3150-1.L.. 1FW3150-1.L..	105 (77.4)	11.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	18	6SL312-1TE21-8AA3
1FW3152-1.L.. 1FW3152-1.L.. 1FW3152-1.L..	210 (155)	22.5	0.92	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	30	6SL312-1TE23-0AA3
1FW3154-1.L.. 1FW3154-1.L.. 1FW3154-1.L..	315 (232)	33	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	45	6SL312-1TE24-5AA3
1FW3155-1.L.. 1FW3155-1.L.. 1FW3155-1.L..	420 (310)	45	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk230	45	6SL312-1TE24-5AA3
1FW3156-1.L.. 1FW3156-1.L.. 1FW3156-1.L..	525 (387)	55	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk420	60	6SL312-1TE26-0AA3
1FW3201-1.L.. 1FW3201-1.L.. 1FW3201-1.L..	315 (232)	38	0.92	0.22 (1.95) 0.27 (2.39) 0.23 (2.04)	127 (280) 171 (377) 179 (395)	gk230	45	6SL312-1TE24-5AA3
1FW3202-1.L.. 1FW3202-1.L.. 1FW3202-1.L..	525 (387)	62	0.94	0.36 (3.19) 0.39 (3.45) 0.35 (3.10)	156 (344) 200 (441) 215 (474)	gk420	60	6SL312-1TE26-0AA3
1FW3203-1.L.. 1FW3203-1.L.. 1FW3203-1.L..	790 (583)	100	0.95	0.49 (4.34) 0.52 (4.60) 0.46 (4.07)	182 (401) 225 (496) 240 (529)	gk420	85	6SL312-1TE28-5AA3
1FW3204-1.L.. 1FW3204-1.L.. 1FW3204-1.L..	1050 (774)	129	0.95	0.70 (6.20) 0.70 (6.20) 0.61 (5.40)	225 (496) 275 (606) 285 (628)	gk630	132	6SL312-1TE31-3AA3
1FW3206-1.L.. 1FW3206-1.L.. 1FW3206-1.L..	1575 (1162)	189	0.95	0.97 (8.59) 0.94 (8.32) 0.84 (7.43)	280 (617) 330 (728) 345 (761)	gk630	200	6SL312-1TE32-0AA4
1FW3208-1.L.. 1FW3208-1.L.. 1FW3208-1.L..	2100 (1549)	256	0.94	1.31 (11.6) 1.24 (11.0) 1.11 (9.82)	350 (772) 400 (882) 415 (915)	gk630	210	6SL3320-1TE32-1AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}		
rpm		kW (HP)	Nm (lb _F -ft)	A	V	Hz	rpm	rpm	Order No.	
Line voltage 480 V 3 AC 480 V Active Line Module										
730	280	157 (210)	2050 (1512)	245	461	121.7	1050	1000	1FW3281-3■M■3-■AA0	
		220 (295)	2900 (2139)	340	470	121.7	1030	1000	1FW3283-3■M■3-■AA0	
		315 (422)	4150 (3061)	450	497	121.7	960	1000	1FW3285-3■M■3-■AA0	
		435 (583)	5700 (4204)	660	464	121.7	1030	1000	1FW3287-3■M■3-■AA0	
890	150	8.9 (11.9)	95 (70.1)	18	464	103.8	1470	1700	1FW3150-1■P■2-■AA0 1FW3150-1■P■2-■AS0 1FW3150-1■P■2-■AM0	
		18.2 (24.4)	195 (144)	31	482	103.8	1450	1700	1FW3152-1■P■2-■AA0 1FW3152-1■P■2-■AS0 1FW3152-1■P■2-■AM0	
		27.5 (36.9)	295 (218)	46	479	103.8	1420	1700	1FW3154-1■P■2-■AA0 1FW3154-1■P■2-■AS0 1FW3154-1■P■2-■AM0	
		36.8 (49.3)	395 (291)	63	470	103.8	1450	1700	1FW3155-1■P■2-■AA0 1FW3155-1■P■2-■AS0 1FW3155-1■P■2-■AM0	
		45.7 (61.3)	490 (361)	74	492	103.8	1380	1700	1FW3156-1■P■2-■AA0 1FW3156-1■P■2-■AS0 1FW3156-1■P■2-■AM0	
		Shaft design:								
		Hollow shaft	A							
		Plug-on shaft	S							
		Solid shaft	M							

For versions, see
Order No. supplements
on pages 6/80 to 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$	I_0 at $\Delta T=100\text{ K}$	η	J	m		Rated output current ⁴⁾	For additional versions and components see SINAMICS S120 drive system
	Nm (lb _f -ft)	A		kgm ² (lb _f -in-s ²)	kg (lb)	Type	A	Order No.
1FW3281-3.M..	2500 (1844)	291	0.96	3.78 (33.5)	600 (1323)	1XB7700	260	6SL3320-1TE32-6AA3
1FW3283-3.M..	3500 (2582)	402	0.96	4.64 (41.1)	690 (1521)	1XB7700	380	6SL3320-1TE33-8AA3
1FW3285-3.M..	5000 (3688)	532	0.97	5.98 (52.9)	860 (1896)	1XB7712	490	6SL3320-1TE35-0AA3
1FW3287-3.M..	6850 (5053)	787	0.97	7.81 (69.1)	1030 (2271)	1XB7712	745	6SL3320-1TE37-5AA3
1FW3150-1.P.. 1FW3150-1.P.. 1FW3150-1.P..	105 (77.4)	17.5	0.90	0.12 (1.06) 0.14 (1.24) 0.06 (0.53)	87 (192) 102 (225) 102 (225)	gk230	30	6SL312-1TE23-0AA3
1FW3152-1.P.. 1FW3152-1.P.. 1FW3152-1.P..	210 (155)	33.5	0.93	0.16 (1.42) 0.20 (1.77) 0.09 (0.80)	108 (238) 124 (273) 121 (267)	gk230	45	6SL312-1TE24-5AA3
1FW3154-1.P.. 1FW3154-1.P.. 1FW3154-1.P..	315 (232)	49	0.93	0.20 (1.77) 0.25 (2.21) 0.13 (1.15)	129 (284) 143 (315) 143 (315)	gk230	60	6SL312-1TE26-0AA3
1FW3155-1.P.. 1FW3155-1.P.. 1FW3155-1.P..	420 (310)	67	0.94	0.24 (2.12) 0.29 (2.57) 0.17 (1.50)	150 (331) 163 (359) 164 (362)	gk420	85	6SL312-1TE28-5AA3
1FW3156-1.P.. 1FW3156-1.P.. 1FW3156-1.P..	525 (387)	80	0.94	0.28 (2.48) 0.34 (3.01) 0.20 (1.77)	171 (377) 184 (406) 187 (412)	gk420	85	6SL312-1TE28-5AA3

Format:

Booksize
Chassis

1
3

Cooling:

Internal air cooling
External air cooling
Cold-plate cooling

0
1
6

Motor Module:

Single Motor Module

1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Rated torque	Rated current	Rated voltage	Rated frequency	Operating speed, max. ¹⁾	Speed, max. ²⁾	SIMOTICS T-1FW3 complete torque motors Water cooling
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	V_{rated}	f_{rated}	$n_{\text{max, Inv}}$	n_{max}	
rpm		kW (HP)	Nm (lb _f -ft)	A	V	Hz	rpm	rpm	
Line voltage 480 V 3 AC Active Line Module									
950	200	24 (32.2)	240 (177)	36.5	416	106.7	1320	1800	1FW3201-3■P■3-■AS0 1FW3201-3■P■3-■AM0
		46 (61.7)	460 (339)	67	425	106.7	1290	1800	1FW3202-3■P■3-■AS0 1FW3202-3■P■3-■AM0
		66 (88.5)	660 (487)	93	437	106.7	1250	1800	1FW3203-3■P■3-■AS0 1FW3203-3■P■3-■AM0
		90 (121)	900 (664)	133	419	106.7	1310	1800	1FW3204-3■P■3-■AS0 1FW3204-3■P■3-■AM0
		130 (174)	1310 (966)	185	437	106.7	1260	1800	1FW3206-3■P■3-■AS0 1FW3206-3■P■3-■AM0
		182 (244)	1830 (1350)	260	433	106.7	1270	1800	1FW3208-3■P■3-■AS0 1FW3208-3■P■3-■AM0
1450	200	33.5 (44.9)	220 (162)	48	444	160	1890	1800	1FW3201-3■S■3-■AS0 1FW3201-3■S■3-■AM0
		64 (85.8)	420 (310)	88	454	160	1850	1800	1FW3202-3■S■3-■AS0 1FW3202-3■S■3-■AM0
		88 (118)	580 (428)	121	456	160	1840	1800	1FW3203-3■S■3-■AS0 1FW3203-3■S■3-■AM0
		121 (162)	800 (590)	178	427	160	1970	1800	1FW3204-3■S■3-■AS0 1FW3204-3■S■3-■AM0
		167 (224)	1100 (811)	245	424	160	1980	1800	1FW3206-3■S■3-■AS0 1FW3206-3■S■3-■AM0
		235 (315)	1540 (1136)	350	413	160	2050	1800	1FW3208-3■S■3-■AS0 1FW3208-3■S■3-■AM0
		Shaft design: Plug-on shaft Solid shaft							

For versions, see
Order No. supplements
on pages 6/81 and 6/82

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Motor type (repeated)	Static torque	Stall current	Effi- ciency ³⁾	Moment of inertia	Weight, approx.	Terminal box	SINAMICS S120 Motor Module	
	M_0 at $\Delta T=100\text{ K}$ Nm (lb _r -ft)	I_0 at $\Delta T=100\text{ K}$ A	η	J kgm ² (lb _r -in-s ²)	m kg (lb)	Type	Rated output current ⁴⁾ I_{rated} A	For additional versions and components see SINAMICS S120 drive system Order No.
1FW3201-3.P.. 1FW3201-3.P..	260 (192)	38	88.7	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	45	6SL312-1TE24-5AA3
1FW3202-3.P.. 1FW3202-3.P..	500 (369)	72	91	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	85	6SL312-1TE28-5AA3
1FW3203-3.P.. 1FW3203-3.P..	730 (538)	102	92.2	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk420	132	6SL312-1TE31-3AA3
1FW3204-3.P.. 1FW3204-3.P..	1000 (738)	145	92.8	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.P.. 1FW3206-3.P..	1500 (1106)	210	93.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	200	6SL312-1TE32-0AA4
1FW3208-3.P.. 1FW3208-3.P..	2100 (1549)	295	93.7	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3201-3.S.. 1FW3201-3.S..	260 (192)	54	90.1	0.27 (2.39) 0.22 (1.95)	159 (351) 176 (388)	gk420	60	6SL312-1TE26-0AA3
1FW3202-3.S.. 1FW3202-3.S..	500 (369)	102	92.2	0.40 (3.54) 0.34 (3.01)	188 (415) 207 (456)	gk420	132	6SL312-1TE31-3AA3
1FW3203-3.S.. 1FW3203-3.S..	730 (538)	149	93.5	0.52 (4.60) 0.45 (3.98)	215 (474) 237 (523)	gk630	132	6SL312-1TE31-3AA3
1FW3204-3.S.. 1FW3204-3.S..	1000 (738)	220	94	0.69 (6.11) 0.61 (5.40)	259 (571) 283 (624)	gk630	200	6SL312-1TE32-0AA4
1FW3206-3.S.. 1FW3206-3.S..	1500 (1106)	330	94.3	0.94 (8.32) 0.83 (7.35)	342 (754) 370 (816)	1XB7700	310	6SL3320-1TE33-1AA3
1FW3208-3.S.. 1FW3208-3.S..	2100 (1549)	470	94.6	1.24 (11.0) 1.11 (9.82)	412 (908) 446 (983)	1XB7700	490	6SL3320-1TE35-0AA3

Format:	
Booksize	1
Chassis	3
Cooling:	
Internal air cooling	0
External air cooling	1
Cold-plate cooling	6
Motor Module:	
Single Motor Module	1

¹⁾ Maximum permissible operating speed based on the induced voltage in the motor and the voltage strength of the converter (without protective circuit).

²⁾ Maximum speed that must not be exceeded.

³⁾ Optimum efficiency in continuous duty.

⁴⁾ The rated pulse frequencies must be taken into account. The rated motor data is valid for 4 kHz or 2 kHz.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Order No. supplements for shaft design: Hollow shaft

Data position of the Order No.	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16	-	Z			
Shaft height 150	1	F	W	3	1	5	.	-	1	■	.	■	2	-	■	A	A	0	-	Z			
Shaft height 200	1	F	W	3	2	0	.	-	1	■	.	■	2	-	■	A	A	0	-	Z			
Shaft height 280	1	F	W	3	2	8	.	-	.	■	.	■	3	-	■	A	A	0	-	Z			
Overall length ¹⁾	.																						
Standard design 1FW315/1FW320										1													
Standard design 1FW328										2													
High-speed version 1FW328										3													
Encoder systems for motors <u>without</u> DRIVE-CLiQ interface										Mounting													
Without encoder										Coaxial										W	6		
IC2048S/R encoder										Over belt drive										A	7		
AM2048S/R encoder										Over belt drive										E	7		
Multipole resolver										Over belt drive										S	7		
Encoder systems for motors <u>with</u> DRIVE-CLiQ interface										Mounting													
IC22DQ encoder										Over belt drive										D	7		
AM22DQ encoder										Belt-mounted										F	7		
R15DQ resolver										Over belt drive										U	7		
Rated speeds at 380 V to 480 V 3 AC (winding design)																							
140 rpm/150 rpm/160 rpm for standard design 1FW320/1FW328												E											
220 rpm/250 rpm/270 rpm for standard design 1FW328												G											
270 rpm/300 rpm/330 rpm for standard design 1FW315/1FW320												H											
350 rpm/400 rpm/430 rpm for standard design 1FW328												J											
450 rpm/500 rpm/550 rpm for standard design 1FW315/1FW320												L											
520 rpm/600 rpm/650 rpm for standard design 1FW328												M											
670 rpm/750 rpm/810 rpm for standard design 1FW315												P											
Type of construction																							
IM B14 for 1FW315/1FW320 (flange-mounted without base, with threaded hole)													2										
IM B35 for 1FW328 (hollow-shaft design (flange-mounted and base-mounted))													3										
Power connection (view of DE)										Cable outlet													
Terminal box top										Transverse right											5		
Terminal box top										Transverse left											6		
Terminal box top										NDE											7		
Terminal box top										DE											8		
Shaft design																							
Hollow shaft																	A						
Special version (order codes are required for options)																				-	Z		

¹⁾ Not selectable. Determined by the choice of rated power.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors
Water cooling

Order No. supplements for shaft design: Plug-on shaft

Data position of the Order No.	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16	-	Z					
Shaft height 150	1	F	W	3	1	5	.	-	1	■	.	6	2	-	■	A	S	0	-	Z					
Shaft height 200	1	F	W	3	2	0	.	-	.	■	.	6	2	-	■	A	S	0	-	Z					
Overall length ¹⁾							.																		
Standard design 1FW315/1FW320										1															
High-speed version 1FW320										3															
Encoder systems for motors <u>without</u> DRIVE-CLiQ interface										Mounting															
Without encoder										Coaxial										W	6				
AM2048S/R encoder										Coaxial										E	6				
Encoder systems for motors <u>with</u> DRIVE-CLiQ interface										Mounting															
AS24DQI encoder										Coaxial										B	6				
AM24DQI encoder										Coaxial										C	6				
Rated speeds at 380 V to 480 V 3 AC (winding design)																									
140 rpm/150 rpm/160 rpm for standard design 1FW320											E														
270 rpm/300 rpm/330 rpm for standard design 1FW315/1FW320											H														
450 rpm/500 rpm/550 rpm for standard design 1FW315/1FW320											L														
670 rpm/750 rpm/810 rpm for standard design 1FW315											P														
710 rpm/1050 rpm for high-speed design 1FW320											P														
Type of construction																									
IM B14 for 1FW315/1FW320 (flange-mounted without base, with threaded hole)													2												
Power connection (view of DE)										Cable outlet															
Terminal box top										Transverse right										5					
Terminal box top										Transverse left										6					
Terminal box top										NDE										7					
Terminal box top										DE										8					
Shaft design																									
Plug-on shaft																	S								
Special version (order codes are required for options)																									
											- Z														

¹⁾ Not selectable. Determined by the choice of rated power.

SIMOTICS linear and torque motors

SIMOTICS T torque motors for SINAMICS S120

SIMOTICS T-1FW3 complete torque motors

Water cooling

Order No. supplements for shaft design: Solid shaft

Data position of the Order No.	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16	-	Z	
Shaft height 150	1	F	W	3	1	5	.	-	1	■	.	6	2	-	■	A	M	0	-	Z	
Shaft height 200	1	F	W	3	2	0	.	-	.	■	.	6	2	-	■	A	M	0	-	Z	
Overall length ¹⁾							.														
Standard design 1FW315/1FW320										1											
High-speed version 1FW320										3											
Encoder systems for motors <u>without</u> DRIVE-CLiQ interface										Mounting											
Without encoder										Coaxial											
AM2048S/R encoder										Coaxial											
Encoder systems for motors <u>with</u> DRIVE-CLiQ interface										Mounting											
AS24DQI encoder										Coaxial											
AM24DQI encoder										Coaxial											
Rated speeds at 380 V to 480 V 3 AC (winding design)																					
140 rpm/150 rpm/160 rpm for standard design 1FW320										E											
270 rpm/300 rpm/330 rpm for standard design 1FW315/1FW320										H											
450 rpm/500 rpm/550 rpm for standard design 1FW315/1FW320										L											
670 rpm/750 rpm/810 rpm for standard design 1FW315										P											
710 rpm/1050 rpm for high-speed design 1FW320										P											
Type of construction																					
IM B14 for 1FW315/1FW320 (flange-mounted without base, with threaded hole)										2											
Power connection (view of DE)										Cable outlet											
Terminal box top										Transverse right											
Terminal box top										Transverse left											
Terminal box top										NDE											
Terminal box top										DE											
Shaft design																					
Solid shaft										M											
Special version (order codes are required for options)										- Z											

¹⁾ Not selectable. Determined by the choice of rated power.