

Synchronous motors

Dimension drawings

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

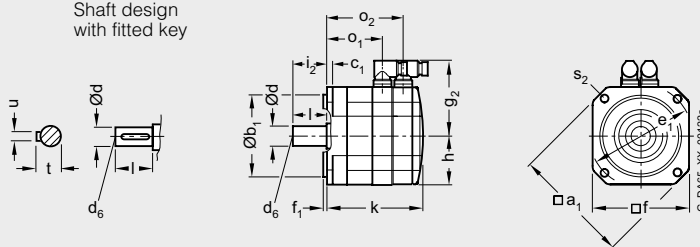
For motor		Dimensions in mm (in)											Encoder system:					
Shaft height	Type	DIN IEC	a ₁ P	b ₁ N	c ₁ LA	e ₁ M	f AB	f ₁ T	g ₂ -	h H	i ₂ -	s ₂ S	Resolver			Absolute encoder EnDat 16 S/R / 15 bit (16 S/R)		
													without brake			with brake		
													k LB	o ₁ -	o ₂ -	k LB	o ₁ -	o ₂ -
1FK7 Compact, type of construction IM B5, natural cooling, with connector, without/with brake																		
20	1FK7011-5	-	30	7	46	40	2.5	65.5	20	18	4.5	140	89	118	140	89	118	
	1FK7015-5		(1.18)	(0.28)	(1.81)	(1.57)	(0.10)	(2.58)	(0.79)	(0.71)	(0.18)	(5.51)	(3.50)	(4.65)	(5.51)	(3.50)	(4.65)	
28	1FK7022-5	-	40	10	63	55	2.5	75	27.5	20	5.4	153	95	128	175	95	150	
			(1.57)	(0.39)	(2.48)	(2.17)	(0.10)	(2.95)	(1.08)	(0.79)	(0.21)	(6.02)	(3.74)	(5.04)	(6.89)	(3.74)	(5.91)	
36	1FK7032-5	92	60	8	75	72	3	81	36	30	6.5	150	90	125	175	90	149	
	1FK7034-5		(3.62)	(2.36)	(0.31)	(2.95)	(2.83)	(0.12)	(3.19)	(1.42)	(1.18)	(0.26)	(5.91)	(3.54)	(4.92)	(6.89)	(3.54)	(5.87)
48	1FK7040-5	120	80	10	100	96	3	90	48	40	7	134	73	106	163	73	135	
	1FK7042-5		(4.72)	(3.15)	(0.39)	(3.94)	(3.78)	(0.12)	(3.54)	(1.89)	(1.57)	(0.28)	(5.28)	(2.87)	(4.17)	(6.42)	(2.87)	(5.31)
63	1FK7060-5	155	110	10	130	126	3.5	105	63	50	9	157	94	126	200	94	169	
	1FK7063-5		(6.10)	(4.33)	(0.39)	(5.12)	(4.96)	(0.14)	(4.13)	(2.48)	(1.97)	(0.35)	(6.18)	(3.70)	(4.96)	(7.87)	(3.70)	(6.65)

6

Shaft height	Type	Encoder system:						DE shaft extension													
		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 -				
Incremental encoder sin/cos 1 V _{pp} / 22 bit (2 048 S/R) Absolute encoder EnDat 2 048 S/R / 22 bit (2 048 S/R) EnDat 512 S/R / 20 bit (512 S/R) EnDat 32 S/R / 16 bit (32 S/R)																					
20	1FK7011-5	155	89	118	155	89	118	8	-	18	8.8	2									
	1FK7015-5	180	114	143	180	114	143	(0.31)													
28	1FK7022-5	178	95	128	200	95	150	9	M3	20	10.2	3									
		(7.01)	(3.74)	(5.04)	(7.87)	(3.74)	(5.91)	(0.35)		(0.79)	(0.40)	(0.12)									
36	1FK7032-5	175	90	125	200	90	149	14	M5	30	16	5									
	1FK7034-5	200	115	150	225	115	174	(0.55)		(1.18)	(0.63)	(0.20)									
48	1FK7040-5	155	73	106	184	73	135	19	M6	40	21.5	6									
	1FK7042-5	182	101	134	211	101	163	(0.75)		(1.57)	(0.85)	(0.24)									
63	1FK7060-5	180	94	126	223	94	169	24	M8	50	27	8									
	1FK7063-5	225	139	171	268	139	214	(0.94)		(1.97)	(1.06)	(0.31)									

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

Shaft design with fitted key



Synchronous motors Dimension drawings

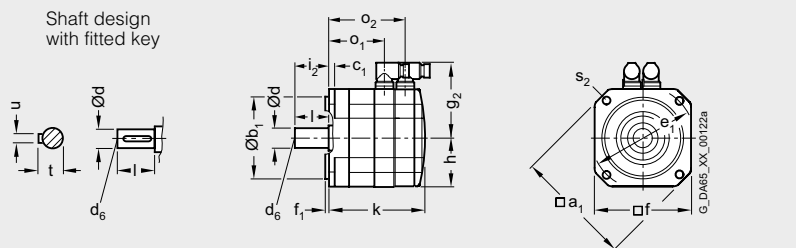
1FK7 Compact motors without/with DRIVE-CLiQ Natural cooling

For motor		Dimensions in mm (in)											Encoder system:					
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	Resolver			with brake		
													without brake			with brake		
1FK7 Compact, type of construction 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)

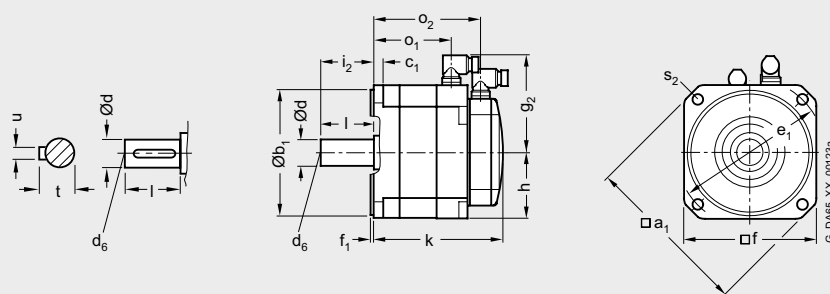
Shaft height	Type	Encoder system:						DE shaft extension				
		Incremental encoder sin/cos 1 V _{pp} / 22 bit (2 048 S/R) Absolute encoder EnDat 2 048 S/R / 22 bit (2 048 S/R) EnDat 32 S/R / 16 bit (32 S/R)										
		without brake			with brake			d	d ₆	l	t	u
		k LB	o ₁ -	o ₂ -	k LB	o ₁ -	o ₂ -	D	-	E	GA	F
80	1FK7080-5	179 (7.05)	91 (3.58)	124 (4.88)	206 (8.11)	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)					
100	1FK7100-5	208 (8.19)	113 (4.45)	153 (6.02)	227 (8.94)	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)					
	1FK7103-5	260 (10.24)	165 (6.50)	205 (8.07)	289 (11.38)	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)					

1FK708 -5

Shaft design 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 Dimensions in mm (in)

Encoder system:
Resolver
Absolute encoder EnDat 16 S/R / 15 bit (16 S/R)

without/with brake

Shaft height	Type	DIN IEC	a _P	b _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 of construction 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		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)
	1FK7044-7												216/245 (8.51/9.65)	155/155 (6.10/6.10)	188/217 (7.40/8.54)
63	1FK7061-7		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)
	1FK7064-7												249/292 (9.80/11.50)	185/185 (7.28/7.28)	217/260 (8.54/10.24)
80	1FK7085-7		186 (7.32)	130 (5.12)	13 (0.51)	165 (6.50)	155 (6.10)	3.5 (0.14)	141.5 (5.57)	77.5 (3.05)	58 (2.28)	11 (0.43)	261/303 (10.28/11.93)	192/192 (7.56/7.56)	229/272 (9.02/10.71)
	1FK7086-7								140.5 (5.53)						

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Encoder system:
Incremental encoder sin/cos 1 V_{pp} / 22 bit (2 048 S/R)
Absolute encoder EnDat 2 048 S/R / 22 bit (2 048 S/R)
EnDat 512 S/R / 20 bit (512 S/R)
EnDat 32 S/R / 16 bit (32 S/R)

DE shaft extension

without/with brake

Shaft height	Type	DIN IEC	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)	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)	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)					
63	1FK7061-7		208/251 (8.19/9.88)	121/121 (4.76/4.76)	154/197 (6.06/7.76)	24 (0.94)	M8	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)					
80	1FK7085-7		283/326 (11.14/12.83)	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 design with fitted key

