

Synchronous motors

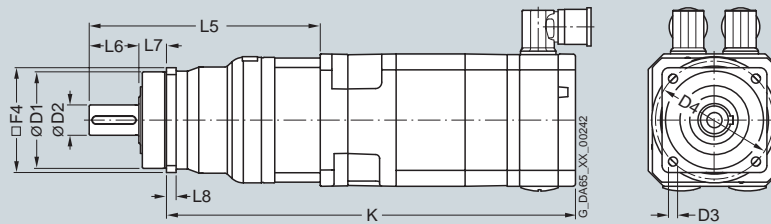
Dimensional drawings

1FT6 motors without/with DRIVE-CLiQ
with SP+ planetary gearbox, single-stage

Dimensional drawings

For motors		Dimensions in mm (inches)										Encoder system:				
Shaft height	Type	F4	Planetary gearbox Type	D1	D2	D3	D4	L5	L6	L7	L8	Resolver		Incr. encoder Absolute encoder		
												without brake K	with brake K	without brake K	with brake K	
1FT6 with SP+ planetary gearbox, single-stage, type of construction IM B5, natural cooling, with connector, without/with brake																
28	1FT6021	62 (2.44)	SP060S-MF1	60 (2.36)	16 (0.63)	5.5 (0.22)	68 (2.68)	138 (5.43)	28 (1.10)	20 (0.79)	6 (0.24)	283 (11.14)	308 (12.13)	283 (11.14)	308 (12.13)	
	1FT6024											323 (12.72)	348 (13.70)	323 (12.72)	348 (13.70)	
36	1FT6031	62 (2.44)	SP060S-MF1	60 (2.36)	16 (0.63)	5.5 (0.22)	68 (2.68)	142 (5.59)	28 (1.10)	20 (0.79)	6 (0.24)	274 (10.79)	294 (11.57)	314 (12.36)	334 (13.15)	
	1FT6034											314 (12.36)	334 (13.15)	354 (13.94)	374 (14.72)	
	1FT6034											76 (2.99)	SP075S-MF1	70 (2.76)	22 (0.87)	6.6 (0.26)
48	1FT6041	76 (2.99)	SP075S-MF1	70 (2.76)	22 (0.87)	6.6 (0.26)	85 (3.35)	168 (6.61)	36 (1.42)	20 (0.79)	7 (0.28)	297 (11.69)	332 (13.07)	340 (13.39)	375 (14.76)	
	1FT6044											347 (13.66)	382 (15.04)	390 (15.35)	425 (16.73)	
63	1FT6061	101 (3.98)	SP100S-MF1	90 (3.54)	32 (1.26)	9 (0.35)	120 (4.72)	217 (8.54)	58 (2.28)	30 (1.18)	10 (0.39)	327 (12.87)	357 (14.06)	357 (14.06)	387 (15.24)	
	1FT6062											352 (13.86)	382 (15.04)	382 (15.04)	412 (16.22)	
	1FT6064											402 (15.83)	432 (17.01)	432 (17.01)	462 (18.19)	
80	1FT6081	141 (5.55)	SP140S-MF1	130 (5.12)	40 (1.57)	11 (0.43)	165 (6.50)	283 (11.14)	82 (3.23)	30 (1.18)	12 (0.47)	392 (15.43)	419 (16.50)	392 (15.43)	419 (16.50)	
	1FT6082											417 (16.42)	444 (17.48)	417 (16.42)	444 (17.48)	
	1FT6084											467 (18.39)	513 (20.20)	467 (18.39)	513 (20.20)	
	1FT6086											517 (20.35)	563 (22.17)	517 (20.35)	563 (22.17)	
	1FT6086											182 (7.17)	SP180S-MF1	160 (6.30)	55 (2.17)	13.5 (0.53)

1FT602
1FT603
1FT604
1FT606
1FT608



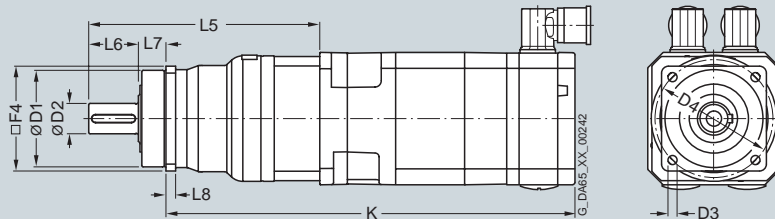
Synchronous motors

Dimensional drawings

1FT6 motors without/with DRIVE-CLiQ with SP+ planetary gearbox, single-stage

Dimensional drawings

For motor		Dimensions in mm (inches)										Encoder system:				
Shaft height	Type	F4	Planetary gearbox Type	D1	D2	D3	D4	L5	L6	L7	L8	Resolver		Incrim. encoder Absolute encoder		
												without brake K	with brake K	without brake K	with brake K	
1FT6 with SP+ planetary gearbox, single-stage, type of construction IM B5, natural cooling, with connector, without/with brake																
100	1FT6102	182 (7.17)	SP180S-MF1	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	310 (12.20)	82 (3.23)	30 (1.18)	15 (0.59)	493 (19.41)	539 (21.22)	493 (19.41)	539 (21.22)	
	1FT6105											568 (22.36)	614 (24.17)	568 (22.36)	614 (24.17)	
	1FT6105	215 (8.46)	SP210S-MF1	180 (7.09)	75 (2.95)	17 (0.67)	250 (9.84)	385 (15.16)	105 (4.13)	38 (1.50)	17 (0.67)	612 (24.09)	658 (25.91)	612 (24.09)	658 (25.91)	
	1FT6108	182 (7.17)	SP180S-MF1	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	310 (12.20)	82 (3.23)	30 (1.18)	15 (0.59)	668 (26.30)	714 (28.11)	668 (26.30)	714 (28.11)	
		215 (8.46)	SP210S-MF1	180 (7.09)	75 (2.95)	17 (0.67)	250 (9.84)	385 (15.16)	105 (4.13)	38 (1.50)	17 (0.67)	712 (28.03)	758 (29.84)	712 (28.03)	758 (29.84)	
132	1FT6132	215 (8.46)	SP210S-MF1	180 (7.09)	75 (2.95)	17 (0.67)	250 (9.84)	385 (15.16)	105 (4.13)	38 (1.50)	17 (0.67)	665 (26.18)	715 (28.15)	665 (26.18)	715 (28.15)	
	1FT6134											715 (28.15)	765 (30.12)	715 (28.15)	765 (30.12)	
	1FT6134	242 (9.53)	SP240S-MF1	200 (7.87)	85 (3.35)	17 (0.67)	290 (11.42)	443 (17.44)	130 (5.12)	40 (1.57)	20 (0.79)	746 (29.37)	796 (31.34)	746 (29.37)	796 (31.34)	
	1FT6136	215 (8.46)	SP210S-MF1	180 (7.09)	75 (2.95)	17 (0.67)	250 (9.84)	385 (15.16)	105 (4.13)	38 (1.50)	17 (0.67)	765 (30.12)	815 (32.09)	765 (30.12)	815 (32.09)	
		242 (9.53)	SP240S-MF1	200 (7.87)	85 (3.35)	17 (0.67)	290 (11.42)	443 (17.44)	130 (5.12)	40 (1.57)	20 (0.79)	796 (31.34)	846 (33.31)	796 (31.34)	846 (33.31)	

1FT610
1FT613

Synchronous motors

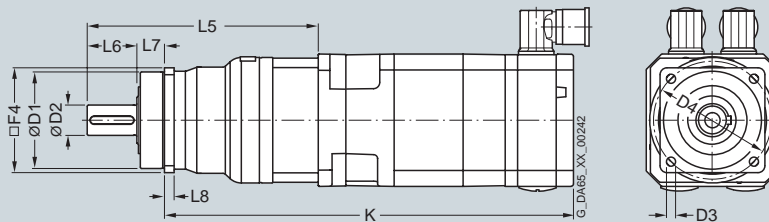
Dimensional drawings

1FT6 motors without/with DRIVE-CLiQ
with SP+ planetary gearbox, two-stage

Dimensional drawings

For motor		Dimensions in mm (inches)											Encoder system:			
Shaft height	Type	F4	Planetary gearbox Type	D1	D2	D3	D4	L5	L6	L7	L8	Resolver		Incr. encoder Absolute encoder		
												without brake K	with brake K	without brake K	with brake K	
1FT6 with SP+ planetary gearbox, two-stage, type of construction IM B5, natural cooling, with connector, without/with brake																
28	1FT6021	62	SP060S-MF2	60	16	5.5	68	156	28	20	6	301	326	301	326	
		(2.44)		(2.36)	(0.63)	(0.22)	(2.68)	(6.14)	(1.10)	(0.79)	(0.24)	(11.85)	(12.83)	(11.85)	(12.83)	
		76	SP075S-MF2	70	22	6.6	85	175	36	20	7	312	337	312	337	
		(2.99)		(2.76)	(0.87)	(0.26)	(3.35)	(6.89)	(1.42)	(0.79)	(0.28)	(12.28)	(13.27)	(12.28)	(13.27)	
		1FT6024	62	SP060S-MF2	60	16	5.5	68	156	28	20	6	341	366	341	366
			(2.44)		(2.36)	(0.63)	(0.22)	(2.68)	(6.14)	(1.10)	(0.79)	(0.24)	(13.43)	(14.41)	(13.43)	(14.41)
		76	SP075S-MF2	70	22	6.6	85	175	36	20	7	352	377	352	377	
		(2.99)		(2.76)	(0.87)	(0.26)	(3.35)	(6.89)	(1.42)	(0.79)	(0.28)	(13.86)	(14.84)	(13.86)	(14.84)	
		101	SP100S-MF2	90	32	9	120	230	58	30	10	375	400	375	400	
		(3.98)		(3.54)	(1.26)	(0.35)	(4.72)	(9.06)	(2.28)	(1.18)	(0.39)	(14.76)	(15.75)	(14.76)	(15.75)	
36	1FT6031	62	SP060S-MF2	60	16	5.5	68	164	28	20	6	296	316	336	356	
			(2.44)		(2.36)	(0.63)	(0.22)	(2.68)	(6.46)	(1.10)	(0.79)	(0.24)	(11.65)	(12.44)	(13.23)	(14.02)
			76	SP075S-MF2	70	22	6.6	85	179	36	20	7	303	323	343	363
		(2.99)		(2.76)	(0.87)	(0.26)	(3.35)	(7.05)	(1.42)	(0.79)	(0.28)	(11.93)	(12.72)	(13.50)	(14.29)	
			101	SP100S-MF2	90	32	9	120	230	58	30	10	322	342	362	382
			(3.98)		(3.54)	(1.26)	(0.35)	(4.72)	(9.06)	(2.28)	(1.18)	(0.39)	(12.68)	(13.46)	(14.25)	(15.04)
	1FT6034	76	SP075S-MF2	70	22	6.6	85	179	36	20	7	343	363	383	403	
		(2.99)		(2.76)	(0.87)	(0.26)	(3.35)	(7.05)	(1.42)	(0.79)	(0.28)	(13.50)	(14.29)	(15.08)	(15.87)	
		101	SP100S-MF2	90	32	9	120	230	58	30	10	362	382	402	422	
		(3.98)		(3.54)	(1.26)	(0.35)	(4.72)	(9.06)	(2.28)	(1.18)	(0.39)	(14.25)	(15.04)	(15.83)	(16.61)	
		141	SP140S-MF2	130	40	11	165	298	82	30	12	406	426	446	466	
		(5.56)		(5.12)	(1.57)	(0.43)	(6.50)	(11.73)	(3.23)	(1.18)	(0.47)	(15.98)	(16.77)	(17.56)	(18.35)	
48	1FT6041	76	SP075S-MF2	70	22	6.6	85	192	36	20	7	321	356	364	399	
			(2.99)		(2.76)	(0.87)	(0.26)	(3.35)	(7.56)	(1.42)	(0.79)	(0.28)	(12.64)	(14.02)	(14.33)	(15.71)
			101	SP100S-MF2	90	32	9	120	234	58	30	10	331	366	374	409
		(3.98)		(3.54)	(1.26)	(0.35)	(4.72)	(9.21)	(2.28)	(1.18)	(0.39)	(13.03)	(14.41)	(14.72)	(16.10)	
			141	SP140S-MF2	130	40	11	165	298	82	30	12	371	406	414	449
			(5.55)		(5.12)	(1.57)	(0.43)	(6.50)	(11.73)	(3.23)	(1.18)	(0.47)	(14.61)	(15.98)	(16.30)	(17.68)
	1FT6044	101	SP100S-MF2	90	32	9	120	234	58	30	10	381	416	424	459	
		(3.98)		(3.54)	(1.26)	(0.35)	(4.72)	(9.21)	(2.28)	(1.18)	(0.39)	(15.00)	(16.38)	(16.69)	(18.07)	
		141	SP140S-MF2	130	40	11	165	298	82	30	12	421	456	464	499	
		(5.55)		(5.12)	(1.57)	(0.43)	(6.50)	(11.73)	(3.23)	(1.18)	(0.47)	(16.57)	(17.95)	(18.27)	(19.65)	
		182	SP180S-MF2	160	55	13.5	215	346	82	30	15	469	504	512	547	
		(7.17)		(6.30)	(2.17)	(0.53)	(8.46)	(13.62)	(3.23)	(1.18)	(0.59)	(18.46)	(19.84)	(20.16)	(21.54)	

1FT602
1FT603
1FT604



Synchronous motors

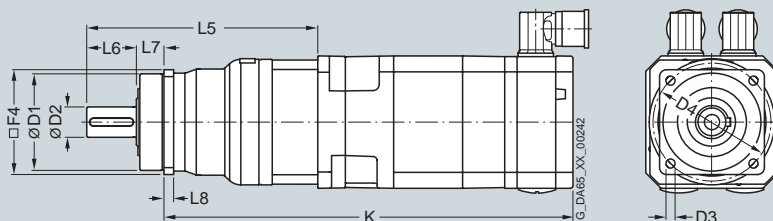
Dimensional drawings

1FT6 motors without/with DRIVE-CLiQ with SP+ planetary gearbox, two-stage

Dimensional drawings

For motor		Dimensions in mm (inches)											Encoder system:			
Shaft height	Type	F4	Planetary gearbox Type	D1	D2	D3	D4	L5	L6	L7	L8	Resolver		Incr. encoder Absolute encoder		
												without brake	with brake	without brake	with brake	
												K	K	K	K	
1FT6 with SP+ planetary gearbox, two-stage, type of construction IM B5, natural cooling, with connector, without/with brake																
63	1FT6061	101	SP100S-MF2	90 (3.54)	32 (1.26)	9 (0.35)	120 (4.72)	252 (9.92)	58 (2.28)	30 (1.18)	10 (0.39)	362 (14.25)	392 (15.43)	392 (15.43)	422 (16.61)	
		141	SP140S-MF2	130 (5.12)	40 (1.57)	11 (0.43)	165 (6.50)	305 (12.01)	82 (3.23)	30 (1.18)	12 (0.47)	391 (15.39)	421 (16.57)	421 (16.57)	451 (17.76)	
		182	SP180S-MF2	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	346 (13.62)	82 (3.23)	30 (1.18)	15 (0.59)	432 (17.01)	462 (18.19)	462 (18.19)	492 (19.37)	
	1FT6062	101	SP100S-MF2	90 (3.54)	32 (1.26)	9 (0.35)	120 (4.72)	252 (9.92)	58 (2.28)	30 (1.18)	10 (0.39)	387 (15.24)	417 (16.42)	417 (16.42)	447 (17.60)	
		141	SP140S-MF2	130 (5.12)	40 (1.57)	11 (0.43)	165 (6.50)	305 (12.01)	82 (3.23)	30 (1.18)	12 (0.47)	416 (16.38)	446 (17.56)	446 (17.56)	476 (18.74)	
		182	SP180S-MF2	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	346 (13.62)	82 (3.23)	30 (1.18)	15 (0.59)	437 (17.20)	467 (18.39)	467 (18.39)	497 (19.57)	
	1FT6064	101	SP100S-MF2	90 (3.54)	32 (1.26)	9 (0.35)	120 (4.72)	252 (9.92)	58 (2.28)	30 (1.18)	10 (0.39)	437 (17.20)	467 (18.39)	467 (18.39)	497 (19.57)	
		141	SP140S-MF2	130 (5.12)	40 (1.57)	11 (0.43)	165 (6.50)	305 (12.01)	82 (3.23)	30 (1.18)	12 (0.47)	466 (18.35)	496 (19.53)	496 (19.53)	526 (20.71)	
		182	SP180S-MF2	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	346 (13.62)	82 (3.23)	30 (1.18)	15 (0.59)	507 (19.96)	537 (21.14)	537 (21.14)	567 (22.32)	
80	1FT6081	141	SP140S-MF2	130 (5.12)	40 (1.57)	11 (0.43)	165 (6.50)	332 (13.07)	82 (3.23)	30 (1.18)	12 (0.47)	441 (17.36)	468 (18.43)	441 (17.36)	468 (18.43)	
		182	SP180S-MF2	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	355 (13.98)	82 (3.23)	30 (1.18)	15 (0.59)	464 (18.27)	491 (19.33)	464 (18.27)	491 (19.33)	
		215	SP210S-MF2	180 (7.09)	75 (2.95)	17 (0.67)	250 (9.84)	415 (16.34)	105 (4.13)	38 (1.50)	17 (0.67)	493 (19.41)	520 (20.47)	493 (19.41)	520 (20.47)	
	1FT6082	141	SP140S-MF2	130 (5.12)	40 (1.57)	11 (0.43)	165 (6.50)	332 (13.07)	82 (3.23)	30 (1.18)	12 (0.47)	466 (18.35)	493 (19.41)	466 (18.35)	493 (19.41)	
		182	SP180S-MF2	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	355 (13.98)	82 (3.23)	30 (1.18)	15 (0.59)	489 (19.25)	516 (20.31)	489 (19.25)	516 (20.31)	
		215	SP210S-MF2	180 (7.09)	75 (2.95)	17 (0.67)	250 (9.84)	415 (16.34)	105 (4.13)	38 (1.50)	17 (0.67)	518 (20.39)	545 (21.46)	518 (20.39)	545 (21.46)	
	1FT6084	141	SP140S-MF2	130 (5.12)	40 (1.57)	11 (0.43)	165 (6.50)	332 (13.07)	82 (3.23)	30 (1.18)	12 (0.47)	516 (20.31)	562 (22.13)	516 (20.31)	562 (22.13)	
		182	SP180S-MF2	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	355 (13.98)	82 (3.23)	30 (1.18)	15 (0.59)	539 (21.22)	585 (23.03)	539 (21.22)	585 (23.03)	
		245	SP240S-MF2	200 (7.87)	85 (3.35)	17 (0.67)	290 (11.42)	467.5 (18.41)	130 (5.12)	40 (1.57)	20 (0.79)	594 (23.39)	640 (25.20)	594 (23.39)	640 (25.20)	
	1FT6086	182	SP180S-MF2	160 (6.30)	55 (2.17)	13.5 (0.53)	215 (8.46)	355 (13.98)	82 (3.23)	30 (1.18)	15 (0.59)	589 (23.19)	635 (25.00)	589 (23.19)	635 (25.00)	
		245	SP240S-MF2	200 (7.87)	85 (3.35)	17 (0.67)	290 (11.42)	467.5 (18.41)	130 (5.12)	40 (1.57)	20 (0.79)	644 (25.35)	690 (27.17)	644 (25.35)	690 (27.17)	

1FT606
1FT608



Synchronous motors

Dimensional drawings

1FT6 motors without/with DRIVE-CLiQ with SP+ planetary gearbox, two-stage

Dimensional drawings

For motor		Dimensions in mm (inches)										Encoder system:				
Shaft height	Type	F4	Planetary gearbox Type	D1	D2	D3	D4	L5	L6	L7	L8	Resolver		Increm. encoder Absolute encoder		
												without brake	with brake	without brake	with brake	
												K	K	K	K	
1FT6 with SP+ planetary gearbox, two-stage, type of construction IM B5, natural cooling, with connector, without/with brake																
100	1FT6102	182	SP180S-MF2	160	55	13.5	215	355	82	30	15	538	584	538	584	
		(7.17)		(6.30)	(2.17)	(0.53)	(8.46)	(13.98)	(3.23)	(1.18)	(0.59)	(21.18)	(22.99)	(21.18)	(22.99)	
			245	SP240S-MF2	200	85	17	290	467.5	130	40	20	593	639	593	639
			(9.65)		(7.87)	(3.35)	(0.67)	(11.42)	(18.41)	(5.17)	(1.57)	(0.79)	(23.35)	(25.16)	(23.35)	(25.16)
		1FT6105	215	SP210S-MF2	180	75	17	250	415	105	38	17	642	688	642	688
			(8.46)		(7.09)	(2.95)	(0.67)	(9.84)	(16.34)	(4.13)	(1.50)	(0.67)	(25.28)	(27.09)	(25.28)	(27.09)
		245	SP240S-MF2	200	85	17	290	467.5	130	40	20	668	714	668	714	
		(9.65)		(7.87)	(3.35)	(0.67)	(11.42)	(18.41)	(5.12)	(1.57)	(0.79)	(26.30)	(28.11)	(26.30)	(28.11)	
	1FT6108	245	SP240S-MF2	200	85	17	290	467.5	130	40	20	768	814	768	814	
		(9.65)		(7.87)	(3.35)	(0.67)	(11.42)	(18.41)	(5.12)	(1.57)	(0.79)	(30.24)	(32.05)	(30.24)	(32.05)	
132	1FT6132	245	SP240S-MF2	200	85	17	290	467.5	130	40	20	721	771	721	771	
		(9.65)		(7.87)	(3.35)	(0.67)	(11.42)	(18.41)	(5.12)	(1.57)	(0.79)	(28.39)	(30.35)	(28.39)	(30.35)	
	1FT6134											771	821	771	821	
												(30.35)	(32.32)	(30.35)	(32.32)	
	1FT6136											821	871	821	871	
												(32.32)	(34.29)	(32.32)	(34.29)	

