

Synchronous motors

Dimension drawings

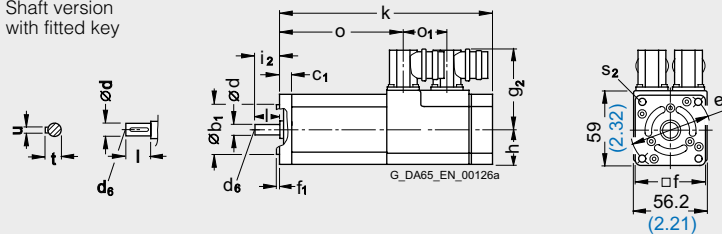
1FT6 motors without/with DRIVE-CLiQ Natural cooling

For motor		Dimensions in mm (in)													Encoder system: Resolver			
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	With- out DRIVE- CLiQ	With DRIVE- CLiQ	h H	i ₂ –	s ₂ S	o ₁	Without brake		With brake	
									g ₂ –	g ₂ –					k LB	o –	k LB	o –
1FT6, type IM B5, natural cooling, with connector, without/with brake																		
28	1FT6021		–	40 (1.57)	9.8 (0.39)	63 (2.48)	55 (2.17)	2.5 (0.10)	64 (2.52)	73.5 (2.89)	28 (1.10)	20 (0.79)	5.8 (0.23)	34.5 (1.36)	193 (7.60)	122 (4.80)	218 (8.58)	147 (5.79)
	1FT6024														233 (9.17)	162 (6.38)	258 (10.16)	187 (7.36)
36	1FT6031		92 (3.62)	60 (2.36)	8 (0.31)	75 (2.95)	72 (2.83)	3 (0.12)	76 (2.99)	86 (3.39)	36 (1.42)	30 (1.18)	5.5 (0.22)	–	180 (7.09)	151 (5.94)	200 (7.87)	171 (6.73)
	1FT6034														220 (8.66)	191 (7.52)	240 (9.45)	211 (8.31)

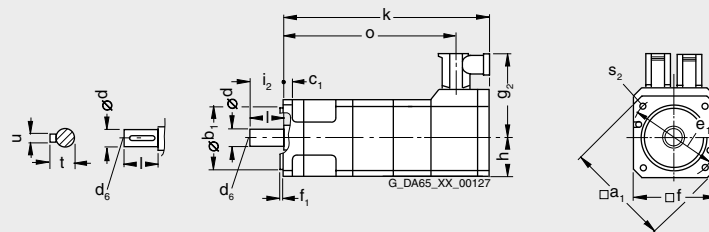
Shaft height	Type	DIN IEC	Encoder system: Incremental encoder Absolute encoder				DE shaft extension				
			Without brake	With brake	Without brake	With brake	d D	d ₆ —	l E	t GA	u F
28	1FT6021	—	193 (7.60)	122 (4.80)	218 (8.58)	147 (5.79)	9 (0.35)	M8	20 (0.79)	10.2 (0.40)	3 (0.12)
	1FT6024	—	233 (9.17)	162 (6.38)	258 (10.16)	187 (7.36)	—	—	—	—	—
36	1FT6031	—	220 (8.66)	151 (5.94)	240 (9.45)	171 (6.73)	14 (0.55)	M5	30 (1.18)	16 (0.63)	5 (0.20)
	1FT6034	—	260 (10.24)	191 (7.52)	280 (11.02)	211 (8.31)	—	—	—	—	—

1FT602

Shaft version
with fitted key



1FT603



Synchronous motors

Dimension drawings

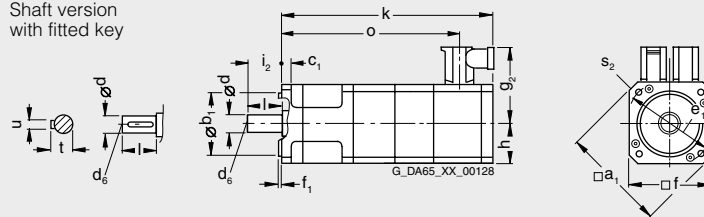
1FT6 motors without/with DRIVE-CLiQ Natural cooling

For motor		Dimensions in mm (in)													Encoder system: Resolver			
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	With- out DRIVE- CLiQ	With DRIVE- CLiQ	h H	i ₂ –	s ₂ ¹⁾ S	s ₂ ²⁾ S	Without brake		With brake	
									g ₂ –	g ₂ –					k LB	o –	k LB	o –
1FT6, type IM B5, natural cooling, with connector, without/with brake																		
48	1FT6041		120 (4.72)	80 (3.15)	10 (0.39)	100 (3.94)	96 (3.78)	3 (0.12)	80 (3.15)	90 (3.54)	48 (1.89)	40 (1.57)	7 (0.28)	M6	185 (7.28)	159 (6.26)	220 (8.66)	194 (7.64)
	1FT6044														235 (9.25)	209 (8.23)	270 (10.63)	244 (9.61)
63	1FT6061		146 (5.75)	110 (4.33)	10 (0.39)	130 (5.12)	116 (4.57)	3.5 (0.14)	90 (3.54)	100 (3.94)	58 (2.28)	50 (1.97)	9 (0.35)	M8	198 (7.80)	172 (6.77)	228 (8.98)	202 (7.95)
	1FT6062														223 (8.78)	197 (7.76)	253 (9.96)	227 (8.94)
	1FT6064														273 (10.75)	247 (9.72)	303 (11.93)	277 (10.91)

Shaft height	Type	DIN IEC	Encoder system: Incremental encoder Absolute encoder				DE shaft extension				
			Without brake		With brake		d D	d ₆ –	l E	t GA	u F
48	1FT6041		k LB	o –	k LB	o –	19 (0.75)	M6	40 (1.57)	21.5 (0.85)	6 (0.24)
	1FT6044		228 (8.98)	157 (6.18)	263 (10.35)	192 (7.56)					
63	1FT6061		278 (10.94)	207 (8.15)	313 (12.32)	242 (9.53)	24 (0.94)	M8	50 (1.97)	27 (1.06)	8 (0.31)
	1FT6062		253 (9.96)	197 (7.76)	283 (11.14)	227 (8.94)					
	1FT6064		303 (11.93)	247 (9.72)	333 (13.11)	277 (10.91)					

1FT604 1FT606

Shaft version
with fitted key



¹⁾ IM B5

²⁾ IM B14

Synchronous motors

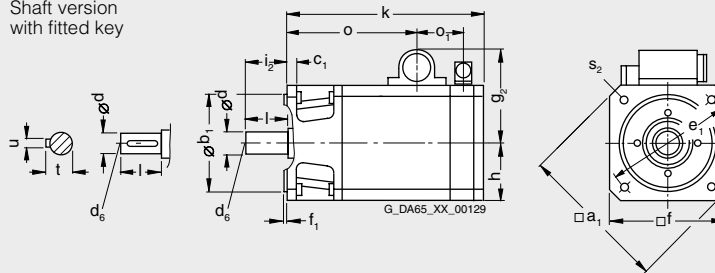
Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Natural cooling

For motor Dimensions in mm (in)

															Encoder system: Resolver			
															Without brake		With brake	
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	g ₂ –	h H	i ₂ –	s ₂ ¹⁾ S	s ₂ ²⁾ S	o ₁ –	k LB	o –	k LB	o –
1FT6, type IM B5, natural cooling, with connector, without/with brake																		
80	1FT6081		194 (7.64)	130 (5.12)	12 (0.47)	165 (6.50)	155 (6.10)	3.5 (0.14)	127.5 (5.02)	77.5 (3.05)	58 (2.28)	11 (0.43)	M10	76 (2.99)	221 (8.70)	113 (4.45)	248 (9.76)	140 (5.51)
	1FT6082														246 (9.69)	138 (5.43)	273 (10.75)	165 (6.50)
	1FT6084														296 (11.65)	188 (7.40)	342 (13.46)	234 (9.21)
	1FT6086														346 (13.62)	238 (9.37)	392 (15.43)	284 (11.18)

Shaft height	Type	DIN IEC	Encoder system: Incremental encoder Absolute encoder				DE shaft extension				
			Without brake		With brake		d D	d ₆ —	l E	t GA	u F
			k LB	o —	k LB	o —					
80	1FT6081		221 (8.70)	113 (4.45)	248 (9.76)	140 (5.51)	32 (1.26)	M12	58 (2.28)	35 (1.38)	10 (0.39)
	1FT6082		246 (9.69)	138 (5.43)	273 (10.75)	165 (6.50)					
	1FT6084		296 (11.65)	188 (7.40)	342 (13.46)	234 (9.21)					
	1FT6086		346 (13.62)	238 (9.37)	392 (15.43)	284 (11.18)					

1FT608Shaft version
with fitted key

¹⁾ IM B5
²⁾ IM B14

Synchronous motors

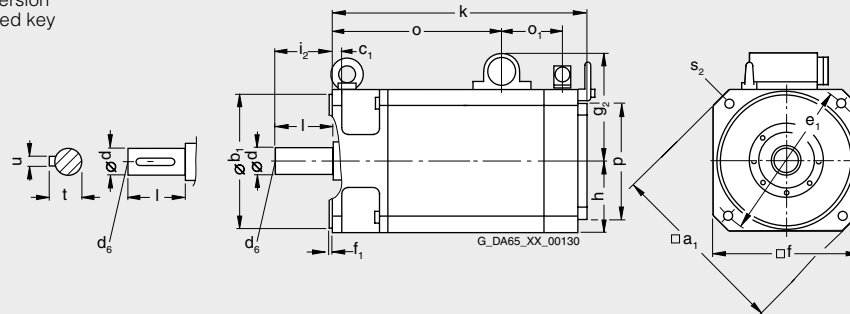
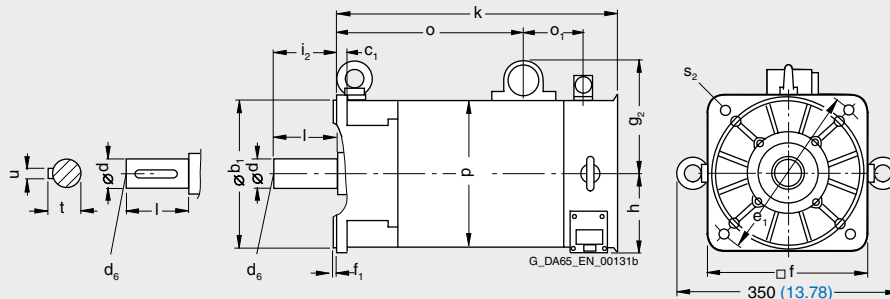
Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Natural cooling

For motor Dimensions in mm (in)

Shaft height	Type	DIN IEC	Connector													
			Size													
			a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	g ₂ —	g ₂ —	h H	i ₂ —	p HD	s ₂ ¹⁾ S	s ₂ ²⁾ S	o ₁ —
1FT6, type IM B5, natural cooling, with connector, without/with brake																
100	1FT6102 1FT6105 1FT6108		240 (9.45)	180 (7.09)	13 (0.51)	215 (8.46)	192 (7.56)	4 (0.16)	146 (5.75)	172 (6.77)	96 (3.78)	80 (3.15)	155 (6.10)	14 (0.55)	M12	76 (2.99)
132	1FT6132 1FT6134 1FT6136		—	250 (9.84)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	172.5 (6.79)	198.5 (7.81)	132 (5.20)	82 (3.23)	245 (9.65)	18 (0.71)	—	66 (2.60)

Shaft height	Type	DIN IEC	Encoder system: Resolver				Incremental encoder Absolute encoder				DE shaft extension				
			Without brake		With brake		Without brake		With brake		d D	d ₆ —	l E	t GA	u F
			k LB	o —	k LB	o —	k LB	o —	k LB	o —					
100	1FT6102 1FT6105 1FT6108		295 (11.61)	186 (7.32)	341 (13.43)	232 (9.13)	295 (11.61)	186 (7.32)	341 (13.43)	232 (9.13)	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)
			370 (14.57)	261 (10.28)	416 (16.38)	307 (12.09)	370 (14.57)	261 (10.28)	416 (16.38)	307 (12.09)					
			470 (18.50)	361 (14.21)	516 (20.31)	407 (16.02)	470 (18.50)	361 (14.21)	516 (20.31)	407 (16.02)					
132	1FT6132 1FT6134 1FT6136		423 (16.65)	288 (11.34)	473 (18.62)	338 (13.31)	423 (16.65)	288 (11.34)	473 (18.62)	338 (13.31)	48 (1.89)	M16	82 (3.23)	52.5 (2.07)	14 (0.55)
			473 (18.62)	338 (13.31)	523 (20.59)	388 (15.28)	473 (18.62)	338 (13.31)	523 (20.59)	388 (15.28)					
			523 (20.59)	388 (15.28)	573 (22.56)	438 (17.24)	523 (20.59)	388 (15.28)	573 (22.56)	438 (17.24)					

1FT610Shaft version
with fitted key**1FT613**

1) IM B5

2) IM B14

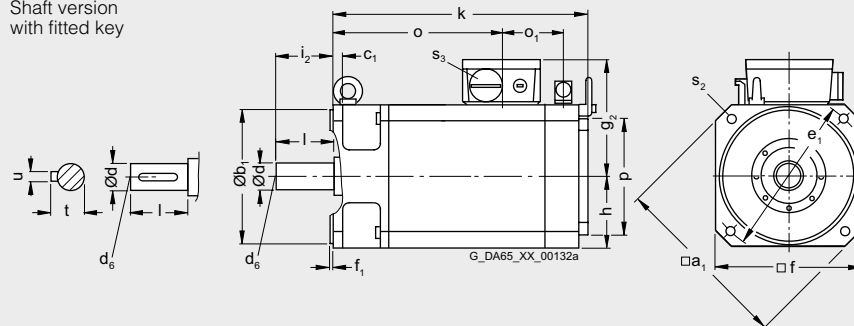
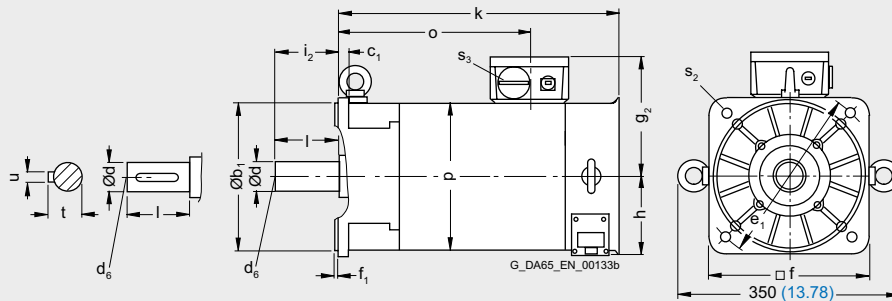
Synchronous motors

Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Natural cooling

For motor		Dimensions in mm (in)															
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	Terminal box		h H	i ₂ –	p HD	s ₂ ¹⁾ S	s ₂ ²⁾ S	s ₃ –	o ₁ –
									gk 130	gk 230							
									g ₂ –	g ₂ –							
1FT6, type IM B5, natural cooling, with terminal box, without/with brake																	
100	1FT6102 1FT6105 1FT6108		240 (9.45)	180 (7.09)	13 (0.51)	215 (8.46)	192 (7.56)	4 (0.16)	155 (6.10)	160 (6.30)	96 (3.78)	80 (3.15)	155 (6.10)	14 (0.55)	M12	PG29	76 (2.99)
132	1FT6132 1FT6134 1FT6136		–	250 (9.84)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	–	194 (7.64)	132 (5.20)	82 (3.23)	245 (9.65)	18 (0.71)	–	PG29/ PG36	–

Shaft height	Type	DIN IEC	Encoder system:								DE shaft extension				
			Resolver				Incremental encoder Absolute encoder				d D	d ₆ –	l E	t GA	u F
			Without brake		With brake		Without brake		With brake						
k LB	o –	k LB	o –	k LB	o –	k LB	o –	k LB	o –						
100	1FT6102		295 (11.61)	186 (7.32)	341 (13.43)	232 (9.13)	295 (11.61)	186 (7.32)	341 (13.43)	232 (9.13)	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)
	1FT6105		370 (14.57)	261 (10.28)	416 (16.38)	307 (12.09)	370 (14.57)	261 (10.28)	416 (16.38)	307 (12.09)					
	1FT6108		470 (18.50)	361 (14.21)	516 (20.31)	407 (16.02)	470 (18.50)	361 (14.21)	516 (20.31)	407 (16.02)					
132	1FT6132		423 (16.65)	288 (11.34)	473 (18.62)	338 (13.31)	423 (16.65)	288 (11.34)	473 (18.62)	338 (13.31)	48 (1.89)	M16	82 (3.23)	51.5 (2.03)	14 (0.55)
	1FT6134		473 (18.62)	338 (13.31)	523 (20.59)	388 (15.28)	473 (18.62)	338 (13.31)	523 (20.59)	388 (15.28)					
	1FT6136		523 (20.59)	388 (15.28)	573 (22.56)	438 (17.24)	523 (20.59)	388 (15.28)	573 (22.56)	438 (17.24)					

1FT610Shaft version
with fitted key**1FT613**

1) IM B5

2) IM B14

Synchronous motors

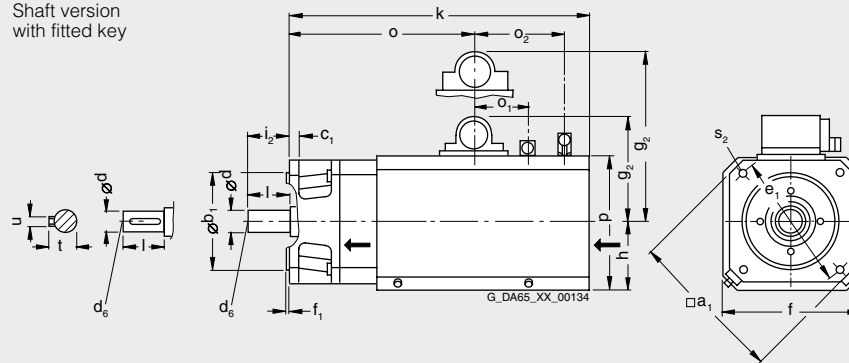
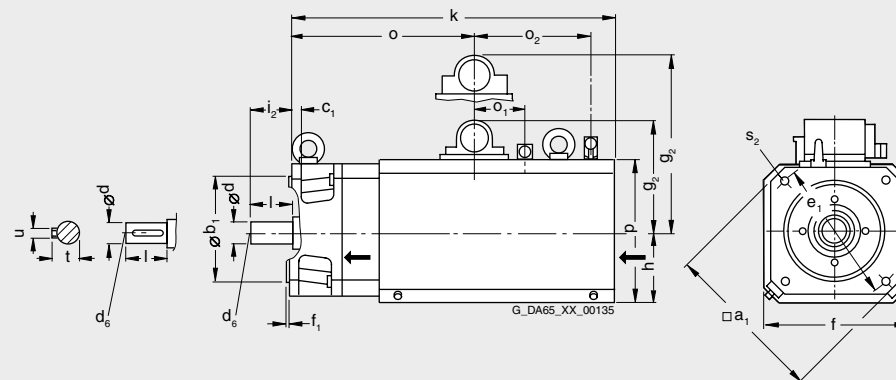
Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Forced ventilation

For motor Dimensions in mm (in)

									Connector									
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	Size	3	h H	i ₂ —	p HD	s ₂ ¹⁾ S	s ₂ ²⁾ S	o ₁ —	o ₂ —	
									1.5									
									g ₂ —	g ₂ —								
1FT6, type IM B5, forced ventilation, with connector, without/with brake																		
80	1FT6084 1FT6086		194 (7.64)	130 (5.12)	12 (0.47)	165 (6.50)	185 (7.28)	3.5 (0.14)	140 (5.51)	154 (6.06)	93 (3.66)	58 (2.28)	175 (6.89)	11 (0.43)	M10	76 (2.99)	169 (6.65)	
100	1FT6105 1FT6108		240 (9.45)	180 (7.09)	13 (0.51)	215 (8.46)	221 (8.70)	4 (0.16)	158 (6.22)	172 (6.77)	111 (4.37)	80 (3.15)	212 (8.35)	14 (0.55)	M12	76 (2.99)	170 (6.69)	

			Encoder system: Resolver Incremental encoder Absolute encoder				DE shaft extension				
Shaft height	Type	DIN IEC	Without brake		With brake		d D	d ₆ –	l E	t GA	u F
			k LB	o –	k LB	o –					
80	1FT6084		399 (15.71)	188 (7.40)	445 (17.52)	234 (9.21)	32 (1.26)	M12	58 (2.28)	35 (1.38)	10 (0.39)
	1FT6086		449 (17.68)	238 (9.37)	495 (19.49)	284 (11.18)					
100	1FT6105		473 (18.62)	261 (10.28)	519 (20.43)	307 (12.09)	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)
	1FT6108		573 (22.56)	361 (14.21)	619 (24.37)	407 (16.02)					

1FT608Shaft version
with fitted key**1FT610**

1) IM B5
2) IM B14

Synchronous motors

Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Forced ventilation

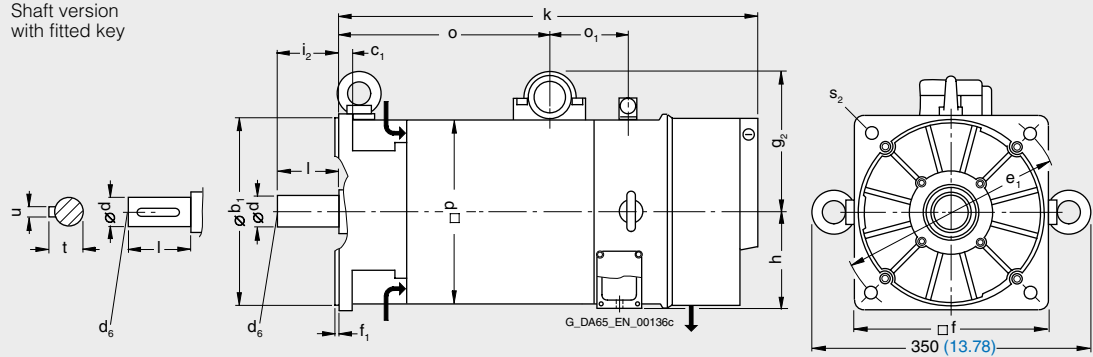
For motor Dimensions in mm (in)

Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	g ₂ —	h H	i ₂ —	p HD	s ₂ ¹⁾ S	s ₂ ²⁾ S	o ₁ —	o ₂ —
1FT6, type IM B5, forced ventilation, with connector, without/with brake																
132	1FT6132 1FT6134 1FT6136		—	250 (9.84)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	198.5 (7.81)	132 (5.20)	82 (3.23)	245 (9.65)	18 (0.71)	—	66 (2.60)	—

Shaft height	Type	DIN IEC	Encoder system:				DE shaft extension				
			Resolver								
			Incremental encoder								
			Without brake				d D	d ₆ —	l E	t GA	u F
			k LB	o —	k LB	o —					
132	1FT6132 1FT6134 1FT6136		541 (21.30)	288 (11.34)	591 (23.27)	338 (13.31)	48 (1.89)	M16	82 (3.23)	51.5 (2.03)	14 (0.55)
			591 (23.27)	338 (13.31)	641 (25.24)	388 (15.28)					
			641 (25.24)	388 (15.28)	691 (27.20)	438 (17.24)					

1FT613

Shaft version
with fitted key



¹⁾ IM B5

²⁾ IM B14

Synchronous motors

Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Forced ventilation

For motor Dimensions in mm (in)

Terminal box
gk 130 gk 230 gk 420

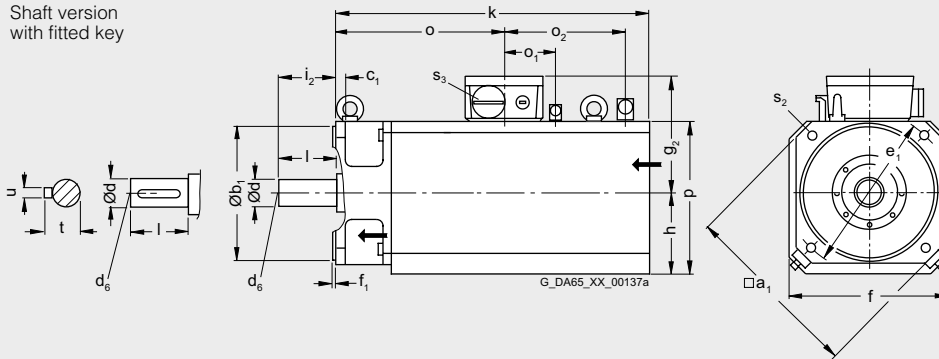
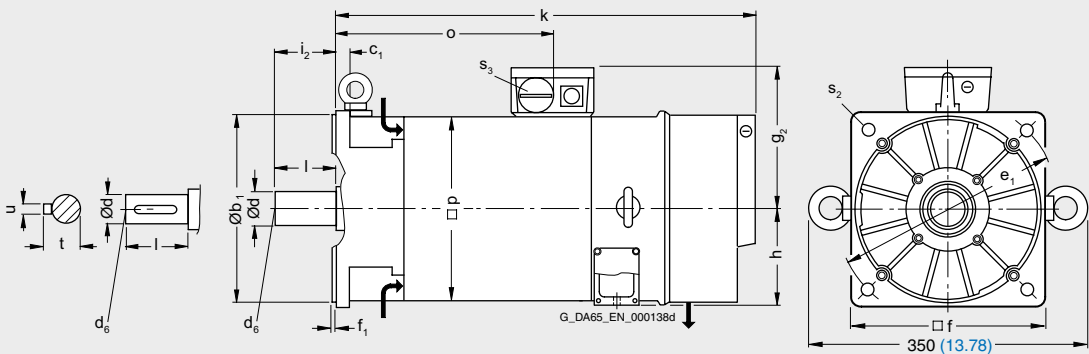
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	g ₂	g ₂	g ₂	h H	i ₂	p HD	s ₂ ¹⁾ S	s ₂ ²⁾ S	s ₃
1FT6, type IM B5, forced ventilation, with terminal box, without/with brake																	
100	1FT6105 1FT6108		240 (9.45)	180 (7.09)	13 (0.51)	215 (8.46)	221 (8.70)	4 (0.16)	167 (6.57)	172 (6.77)	–	111 (4.37)	80 (3.15)	212 (8.35)	14 (0.55)	M12	PG29
132	1FT6132 1FT6134 1FT6136		–	250 (9.84)	18 (0.71)	300 (11.81)	260 (10.24)	5 (0.20)	–	186.5 (7.34)	202 (7.95)	132 (5.20)	82 (3.23)	245 (9.65)	18 (0.71)	–	PG29/ PG36

Encoder system:
Resolver
Incremental encoder
Absolute encoder

DE shaft extension

Without brake With brake
k LB o LB o

Shaft height	Type	DIN IEC	o ₁	o ₂	k LB	o LB	k LB	o LB	d D	d ₆	l E	t GA	u F
100	1FT6105 1FT6108		76 (2.99)	170 (6.69)	473 (18.62) 573 (22.56)	261 (10.28) 361 (14.21)	519 (20.43) 619 (24.37)	307 (12.09) 407 (16.02)	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)
132	1FT6132 1FT6134 1FT6136		–	–	541 (21.30) 591 (23.27) 641 (25.24)	288 (11.34) 338 (13.31) 388 (15.28)	591 (23.27) 641 (25.24) 691 (27.20)	338 (13.31) 388 (15.28) 438 (17.24)	48 (1.89)	M16	82 (3.23)	51.5 (2.03)	14 (0.55)

1FT610Shaft version
with fitted key**1FT613**

1) IM B5

2) IM B14

Synchronous motors

Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Water cooling

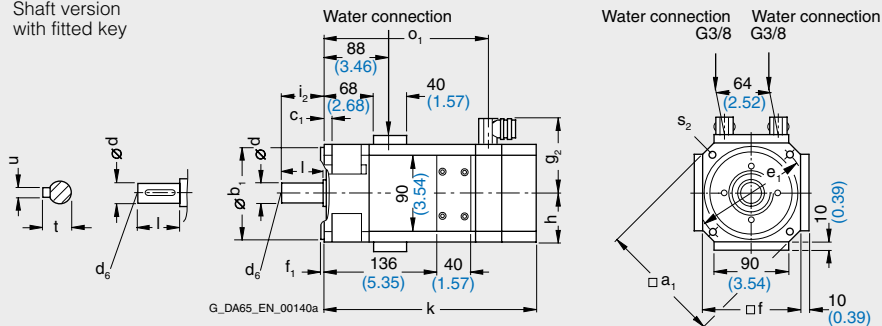
For motor Dimensions in mm (in)

									Connector Size								
									With DRIVE- CLiQ	With- out DRIVE- CLiQ							
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	1 g ₂ –	1 g ₂ –	1.5 g ₂ –	3 g ₂ –	h H	i ₂ –	p HD	s ₂ ¹⁾ S	s ₂ ²⁾ S
1FT6, type IM B5, water cooling, with connector, without/with brake																	
63	1FT6062 1FT6064		146 (5.75)	110 (4.33)	10 (0.39)	130 (5.12)	116 (4.57)	3.5 (0.14)	100 (3.94)	99 (3.90)	–	–	58 (2.28)	50 (1.97)	–	9 (0.35)	M8
80	1FT6084 1FT6086		194 (7.64)	130 (5.12)	12 (0.47)	165 (6.50)	155 (6.10)	3.5 (0.14)	–	–	139.5 (5.49)	153.5 (6.04)	77.5 (3.05)	58 (2.28)	–	11 (0.43)	M10

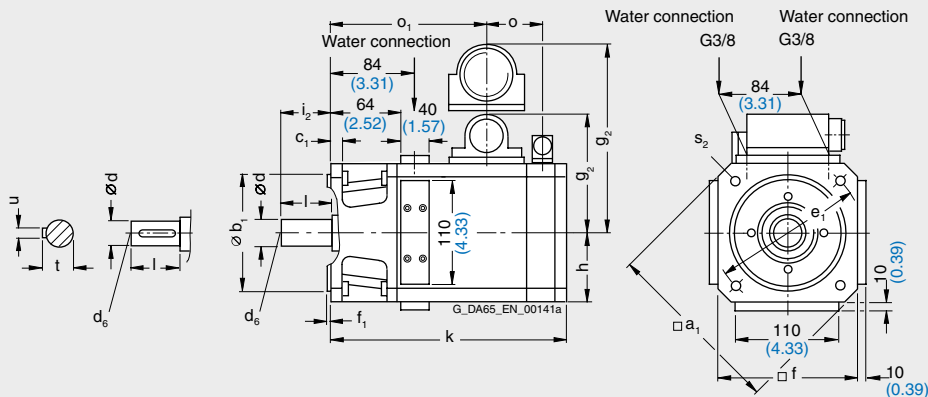
			Encoder system:										DE shaft extension				
			Resolver Incremental encoder Absolute encoder				Resolver		Incremental encoder Absolute encoder								
			Without brake		With brake		Without/with brake		Without/with brake								
Shaft height	Type	DIN IEC	o –	k LB	o ₁ –	k LB	o ₁ –	k LB	o ₁ –	k LB	o ₁ –	d D	d ₆ –	l E	t GA	u F	
63	1FT6062 1FT6064	–	–	–	–	–	–	253 (9.96) 303 (11.93)	227 (8.94) 277 (10.91)	283 (11.14) 333 (13.11)	227 (8.94) 277 (10.91)	24 (0.94)	M8	50 (1.97)	27 (1.06)	8 (0.31)	
80	1FT6084 1FT6086	76 (2.99)	296 (11.65) 346 (13.62)	188 (7.40) 238 (9.37)	342 (13.46) 392 (15.43)	234 (9.21) 284 (11.18)	– –	– –	– –	– –	– –	32 (1.26)	M12	58 (2.28)	35 (1.38)	10 (0.39)	

1FT606

Shaft version with fitted key



1FT608



¹⁾ IM B5
²⁾ IM B14

Synchronous motors

Dimension drawings

1FT6 motors without/with DRIVE-CLiQ Water cooling

For motor

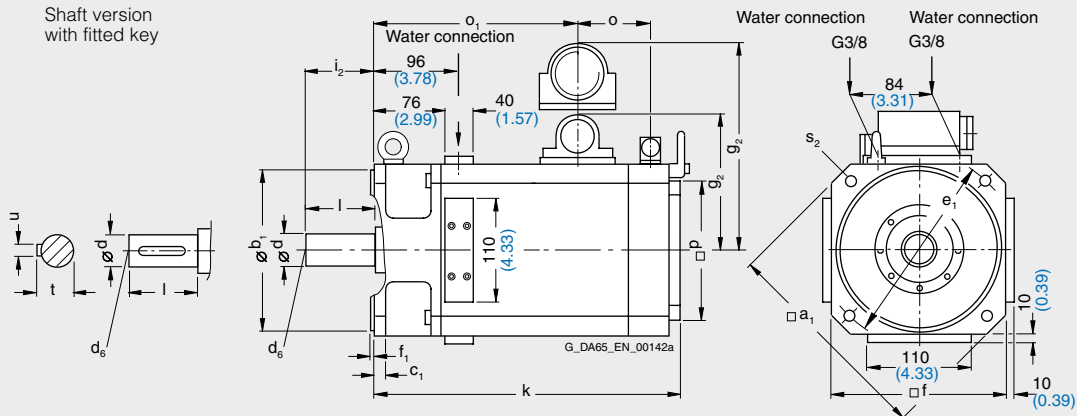
Dimensions in mm (in)

Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	Connector		h H	i ₂ –	p HD	s ₂ ¹⁾ S ₂	s ₂ ²⁾ S	o –
									1.5	3						
1FT6, type IM B5, water cooling, with connector, without/with brake																
100	1FT6105 1FT6108		240 (9.45)	180 (7.09)	13 (0.51)	215 (8.46)	192 (7.56)	4 (0.16)	158 (6.22)	172 (6.77)	96 (3.78)	80 (3.15)	155 (6.10)	14 (0.55)	M12	76 (2.99)

Shaft height	Type	DIN IEC	Encoder system:				DE shaft extension				
			Resolver		Incremental encoder						
			Absolute encoder								
			Without brake		With brake						
			k	o ₁	k	o ₁	d	d ₆	l	t	u
			LB	–	LB	–	D	–	E	GA	F
100	1FT6105		370 (14.57)	261 (10.28)	416 (16.38)	307 (12.09)	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)
	1FT6108		470 (18.50)	361 (14.21)	516 (20.31)	407 (16.02)					

1FT610

Shaft version
with fitted key



1) IM B5

2) IM B14

Synchronous motors

Dimension drawings

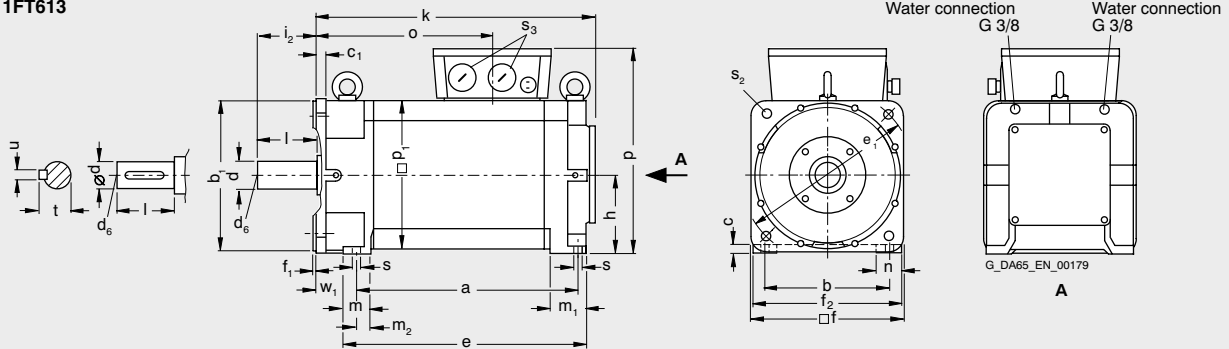
1FT6 motors without/with DRIVE-CLiQ Water cooling

For motor Dimensions in mm (in)

Shaft height	Type	DIN IEC	a B	b A	b ₁ N	c LA	c ₁ –	e BB	e ₁ M	f AB	f ₁ T	f ₂ –	h H	i ₂ –	k LB	m BA	m ₁ –	m ₂ –
1FT6, type IM B35, water cooling, with terminal box																		
132	1FT6132		342 (13.46)	216 (8.50)	250 (9.84)	14 (0.55)	16 (0.63)	366 (14.41)	300 (11.81)	260 (10.24)	5 (0.20)	245 (9.65)	132 (5.20)	82 (3.23)	423 (16.65)	36 (1.42)	53 (2.09)	23 (0.91)
	1FT6134		392 (15.43)					416 (16.38)							473 (18.62)			
	1FT6136		442 (17.40)					466 (18.35)							523 (20.59)			
	1FT6138		517 (20.35)					541 (21.30)							598 (23.54)			

Shaft height	Type	DIN IEC	n AA	o –	p HD	p ₁ AC	s K	s ₂ K	s ₃ –	$n_{rated}=1500$ rpm	$n_{rated}=2500$ rpm	w ₁ C	d D	d ₆ –	l E	t GA	u F
132	1FT6132		14 (0.55)	255.5 (10.06)	350.5 (13.80)	245 (9.65)	12 (0.47)	18 (0.71)	M32 x 1.5		M40 x 1.5	53 (2.09)	48 (1.89)	M16	82 (3.23)	51.5 (2.03)	14 (0.55)
	1FT6134			305.5 (12.03)					M40 x 1.5		M50 x 1.5						
	1FT6136			355.5 (14.00)					M50 x 1.5		M50 x 1.5						
	1FT6138			430.5 (16.95)					M50 x 1.5		M50 x 1.5						

1FT613



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