

Synchronous motors

Dimension drawings

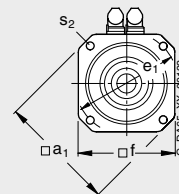
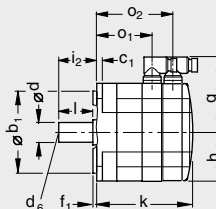
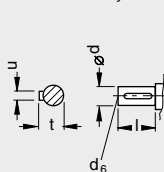
1FK7 Compact motors without/with DRIVE-CLiQ Natural cooling

For motor Dimensions in mm (in)

													Encoder system:					
													Resolver					
													Absolute encoder EnDat 16 S/R					
													Absolute encoder 15 bit (16 S/R)					
													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 S	k LB	o ₁ –	o ₂ –	k LB	o ₁ –	o ₂ –
1FK7 Compact, type IM B5, natural cooling, with connector, without/with brake																		
20	1FK7011-5		–	30 (1.18)	7 (0.28)	46 (1.81)	40 (1.57)	2.5 (0.10)	65.5 (2.58)	20 (0.79)	18 (0.71)	4.5 (0.18)	140 (5.51)	89 (3.50)	118 (4.65)	140 (5.51)	89 (3.50)	118 (4.65)
	1FK7015-5												165 (6.50)	114 (4.49)	143 (5.63)	165 (6.50)	114 (4.49)	143 (5.63)
28	1FK7022-5		–	40 (1.57)	10 (0.39)	63 (2.48)	55 (2.17)	2.5 (0.10)	75 (2.95)	27.5 (1.08)	20 (0.79)	5.4 (0.21)	153 (6.02)	95 (3.74)	128 (5.04)	175 (6.89)	95 (3.74)	150 (5.91)
36	1FK7032-5		92 (3.62)	60 (2.36)	8 (0.31)	75 (2.95)	72 (2.83)	3 (0.12)	81 (3.19)	36 (1.42)	30 (1.18)	6.5 (0.26)	150 (5.91)	90 (3.54)	125 (4.92)	175 (6.89)	90 (3.54)	149 (5.87)
	1FK7034-5												175 (6.89)	115 (4.53)	150 (5.91)	200 (7.87)	115 (4.53)	174 (6.85)
48	1FK7040-5		120 (4.72)	80 (3.15)	10 (0.39)	100 (3.94)	96 (3.78)	3 (0.12)	90 (3.54)	48 (1.89)	40 (1.57)	7 (0.28)	134 (5.28)	73 (2.87)	106 (4.17)	163 (6.42)	73 (2.87)	135 (5.31)
	1FK7042-5												162 (6.38)	101 (3.98)	134 (5.28)	191 (7.52)	101 (3.98)	163 (6.42)
63	1FK7060-5		155 (6.10)	110 (4.33)	10 (0.39)	130 (5.12)	126 (4.96)	3.5 (0.14)	105 (4.13)	63 (2.48)	50 (1.97)	9 (0.35)	157 (6.18)	94 (3.70)	126 (4.96)	200 (7.87)	94 (3.70)	169 (6.65)
	1FK7063-5												202 (7.95)	139 (5.47)	171 (6.73)	245 (9.65)	139 (5.47)	214 (8.43)

Shaft height	Type	Encoder system:												DE shaft extension				
		Incremental encoder sin/cos1 V _{pp} Incremental encoder 22 bit (2048 S/R) Absolute encoder EnDat 32 S/R Absolute encoder 16 bit (32 S/R)												Absolute encoder EnDat 2048 S/R Absolute encoder 22 bit (2048 S/R) Absolute encoder EnDat 512 S/R Absolute encoder 20 bit (512 S/R)				
		Without brake			With brake			Without brake			With brake			d	d ₆	l	t	u
		k	o ₁	o ₂	k	o ₁	o ₂	k	o ₁	o ₂	k	o ₁	o ₂					
		LB	—	—	LB	—	—	LB	—	—	LB	—	—	D	—	E	GA	F
20	1FK7011-5	155	89	118	155	89	118	155	89	118	155	89	118	8	—	18	8.8	2
	1FK7015-5	(6.10)	(3.50)	(4.65)	(6.10)	(3.50)	(4.65)	(6.10)	(3.50)	(4.65)	(6.10)	(3.50)	(4.65)	(0.31)	—	(0.71)	(0.35)	(0.08)
28	1FK7022-5	180	114	143	180	114	143	180	114	143	180	114	143	9	M3	20	10.2	3
	1FK7022-5	(7.09)	(4.49)	(5.63)	(7.09)	(4.49)	(5.63)	(7.09)	(4.49)	(5.63)	(7.09)	(4.49)	(5.63)	(0.35)		(0.79)	(0.40)	(0.12)
36	1FK7032-5	175	90	125	200	90	149	175	90	125	200	90	149	14	M5	30	16	5
	1FK7034-5	(6.89)	(3.54)	(4.92)	(7.87)	(3.54)	(5.87)	(6.89)	(3.54)	(4.92)	(7.87)	(3.54)	(5.87)	(0.55)		(1.18)	(0.63)	(0.20)
48	1FK7040-5	200	115	150	225	115	174	200	115	150	225	115	174	19	M6	40	21.5	6
	1FK7042-5	(7.87)	(4.53)	(5.91)	(8.86)	(4.53)	(6.85)	(7.87)	(4.53)	(5.91)	(8.86)	(4.53)	(6.85)	(0.75)		(1.57)	(0.85)	(0.24)
63	1FK7060-5	180	94	126	223	94	169	188	94	126	231	94	169	24	M8	50	27	8
	1FK7063-5	(7.09)	(3.70)	(4.96)	(8.78)	(3.70)	(6.65)	(7.40)	(3.70)	(4.96)	(9.09)	(3.70)	(6.65)	(0.94)		(1.97)	(1.06)	(0.31)
		225	139	171	268	139	214	233	139	171	276	139	214					
		(8.86)	(5.47)	(6.73)	(10.55)	(5.47)	(8.43)	(9.17)	(5.47)	(6.73)	(10.87)	(5.47)	(8.43)					

1FK701.-5
1FK702.-5
1FK703.-5
1FK704.-5
1FK706.-5

Shaft version
with fitted key

Synchronous motors

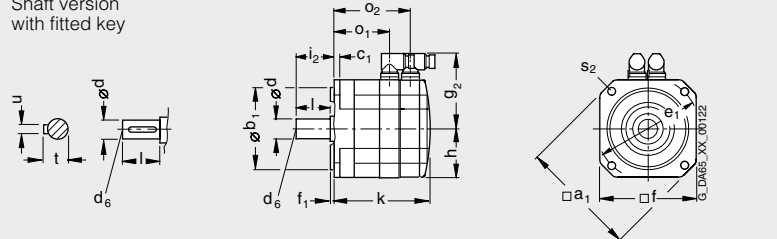
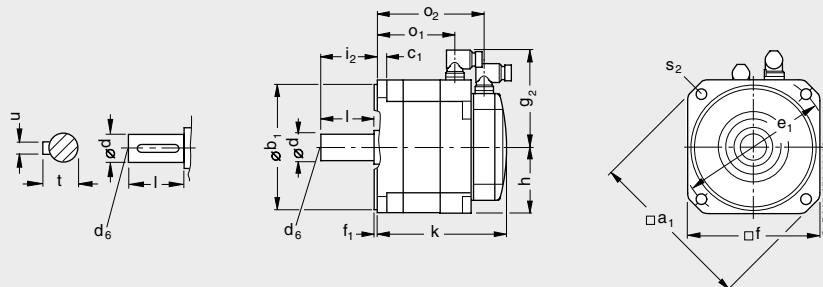
Dimension drawings

1FK7 Compact 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	g ₂ —	h H	i ₂ —	s ₂ S	Without brake			With brake		
													k LB	o ₁ —	o ₂ —	k LB	o ₁ —	o ₂ —
1FK7 Compact, type IM B5, natural cooling, with connector, without/with brake																		
80	1FK7080-5		186 (7.32)	130 (5.12)	13 (0.51)	165 (6.50)	155 (6.10)	3.5 (0.14)	119.5 (4.70)	77.5 (3.05)	58 (2.28)	11 (0.43)	156 (6.14)	91 (3.58)	124 (4.88)	184 (7.24)	91 (3.58)	151 (5.94)
	1FK7083-5												194 (7.64)	129 (5.08)	162 (6.38)	245 (9.65)	129 (5.08)	207 (8.15)
100	1FK7100-5		240 (9.45)	180 (7.09)	13 (0.51)	215 (8.46)	192 (7.56)	4 (0.16)	138 (5.43)	96 (3.78)	80 (3.15)	14 (0.55)	185 (7.28)	113 (4.45)	153 (6.02)	204 (8.03)	113 (4.45)	172 (6.77)
	1FK7101-5												211 (8.31)	139 (5.47)	179 (7.05)	240 (9.45)	139 (5.47)	208 (8.19)
	1FK7103-5												237 (9.33)	165 (6.50)	205 (8.07)	266 (10.47)	165 (6.50)	234 (9.21)
	1FK7105-5												289 (11.38)	217 (8.54)	257 (10.12)	318 (12.52)	217 (8.54)	286 (11.26)

		Encoder system: Incremental encoder sin/cos1 V _{pp} Incremental encoder 22 bit (2048 S/R) Absolute encoder EnDat 32 S/R Absolute encoder 16 bit (32 S/R)												Absolute encoder EnDat 2048 S/R Absolute encoder 22 bit (2048 S/R)					DE shaft extension				
Shaft height	Type	Without brake			With brake			Without brake			With brake			d D	d ₆ —	l E	t GA	u F					
		k LB	o ₁ —	o ₂ —	k LB	o ₁ —	o ₂ —	k LB	o ₁ —	o ₂ —	k LB	o ₁ —	o ₂ —										
80	1FK7080-5	179 (7.05)	91 (3.58)	124 (4.88)	206 (8.11)	91 (3.58)	151 (5.94)	187 (7.36)	91 (3.58)	124 (4.88)	215 (8.46)	91 (3.58)	151 (5.94)	32 (1.26)	M12	58 (2.28)	35 (1.38)	10 (0.39)					
	1FK7083-5	217 (8.54)	129 (5.08)	162 (6.38)	268 (10.55)	153 (6.02)	213 (8.39)	225 (8.86)	129 (5.08)	162 (6.38)	276 (10.87)	129 (5.08)	207 (8.15)										
100	1FK7100-5	208 (8.19)	113 (4.45)	153 (6.02)	227 (8.94)	113 (4.45)	172 (6.77)	216 (8.50)	113 (4.45)	153 (6.02)	235 (9.25)	113 (4.45)	172 (6.77)	38 (1.50)	M12	80 (3.15)	41 (1.61)	10 (0.39)					
	1FK7101-5	234 (9.21)	139 (5.47)	179 (7.05)	263 (10.35)	139 (5.47)	208 (8.19)	242 (9.53)	139 (5.47)	179 (7.05)	271 (10.67)	139 (5.47)	208 (8.19)										
	1FK7103-5	260 (10.24)	165 (6.50)	205 (8.07)	289 (11.38)	165 (6.50)	234 (9.21)	268 (10.55)	165 (6.50)	205 (8.07)	297 (11.69)	165 (6.50)	234 (9.21)										
	1FK7105-5	312 (12.28)	217 (8.54)	257 (10.12)	341 (13.43)	217 (8.54)	286 (11.26)	320 (12.60)	217 (8.54)	257 (10.12)	349 (13.74)	217 (8.54)	286 (11.26)										

1FK708-5Shaft version
with fitted key
1FK7100-5
1FK7101-5
1FK7103-5
1FK7105-5


Synchronous motors

Dimension drawings

1FK7 High Dynamic motors without/with DRIVE-CLiQ Natural cooling

For motor													Encoder system:		
Dimensions in mm (in)													Resolver		
													Absolute encoder EnDat 16 S/R		
													Absolute encoder 15 bit (16 S/R)		
													Without/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 S	k LB	o ₁ —	o ₂ —
1FK7 High Dynamic, type IM B5, natural cooling, with connector, without/with brake															
36	1FK7033-7		92 (3.62)	60 (2.36)	8 (0.31)	75 (2.95)	72 (2.83)	3 (0.12)	78 (3.07)	36 (1.42)	30 (1.18)	6.5 (0.26)	170/195 (6.69/7.68)	108/108 (4.25/4.25)	145/170 (5.71/6.69)
48	1FK7043-7 1FK7044-7		120 (4.72)	80 (3.15)	10 (0.39)	100 (3.94)	96 (3.78)	3 (0.12)	90 (3.54)	48 (1.89)	40 (1.57)	7 (0.28)	191/220 (7.52/8.66)	130/130 (5.12/5.12)	163/192 (6.42/7.56)
63	1FK7061-7 1FK7064-7		155 (6.10)	110 (4.33)	10 (0.39)	130 (5.12)	126 (4.96)	3.5 (0.14)	105 (4.13)	63 (2.48)	50 (1.97)	9 (0.35)	185/228 (7.28/8.98)	121/121 (4.76/4.76)	153/196 (6.02/7.72)
80	1FK7085-7 1FK7086-7		186 (7.32)	130 (5.12)	13 (0.51)	165 (6.50)	155 (6.10)	3.5 (0.14)	141.5 (5.57) 140.5 (5.53)	77.5 (3.05)	60 (2.36)	11 (0.43)	261/304 (10.28/11.97)	190/191 (7.48/7.52)	229/272 (9.02/10.71)

			Encoder system:						DE shaft extension				
			Incremental encoder sin/cos1 V _{pp}			Absolute encoder EnDat 2048 S/R							
			Incremental encoder 22 bit (2048 S/R)			Absolute encoder 22 bit (2048 S/R)							
			Absolute encoder EnDat 32 S/R			Absolute encoder EnDat 512 S/R							
			Absolute encoder 16 bit (32 S/R)			Absolute encoder 20 bit (512 S/R)							
			Without/with brake			Without/with brake							
Shaft height	Type	DIN IEC	k LB	o ₁ —	o ₂ —	k LB	o ₁ —	o ₂ —	d D	d ₆ —	l E	t GA	u F
36	1FK7033-7		194/219 (7.64/8.62)	109/109 (4.29/4.29)	144/168 (5.67/6.61)	194/219 (7.64/8.62)	109/109 (4.29/4.29)	144/168 (5.67/6.61)	14 (0.55)	M5	30 (1.18)	16 (0.63)	5 (0.20)
48	1FK7043-7		212/241 (8.35/9.49)	130/130 (5.12/5.12)	163/192 (6.42/7.56)	220/249 (8.66/9.80)	130/130 (5.12/5.12)	163/192 (6.42/7.56)	19 (0.75)	M6	40 (1.57)	21.5 (0.85)	6 (0.24)
	1FK7044-7		237/266 (9.33/10.47)	155/155 (6.10/6.10)	188/217 (7.40/8.54)	245/274 (9.65/10.79)	155/155 (6.10/6.10)	188/217 (7.40/8.54)					
63	1FK7061-7		208/251 (8.19/9.88)	121/121 (4.76/4.76)	154/197 (6.06/7.76)	217/260 (8.54/10.24)	121/121 (4.76/4.76)	154/197 (6.06/7.76)	24 (0.94)	M6	50 (1.97)	27 (1.06)	8 (0.31)
	1FK7064-7		272/315 (10.71/12.40)	185/185 (7.28/7.28)	218/261 (8.58/10.28)	281/324 (11.06/12.76)	185/185 (7.28/7.28)	218/261 (8.58/10.28)					
80	1FK7085-7		283/326 (11.14/12.83)	192/192 (7.56/7.56)	229/272 (9.02/10.71)	292/334 (11.50/13.15)	192/192 (7.56/7.56)	229/272 (9.02/10.71)	32 (1.26)	M12	58 (2.28)	35 (1.38)	10 (0.39)
	1FK7086-7												

1FK703.-7
1FK704.-7
1FK706.-7
1FK708.-7

Shaft version
with fitted key

